FORM S-1 · REGISTRATION STATEMENT

Ping Identity Holding Corp

IPO priced 2019-09-20 · $15.00 a share · PING



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AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON AUGUST 23, 2019

REGISTRATION NO. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM S-1 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Ping Identity Holding Corp.

(Exact name of registrant as specified in its charter)

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Delaware (State or other jurisdiction of incorporation or organization)	**7372** (Primary Standard Industrial Classification Code Number)	**81-2933383** (I.R.S. Employer Identification No.)

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1001 17th Street, Suite 100

Denver, Colorado 80202 Telephone: (303) 468-2900

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices) **Andre Durand**

Chief Executive Officer 1001 17th Street, Suite 100 Denver, Colorado 80202 Telephone: (303) 468-2900 (Name, address, including zip code, and telephone number, including area code, of agent for service)

User-specified TAGGED TABLE

Copies of all communications, including communications sent to agent for service, should be sent to:

Robert M. Hayward, P.C. **Robert E. Goedert, P.C. Michael P. Keeley Kirkland & Ellis LLP 300 North LaSalle Chicago, Illinois 60654 (312) 862-2000**	**Eric C. Jensen** **Matthew P. Dubofsky Michael L. Platt Cooley LLP 380 Interlocken Crescent Suite 900 Broomfield, Colorado 80021 (720) 566-4000**

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Approximate date of commencement of proposed sale to the public:

As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box: o If this Form is filed to registered additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities act registration statement number of the earlier effective registration statement for the same offering. o If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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Large accelerated filer o	Accelerated filer o	Non-accelerated filer ý	Smaller reporting company o Emerging growth company ý

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If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. o

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Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)(2)	Amount of Registration Fee
Common Stock, par value $0.001 per share	$100,000,000	$12,120

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(1) Includes the aggregate offering price of shares of common stock subject to the underwriters' option to purchase additional shares.

(2) Estimated solely for purposes of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

THIS IS THE END OF A COMPOSITION COMPONENT

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion. Dated August 23, 2019.

Shares

Common Stock

This is an initial public offering of shares of common stock of Ping Identity Holding Corp.

Prior to this offering, there has been no public market for the common stock. It is currently estimated that the initial public offering price per share will be between $ and $. We have applied to list our common stock on the NASDAQ Global Select Market under the symbol "PING".

We are an "emerging growth company" as defined under the federal securities laws, and as such, we have elected to comply with certain reduced reporting requirements for this prospectus and may elect to do so in future filings.

See "Risk Factors" beginning on page 15 to read about factors you should consider before buying shares of our common stock.

Immediately after this offering, assuming an offering size as set forth above, funds controlled by our equity sponsor, Vista Equity Partners, will own approximately % of our outstanding common stock (or % of our outstanding common stock if the underwriters' option to purchase additional shares is exercised in full). As a result, we expect to be a "controlled company" within the meaning of the corporate governance standards of the NASDAQ Global Select Market. See "Management – Corporate Governance – Controlled Company Status".

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

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	Per Share	Total
Initial public offering price		$$
Underwriting discount[(1)]		$$
Proceeds, before expenses, to Ping Identity Holding Corp.		$$

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(1) See "Underwriting" for a description of compensation payable to the underwriters.

To the extent that the underwriters sell more than shares of common stock, the underwriters have the option to purchase up to an additional shares of our common stock at the initial public offering price less the underwriting discount.

The underwriters expect to deliver the shares of common stock against payment in New York, New York on , 2019.

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Goldman Sachs & Co. LLC	**BofA Merrill Lynch**	**RBC Capital Markets**	**Citigroup**

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Barclays	**Credit Suisse**	**Deutsche Bank Securities**	**Wells Fargo Securities**

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Raymond James	**Stifel**	**William Blair**	**Mizuho Securities**	**Oppenheimer & Co.**

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Prospectus dated , 2019

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You should rely only on the information contained in this prospectus or contained in any free writing prospectus filed with the Securities and Exchange Commission, or SEC. Neither we nor any of the underwriters have authorized anyone to provide any information or make any representations other than those contained in this prospectus or in any free writing prospectus filed with the SEC. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock. Our business, financial condition, results of operations, and prospects may have changed since such date.

For investors outside of the United States, neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about, and to observe any restrictions relating to, this offering and the distribution of this prospectus outside of the United States.

Through and including , 2019 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

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Prospectus Summary

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information that you should consider before investing in our common stock. For a more complete understanding of us and this offering, you should read and carefully consider the entire prospectus, including the more detailed information set forth under "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes. Some of the statements in this prospectus are forward-looking statements. See "Forward-Looking Statements".

Unless the context otherwise requires, the terms "Ping", the "Company", "our company", "we", "us" and "our" in this prospectus refer to Ping Identity Holding Corp. and, where appropriate, its consolidated subsidiaries. The term "Vista" or "our Sponsor" refers to Vista Equity Partners, our equity sponsor, and the term "Vista Funds" refers to Vista Equity Partners Fund VI, L.P., Vista Equity Partners Fund VI-A, L.P. and VEPF VI FAF, L.P.

Our Mission

Our mission is to secure the digital world through Intelligent Identity.

Overview

Ping is pioneering Intelligent Identity. We enable secure access to any service, application or API from any device. Our Intelligent Identity Platform can leverage artificial intelligence and machine learning to analyze device, network, application and user behavior data to make real-time authentication and security control decisions, enhancing the user experience. Our platform is designed to detect anomalies and automatically insert additional security measures, such as multi-factor authentication, only when necessary. We built our platform to meet the requirements of the most demanding enterprises. Our platform can be deployed across cloud, hybrid and on-premise infrastructures, offers a comprehensive suite of turnkey integrations and is able to scale to millions of identities and thousands of cloud and on-premise applications in a single deployment. As of June 30, 2019, our platform secures over two billion identities globally across our customer base.

Enterprises are undergoing digital transformation as they seek to create new revenue streams, transition business models and increase customer engagement. Concurrently, enterprises are becoming more distributed as the adoption of cloud, mobile and the Internet of Things, or IoT, moves data, applications and access requirements beyond the traditional network perimeter. These enterprises must contend with an evolving cyber-threat landscape, new privacy directives and stringent regulatory requirements. As a result, enterprises require Intelligent Identity solutions that proactively ensure the right user has authorized access to resources at the appropriate time.

Our Intelligent Identity Platform can secure all primary use cases, including customer, employee, partner and IoT. For example, enterprises can use our platform to enhance their customers' user experience by creating a single ID and login across web and mobile properties. For the year ended December 31, 2018, 44% of our subscription revenue was derived from the customer use case. Enterprises can also use our platform to provide their employees and commercial partners with secure, seamless access from any device to the applications, data and application programming interfaces, or APIs, they need to be productive. Enterprises are increasingly using our platform to manage and authenticate IoT devices, such as connected vehicles and consumer devices.

Our Intelligent Identity Platform is comprised of six solutions that can be purchased individually or as a set of integrated offerings for the customer, employee, partner or IoT use case:

- secure single sign-on, or SSO;
- adaptive multi-factor authentication, or MFA;
- security control for applications and APIs, or Access Security;
- personalized and unified profile directories, or Directory;
- data governance to control access to identity data, or Data Governance; and
- artificial intelligence and machine learning powered API security, or API Intelligence.

We have spent over a decade building a comprehensive suite of turnkey integrations designed to ensure that enterprises can use our platform to secure their applications wall-to-wall, facilitating easier deployment and rapid time-to-value.

We sell our solutions via a subscription model through a direct sales force, with increasing influence from our channel partners. Our SSO, Access Security and Directory solutions typically replace legacy and homegrown systems. We also have significant greenfield opportunities with our MFA, Data Governance and API Intelligence solutions and, increasingly, the IoT use case.

Our "land and expand" strategy targets enterprises with a specific solution and use case and then seeks to grow our footprint with additional solutions, use cases and identities. The success of our strategy is validated by our strong dollar-based net retention rates and our growing number of large customers. Our dollar-based net retention rates were 123%, 116% and 115% at December 31, 2017 and 2018 and June 30, 2019, respectively, and our dollar-based net retention rates have exceeded 115% for each of the past eight fiscal quarters. Our customers with annual recurring revenue, or ARR, over $250,000 increased from 144 at December 31, 2017 to 202 at December 31, 2018, representing a growth rate of 40%. Our total customers increased from 1,264 at December 31, 2017 to 1,284 at December 31, 2018. The gross increase in total customers for the 2018 fiscal year was partially offset by customer churn, primarily consisting of low contract value churn of customers with ARR below $25,000. The increase of 58 net customers with ARR greater than $250,000 for the 2018 fiscal year is comprised of 16 new customers and 42 existing customers that had ARR grow to exceed $250,000 in 2018. Additionally, at December 31, 2018, we had 25 customers with greater than $1,000,000 in ARR. An increasing

number of our customers are deploying a combination of our solutions across multiple business units, functions and use cases in their initial purchase. For definitions of ARR and dollar-based net retention rate and descriptions of how we calculate these metrics, see "Management's Discussion and Analysis of Financial Condition and Results of Operations".

Our customers include many of the world's largest enterprises, including over 50% of the Fortune 100. These customers are security-focused, and typically operate in regulated industries, have hybrid IT infrastructures, require turnkey integrations and have demanding scalability requirements. Our solutions secure 12 of the 12 largest U.S. banks (measured by assets), 8 of the 10 largest bio-pharmaceutical companies (measured by revenue), 4 of the 5 largest healthcare plans (measured by revenue) and 5 of the 7 largest U.S. retailers (measured by revenue).

Since our inception, we have been an innovator in identity. We pioneered the concept of Intelligent Identity, which leverages artificial intelligence, or AI, and machine learning, or ML, to analyze device, network, application and user behavior data to secure access and enhance the user experience. We contributed to or co-authored many of the open identity standards such as SAML, OAuth, SCIM and OpenID Connect, which form the foundation of our industry. We have consistently been recognized as a leader in the Identity and Access Management, or IAM, industry by Gartner and KuppingerCole.

We sell our solutions via a subscription model typically billed annually in advance. Our ARR was $147.0 million and $183.6 million at December 31, 2017 and 2018, respectively, representing year-over-year growth of 25%. Our ARR was $159.6 million and $198.0 million at June 30, 2018 and 2019, respectively, representing period-over-period growth of 24%. We have grown revenue from $172.5 million for the year ended December 31, 2017 to $201.6 million for the year ended December 31, 2018, representing year-over-year growth of 17%. We have grown revenue from $99.5 million for the six months ended June 30, 2018 to $112.9 million for the six months ended June 30, 2019, representing period-over-period growth of 14%. Our net income was $19.0 million for the year ended December 31, 2017. Our net loss was $13.4 million for the year ended December 31, 2018. We had net losses of $5.8 million and $3.1 million for the six months ended June 30, 2018 and 2019, respectively. Our cash provided by operations was $3.4 million and $22.9 million for the years ended December 31, 2017 and 2018, respectively. Our cash provided by operations was $13.0 million and $8.1 million for the six months ended June 30, 2018 and 2019, respectively. Our Free Cash Flow was $(2.5) million and $13.1 million for the years ended December 31, 2017 and 2018, respectively. Our Free Cash Flow was $8.9 million and $1.2 million for the six months ended June 30, 2018 and 2019, respectively. Free Cash Flow is a supplemental measure that is not calculated and presented in accordance with generally accepted accounting principles in the United States, or GAAP. See "Selected Consolidated Financial Data—Non-GAAP Financial Measures" for a definition of Free Cash Flow and a reconciliation to its most directly comparable GAAP financial measure.

Industry Background

IAM is the foundation for maximizing security and enhancing user experience in a distributed and highly-connected digital world, where the traditional network perimeter has dissolved and the attack surface has expanded. In this digital world, legacy IAM solutions are proving ill-suited to address cloud, mobile, IoT and API requirements. Similarly, cloud-only IAM vendors are unable to meet the requirements of large enterprises that have hybrid IT infrastructures.

Enterprises are Undergoing Digital Transformations and Embracing Technology Trends

Digital Transformation is Critical to Driving Competitive Differentiation. Enterprises are investing in technology to grow their digital presence, create new revenue streams, transition business models and increase customer engagement. In order to accomplish this, enterprises must engage with their customers across digital channels. As consumers have become accustomed to seamless access and high-quality experiences from companies such as Amazon, Google and Netflix, all enterprises are under pressure to meet rising expectations or risk being disrupted by competitors.

Enterprises are Embracing Cloud Computing, SaaS and Mobility. Enterprises are transitioning a portion of their IT budgets to invest in cloud computing to build new services, shorten time-to-value and drive cost efficiency. The adoption of Software-as-a-Service, or SaaS, applications and mobility is empowering business users and partners to increase productivity, facilitate collaboration, reengineer business processes and drive new opportunities for growth. The consumerization of IT and shift towards a distributed workforce has caused employees and partners to demand seamless access to cloud and on-premise applications from any device.

APIs and IoT Devices are Dramatically Expanding the Number of New Connections. APIs have become critical to software development and act as gateways to other digital services by facilitating the connection and data sharing between heterogeneous systems and applications. APIs have become the building blocks of the web and will help drive the future of software by powering new applications, enabling communications and automating business processes.

Enterprises are also deploying IoT devices embedded with software and sensors to connect with their customers, collect streaming data and analyze endpoint performance. According to IDC, the worldwide installed base of IoT devices is expected to grow from 23 billion in 2018 to more than 41 billion in 2025, representing a CAGR of 9%.

Digital Transformation Initiatives have Created Challenges and Complexity for Enterprises

Cloud, Mobile and IoT Have Expanded the Attack Surface. The rapid adoption of cloud-based offerings and the proliferation of mobile and IoT devices have expanded the attack surface for cyber threats, moving users, devices, applications and data outside the traditional network perimeter. As a result of this shift, identity has become the most common vulnerability that hackers seek to exploit. According to a 2017 Verizon report, 81% of hacking-related breaches leveraged stolen and/or weak passwords.

New Technology Adoption has Created Complex Hybrid and Multi-Cloud IT Challenges. Enterprises are increasingly reliant on both cloud and on-premise applications, which is creating complex hybrid IT infrastructures. According to IDC, public cloud spending is projected to grow from 33% of worldwide IT infrastructure spend in 2018 to 38% in 2023. A significant portion of IT budgets, however, will continue to be allocated to on-premise IT infrastructure. As a result, enterprises increasingly require solutions capable of spanning both cloud and on-premise infrastructures to support their hybrid realities. As the adoption of cloud matures, enterprises are focused on optimizing for performance, cost and security while also maintaining flexibility to operate across multiple clouds. IDC expects more than 90% of enterprise IT organizations will commit to multi-cloud architectures by 2020.

The Rise of APIs has Created New Security Vulnerabilities. The rapid proliferation of APIs has created new security vulnerabilities due to their connectivity with critical systems and access to data. Breaches associated with API gateways can remain undetected for extended periods of time because of a lack of visibility into API traffic and an inability to monitor anomalies or abuse.

The Identity Landscape is Large and Evolving

Identity is a vast landscape, comprised of three distinct established markets that each require different solutions. Our Intelligent Identity Platform focuses on the largest of these markets, IAM. We partner with leading companies in the adjacent markets, Privileged Access Management, or PAM, and Identity Governance and Administration, or IGA. The objectives, workflows and interfaces of these three markets remain distinct and have little overlap.

- *Identity and Access Management.* Solutions that store user information and enable the authentication of a user and the subsequent access management and security control of that user as the user attempts to access applications, data and APIs.

  Within IAM, Customer Identity and Access Management, or CIAM, represents a large and growing opportunity and includes solutions that provide a consistent, modern, omni-channel customer experience through personalized access to all digital services.

- *Privileged Access Management.* Solutions that help organizations secure, control, manage and monitor privileged accounts or privileged rights.

- *Identity Governance and Administration.* Solutions designed to encapsulate the governance and policies that a company uses to meet its identity management related audit and compliance obligations.

Existing IAM Solutions are Limited

Legacy IAM solutions generally do not meet enterprises' evolving requirements because of these inherent limitations: not being designed for cloud environments, mobile and IoT devices or APIs; being cumbersome and expensive to deploy; having a tendency to experience stability problems; and being at or near end of life.

Cloud-only IAM solutions generally do not meet enterprises' evolving requirements because of these inherent limitations: lacking in-depth enterprise features and robust integrations across on-premise applications; primarily being focused on the employee use case; having an unproven ability to scale; and only meeting minimal security requirements.

Intelligent Identity is Needed Now More than Ever

Enterprises are under pressure to innovate faster, improve productivity and deliver exceptional user experiences through digitalization, all while maximizing security. The question "Who are you?" must be asked and satisfactorily answered as a precondition to every digital interaction. Intelligent Identity asks and answers the question by leveraging AI and ML to analyze device, network, application and user behavior data to make real-time authentication and security control decisions. Additional security measures, which impose friction on the user experience, are only utilized if anomalies in behavior or data are detected or in high-value transactions. This optimizes the balance between securing access and providing an enhanced user experience.

Our Market Opportunity

According to IDC, the worldwide market for IAM is expected to grow from $6.6 billion in 2018 to $9.0 billion in 2023, representing a CAGR of approximately 6%. Based on management's internal analysis, we estimate that our market opportunity is greater than $25 billion across our use cases. For a more detailed description of how we calculate our market opportunity, see "Business — Our Market Opportunity". We believe our market opportunity has the potential to expand in the future as the proliferation of IoT and APIs increases connections, complexity and the number of identities in the enterprise.

Our market includes opportunities for both greenfield expansion and replacement of legacy and homegrown solutions. We believe security budgets are shifting from network-centric to identity-centric solutions because the adoption of cloud, mobile and IoT has led to a disappearing network perimeter. We believe the focus of cybersecurity will continue to shift to the user as targeted attacks against users and their credentials increase. As a result, we believe that IAM will represent a larger portion of future security budgets, which we are well positioned to capture.

Our Growth Strategy

The key elements of our growth strategy include:

- *Increase Sales to Existing Customers.* Of our more than 1,275 customers at December 31, 2018, only 13% had purchased three or more of our six solutions, providing a significant opportunity to further penetrate our existing customer base. We believe there are significant upsell and cross-sell opportunities within our existing customer base by adding identities and use cases and selling new solutions.
- *Innovate and Enhance our Offerings.* We intend to continue investing in research and development to enhance our existing solutions, add new solutions and deployment options and expand use cases.
- *Expand our Customer Base by Investing in Sales and our Partner Network.* We continue to make investments in sales and marketing to grow our customer base and drive broader awareness of our Intelligent Identity Platform. We plan to deepen and expand our joint go-to-market efforts with our channel partners, system integrators and technology partners.
- *Expand our Customer Base by Targeting New Buyers.* We focus our selling efforts on executives such as Chief Information Officers, or CIOs, and Chief Information Security Officers, or CISOs, who are often making strategic top-down decisions to purchase our platform. We recently extended our cloud-based offering to target developers who represent a new addressable customer base for us. The ability for developers to directly integrate identity into their applications accelerates the adoption of identity within the enterprise.
- *Continue to Expand our Global Presence.* We have a large and growing international presence and intend to grow our customer base in various international regions by making investments in our sales team globally.

Our Intelligent Identity Platform

Our Intelligent Identity Platform is comprised of six solutions (SSO, MFA, Access Security, Directory, Data Governance and API Intelligence) and supports all primary use cases and deployment options. Our Intelligent Identity Platform provides the following key benefits:

- intelligent authentication of users based on contextual signals and risk attributes;
- one platform for all primary use cases;
- flexible hybrid deployment options;
- turnkey integrations across cloud and on-premise applications;
- high standards for critical security and resiliency; and
- scalable to billions of identities.

Our Intelligent Identity Platform Supports All Primary Use Cases

- *Customer.* Our platform helps enterprises better engage with their customers by providing a consistent, modern, omni-channel user experience through personalized access to all digital services. This enhanced digital experience improves brand loyalty and drives additional revenue, while also strengthening security.
- *Employee.* Our platform allows enterprises to provide their employees with seamless and secure access to all of their cloud and on-premise applications and APIs to enable better employee productivity.
- *Partner.* Our platform helps enterprises rapidly connect with partners and manage their access privileges when onboarding and offboarding users.
- *IoT.* Our platform is increasingly being used to manage IoT identities, such as connected vehicles and consumer devices, and authenticate machine-to-machine and human-to-machine interactions.

Deployment Flexibility

We have designed our solutions for flexible deployment because every enterprise has different customization, control, security and privacy needs. Our deployment flexibility provides the optionality to adopt cloud-based offerings for rapid deployment, remain on-premise for maximum control or to comply with industry regulations or deploy in a hybrid manner. Our deployment options include:

- *Multi-Tenant Cloud.* For enterprises seeking to outsource identity infrastructure, often in coordination with cloud-first initiatives.
- *Single-Tenant Cloud.* For enterprises seeking a higher degree of control, customization and segregation, often in response to regulatory compliance or other corporate mandates.
- *On-Premise.* For enterprises seeking the highest degree of control over identity for security, privacy and other specialized requirements.

Risks Associated with Our Business

There are a number of risks related to our business, this offering and our common stock that you should consider before you decide to participate in this offering. You should carefully consider all the information presented in the section entitled "Risk Factors" in this prospectus. Some of the principal risks related to our business include the following:

- our ability to adapt to rapid technological change, evolving industry standards and changing customer needs, requirements or preferences;
- our ability to enhance and deploy our cloud-based and on-premise offerings and services and adapt our business model to keep pace with industry trends;
- our ability to maintain or improve our competitive position;
- the impact on our business of a network or data security incident or unauthorized access to our network or customers' data;
- the effects on our business if we are unable to acquire new customers, if our customers do not renew their arrangements with us, or if we are unable to expand sales to our existing customers or develop new solutions that achieve market acceptance;
- our dependence on our senior management team and other key employees; and
- the other factors set forth under "Risk Factors".

These and other risks are more fully described in the section entitled "Risk Factors" in this prospectus. If any of these risks actually occurs, our business, financial condition, results of operations, cash flows and prospects could be materially and adversely affected. As a result, you could lose all or part of your investment in our common stock.

Our Sponsor

We have a valuable relationship with our equity sponsor, Vista. In May 2016, Vista formed our company for the purpose of acquiring all of the capital stock of Ping Identity Corporation. We refer to this transaction as the "Vista Acquisition".

Vista is a U.S.-based investment firm with offices in Austin, San Francisco, Chicago, New York and Oakland with more than $50 billion in cumulative capital commitments. Vista exclusively invests in software, data and technology-enabled organizations led by world-class management teams. As a value-added investor with a long-term perspective, Vista contributes professional expertise and multi-level support towards companies to realize their potential. Vista's investment approach is anchored by a sizable long-term capital base, experience in structuring technology-oriented transactions and proven management techniques that yield flexibility and opportunity.

General Corporate Information

We were incorporated in 2016 as Roaring Fork Holding, Inc., a Delaware corporation, in connection with the Vista Acquisition. Effective August 22, 2019, the name of our company was changed to Ping Identity Holding Corp. Our principal executive offices are located at 1001 17th Street, Suite 100, Denver, Colorado 80202. Our telephone number is (303) 468-2900. Our website address is www.pingidentity.com. The information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock. We are a holding company and all of our business operations are conducted through our subsidiaries.

This prospectus includes our trademarks and service marks such as "Ping Identity," "Ping Intelligent Identity" "Ping Intelligent Identity Platform" and "Identiverse", which are protected under applicable intellectual property laws and are the property of us or our subsidiaries. This prospectus also contains trademarks, service marks, trade names and copyrights of other companies, such as "Amazon", "Google", and "Microsoft" which are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. We will remain an emerging growth company until the earliest of (1) the last day of the fiscal year following the fifth anniversary of the completion of this offering, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the date on which we are deemed to be a large accelerated filer (this means the market value of common that is held by non-affiliates exceeds $700.0 million as of the end of the second quarter of that fiscal year) or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We have elected to take advantage of certain of the reduced disclosure obligations regarding financial statements (such as not being required to provide audited financial statements for the year ended December 31, 2016 or five years of Selected Consolidated Financial Data) in this prospectus and executive compensation in this prospectus and expect to elect to take advantage of other reduced burdens in future filings. As a result, the information that we provide to our shareholders may be different than you might receive from other public reporting companies in which you hold equity interests.

The JOBS Act also permits an emerging growth company like us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We have elected to "opt-in" to this extended transition period for complying with new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that comply with such new or revised accounting standards on a non-delayed basis.

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The Offering

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Common stock offered	shares.
Option to purchase additional shares	shares.
Common stock to be outstanding after this offering	shares (or shares if the underwriters' option to purchase additional shares is exercised in full).
Use of proceeds	We estimate that our net proceeds from this offering will be approximately $ million, or approximately $ million if the underwriters' option to purchase additional shares is exercised in full, assuming an initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us.
	The principal purposes of this offering are to increase our capitalization and financial flexibility, create a public market for our common stock and enable access to the public equity markets for us and our shareholders. We expect to use approximately $ million of the net proceeds of this offering (or $ million of the net proceeds of this offering if the underwriters exercise their option to purchase additional shares in full) to repay outstanding borrowings under our Term Loan Facility (as defined herein) and the remainder of such net proceeds will be used for general corporate purposes. At this time, other than repayment of indebtedness under our Term Loan Facility, we have not specifically identified a large single use for which we intend to use the net proceeds and, accordingly, we are not able to allocate the net proceeds among any of these potential uses in light of the variety of factors that will impact how such net proceeds are ultimately utilized by us. See "Use of Proceeds" for additional information.
Controlled company	After this offering, assuming an offering size as set forth in this section, the Vista Funds will own approximately % of our common stock (or % of our common stock if the underwriters' option to purchase additional shares is exercised in full). As a result, we expect to be a controlled company within the meaning of the corporate governance standards of the NASDAQ Global Select Market, or NASDAQ. See "Management — Corporate Governance — Controlled Company Status".

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Directed share program	At our request, the underwriters have reserved up to shares of common stock, or % of the shares of common stock to be offered by this prospectus for sale, at the initial public offering price, to directors, officers, and their friends and family members through a directed share program. If purchased by these persons, these shares will not be subject to a lock-up restriction, except in the case of shares purchased by any director or officer. The number of shares of common stock available for sale to the general public will be reduced to the extent these individuals or entities purchase such reserved shares. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus.
Risk factors	Investing in our common stock involves a high degree of risk. See "Risk Factors" elsewhere in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Proposed trading symbol	"PING".

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The number of shares of common stock to be outstanding following this offering is based on shares of common stock outstanding as of June 30, 2019, and excludes:

- shares of common stock issuable upon the exercise of options outstanding as of June 30, 2019, with a weighted average exercise price of $ per share;
- shares of common stock issuable upon vesting and settlement of restricted stock units, or RSUs, as of June 30, 2019; and
- million shares of common stock reserved for future issuance under our 2019 Omnibus Incentive Plan, or the 2019 Plan, which will be adopted in connection with this offering.

Unless otherwise indicated, all information in this prospectus assumes:

- the -for-1 stock split of our shares of common stock effected on , 2019;
- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each in connection with the closing of this offering;
- no exercise of outstanding options or issuance of shares of common stock upon vesting and settlement of RSUs after June 30, 2019; and
- no exercise by the underwriters of their option to purchase up to additional shares of common stock.

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Summary Consolidated Financial Data

The following tables summarize our consolidated financial data. The summary consolidated statements of operations data and summary consolidated statements of cash flows data for the years ended December 31, 2017 and 2018 and the summary consolidated balance sheets data as of December 31, 2017 and 2018 are derived from our audited consolidated financial statements that are included elsewhere in this prospectus. The summary consolidated statements of operations data and the summary consolidated statements of cash flows data for the six months ended June 30, 2018 and 2019 and the summary consolidated balance sheet data as of June 30, 2019 are derived from our unaudited interim consolidated financial statements that are included elsewhere in this prospectus. The unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair statement of our unaudited interim consolidated financial statements.

Our historical results are not necessarily indicative of the results that may be expected in the future. You should read the summary historical financial data below in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and related notes included elsewhere in this prospectus.

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
	(in thousands, except share and per share amounts)			
Consolidated Statements of Operations Data:				
Revenue:				
Subscription	$160,219	$184,991	$90,576	$103,892

Professional services and other	12,320	16,571	8,874	9,006
Total revenue	172,539	201,562	99,450	112,898
Cost of revenue:				
Subscription (exclusive of amortization shown below)	14,054	17,512	8,259	10,833
Professional service and other (exclusive of amortization shown below)	9,155	12,703	5,837	6,916
Amortization expense	12,626	14,396	7,064	7,822
Total cost of revenue	35,835	44,611	21,160	25,571
Gross profit	136,704	156,951	78,290	87,327
Operating Expenses:				
Sales and marketing[1]	49,481	60,140	28,121	37,334
Research and development[1]	26,215	36,229	16,393	22,311
General and administrative[1]	20,202	28,355	13,079	15,748
Depreciation and amortization	16,526	16,341	8,356	8,274
Total operating expenses	112,424	141,065	65,949	83,667
Income from operations	24,280	15,886	12,341	3,660
Other Income (Expense):				
Interest expense	(19,277)	(15,837)	(7,791)	(8,249)
Loss on extinguishment of debt	—	(9,785)	(9,785)	—
Other income (expense), net	773	(335)	(912)	225
Total other income (expense)	(18,504)	(25,957)	(18,488)	(8,024)
Income (loss) before income taxes	5,776	(10,071)	(6,147)	(4,364)
Benefit (provision) for income taxes	13,185	(3,375)	391	1,241
Net income (loss)	$18,961	$(13,446)	$(5,756)	$(3,123)
Per Share Data[2]:				
Net income (loss) per share:				
Basic	$49.60	$(35.17)	$(15.05)	$(8.17)
Diluted	$49.60	$(35.17)	$(15.05)	$(8.17)
Weighted-average shares used in computing net income (loss) per share:				
Basic	382,258	382,365	382,364	382,425
Diluted	382,297	382,365	382,364	382,425
Pro forma net income (loss) per share[3]:				
Basic				$ $

Diluted				$ $
Weighted-average shares used in computing pro forma net income (loss) per share[3]:				
Basic				
Diluted				
Consolidated Statements of Cash Flows Data:				
Net cash provided by operating activities	$3,423	$22,886	$13,015	$8,064
Net cash used in investing activities	$(5,961)	$(26,661)	$(21,566)	$(6,822)
Net cash provided by (used in) financing activities	$101	$67,102	$68,921	$(1,951)
Non-GAAP Financial Data (unaudited):				
Free Cash Flow[4]	$(2,538)	$13,139	$8,863	$1,242
Non-GAAP Gross Profit[5]	$149,330	$171,347	$85,354	$95,149
Adjusted EBITDA[6]	$55,956	$56,137	$32,216	$24,132
Other Data:				
ARR as of the period ended[7]	$146,969	$183,579	$159,563	$197,990
Dollar-based net retention rate for the trailing twelve months ended[8]	123%	116%	118%	115%

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(1) Includes stock-based compensation as follows:

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	Year Ended December 31,		**Six Months Ended June 30,**	
	2017	**2018**	**2018**	**2019**
	(in thousands)			
Sales and marketing	$626	$726	$351	$410
Research and development	297	342	108	433
General and administrative	1,601	1,780	821	1,256
Total	$2,524	$2,848	$1,280	$2,099

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(2) See Note 13 to our consolidated financial statements appearing elsewhere in this prospectus for an explanation of the method used to calculate our basic and diluted net income (loss) per share and the weighted-average number of shares used in the computation of the per share amounts.

(3) Pro forma basic and diluted net income (loss) per share and pro forma weighted-average common shares outstanding have been computed to give effect to the issuance by us of shares of common stock in this offering and the application of the net proceeds from this offering to repay $ million of outstanding borrowings under our Term Loan Facility as set forth under "Use of Proceeds," assuming an initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us. This pro forma data is presented for informational purposes only and

does not purport to represent what our net income (loss) or net income (loss) per share actually would have been had the offering and use of proceeds therefrom occurred on January 1, 2018 or to project our net income (loss) or net income (loss) per share for any future period.

(4) We define Free Cash Flow as net cash provided by (used in) operating activities less cash used for purchases of property and equipment and capitalized software development costs. For a reconciliation of Free Cash Flow to net cash flow provided by (used in) operations, the most directly comparable measure calculated and presented in accordance with GAAP, see "Selected Consolidated Financial Data — Non-GAAP Financial Measures".

(5) We define Non-GAAP Gross Profit as gross profit adjusted for certain amortization expense of acquired intangible assets and software developed for internal use. For a reconciliation of Non-GAAP Gross Profit to gross profit, the most directly comparable measure calculated and presented in accordance with GAAP, see "Selected Consolidated Financial Data — Non-GAAP Financial Measures".

(6) We define Adjusted EBITDA as net income (loss) adjusted for interest expense, loss on extinguishment of debt, benefit for income taxes, depreciation and amortization, stock-based compensation expense, acquisition related expense and other (income) expense, net. For a reconciliation of Adjusted EBITDA to net income (loss), the most directly comparable measure calculated and presented in accordance with GAAP, see "Selected Consolidated Financial Data — Non-GAAP Financial Measures".

(7) See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Key Business Metrics" for more information with respect to ARR.

(8) See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Key Business Metrics" for more information with respect to our dollar-based net retention rate.

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	June 30, 2019	
	Actual	Pro Forma[1][2]
	(in thousands)	
Consolidated Balance Sheets Data:		
Cash and cash equivalents	$83,000	
Working capital[3]	142,805	
Total assets	849,437	
Deferred revenue, current and noncurrent	35,490	
Long-term debt, including current portion[4]	242,725	
Total stockholders' equity	509,374	

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(1) Gives effect to the issuance by us of shares of common stock in this offering and the application of the net proceeds from this offering to repay $ million of outstanding borrowings under our Term Loan Facility as set forth under "Use of Proceeds," assuming an initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us.

(2) A $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease each of cash and cash equivalents, working capital, total assets and total stockholders' equity on a pro forma basis by approximately $ million, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discount and estimated offering expenses payable by us.

(3) We define working capital as current assets less current liabilities.

(4) Net of debt issuance costs of $4.8 million as of June 30, 2019.

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Risk Factors

RISK FACTORS

This offering and an investment in our common stock involve a high degree of risk. You should carefully consider the risks described below, together with the financial and other information contained in this prospectus, before you decide to purchase shares of our common stock. If any of the following risks actually occurs, our business, financial condition, results of operations, cash flows and prospects could be materially and adversely affected. As a result, the trading price of our common stock could decline and you could lose all or part of your investment in our common stock.

`Risks Relating to Our Business`

If we fail to adapt to rapid technological change, evolving industry standards and changing customer needs, requirements or preferences, our ability to remain competitive could be impaired.

The IAM market is characterized by rapid technological change, evolving industry standards and changing regulations, as well as changing customer needs, requirements and preferences. The success of our business will depend, in part, on our ability to anticipate, adapt and respond effectively to these changes on a timely and cost-effective basis. In addition, as our customers' technologies and business plans grow more complex, we expect them to face new and increasing challenges. Our customers require that our platform effectively identify and respond to these challenges without disrupting the performance of our customers' IT systems or interrupting their business operations. As a result, we must continually modify and improve our offerings in response to changes in our customers' IT infrastructures and operational needs or end-user preferences. The success of any enhancement to our existing offerings or the deployment of new offerings depends on several factors, including the timely completion and market acceptance of our enhancements or new offerings. Any enhancement to our existing offerings or new offerings that we develop and introduce involves significant commitment of time and resources and is subject to a number of risks and challenges including:

- ensuring the timely release of new solutions and solution enhancements;
- adapting to emerging and evolving industry standards, technological developments by our competitors and customers and changing regulatory requirements;
- interoperating effectively with existing or newly-introduced technologies, systems or applications of our existing and prospective customers;
- resolving defects, errors or failures in our platform or solutions;
- extending the operation of our offerings and services to new and evolving platforms, operating systems and hardware products, such as mobile and IoT devices; and
- managing new solution and service strategies for the markets in which we operate.

If we are not successful in managing these risks and challenges, or if our new solutions, solution upgrades and services are not technologically competitive or do not achieve market acceptance, our business, results of operations and financial condition could be adversely affected.

If we are unable to enhance and deploy our cloud-based offerings while continuing to effectively offer our on-premise offerings, our business and operating results could be adversely affected.

Historically, our revenue has been driven predominately by our on-premise offerings. For the year ended December 31, 2017, $122.1 million, or 71%, of our total revenue was from subscription term-based licenses, whereas $38.1 million, or 22%, of our total revenue was from subscription SaaS and support and maintenance. For the year ended December 31, 2018, $133.7 million, or 66%, of our total revenue was from subscription term-based licenses whereas $51.3 million, or 25%, of our total revenue was from subscription SaaS and support and maintenance. For the six months ended June 30, 2019, $73.5 million, or 65%, of our total revenue was from subscription term-based licenses whereas $30.4 million, or 27%, of our total revenue was from subscription SaaS and support and maintenance. The remainder of our revenue, or $12.3 million, $16.6 million and $9.0 million for the years ended December 31, 2017 and 2018 and the six months ended June 30, 2019, respectively, was attributable to professional services and other. All of our revenue from support and maintenance and a portion of our revenue from professional services is associated with our on-premise offerings. As a result, for the periods presented, the percentage of our total revenue from all revenue sources associated with on-premise offerings was significantly higher than the percentage of our total revenue based solely on subscription term-based licenses and we expect this to remain true for the foreseeable future. We have responded to the increasing market shift toward cloud-based services by developing and introducing additional cloud-based IAM offerings to our customers. While our customers are increasingly adopting our cloud-based offerings, we expect our customers to continue to require substantial on-premise and hybrid offerings. To support hybrid deployment of our offerings, our developers and support team must be trained on and learn multiple environments in which our platform is deployed, which is more expensive than supporting a cloud-only offering. Moreover, we must engineer our software for on-premise, cloud and hybrid deployments, which we expect will cause us additional research and development expense that may impact our operating results. Furthermore, we cannot assure you that the market for cloud-based offerings will develop at a rate or in the manner we expect or that our cloud-based offerings will be competitive with those of more established cloud-based

providers or other new market entrants. We are directing a significant portion of our financial and operating resources to implement a robust and secure cloud-based offering for our customers, but even if we continue to make these investments, we may be unsuccessful in growing or implementing our cloud-based offerings in a way that competes successfully against our current and future competitors and in such event our business, results of operations and financial condition could be harmed. Customers may require features and capabilities that our current solutions do not have and that we may be unable to develop. If we are unable to develop and deploy cloud-based offerings alongside on-premise offerings that satisfy customer preferences in a timely and cost-effective manner, it may harm our ability to renew subscriptions with existing customers and to create or increase demand for our solutions with new customers, and may adversely impact our financial condition and results of operations.

We face intense competition, especially from larger, well-established companies, and we may lack sufficient financial or other resources to maintain or improve our competitive position.

The IAM market is intensely competitive, and we expect competition to increase in the future from established competitors and new market entrants. We face competition from (1) legacy providers, (2) cloud-only providers and (3) homegrown solutions. Legacy providers include CA Technologies, IBM and Oracle, among others. We also compete with cloud-only providers, such as Okta and OneLogin that primarily focus on the employee use case. Microsoft also competes in our market and has tied its identity services to both its Azure and Office365 offerings. With the recent increase in large merger and acquisition transactions in the technology industry, particularly transactions involving cloud-based technologies, there is a greater likelihood that we will compete with other large technology companies in the future. For example, Amazon or Google could acquire or develop an IAM or identity security platform that competes directly with our solutions. These companies have significant name recognition, considerable resources and existing IT infrastructures and powerful economies of scale and scope, which allow them to rapidly develop and deploy new solutions. Many of our existing competitors have, and some of our potential competitors could have, substantial competitive advantages such as greater name recognition and longer operating histories, larger sales and marketing budgets and resources, broader distribution and established relationships with channel partners and customers, greater customer support resources, greater resources to make acquisitions, lower labor and development costs, larger and more mature intellectual property portfolios and substantially greater financial, technical and other resources.

In addition, some of our larger competitors have substantially broader product offerings and leverage their relationships based on other products they offer or incorporate functionality into existing products to gain business in a manner that discourages users from purchasing our solutions, including through selling at zero or negative margins, product bundling or closed technology platforms. Potential customers may also prefer to purchase from their existing suppliers rather than a new supplier regardless of product performance or features. Our larger competitors often have broader product lines and market focus and are less susceptible to downturns in a particular market. Our competitors may also seek to repurpose their existing offerings to provide identity solutions with subscription models. Additionally, start-up companies that innovate and large competitors that are making significant investments in research and development may invent similar or superior products and technologies that compete with our solutions.

Consolidation in the markets in which we compete may affect our competitive position. This is particularly true in circumstances where customers are seeking to obtain a broader set of solutions and services than we are currently able to provide. In addition, some of our competitors may enter into new alliances with each other or may establish or strengthen cooperative relationships with system integrators, third-party consulting firms or other parties. Any such consolidation, acquisition, alliance or cooperative relationship could lead to pricing pressure and loss of market share and could result in a competitor with greater financial, technical, marketing, service and other resources, all of which could harm our ability to compete. Furthermore, organizations may be more willing to incrementally add solutions to their existing infrastructure from competitors than to replace their existing infrastructure with our solutions. These competitive pressures in our market or our failure to compete effectively may result in fewer orders and reduced revenue and gross margins. Any failure to meet and address these factors could adversely affect our business, results of operations and financial condition.

A network or data security incident may allow unauthorized access to our network or data or our customers' data, harm our reputation, create additional liability and adversely impact our financial results.

Increasingly, companies are subject to a wide variety of attacks on their networks and systems. In addition to threats from traditional computer hackers, malicious code (such as malware, viruses, worms and ransomware), employee theft or misuse, password spraying, phishing and distributed denial-of-service, or DDOS, attacks, we now also face threats from sophisticated nation-state and nation-state supported actors who engage in attacks (including advanced persistent threat intrusions) that add to the risks to our internal networks, our platform, our third-party service providers and our customers' systems and the information that they store and process. Despite significant efforts to create security barriers to safeguard against such threats, it is virtually impossible for us to entirely mitigate these risks. As a well-known provider of IAM solutions, we pose an attractive target for such attacks. The security measures we have integrated into our internal networks and platform, which are designed to detect unauthorized activity and prevent or minimize security breaches, may not function as expected or may not be sufficient to protect our internal networks and platform against certain attacks. In addition, techniques used to sabotage or obtain unauthorized access to networks in which data is stored or through which data is transmitted change frequently and generally are not recognized until launched against a target. As a result, we may be unable to anticipate these techniques or implement adequate preventative measures to prevent an electronic intrusion into our networks.

If a breach of customer data security or unauthorized access to customer systems through our platform were to occur, as a result of third-party action, employee error, malfeasance or otherwise, and the confidentiality, integrity or availability of our customers' data or systems was disrupted, we could incur significant liability to our customers and to individuals or businesses whose information we process, and our platform may be perceived as less desirable, which could negatively affect our business and damage our reputation. Our ability to retain existing customers, expand solution and use case penetration with existing customers and acquire new customers is dependent upon our reputation as a trusted intelligent security provider. The

importance of our reputation in retaining existing business and acquiring new business is heightened by our focus on enterprise customers. In addition, we have a number of customers that operate in highly-regulated industries where our customers' data is particularly sensitive, such as financial services and healthcare. A network or security breach could damage our relationships with customers, result in the loss of customers across one or more use case or solution and make it more challenging to acquire new customers and such damage would likely be heightened in the event a network or security breach occurred in the highly-regulated industries we serve. Because techniques used to obtain unauthorized access to, or sabotage, systems change frequently and may not be recognized until launched against a target, we and our customers may be unable to anticipate these techniques or implement adequate preventive measures.

In addition, security incidents impacting our platform or the systems of our third-party service providers could result in a risk of loss or unauthorized access to or disclosure of the information we process on behalf of our customers. This, in turn, could require notification under applicable data privacy regulations, and could lead to litigation, governmental audits and investigations and possible liability, damage our relationships with our existing customers, trigger indemnification and other contractual obligations, cause us to incur investigation, mitigation and remediation expenses, and have a negative impact on our ability to attract and retain new customers. Furthermore, any such incident, including a breach of our customers' systems, could compromise our networks or networks secured by our solutions, creating system disruptions or slowdowns and exploiting security vulnerabilities of our or our customers' networks, and the information stored on our or our customers' systems could be accessed or disclosed without authorization, altered, lost or stolen, which could subject us to liability and cause us financial harm. An actual or perceived breach of our networks, our customers' networks or other networks secured by our solutions, whether or not due to a vulnerability in our platform, may also undermine confidence in our platform or our industry and result in expenditure of significant resources in efforts to analyze, correct, eliminate or work around errors or defects, delayed or lost revenue, delay in the development or release of new solutions or services, an increase in collection cycles for accounts receivable, damage to our brand and reputation, negative publicity, loss of channel partners, customers and sales, increased costs to remedy any problem, increased insurance expense and costly litigation. In addition, if a high profile security incident occurs with respect to another IAM solution provider, our customers and potential customers may lose trust in the value of the IAM solution business model generally, including the security of our solutions, which could adversely impact our ability to retain existing customers or attract new ones, potentially causing a negative impact on our business. Any of these negative outcomes could adversely impact market acceptance of our solutions and could adversely affect our business, results of operations and financial condition.

Third parties may attempt to fraudulently induce employees or customers into disclosing sensitive information such as user names, passwords or other information or otherwise compromise the security of our internal networks, electronic systems and/or physical facilities or those of our third-party service providers, in order to gain access to our data or our customers' data, which could result in significant legal and financial exposure, a loss of confidence in the security of our platform, interruptions or malfunctions in our operations, and, ultimately, harm to our future business prospects and revenue. We may be required to expend significant capital and financial resources to protect against such threats or to alleviate problems caused by breaches in security.

Our future revenue and operating results will be harmed if we are unable to acquire new customers, if our customers do not renew their arrangements with us, or if we are unable to expand sales to our existing customers or develop new solutions that achieve market acceptance.

To continue to grow our business, it is important that we continue to acquire new customers. Our success in adding new customers depends on numerous factors, including our ability to (1) offer a compelling Intelligent Identity Platform and effective solutions, (2) execute our sales and marketing strategy, (3) attract, effectively train and retain new sales, marketing, professional services and support personnel in the markets we pursue, (4) develop or expand relationships with channel partners, system integrators and technology partners (5) expand into new geographies and vertical markets, (6) deploy our platform and solutions for new customers and (7) provide quality customer support once deployed.

It is important to our continued growth that our customers renew their arrangements when existing contract terms expire. Our customers have no obligation to renew their subscription agreements, and our customers may decide not to renew these agreements with a similar contract period, at the same prices and terms or with the same or a greater number of identities, or at all. Our customer retention and expansion rates may decline or fluctuate as a result of a number of factors, including our customers' satisfaction with our solutions, our customer support and professional services, our prices and pricing plans, the competitiveness of other IAM solutions and services, reductions in our customers' spending levels, user adoption of our solutions, deployment success, utilization rates by our customers, new releases and changes to our solutions. Additionally, new consolidations, acquisitions, alliances or cooperative relationships involving one or more of our customers may lead such customers not to renew their existing subscriptions with us.

Our ability to increase revenue also depends in part on our ability to increase the number of identities managed by our platform and sell more solutions and use cases to our existing and new customers. Our ability to increase sales to existing customers depends on several factors, including their experience with implementing our solutions and using our platform and the existing solutions they have implemented, their ability to integrate our solutions with existing technologies and our pricing model. As we expand our market reach, we may experience difficulties in gaining traction and raising awareness among potential customers regarding the critical role that our solutions play in securing their businesses and we may face more competitive pressure in such markets.

If our new solutions do not achieve adequate acceptance in the market or if we fail to effectively incorporate features and capabilities that our customers expect, our competitive position could be impaired, and our potential to generate new revenue or to retain existing revenue could be diminished. The adverse effect on our financial results may be particularly acute because of the significant research, development, marketing, sales and other expenses we will have incurred in connection with the new solutions and our ability to introduce compelling new solutions that address the requirements of our customers in light of the dynamic IAM market in which we operate.

If we are unable to successfully acquire new customers, retain our existing customers, expand sales to existing customers or introduce new solutions, our business, financial condition and operating results could be adversely affected.

If we fail to manage our growth effectively, we may be unable to execute our business plan, maintain high levels of service and customer satisfaction or adequately address competitive challenges.

We have experienced, and may continue to experience, rapid growth and organizational change, which has placed, and may continue to place, significant demands on our management and our operational and financial resources. Additionally, our organizational structure may become more complex as we improve our operational, financial and management controls, as well as our reporting systems and procedures. We may require significant capital expenditures and the allocation of valuable management resources to grow and change in these areas. If we fail to effectively manage our anticipated growth and change, the quality of our platform may suffer, which could negatively affect our brand and reputation and harm our ability to retain and attract customers and employees.

We currently have international operations in the United Kingdom, Canada, Australia, France, Germany, India, Israel, Netherlands and Switzerland, and we may continue to expand our international operations in these jurisdictions and/or other countries in the future. Our expansion has placed, and our expected future growth will continue to place, a significant strain on our managerial, customer operations, research and development, sales and marketing, administrative, financial and other resources. If we are unable to manage our continued growth successfully, our business and results of operations could suffer.

In addition, as we expand our business, it is important that we continue to maintain a high level of customer service and satisfaction. As our customer base continues to grow, we will need to expand our account management, customer service and other personnel, and our network of channel partners and system integrators, to provide personalized account management and customer service. If we are not able to continue to provide high levels of customer service, our reputation, as well as our business, results of operations and financial condition, could be adversely affected.

We depend on our senior management team and other key employees, and the loss of one or more of these employees or an inability to attract and retain other highly skilled employees could harm our business.

Our success depends largely upon the continued services of our senior management team and other key employees. We rely on our leadership team in the areas of research and development, operations, security, marketing, sales, customer support, general and administrative functions and on individual contributors in our research and development and operations functions. From time to time, there may be changes in our executive management team resulting from the hiring or departure of executives, which could disrupt our business. We do not have employment agreements with our executive officers or other key personnel that require them to continue to work for us for any specified period and, therefore, they could terminate their employment with us at any time. The loss of one or more the members of our senior management team, or other key employees could harm our business. In particular, the loss of services of our founder and Chief Executive Officer, Andre Durand, could significantly delay or prevent the achievement of our strategic objectives. Changes in our executive management team may also cause disruptions in, and harm to, our business.

Failure to effectively develop and expand our sales and marketing capabilities could harm our ability to increase our customer base and achieve broader market acceptance of our solutions.

Our ability to increase our customer base and achieve broader market acceptance of our solutions will depend on our ability to expand our sales and marketing operations. Our business will be harmed if our business development efforts do not generate a corresponding increase in revenue. We may not achieve anticipated revenue growth from expanding our direct sales force if we are unable to hire and develop talented direct sales personnel, if our new direct sales personnel are unable to achieve desired productivity levels in a reasonable period of time, or if we are unable to retain our existing direct sales personnel. There is significant competition for sales personnel with the advanced sales skills and technical knowledge we need. Selling our solution to sophisticated enterprise customers requires particularly talented sales personnel with the ability to communicate the transformative potential of our platform.

We must attract and retain highly qualified personnel in order to execute our growth plan.

Competition for highly qualified personnel is intense, especially for engineers experienced in designing and developing software and SaaS offerings and experienced sales professionals. In recent years, recruiting, hiring and retaining employees with expertise in our industry has become increasingly difficult as the demand for cybersecurity and identity professionals has increased as a result of the recent cybersecurity attacks on global corporations and governments. We have, from time to time experienced, and we expect to continue to experience, difficulty in hiring and retaining employees with appropriate qualifications. Many of the companies with which we compete for experienced personnel have greater resources than we have. If we hire employees from competitors or other companies, their former employers may attempt to assert that these employees or we have breached certain legal obligations, resulting in a diversion of our time and resources. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects could be harmed.

If there are interruptions or performance problems associated with our technology or infrastructure, our existing customers may experience service outages, and our new customers may experience delays in the deployment of our platform.

Our continued growth depends on the ability of our existing and potential customers to access our platform 24 hours a day, seven days a week, without interruption or degradation of performance. We have in the past and may in the future experience disruptions, outages and other performance problems with our infrastructure due to a variety of factors, including infrastructure changes, introductions of new functionality, human or software errors, capacity constraints, DDOS attacks or other security-related incidents. In some instances, we may not be able to identify the cause or causes of these performance problems immediately or in short order. We may not be able to maintain the level of service uptime and

performance required by our customers, especially during peak usage times and as our solutions become more complex and our user traffic increases. If our platform is unavailable or if our customers are unable to access our solutions or deploy them within a reasonable amount of time, or at all, our business would be harmed. The adverse effects of any service interruptions on our reputation and financial condition may be disproportionately heightened due to the nature of our business and the fact that our customers expect continuous and uninterrupted access to our solutions and have a low tolerance for interruptions of any duration. Since our customers rely on our solutions to provide and secure access to their IT infrastructures and to support customer-facing applications, any outage on our platform would impair the ability of our customers to operate their businesses, which would negatively impact our brand, reputation and customer satisfaction.

Moreover, we depend on services from various third parties to maintain our cloud infrastructure and deploy our solutions, such as Amazon Web Services, or AWS, cloud infrastructure services, which hosts our platform. If a service provider fails to provide sufficient capacity to support our platform or otherwise experiences service outages, such failure could interrupt our customers' access to our services, which could adversely affect their perception of our platform's reliability and our revenue. Any disruptions in these services, including as a result of actions outside of our control, would significantly impact the continued performance of our solutions. In the future, these services may not be available to us on commercially reasonable terms, or at all. Any loss of the right to use any of these services could result in decreased functionality of our solutions until equivalent technology is either developed by us or, if available from another provider, is identified, obtained and integrated into our infrastructure. If we do not accurately predict our infrastructure capacity requirements, our customers could experience service shortfalls. We may also be unable to effectively address capacity constraints, upgrade our systems as needed and continually develop our technology and network architecture to accommodate actual and anticipated changes in technology.

Our platform is accessed by a large number of customers, often at the same time. As we continue to expand the number of our customers and solutions available to our customers, we may not be able to scale our technology to accommodate the increased capacity requirements, which may result in interruptions or delays in service. In addition, the failure of third-party cloud infrastructure providers, third-party internet service providers or other third-party service providers whose services are integrated with our platform to meet our capacity requirements could result in interruptions or delays in access to our platform or impede our ability to scale our operations. In the event that our service agreements are terminated with our cloud infrastructure providers, or there is a lapse of service, interruption of internet service provider connectivity or damage to such providers' facilities, we could experience interruptions in access to our platform as well as delays and additional expense in arranging new facilities and services.

Any of the above circumstances or events may harm our reputation, cause customers to terminate their agreements with us, impair our ability to obtain subscription renewals from existing customers, impair our ability to grow our customer base, result in the expenditure of significant financial, technical and engineering resources, subject us to financial penalties and liabilities under our service level agreements, and otherwise could adversely affect our business, results of operations and financial condition.

The delivery of our platform depends on AWS cloud infrastructure services.

Our SaaS offerings are hosted solely in AWS and our other offerings utilize the cloud infrastructure offered by AWS. Our operations depend on maintaining the configuration, architecture and interconnection specifications required by AWS. Although we have disaster recovery plans that utilize multiple AWS infrastructure locations, any incident affecting this infrastructure that may be caused by fire, flood, severe storm, earthquake, power loss, telecommunications failures, unauthorized intrusion, computer viruses and disabling devices, natural disasters, war, criminal act, military actions, terrorist attacks and other similar events beyond our control could negatively affect our platform. A prolonged AWS service disruption affecting our platform for any of the foregoing reasons could damage our reputation with current and potential customers, expose us to liability, cause us to lose customers or otherwise harm our business. In addition, since all of our cloud-based offerings utilize AWS cloud infrastructure services, in the event of a prolonged AWS services disruption we may not be able to find an alternative provider on commercially reasonable terms or in a timely manner, if at all. We may also incur significant costs for using alternative equipment or taking other actions in preparation for, or in reaction to, events that damage the AWS services we use.

AWS enables us to order and reserve server capacity in varying amounts and sizes distributed across multiple regions. AWS provides us with computing and storage capacity pursuant to an agreement that continues until terminated by either party. AWS may terminate the agreement by providing 30 days prior written notice and may, in some cases, terminate the agreement immediately for cause upon notice. If AWS terminates its agreement with us, we may be unable to deploy certain of our solutions and our business, results of operations and financial condition may be adversely affected.

In addition, since all of our cloud-based offerings utilize AWS cloud infrastructure resources, our customers' satisfaction with our cloud-based offerings is dependent in part upon their perceptions and satisfaction with AWS cloud infrastructure services. Dissatisfaction with AWS cloud infrastructure services could damage our relationships with customers and/or result in the loss of customers across one or more use case or solution.

Data privacy concerns, evolving regulations of cloud computing, cross-border data transfer restrictions and other domestic and foreign laws and regulations may limit the use and adoption of, or require modification of, our solutions and services, which could adversely affect our business.

Laws and regulations related to the provision of services on the Internet are increasing, as federal, state and foreign governments continue to adopt new laws and regulations addressing data privacy and the collection, processing, storage and use of personal information. Internationally, many of the jurisdictions in which we operate have established their own data security and privacy legal frameworks with which we, or our customers, must comply. We have implemented various features and processes intended to enable our customers to better comply with applicable privacy and security requirements, but these features and processes do not guarantee compliance and may not guard against all potential privacy concerns.

For example, the European Union, or the EU, adopted the General Data Protection Regime, or the GDPR, which became effective and enforceable across all 28 EU member states on May 25, 2018. The GDPR applies to any company established in the EU as well as to those outside the EU if they collect and use personal data in connection with the offering of goods or services to individuals in the EU or the monitoring of their behavior. The GDPR enhances data protection obligations for processors and controllers of personal data, including requiring additional disclosures about how personal information is to be used, and imposing limitations on retention of information, mandatory data breach notification requirements and onerous new obligations on services providers. Under the GDPR, fines of up to €20 million or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, may be imposed. Given the breadth and depth of changes in data protection obligations, complying with its requirements has caused us to expend significant resources and such expenditures are likely to continue into the near future as we respond to new interpretations, additional guidance and potential enforcement actions, and as we continue to negotiate data processing agreements with our customers and business partners.

In the United States, California enacted the California Consumer Privacy Act, or the CCPA, on June 28, 2018, which takes effect on January 1, 2020. The CCPA gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability. Some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation in the U.S., which could increase our potential liability and adversely affect our business.

Privacy and data protections laws and regulations are subject to new and differing interpretations and there may be significant inconsistency in laws and regulations among the jurisdictions in which we operate or provide our SaaS offerings. Legal and other regulatory requirements could restrict our ability to store and process data as part of our SaaS offerings, or, in some cases, impact our ability to provide our SaaS offerings in certain jurisdictions. Our inability to provide our offerings in certain jurisdictions, particularly China and Russia, as a result of their local data privacy frameworks may result in the loss of business opportunities from customers operating in, or seeking to expand into, those jurisdictions. In addition, we may seek to engage third party support providers in certain jurisdictions in order to comply with our customers' data privacy concerns and such engagements may be costly.

Privacy and data protection laws and regulations may also impact our customers' ability to deploy certain of our solutions globally, to the extent they utilize our solutions for storing personal information that they process. Additionally, if third parties that we work with violate applicable laws or our policies, such violations may also put our customers' information at risk and could in turn have an adverse effect on our business. The costs of compliance with, and other burdens imposed by, data privacy laws, regulations and standards may require resources to create new solutions or modify existing solutions, could lead to us being subject to significant fines, penalties or liabilities for noncompliance, could lead to complex and protracted contract negotiations with respect to privacy and data protection terms, and may slow the pace at which we close sales transactions, any of which could harm our business.

The data protection landscape is rapidly evolving, and we expect that there will continue to be new proposed laws, regulations and industry standards concerning privacy, data protection and information security. We cannot yet determine the impact that such future laws, regulations and standards may have on our business. Such laws and regulations are often subject to differing interpretations and may be inconsistent among jurisdictions. Any failure or perceived failure by us to comply with federal, state or foreign laws or regulations, industry standards, contractual obligations or other legal obligations, with respect to any security incident, whether or not resulting in unauthorized access to, or acquisition, release or transfer of personal data or other data, may result in governmental enforcement actions and prosecutions, private litigation, fines and penalties, friction in our customer relationships or adverse publicity, and could cause our customers to lose trust in us, which could have an adverse effect on our reputation and business.

Around the world, there are numerous lawsuits in process against various technology companies that process personal data. If those lawsuits are successful, it could increase the likelihood that we may be exposed to liability for our own policies and practices concerning the processing of personal data and could hurt our business. Furthermore, the costs of compliance with, and other burdens imposed by, laws, regulations and policies concerning privacy and data security that are applicable to the businesses of our customers may limit the use and adoption of our platform and reduce overall demand for it.

In addition, if our platform is perceived to cause, or is otherwise unfavorably associated with, violations of privacy or data security requirements, it may subject us or our customers to public criticism and potential legal liability. Existing and potential laws and regulations concerning privacy and data security and increasing sensitivity of consumers to unauthorized processing of personal data may create negative public reactions to technologies, solutions and services such as ours. Public concerns regarding personal data processing, privacy and security may cause some of our customers' end users to be less likely to visit their websites or otherwise interact with them. If enough end users choose not to visit our customers' websites or otherwise interact with them, our customers could stop using our platform. This, in turn, may reduce the value of our service and slow or eliminate the growth of our business.

THIS IS THE END OF A COMPOSITION COMPONENT

Our quarterly operating results and other metrics are likely to vary significantly and be unpredictable, which could cause the trading price of our stock to decline.

Our operating results and other metrics have historically varied from period to period, and we expect that they will continue to do so as a result of a number of factors, many of which are outside of our control and may be difficult to predict, including:

- the level of demand for our solutions, including our newly-introduced solutions, and the level of perceived urgency regarding security threats and compliance requirements;
- the timing and use of new subscriptions and renewals of existing subscriptions;
- the mix of cloud and on-premise offerings sold and the associated contract term;
- the extent to which customers subscribe for additional solutions or increase the number of identities or use cases;
- significant security breaches of, technical difficulties with, or interruptions to, the delivery and use of our offerings;
- customer budgeting cycles and seasonal buying patterns where our customers often time their purchases and renewals of our solutions to coincide with their fiscal year end, which is typically June 30 or December 31;
- any changes in the competitive landscape of our industry, including consolidation among our competitors, customers, partners or resellers;
- timing of costs and expenses during a quarter;
- deferral of orders in anticipation of new solutions or enhancements announced by us or our competitors;
- price competition;
- changes in renewal rates and terms in any quarter;
- costs related to the acquisition of businesses, talent, technologies or intellectual property by us, including potentially significant amortization costs and possible write-downs;
- litigation-related costs, settlements or adverse litigation judgments;
- any disruption in our sales channels or termination of our relationship with channel and other strategic partners;
- general economic conditions, both domestically and in our foreign markets, and related changes to currency exchange rates;
- insolvency or credit difficulties confronting our customers, affecting their ability to purchase or pay for our solutions; and
- future accounting pronouncements or changes in our accounting policies.

Any one of the factors above or the cumulative effect of some of the factors referred to above may result in significant fluctuations in our financial and other operating results, including fluctuations in our key metrics. This variability and unpredictability could result in our failing to meet the expectations of securities analysts or investors for any period. If we fail to meet or exceed such expectations for these or any other reasons, the market price of our shares could fall substantially and we could face costly lawsuits, including securities class action suits. In addition, a significant percentage of our operating expenses are fixed in nature and based on forecasted revenue and cash flow trends. Accordingly, in the event of revenue shortfalls, we are generally unable to mitigate the negative impact on margins or other operating results in the short term.

We may fail to meet or exceed the expectations of securities analysts and investors, and the market price for our common stock could decline. If one or more of the securities analysts who cover us change their recommendation regarding our stock adversely, the market price for our common stock could decline. Additionally, our stock price may be based on expectations, estimates or forecasts of our future performance that may be unrealistic or may not be achieved. Further, our stock price may be affected by financial media, including press reports and blogs.

Our revenue recognition policy and other factors may distort our financial results in any given period and make them difficult to predict.

Under accounting standards update No. 2014-09 (Topic 606), Revenue from Contracts with Customers, or ASC 606, we recognize revenue when our customer obtains control of goods or services in an amount that reflects the consideration that we expect to receive in exchange for those goods or services. Our subscription revenue includes subscription term-based license revenue, which is recognized when we transfer control of the term-based license to the customer, and subscription SaaS and support and maintenance revenue, which is recognized ratably over the contract period. Because subscription term-based license revenue is recognized upfront, a single, large license in a given period may distort our operating results for that period. In contrast, the impact of agreements that are recognized ratably may take years to be fully reflected in our financial statements.

Consequently, a significant increase or decline in our subscription SaaS and support and maintenance contracts in any one quarter will not be fully reflected in the results for that quarter, but will affect our revenue in future quarters. This also makes it challenging to forecast our revenue for future periods, as both the mix of solutions and services we will sell in a given period, as well as the size of contracts, is difficult to predict.

Furthermore, the presentation of our financial results requires us to make estimates and assumptions that may affect revenue recognition. In some instances, we could reasonably use different estimates and assumptions, and changes in estimates are likely to occur from period to period. See "Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies – Revenue Recognition".

Given the foregoing factors, our actual results could differ significantly from our estimates, comparing our revenue and operating results on a period-to-period basis may not be meaningful, and our past results may not be indicative of our future performance.

If we fail to enhance our brand cost-effectively, our ability to expand our customer base will be impaired and our business, results of operations and financial condition may be adversely affected.

We believe that developing and maintaining awareness of our brand in a cost-effective manner is critical to achieving widespread acceptance of our existing and future solutions and is an important element in attracting new customers. We believe that the importance of brand recognition will increase as competition in our market increases. Successful promotion of our brand will depend largely on the effectiveness of our marketing efforts and on our ability to develop and deploy high-quality, reliable and differentiated solutions to customers. In the past, our efforts to build our brand have involved significant expense. Brand promotion activities may not yield increased revenue, and even if they do, any increased revenue may not offset the expense we incur in building our brand. If we fail to successfully promote and maintain our brand, or incur substantial expense in an unsuccessful attempt to promote and maintain our brand, we may fail to attract new customers or retain our existing customers to the extent necessary to realize a sufficient return on our brand-building efforts, and our business, results of operations and financial condition could be adversely affected.

We are subject to anti-corruption, anti-bribery and similar laws, and non-compliance with such laws can subject us to criminal penalties or significant fines and harm our business and reputation.

We are subject to anti-corruption and anti-bribery and similar laws, such as the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, the U.K. Bribery Act 2010 and other anti-corruption, anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption and anti-bribery laws have been enforced aggressively in recent years and are interpreted broadly and prohibit companies and their employees and agents from promising, authorizing, making, offering, soliciting, or accepting, directly or indirectly, improper payments or other improper benefits to or from any person whether in the public or private sector. As we increase our international sales and business, our risks under these laws may increase. Noncompliance with these laws could subject us to investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, adverse media coverage and other consequences. Any investigations, actions or sanctions could adversely affect our business, results of operations and financial condition.

We are subject to governmental export and import controls and economic sanctions laws that could impair our ability to compete in international markets and subject us to liability if we are not in full compliance with applicable laws.

Our business activities are subject to various restrictions under U.S. export and import controls and trade and economic sanctions laws, including the U.S. Commerce Department's Export Administration Regulations, U.S. Customs regulations and various economic and trade sanctions regulations maintained by the U.S. Treasury Department's Office of Foreign Assets Control. U.S. export control laws and U.S. economic sanctions laws include prohibitions on the sale or supply of certain products and services to U.S. embargoed or sanctioned countries, governments, persons and entities. Changes in our solutions or services or changes in applicable export or import regulations may create delays in the introduction and sale of our solutions in international markets, prevent our customers with international operations from deploying our solutions or, in some cases, prevent the export or import of our solutions to certain countries, governments, or persons altogether. Any decreased use of our solutions or limitation on our ability to export or sell our solutions would likely adversely affect our business.

Furthermore, we incorporate encryption technology into certain of our solutions. U.S. export control laws require authorization for the export of encryption items. In addition, various countries regulate the import of certain encryption technology, including through import permitting and licensing requirements, and have enacted laws that could limit our ability to deploy our solutions and services or could limit our customers' ability to implement our offerings and services in those countries. Obtaining the necessary authorizations, including any required license, for a particular transaction may be time-consuming, is not guaranteed, and may result in the delay or loss of sales opportunities.

Although we take precautions to prevent our solutions from being provided in violation of U.S. export control and economic sanctions laws, our solutions may have been in the past, and could in the future be, provided inadvertently in violation of such laws. If we fail to comply with U.S. export control and economic sanctions laws and regulations, we and certain of our employees could be subject to civil or criminal penalties, including the possible loss of export privileges and monetary penalties. In addition, violations of such laws could result in negative consequences to us, including government investigations, penalties and harm to our reputation.

We function as a HIPAA "business associate" for certain of our customers and, as such, are subject to strict privacy and data security requirements. If we fail to comply with any of these requirements, we could be subject to significant liability, all of which can adversely affect our business as well as our ability to attract and retain new customers.

The Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their respective implementing regulations, or HIPAA, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's security standards directly applicable to "business associates". We function as a business associate for certain of our customers that are HIPAA covered entities and service providers, and in that context we are regulated as a business associate for the purposes of HIPAA. If we are unable to comply with our obligations as a HIPAA business associate, we could face substantial civil and even criminal liability. HITECH imposes four tiers of civil monetary penalties and gives state attorneys general authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, many state laws govern the privacy and security of health information in certain circumstances, many of which differ from HIPAA and each other in significant ways and may not have the same effect.

As a business associate, we are required by HIPAA to maintain HIPAA-compliant business associate agreements with our customers that are HIPAA covered entities and service providers, as well as our subcontractors that access, maintain, create or transmit individually identifiable health information on our behalf for the rendering of services to our HIPAA covered entity and service provider customers. These agreements impose stringent data security and other obligations on us. If we or our subcontractors are unable to meet the requirements of any of these business associate agreements, we could face contractual liability under the applicable business associate agreement as well as possible civil and criminal liability under HIPAA, all of which can have an adverse impact on our business and generate negative publicity, which, in turn, can have an adverse impact on our ability to attract and retain customers.

We may be the subject of various legal proceedings which could have a material adverse effect on our business, financial condition or results of operations.

In the ordinary course of business, we may be involved in various litigation matters, including but not limited to commercial disputes, employee claims and class actions, and from time to time may be involved in governmental or regulatory investigations or similar matters arising out of our current or future business. Any claims asserted against us, regardless of merit or eventual outcome, could harm our reputation and have an adverse impact on our relationship with our customers and other third parties and could lead to additional related claims. Certain claims may seek injunctive relief, which could disrupt the ordinary conduct of our business and operations or increase our cost of doing business. Our insurance or indemnities may not cover all claims that may be asserted against us, and any claims asserted against us, regardless of merit or eventual outcome, may harm our reputation and cause us to expend resources in our defense. Furthermore, there is no guarantee that we will be successful in defending ourselves in future litigation or similar matters under various laws. Should the ultimate judgments or settlements in any future litigation or investigation significantly exceed our insurance coverage, they could adversely affect our business, results of operations and financial condition.

Our sales cycle is frequently long and unpredictable, and our sales efforts require considerable time and expense.

Since we primarily focus on selling our solutions to enterprises, the timing of our sales can be difficult to predict. We and our channel partners are often required to spend significant time and resources to better educate and familiarize potential customers with the value proposition of our platform and solutions. Customers often view the purchase of our solutions as a strategic decision and significant investment and, as a result, frequently require considerable time to evaluate, test and qualify our platform and solutions prior to purchasing our solutions. In particular, for customers in highly-regulated industries, the selection of a security solution provider is a critical business decision due to the sensitive nature of these customers' data, which results in particularly extensive evaluation prior to the selection of information security vendors. During the sales cycle, we expend significant time and money on sales and marketing and contract negotiation activities, which may not result in a sale. Additional factors that may influence the length and variability of our sales cycle include:

- the discretionary nature of purchasing and budget cycles and decisions;
- lengthy purchasing approval processes;
- the industries in which our customers operate;
- the evaluation of competing solutions during the purchasing process;
- time, complexity and expense involved in replacing existing solutions;
- announcements or planned introductions of new solutions, features or functionality by our competitors or of new solutions or offerings by us; and
- evolving functionality demands.

If our efforts in pursuing sales and customers are unsuccessful, or if our sales cycles lengthen, our revenue could be lower than expected, which would adversely affect our business, results of operations or financial condition.

Our growth strategy includes the acquisition of other businesses or technologies, and we may not be able to identify suitable acquisition targets or otherwise successfully implement our growth strategy.

In order to expand our business, we have made several acquisitions of businesses, products and technologies and expect to continue making similar acquisitions and possibly larger acquisitions as part of our growth strategy. The success of our future growth strategy will depend in part on our ability to identify, negotiate, complete and integrate the acquisition of businesses or technologies and, if necessary, to obtain satisfactory debt or equity financing to fund those acquisitions. We expect to continue evaluating potential strategic acquisitions of businesses, assets and technologies. However, we may not be able to identify suitable candidates, negotiate appropriate or favorable acquisition terms, obtain financing that may be needed to consummate such transactions or complete proposed acquisitions. Further, there is significant competition for acquisition and expansion opportunities in the IAM industry.

Acquisitions are inherently risky, and any acquisitions we complete may not be successful. Our past acquisitions and any acquisitions that we may undertake in the future involve numerous risks, including, but not limited to, the following:

- difficulties in integrating and managing the operations, personnel, procedures, IT systems, technologies and the systems and solutions of the companies we acquire;
- diversion of our management's attention from normal daily operations of our business;
- potential loss of key employees, management and engineers of the companies we acquire;
- our inability to maintain the key business relationships and the reputations of the businesses we acquire;
- the price we pay for any business, asset or technology acquired may overstate the value of that business, asset or technology or otherwise be too high;
- uncertainty of entry into markets in which we have limited or no prior experience and in which competitors have stronger market positions;
- our dependence on unfamiliar affiliates, resellers and partners of the companies we acquire;
- our inability to increase sales from an acquisition for a number of reasons, including our failure to drive demand in our existing customer base for acquired businesses, assets or technologies;
- increased costs related to acquired operations and continuing support and development of acquired systems;
- our responsibility for the liabilities of the businesses we acquire and the potential failure to properly identify an acquisition target's liabilities, potential liabilities or risks;
- potential goodwill and intangible asset impairment charges and amortization associated with acquired businesses;
- failure to achieve acquisition synergies or to properly evaluate a target company's capabilities;
- adverse tax consequences associated with acquisitions;
- changes in how we are required to account for our acquisitions under GAAP, including arrangements that we assume from an acquisition;
- potential negative perceptions of our acquisitions by customers, financial markets or investors;
- failure to obtain any applicable required approvals from governmental authorities under competition and antitrust laws on a timely basis, if at all, which could, among other things, delay or prevent us from completing a transaction, or otherwise restrict our ability to realize the expected financial or strategic goals of an acquisition;
- potential increases in our interest expense, leverage and debt service requirements if we incur additional debt to pay for an acquisition, or dilution to our shareholders if we issue shares as consideration for an acquisition; and
- our inability to apply and maintain our internal standards, controls, procedures and policies to acquired businesses.

We regularly evaluate potential acquisition candidates and engage in discussions and negotiations regarding potential acquisitions; however, even if we execute a definitive agreement for an acquisition, there can be no assurance that we will consummate the transaction within the anticipated closing timeframe, or at all. Further, acquisitions typically involve the payment of a premium over book- and market-values and, therefore, some

dilution of our tangible book value and earnings per common share may occur in connection with any future transaction.

Inherent in any future acquisition is the risk of transitioning company cultures and facilities. The failure to efficiently and effectively achieve such transitions could increase our costs and decrease our profitability. Although we expect that the realization of efficiencies related to the integration of any acquired businesses will offset incremental transaction and acquisition-related costs over time, anticipated financial benefits may not be achieved in the near term, or at all.

Additionally, acquisitions or asset purchases made entirely or partially for cash may reduce our cash reserves or require us to incur additional debt under our credit agreements or otherwise. We may seek to obtain additional cash to fund an acquisition by selling equity or debt securities. We may be unable to secure the equity or debt funding necessary to finance future acquisitions on terms that are acceptable to us. If we finance acquisitions by issuing equity or convertible debt securities, our existing shareholders will experience ownership dilution.

The occurrence of any of these risks could have a material adverse effect on our business, results of operations or financial condition.

We may need to change our pricing models to compete successfully.

The intense competition we face in the sales of our solutions and services and general economic and business conditions can put pressure on us to change our prices. If our competitors offer deep discounts on certain solutions or services or develop solutions that the marketplace considers more valuable than ours, we may need to lower prices or offer other favorable terms in order to compete successfully. Any such changes may reduce margins and could adversely affect operating results. Additionally, the increasing prevalence of cloud and SaaS delivery models offered by us and our competitors may unfavorably impact pricing for both our on-premise and cloud-based offerings, as well as overall demand for our on-premise software and service offerings, which could reduce our revenues and profitability. Our competitors may offer lower pricing on their support offerings, which could put pressure on us to further discount our offering or support pricing. We also must determine the appropriate price of our offerings and services to enable us to compete effectively internationally.

Any broad-based change to our prices and pricing policies could cause our revenue to decline or be delayed as our sales force implements and our customers adjust to new pricing policies. We or our competitors may bundle solutions for promotional purposes or as a long-term go-to-market or pricing strategy or provide guarantees of prices and solution implementations. These practices could, over time, significantly constrain the prices that we can charge for certain of our solutions. If we do not adapt our pricing models to reflect changes in customer use of our solutions or changes in customer demand, our revenue could decrease.

Our failure to meet certain of our service level commitments could harm our business, results of operations and financial condition.

Our customer agreements contain service level commitments, under which we guarantee specified availability and error resolution times with respect to our solutions. Any failure of or disruption to our infrastructure could make our solutions unavailable to our customers. If we are unable to meet the stated service level commitments to our customers or suffer extended periods of unavailability of our SaaS offerings, we may be contractually obligated to provide affected customers with service credits, or customers could elect to terminate and receive refunds for prepaid amounts related to unused subscriptions. Our revenue, other results of operations and financial condition could be harmed if we suffer unscheduled downtime that exceeds the service level commitments under our agreements with our customers, and any extended service outages could adversely affect our business and reputation as customers may elect not to renew.

If we fail to offer high-quality customer support, our business and reputation will suffer.

Once our solutions are deployed, our customers rely on our support services to resolve any issues that may arise. High-quality customer education and customer support is important for the successful marketing and sale of our solutions and for the renewal of existing customers. We must successfully assist our customers in deploying our solutions, resolving performance issues and addressing interoperability challenges with a customer's existing network and security infrastructure. Many enterprises, particularly large enterprises, have complex networks and require high levels of focused support, including premium support offerings, to fully realize the benefits of our solutions. Any failure by us to maintain the expected level of support could reduce customer satisfaction and hurt our customer retention, particularly with respect to our large enterprise customers. To the extent that we are unsuccessful in hiring, training and retaining adequate support resources, our ability to provide adequate and timely support to our customers will be negatively impacted, and our customers' satisfaction with our solutions could be adversely affected. Given our growth, we may in the future engage third parties to provide support services to our customers. Any failure to properly train or oversee such contractors could result in a poor customer experience, which could have an adverse impact on our reputation and ability to renew subscriptions or engage new customers. In addition, most of our contracts with our larger customers require consent in the event we subcontract the services we provide thereunder. The process of obtaining consent to subcontract support services with these customers could be lengthy and there can be no assurance such consent would be provided.

Furthermore, as we sell our solutions internationally, our support organization faces additional challenges, including those associated with delivering support, training and documentation in languages other than English. Any failure to maintain high-quality customer support, or a market perception that we do not maintain high-quality support, could materially harm our reputation, business, financial condition and results of operations, and adversely affect our ability to sell our solutions to existing and prospective customers. The importance of high-quality customer support will increase as we expand our business and pursue new customers.

Our growth is substantially dependent on the success of our strategic relationships with channel partners and other third parties.

As part of our business development efforts, we anticipate that we will continue to depend on relationships with third parties, such as our channel partners and system integrators, to sell, market and deploy our solutions. Identifying partners, and negotiating and documenting relationships with them, requires significant time and resources. Our competitors may be effective in providing incentives to channel partners and other third parties to favor their solutions or services over subscriptions to our platform and a substantial number of our agreements with channel partners are non-exclusive such that those channel partners may offer customers the solutions of several different companies, including solutions that compete with ours. Our channel partners may cease marketing or reselling our platform with limited or no notice and without penalty. If our channel partners do not effectively sell, market or deploy our solutions, choose to promote our competitors' solutions or otherwise fail to meet the needs of our customers, our ability to grow our business and sell our solutions may be adversely affected. In addition, acquisitions of such partners by our competitors could result in a decrease in the number of our current and potential customers, as these partners may no longer facilitate the adoption of our applications by potential customers. Further, some of our partners are or may become competitive with certain of our solutions and may elect to no longer integrate with our platform. If we are unsuccessful in establishing or maintaining our relationships with third parties, our ability to compete in the marketplace or to grow our revenue could be impaired, and our results of operations may suffer. Even if we are successful, we cannot assure you that these relationships will result in increased customer usage of our solutions or increased revenue.

Adverse general and industry-specific economic and market conditions and reductions in IT and identity spending may reduce demand for our solutions, which could harm our results of operations.

Our revenue, results of operations and cash flows depend on the overall demand for our solutions. Concerns about the systemic impact of a potential widespread recession (in the United States or internationally), geopolitical issues or the availability and cost of credit could lead to increased market volatility, decreased consumer confidence and diminished growth expectations in the U.S. economy and abroad, which in turn could result in reductions in IT, IAM and identity security spending by our existing and prospective customers. For the six months ended June 30, 2019, 30% of our revenue was derived from the financial services industry, including banking. Negative economic conditions, including in the financial services industry, may cause customers to reduce their IT spending. Prolonged economic slowdowns may result in customers delaying or canceling IT projects, choosing to focus on in-house development efforts or seeking to lower their costs by requesting us to renegotiate existing contracts on less advantageous terms or defaulting on payments due on existing contracts or not renewing at the end of the contract term.

Our customers may merge with other entities who use alternative IAM solutions and, during weak economic times, there is an increased risk that one or more of our customers will file for bankruptcy protection, either of which may harm our revenue, profitability and results of operations. We also face risk from international customers that file for bankruptcy protection in foreign jurisdictions, particularly given that the application of foreign bankruptcy laws may be more difficult to predict. In addition, we may determine that the cost of pursuing any claim may outweigh the recovery potential of such claim. As a result, broadening or protracted extension of an economic downturn could harm our business, revenue, results of operations and cash flows.

If our platform and solutions do not effectively interoperate with our customers' existing or future IT infrastructures, our business would be harmed.

Our success depends on the interoperability of our platform and solutions with our customers' IT infrastructures, including third-party operating systems, applications, data and devices that we have not developed and do not control. Any changes in such infrastructure, operating systems, applications, data or devices that degrade the functionality of our platform or solutions or give preferential treatment to competitive solutions could adversely affect the adoption and usage of our platform. We may not be successful in quickly or cost effectively adapting our platform or solutions to operate effectively with these operating systems, applications, data or devices. If it is difficult for our customers to access and use our platform or solutions, or if our platform or solutions cannot connect a broadening range of applications, data and devices, then our customer growth and retention may be harmed, and our business, results of operations and financial condition could be adversely affected. We rely on open standards for many integrations between our solutions and third-party applications that our customers utilize, and in other instances on such third parties making available the necessary tools for us to create interoperability with their applications. If application providers were to move away from open standards, or if a critical, widely-utilized application provider were to adopt proprietary integration standards and not make them available for the purposes of facilitating interoperability with our platform, the utility of our solutions for our customers would be decreased.

Our ability to introduce new solutions and features is dependent on adequate research and development resources and our ability to successfully complete acquisitions. If we do not adequately fund our research and development efforts or complete acquisitions successfully, we may not be able to compete effectively and our business and results of operations may be harmed.

To remain competitive, we must continue to offer new solutions and enhancements to our platform. This is particularly true as we further expand and diversify our capabilities. Maintaining adequate research and development resources, such as the appropriate personnel and development technology, to meet the demands of the market is essential. If we elect not to or are unable to develop solutions internally due to certain constraints, such as high employee turnover, lack of management ability or a lack of other research and development resources, we may choose to expand into a certain market or strategy via an acquisition for which we could potentially pay too much or fail to successfully integrate into our operations. Further, many of our competitors expend a considerably greater amount of funds on their respective research and development programs, and those that do not may be acquired by larger companies that would allocate greater resources to our competitors' research and development programs. Our failure to maintain adequate research and development resources or to compete effectively with the research and development programs of our competitors would give an advantage to such competitors and our business, results of operations and financial condition could be adversely affected. Moreover, there is no assurance that our research and development or acquisition efforts will successfully anticipate market needs and result in significant new

marketable solutions or enhancements to our solutions, design improvements, cost savings, revenues or other expected benefits. If we are unable to generate an adequate return on such investments, we may not be able to compete effectively and our business and results of operations may be materially and adversely affected.

Our success depends, in part, on the integrity and scalability of our systems and infrastructures. System interruption and the lack of integration, redundancy and scalability in these systems and infrastructures may result in our business, results of operations and financial condition being adversely affected.

Our success depends, in part, on our ability to maintain the integrity of our systems and infrastructure, including websites, information and related systems. System interruption and a lack of integration and redundancy in our information systems and infrastructure may adversely affect our ability to operate websites, process and fulfill transactions, respond to customer inquiries and generally maintain cost-efficient operations. We may experience occasional system interruptions that make some or all systems or data unavailable or prevent us from efficiently providing access to our platform. Fire, flood, power loss, telecommunications failure, hurricanes, tornadoes, earthquakes, other natural disasters, acts of war or terrorism and similar events or disruptions may damage or interrupt computer, broadband or other communications systems and infrastructure at any time. Any of these events could cause system interruption, delays and loss of critical data, and could prevent us from providing access to our platform.

While we have backup systems for certain aspects of our operations, disaster recovery planning by its nature cannot be sufficient for all eventualities. In addition, we may not have adequate insurance coverage to compensate for losses from a major interruption. If any of these events were to occur, our business, results of operations and financial condition could be adversely affected.

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We rely on software and services from other parties. Defects in or the loss of access to software or services from third parties could increase our costs and adversely affect the quality of our solutions.

We rely on third-party computer systems, broadband and other communications systems and service providers in providing access to our platform. Any interruptions, outages or delays in our systems and infrastructure, our business and/or third parties, or deterioration in the performance of these systems and infrastructure, could impair our ability to provide access to our platform. Our business would be disrupted if any of the third-party software or services we utilize, particularly with respect to third-party software or services embedded in our solutions, or functional equivalents thereof, were unavailable due to extended outages or interruptions or because they are no longer available on commercially reasonable terms or prices or at all.

In each case, we would be required to either seek licenses to software or services from other parties and redesign our solutions to function with such software or services or develop these components ourselves, which would result in increased costs and could result in delays in our solution launches and the release of new solution offerings until equivalent technology can be identified, licensed or developed, and integrated into our solutions. Furthermore, we might be forced to limit the features available in our current or future solutions. If these delays and feature limitations occur, our business, results of operations and financial condition could be adversely affected.

Real or perceived errors, failures, vulnerabilities or bugs in our solutions, including deployment complexity, could harm our business and results of operations.

Errors, failures, vulnerabilities or bugs may occur in our solutions, especially when updates are deployed or new solutions are rolled out. Our platform is often used in connection with large-scale computing environments with different operating systems, system management software, equipment and networking configurations, which may cause errors or failures of solutions. In addition, deployment of our solutions into complicated, large-scale computing environments may expose errors, failures, vulnerabilities or bugs in our solutions. Any such errors, failures, vulnerabilities or bugs may not be found until after they are deployed to our customers. Real or perceived errors, failures, vulnerabilities or bugs in our solutions could result in negative publicity, loss of customer data, loss of or delay in market acceptance of our solutions, loss of competitive position, or claims by customers for losses sustained by them, all of which could adversely affect our business, results of operations and financial condition.

If we fail to adequately protect our proprietary rights, our competitive position could be impaired and we may lose valuable assets, generate less revenue and incur costly litigation to protect our rights.

Our success is dependent, in part, upon protecting our proprietary information and technology. We rely on a combination of patents, copyrights, trademarks, service marks, trade secret laws and contractual restrictions to establish and protect our proprietary rights. However, the steps we take to protect our intellectual property may be inadequate. We will not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Despite our precautions, it may be possible for unauthorized third parties to copy our solutions and use information that we regard as proprietary to create solutions that compete with ours. Some license provisions protecting against unauthorized use, copying, transfer and disclosure of our solutions may be unenforceable under the laws of certain jurisdictions and foreign countries. Further, the laws of some countries do not protect proprietary rights to the same extent as the laws of the United States, and mechanisms for enforcement of intellectual property rights in some foreign countries may be inadequate. To the extent we expand our international activities, our exposure to unauthorized copying and use of our solutions and proprietary information may increase. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon or misappropriating our technology and intellectual property.

We rely in part on trade secrets, proprietary know-how and other confidential information to maintain our competitive position. Although we enter into confidentiality and invention assignment agreements with our employees and consultants and enter into confidentiality agreements with the parties with whom we have strategic relationships and business alliances, no assurance can be given that these agreements will be effective in controlling access to and distribution of our solutions and proprietary information. Further, these agreements do not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our solutions.

To protect our intellectual property rights, we may be required to spend significant resources to monitor and protect these rights. Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Such litigation could be costly, time consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of our intellectual property rights. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay further sales or the implementation of our solutions, impair the functionality of our solutions, delay introductions of new solutions, result in our substituting inferior or more costly technologies into our solutions, or injure our reputation. In addition, we may be required to license additional technology from third parties to develop and market new solutions, and we cannot assure you that we could license that technology on commercially reasonable terms or at all, and our inability to license this technology could harm our ability to compete.

Our results of operations may be harmed if we are subject to an infringement claim or a claim that results in a significant damage award.

Other companies have claimed in the past, and may claim in the future, that we infringe upon their intellectual property rights. A claim may also be made relating to technology that we acquire or license from third parties. Because of constant technological change in the segments in which we compete, the extensive patent coverage of existing technologies, and the rapid rate of issuance of new patents, it is possible that the number of these claims may grow. If we were subject to a claim of infringement, regardless of the merit of the claim or our defenses, the claim could:

- require costly litigation to resolve and/or the payment of substantial damages or other amounts to settle such disputes;
- require significant management time;
- cause us to enter into unfavorable royalty or license agreements, if such arrangements are available at all;
- require us to discontinue the sale of some or all of our offerings, or to remove or reduce features or functionality of our solutions;
- require us to indemnify our customers or third-party service providers; and/or
- require us to expend additional development resources to redesign our solutions.

Any one or more of the above could adversely affect our business, results of operations and financial condition.

Our use of open source software in our offerings could negatively affect our ability to sell our solutions and subject us to possible litigation.

We use software modules licensed to us by third-party authors under "open source" licenses in our offerings. Some open source licenses require that users of the applicable software make available source code for modifications or derivative works created using that open source software. If we were to combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release or otherwise make available the source code of our proprietary software to the public. This would allow our competitors to create similar products with lower development effort and time and ultimately could result in a loss of sales for us.

Although we monitor our compliance with open source licenses and attempt to protect our proprietary source code from the effects stated above, we may inadvertently use open source software in a manner we do not intend and that could expose us to claims for breach of contract and intellectual property infringement. In addition, the terms of many open source licenses have not been interpreted by United States courts, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our solutions. If we are held to have breached the terms of an open source software license, we could be required to seek licenses from third parties to continue providing our offerings on terms that are not economically feasible, to re-engineer our offerings, to discontinue the sale of our offerings if re-engineering cannot be accomplished on a timely basis, or to make generally available, in source code form, a portion of our proprietary code, any of which could adversely affect our business, results of operations and financial condition. In addition to the risks described above, usage of open source software typically exposes us to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or assurance of title or controls on the functionality or origin of the software. Many of the risks associated with usage of open source software, such as the lack of warranties or assurances of title, cannot be eliminated, and could, if not properly addressed, negatively affect our business. We have established processes to help alleviate these risks, including a review process for screening requests from our development organizations for the use of open source software, but we cannot be sure that our processes for controlling our use of open source software in our offerings will be effective. Use of open source software may also present additional security risks because the public availability of such software may make it easier for hackers and other third parties to determine how to compromise our offerings.

We rely on SaaS vendors to operate certain functions of our business and any failure of such vendors to provide services to us could adversely impact our business and operations.

We rely on third-party SaaS vendors to operate certain critical functions of our business, including financial management, human resource management and customer relationship management. If these services become unavailable due to extended outages or interruptions or because they are no longer available on commercially reasonable terms or prices, our expenses could increase, our ability to manage our finances could be

interrupted and our processes for managing sales of our solutions and supporting our customers could be impaired until equivalent services, if available, are identified, obtained and integrated, all of which could harm our business.

Indemnity provisions in various agreements potentially expose us to substantial liability for intellectual property infringement and other losses.

Our agreements with customers and other third parties may include indemnification or other provisions under which we agree to indemnify them for losses suffered or incurred as a result of claims of intellectual property infringement, damage caused by us to property or persons, or other liabilities relating to or arising from the use of our platform or other acts or omissions. The term of these contractual provisions often survives termination or expiration of the applicable agreement. As we continue to grow, the possibility of infringement claims and other intellectual property rights claims against us may increase. For any intellectual property rights indemnification claim against us or our customers, we may incur significant legal expenses and may have to pay damages, settlement fees, license fees and/or stop using technology found to be in violation of the third-party's rights. Large indemnity payments could harm our business, results of operations and financial condition. We may also have to seek a license for the infringing or allegedly infringing technology. Such license may not be available on reasonable terms, if at all, and may significantly increase our operating expenses or may require us to restrict our business activities and limit our ability to deploy certain offerings. As a result, we may also be required to develop alternative non-infringing technology, which could require significant effort and expense and/or cause us to alter our platform or solutions, which could negatively affect our business. In addition, we may be subject to increased risk of infringement claims as a result of our use of open source software given that our agreements with our customers generally do not exclude open source software from the intellectual property indemnity we contractually agree to provide for our offerings.

From time to time, customers require us to indemnify them for breach of confidentiality, violation of applicable law or failure to implement adequate security measures with respect to their data stored, transmitted, or accessed using our platform. Although we normally contractually limit our liability with respect to such obligations, the existence of such a dispute may have adverse effects on our customer relationship and reputation and we may still incur substantial liability related to them.

Any assertions by a third party, whether or not successful, with respect to such indemnification obligations could subject us to costly and time-consuming litigation, expensive remediation and licenses, divert management attention and financial resources, harm our relationship with that customer and other current and prospective customers, reduce demand for our platform and result in our brand, business, results of operations and financial condition being adversely affected.

We may be subject to liability claims if we breach our contracts and our insurance may be inadequate to cover our losses.

We are subject to numerous obligations in our contracts with our customers and strategic partners. Despite the procedures, systems and internal controls we have implemented to comply with our contracts, we may breach these commitments, whether through a weakness in these procedures, systems and internal controls, negligence or the willful act of an employee or contractor.

Our insurance policies, including our errors and omissions insurance, may be inadequate to compensate us for the potentially significant losses that may result from claims arising from breaches of our contracts, disruptions in our services, including those caused by cybersecurity incidents, failures or disruptions to our infrastructure, catastrophic events and disasters or otherwise. In addition, such insurance may not be available to us in the future on economically reasonable terms, or at all. Further, our insurance may not cover all claims made against us and defending a suit, regardless of its merit, could be costly and divert management's attention.

Our customers may fail to pay us in accordance with the terms of their agreements, necessitating action by us to compel payment.

If customers fail to pay us under the terms of our agreements, we may be adversely affected both from the inability to collect amounts due and the cost of enforcing the terms of our contracts, including related litigation. Furthermore, some of our customers may seek bankruptcy protection or other similar relief and fail to pay amounts due to us, or pay those amounts more slowly, either of which could adversely affect our business, results of operations and financial condition.

Because our long-term success depends, in part, on our ability to expand the sales of our solutions to customers located outside of the United States, our business will be susceptible to risks associated with international operations.

We currently have international operations in the United Kingdom, Canada, Australia, France, Germany, India, Israel, Netherlands and Switzerland. In 2018, our international revenue was 23% of our total revenue. Any efforts that we may undertake to increase our international revenue may not be successful. In addition, continuing to expand our international footprint with our solutions subjects us to new risks, some of which we have not generally faced in the United States. These risks include, among other things:

- unexpected costs and errors in the localization of our solutions, including translation into foreign languages and adaptation for local practices and regulatory requirements;
- difficulties in developing and executing an effective go-to-market strategy in various locations;
- lack of familiarity and burdens of complying with foreign laws, legal standards, privacy standards, regulatory requirements, tariffs and other barriers;
- laws and business practices favoring local competitors or commercial parties;

- costs and liabilities related to compliance with foreign privacy, data protection and information security laws and regulations, including the GDPR, and the risks and costs of noncompliance;
- greater risk of a failure of foreign employees, partners, distributors and resellers to comply with both U.S. and foreign laws, including antitrust regulations, anti-bribery laws, export and import control laws, and any applicable trade regulations ensuring fair trade practices;
- practical difficulties of enforcing intellectual property rights in countries with fluctuating laws and standards and reduced or varied protection for intellectual property rights in some countries;
- unexpected changes in global, economic and political landscapes;
- unexpected changes in regulatory requirements, taxes, trade laws, tariffs, export quotas, custom duties or other trade restrictions;
- difficulties in managing system integrators and technology partners;
- differing technology standards;
- longer accounts receivable payment cycles and difficulties in collecting accounts receivable;
- difficulties in managing and staffing international operations and differing employer/employee relationships and local employment laws;
- political unrest, war, or terrorism, or regional natural disasters, particularly in areas in which we have facilities;
- fluctuations in exchange rates that may increase the volatility of our foreign-based revenue; and
- potentially adverse tax consequences, including the complexities of foreign value added tax (or other tax) systems and restrictions on the repatriation of earnings.

Additionally, operating in international markets also requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required in establishing operations in other countries will produce desired levels of revenue or profitability.

In addition, some of our business functions, such as research and development, may be siloed geographically, which may adversely affect the integration of our operations on a global scale.

We have limited experience in marketing, selling and supporting our platform abroad. Our limited experience in operating our business internationally increases the risk that any potential future expansion efforts that we may undertake will not be successful. If we invest substantial time and resources to increase our international revenue and are unable to do so successfully and in a timely manner, our business and results of operations will suffer.

We may face exposure to foreign currency exchange rate fluctuations.

Today, our international contracts are usually denominated in local currencies and the majority of our international costs are denominated in local currencies. Over time, an increasing portion of our international contracts may be denominated in local currencies. Therefore, fluctuations in the value of the U.S. dollar and foreign currencies may affect our results of operations when translated into U.S. dollars. We do not currently engage in currency hedging activities to limit the risk of exchange rate fluctuations. However, in the future, we may use derivative instruments, such as foreign currency forward and option contracts, to hedge certain exposures to fluctuations in foreign currency exchange rates. The use of such hedging activities may not offset any or more than a portion of the adverse financial effects of unfavorable movements in foreign exchange rates over the limited time the hedges are in place. Moreover, the use of hedging instruments may introduce additional risks if we are unable to structure effective hedges with such instruments.

Exposure to political developments in the United Kingdom, including the outcome of the U.K. referendum on membership in the EU, could harm us.

In June 2016, a referendum was held on the United Kingdom's membership in the EU, the outcome of which was a vote in favor of leaving the EU. The United Kingdom's vote to leave the EU creates an uncertain political and economic environment in the United Kingdom and potentially across other EU member states, which may last for a number of months or years.

The result of the referendum means that the long-term nature of the United Kingdom's relationship with the EU is unclear and that there is considerable uncertainty as to when any such relationship will be agreed and implemented. The political and economic instability created by the United Kingdom's vote to leave the EU has caused and may continue to cause significant volatility in global financial markets and the value of the British Pound or other currencies, including the Euro. Depending on the terms reached regarding any exit from the EU, it is possible that there may be adverse practical or operational implications on our business.

Our international operations may give rise to potentially adverse tax consequences.

Our corporate structure and associated transfer pricing policies anticipate future growth into the international markets. The amount of taxes we pay in different jurisdictions may depend on the application of the tax laws of the various jurisdictions, including the United States, to our international business activities, changes in tax rates, new or revised tax laws or interpretations of existing tax laws and policies and our ability to operate our business in a manner consistent with our corporate structure and intercompany arrangements. The taxing authorities of the jurisdictions in which we operate may challenge our methodologies for pricing intercompany transactions, which are generally required to be computed on an arm's-length basis pursuant to intercompany arrangements or disagree with our determinations as to the income and expenses attributable to specific jurisdictions. If such a challenge or disagreement were to occur, and our position was not sustained, we could be required to pay additional taxes, interest and penalties, which could result in one-time tax charges, higher effective tax rates, reduced cash flows and lower overall profitability of our operations. Our financial statements could fail to reflect adequate reserves to cover such a contingency.

Changes in tax laws or regulations in the various tax jurisdictions we are subject to that are applied adversely to us or our customers could increase the costs of our solutions and harm our business.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time. Those enactments could harm our domestic and international business operations, and our business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. These events could require us or our customers to pay additional tax amounts on a prospective or retroactive basis, as well as require us or our customers to pay fines and/or penalties and interest for past amounts deemed to be due. If we raise our prices to offset the costs of these changes, existing and potential future customers may elect not to purchase our solutions in the future. Additionally, new, changed, modified or newly interpreted or applied tax laws could increase our customers' and our compliance, operating and other costs, as well as the costs of our solutions. Further, these events could decrease the capital we have available to operate our business. Any or all of these events could harm our business and financial performance.

Comprehensive tax reform legislation could adversely affect our business and financial condition.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act of 2017, or the Tax Act, that significantly reforms the Internal Revenue Code of 1986, as amended, or the Code. The Tax Act, among other things, includes changes to U.S. federal tax rates, imposes significant additional limitations on the deductibility of interest and net operating loss carryforwards, allows for the expensing of capital expenditures, and puts into effect the migration from a "worldwide" system of taxation to a territorial system. While we have reflected the expected impact of the Tax Act in our financial statements in accordance with our understanding of the Tax Act and available guidance, the ultimate effects of the Tax Act remain uncertain. The U.S. Department of Treasury may issue regulations and guidance that may significantly impact how the Tax Act applies to us and resulting changes may have an adverse impact on our results of operations, cash flows and financial condition.

If we cannot maintain our corporate culture as we grow, our business may be harmed.

We believe that our corporate culture has been a critical component to our success and that our culture creates an environment that drives and perpetuates our overall business strategy. We have invested substantial time and resources in building our team and we expect to continue to hire aggressively as we expand, including with respect to our international operations. As we grow and mature as a public company and grow internationally, we may find it difficult to maintain our corporate culture. Any failure to preserve our culture could negatively affect our future success, including our ability to recruit and retain personnel and effectively focus on and pursue our business strategy.

We have identified a material weakness in our internal control over financial reporting and, if we are unable to remediate this material weakness, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company's annual or interim financial statements will not be prevented or detected on a timely basis. During the course of preparing for this offering, we identified a material weakness in our internal control over financial reporting as we did not design and maintain effective controls related to the quarterly accounting for income taxes. Specifically, we did not design and maintain effective controls related to the preparation, analysis and review of the interim income tax provision and significant income tax balance sheet accounts required to assess the accuracy and completeness of the income tax amounts reported within the consolidated financial statements at period end. This material weakness resulted in the restatement of the interim financial statements as of and for the nine months ended September 30, 2018, as well as the financial information for each of the quarters within 2018.

The control deficiency could result in a misstatement of these accounts or disclosures that would result in a material misstatement of our interim consolidated financial statements that would not be prevented or detected, and accordingly, we determined that the control deficiency constitutes a material weakness.

We are working to remediate this material weakness through the development and implementation of processes and controls over the preparation of the interim tax provision and related tax assets and liabilities. Specifically:

- we have performed a risk assessment and identified control activities to be implemented in response to the identified risks; and
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we have designed and implemented new control activities related to the preparation of the interim tax provision and related tax assets and liabilities.

While new controls have been designed and implemented, they have not operated for a sufficient period of time to demonstrate the material weakness has been remediated. We cannot assure you that the measures we have taken to date will be sufficient to remediate the material weakness we identified or avoid the identification of additional material weaknesses in the future. Although we plan to complete this remediation process soon, if the steps we take do not remediate the material weakness in a timely manner, there could continue to be a reasonable possibility that this control deficiency or others could result in a material misstatement of our annual or interim financial statements that would not be prevented or detected on a timely basis.

As a result of becoming a public company, we will be obligated to develop and maintain proper and effective internal control over financial reporting in order to comply with Section 404 of the Sarbanes-Oxley Act. We may not complete our analysis of our internal control over financial reporting in a timely manner, or these internal controls may not be determined to be effective, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. We are in the very early stages of the costly and challenging process of compiling the system and processing documentation necessary to perform the evaluation needed to comply with Section 404 of the Sarbanes-Oxley Act. We may not be able to complete our evaluation, testing and any required remediation prior to becoming a public company or in a timely manner thereafter. See "– We have identified a material weakness in our internal control over financial reporting and, if we are unable to remediate this material weakness, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect investor confidence in us and, as a result, the value of our common stock." If we are unable to assert that our internal control over financial reporting is effective, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our common stock to decline, and we may be subject to investigation or sanctions by the SEC.

We will be required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting as of the end of the fiscal year that coincides with the filing of our second annual report on Form 10-K. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. We will also be required to disclose changes made in our internal control and procedures on a quarterly basis. However, our independent registered public accounting firm will not be required to report on the effectiveness of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act until the later of the year following our first annual report required to be filed with the SEC, or the date we are no longer an "emerging growth company" as defined in the JOBS Act if we take advantage of the exemptions contained in the JOBS Act. At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed or operating.

Additionally, the existence of any material weakness, including our existing material weakness regarding accounting for quarterly income taxes, or significant deficiency would require management to devote significant time and incur significant expense to remediate any such material weaknesses or significant deficiencies and management may not be able to remediate any such material weaknesses or significant deficiencies in a timely manner. The existence of any material weakness in our internal control over financial reporting could also result in errors in our financial statements that could require us to restate our financial statements, cause us to fail to meet our reporting obligations and cause shareholders to lose confidence in our reported financial information, all of which could materially and adversely affect our business and stock price. To comply with the requirements of being a public company, we may need to undertake various costly and time-consuming actions, such as implementing new internal controls and procedures and hiring accounting or internal audit staff, which may adversely affect our business, financial condition and results of operations.

Our management team has limited experience managing a public company.

Most members of our management team have limited experience managing a publicly-traded company, interacting with public company investors, and complying with the increasingly complex laws pertaining to public companies. Our management team may not successfully or efficiently manage us as a public company that is subject to significant regulatory oversight and reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors. These new obligations and constituents require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, results of operations and financial condition.

We face risks associated with having operations and employees located in Israel.

We have an office and employees located in Israel. As a result, political, economic, and military conditions in Israel directly affect our operations. The future of peace efforts between Israel and its Arab neighbors remains uncertain. There has been a significant increase in hostilities and political unrest between Hamas and Israel in the past few years. The effects of these hostilities and violence on the Israeli economy and our operations in Israel are unclear, and we cannot predict the effect on us of further increases in these hostilities or future armed conflict, political instability or violence in the region. Current or future tensions and conflicts in the Middle East could adversely affect our business, operating results, financial condition and cash flows.

In addition, many of our employees in Israel are obligated to perform annual reserve duty in the Israeli military and are subject to being called for active duty under emergency circumstances. We cannot predict the full impact of these conditions on us in the future, particularly if emergency circumstances or an escalation in the political situation occurs. If many of our employees in Israel are called for active duty for a significant period of time, our operations and our business could be disrupted and may not be able to function at full capacity. Any disruption in our operations in Israel could adversely affect our business.

A portion of our revenue is generated by sales to government entities, which are subject to a number of challenges and risks, such as increased competitive pressures, administrative delays and additional approval requirements.

A portion of our revenue is generated by sales to U.S. and foreign federal, state and local governmental agency customers, and we may in the future increase sales to government entities. Selling to government entities can be highly competitive, expensive and time consuming, often requiring significant upfront time and expense without any assurance that we will complete a sale or imposing terms of sale which are less favorable than the prevailing market terms. Government demand and payment for our solutions and services may be impacted by public sector budgetary cycles and funding authorizations, with funding reductions or delays adversely affecting public sector demand for our solutions. Governments routinely investigate and audit government contractors' administrative processes and any unfavorable audit could result in fines, civil or criminal liability, further investigations, damage to our reputation and debarment from further government business.

Catastrophic events may disrupt our business.

Natural disasters or other catastrophic events may cause damage or disruption to our operations, international commerce and the global economy, and thus could harm our business. In the event of a major earthquake, hurricane or catastrophic event such as fire, power loss, telecommunications failure, cyberattack, war or terrorist attack, we may be unable to continue our operations and may endure system interruptions, reputational harm, delays in our application development, lengthy interruptions in our solutions, breaches of data security and loss of critical data, all of which could adversely affect our business, results of operations and financial condition. In addition, the insurance we maintain may not be adequate to cover our losses resulting from disasters or other business interruptions.

Certain estimates of market opportunity and forecasts of market growth included in this prospectus may prove to be inaccurate.

This prospectus includes our internal estimates of the addressable market for identity solutions. Market opportunity estimates and growth forecasts, whether obtained from third-party sources or developed internally, are subject to significant uncertainty and are based on assumptions and estimates that may not prove to be accurate. The estimates and forecasts in this prospectus relating to the size and expected growth of our target market, market demand and adoption, capacity to address this demand and pricing may prove to be inaccurate. In particular, our estimates regarding our current and projected market opportunity is difficult to predict. In addition, our internal estimates of the addressable market for IAM solutions reflects the opportunity available from all participants and potential participants in the market. The addressable market we estimate may not materialize for many years, if ever, and even if the markets in which we compete meet the size estimates and growth forecasted in this prospectus, our business could fail to grow at similar rates, if at all.

Risks Relating to Our Indebtedness

Our existing indebtedness could adversely affect our business and growth prospects.

As of June 30, 2019, we had total current and long-term indebtedness outstanding of $248.2 million, including (i) $247.5 million outstanding under our term loan facility, or our Term Loan Facility, (ii) no borrowings outstanding under our revolving credit facility, or our Revolving Credit Facility, and together with the Term Loan Facility, our Credit Facilities and (iii) $0.7 million of outstanding letters of credit. In addition, as of June 30, 2019, we had $25.0 million of additional borrowing capacity under our Revolving Credit Facility. All obligations under the Credit Agreement are secured by first-priority perfected security interests in substantially all of our assets and the assets of our subsidiaries, subject to permitted liens and other exceptions. Our indebtedness, or any additional indebtedness we may incur, could require us to divert funds identified for other purposes for debt service and impair our liquidity position. If we cannot generate sufficient cash flow from operations to service our debt, we may need to refinance our debt, dispose of assets or issue equity to obtain necessary funds. We do not know whether we will be able to take any of these actions on a timely basis, on terms satisfactory to us or at all.

Our indebtedness, the cash flow needed to satisfy our debt and the covenants contained in our Credit Facilities have important consequences, including:

- limiting funds otherwise available for financing our capital expenditures by requiring us to dedicate a portion of our cash flows from operations to the repayment of debt and the interest on this debt;
- limiting our ability to incur additional indebtedness;
- limiting our ability to capitalize on significant business opportunities;
- making us more vulnerable to rising interest rates; and
- making us more vulnerable in the event of a downturn in our business.

Our level of indebtedness may place us at a competitive disadvantage to our competitors that are not as highly leveraged. Fluctuations in interest rates can increase borrowing costs. Increases in interest rates may directly impact the amount of interest we are required to pay and reduce earnings accordingly. In addition, developments in tax policy, such as the disallowance of tax deductions for interest paid on outstanding indebtedness, could have an adverse effect on our liquidity and our business, financial conditions and results of operations. Further, our Credit Facilities contain customary affirmative and negative covenants and certain restrictions on operations that could impose operating and financial limitations and restrictions on us, including restrictions on our ability to enter into particular transactions and to engage in other actions that we may believe are advisable or necessary for our business. Our Term Loan Facility is also subject to mandatory prepayments in certain circumstances and requires a prepayment of a certain percentage of our excess cash flow. This excess cash flow payment, and future required prepayments, will reduce our cash available for investment in our business.

We expect to use cash flow from operations to meet current and future financial obligations, including funding our operations, debt service requirements and capital expenditures. The ability to make these payments depends on our financial and operating performance, which is subject to prevailing economic, industry and competitive conditions and to certain financial, business, economic and other factors beyond our control.

Despite current indebtedness levels and restrictive covenants, we may still be able to incur substantially more indebtedness or make certain restricted payments, which could further exacerbate the risks associated with our substantial indebtedness.

We may be able to incur significant additional indebtedness in the future. Although the financing documents governing our Credit Facilities contain restrictions on the incurrence of additional indebtedness and liens, these restrictions are subject to a number of important qualifications and exceptions, and the additional indebtedness and liens incurred in compliance with these restrictions could be substantial.

The financing documents governing our Credit Facilities permit us to incur certain additional indebtedness, including liabilities that do not constitute indebtedness as defined in the financing documents. We may also consider investments in joint ventures or acquisitions, which may increase our indebtedness. In addition, financing documents governing our Credit Facilities do not restrict our Sponsor from creating new holding companies that may be able to incur indebtedness without regard to the restrictions set forth in the financing documents governing our Credit Facilities. If new debt is added to our currently anticipated indebtedness levels, the related risks that we face could intensify.

We may not be able to generate sufficient cash flow to service all of our indebtedness, and may be forced to take other actions to satisfy our obligations under such indebtedness, which may not be successful.

Our ability to make scheduled payments or to refinance outstanding debt obligations depends on our financial and operating performance, which will be affected by prevailing economic, industry and competitive conditions and by financial, business and other factors beyond our control. We may not be able to maintain a sufficient level of cash flow from operating activities to permit us to pay the principal, premium, if any, and interest on the our indebtedness. Any failure to make payments of interest and principal on our outstanding indebtedness on a timely basis would likely result in a reduction of our credit rating, which would also harm our ability to incur additional indebtedness.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures, sell assets, seek additional capital or seek to restructure or refinance our indebtedness. Any refinancing of our indebtedness could be at higher interest rates and may require us to comply with more onerous covenants. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In the absence of such cash flows and resources, we could face substantial liquidity problems and might be required to sell material assets or operations to attempt to meet our debt service obligations. The financing documents governing our Credit Facilities restrict our ability to conduct asset sales and/or use the proceeds from asset sales. We may not be able to consummate these asset sales to raise capital or sell assets at prices and on terms that we believe are fair and any proceeds that we do receive may not be adequate to meet any debt service obligations then due. If we cannot meet our debt service obligations, the holders of our indebtedness may accelerate such indebtedness and, to the extent such indebtedness is secured, foreclose on our assets. In such an event, we may not have sufficient assets to repay all of our indebtedness.

The terms of the financing documents governing our Credit Facilities restrict our current and future operations, particularly our ability to respond to changes or to take certain actions.

The financing documents governing our Credit Facilities contain a number of restrictive covenants that impose significant operating and financial restrictions on us and may limit our ability to engage in acts that may be in our long-term best interests, including restrictions on our ability to:

- incur additional indebtedness;
- pay dividends on or make distributions in respect of capital stock or repurchase or redeem capital stock;
- prepay, redeem or repurchase certain indebtedness;
- make loans and investments;
- sell or otherwise dispose of assets, including capital stock of restricted subsidiaries;
- incur liens;
-

enter into transactions with affiliates;

- enter into agreements restricting the ability of our subsidiaries to pay dividends; and
- consolidate, merge or sell all or substantially all of our assets.

You should read the discussion under the heading "Description of Certain Indebtedness" for further information about these covenants.

The restrictive covenants in the financing documents governing our Credit Facilities require us to maintain specified financial ratios and satisfy other financial condition tests to the extent applicable. Our ability to meet those financial ratios and tests can be affected by events beyond our control.

A breach of the covenants or restrictions under the financing documents governing our Credit Facilities could result in an event of default under such documents. Such a default may allow the creditors to accelerate the related debt, which may result in the acceleration of any other debt to which a cross-acceleration or cross-default provision applies. In the event the holders of our indebtedness accelerate the repayment, we may not have sufficient assets to repay that indebtedness or be able to borrow sufficient funds to refinance it. Even if we are able to obtain new financing, it may not be on commercially reasonable terms or on terms acceptable to us. As a result of these restrictions, we may be:

- limited in how we conduct our business;
- unable to raise additional debt or equity financing to operate during general economic or business downturns; or
- unable to compete effectively or to take advantage of new business opportunities.

These restrictions, along with restrictions that may be contained in agreements evidencing or governing other future indebtedness, may affect our ability to grow in accordance with our growth strategy.

We may be unable to refinance our indebtedness.

We may need to refinance all or a portion of our indebtedness before maturity. We cannot assure you that we will be able to refinance any of our indebtedness on commercially reasonable terms or at all. There can be no assurance that we will be able to obtain sufficient funds to enable us to repay or refinance our debt obligations on commercially reasonable terms, or at all.

A lowering or withdrawal of the ratings assigned to our debt securities by rating agencies may increase our future borrowing costs and reduce our access to capital.

Our debt currently has a non-investment grade rating, and any rating assigned could be lowered or withdrawn entirely by a rating agency if, in that rating agency's judgment, future circumstances relating to the basis of the rating, such as adverse changes, so warrant. Any future lowering of our ratings likely would make it more difficult or more expensive for us to obtain additional debt financing ***Our failure to raise additional capital or generate cash flows necessary to expand our operations and invest in new technologies in the future could reduce our ability to compete successfully and harm our results of operations.***

We may need to raise additional funds, and we may not be able to obtain additional debt or equity financing on favorable terms or at all. If we raise additional equity financing, our security holders may experience significant dilution of their ownership interests. If we engage in additional debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, force us to maintain specified liquidity or other ratios or restrict our ability to pay dividends or make acquisitions. If we need additional capital and cannot raise it on acceptable terms, or at all, we may not be able to, among other things:

- develop and enhance our solutions;
- continue to expand our solution development, sales and marketing organizations;
- hire, train and retain employees;
- respond to competitive pressures or unanticipated working capital requirements; or
- pursue acquisition opportunities.

In addition, our Credit Facilities also limit our ability to incur additional debt and therefore we likely would have to amend our Credit Facilities or issue additional equity to raise capital. If we issue additional equity, your interest in us will be diluted.

Risks Relating to Our Common Stock and This Offering

Vista controls us, and its interests may conflict with ours or yours in the future.

Immediately following this offering, Vista will beneficially own approximately % of our common stock, or % if the underwriters exercise in full their option to purchase additional shares, which means that, based on its percentage voting power held after the offering, Vista will control the vote of all matters submitted to a vote of our board of directors, or our Board, or shareholders, which will enable it to control the election of the members of the Board and all other corporate decisions. Even when Vista ceases to own shares of our stock representing a majority of the total voting power, for so long as Vista continues to own a significant percentage of our stock, Vista will still be able to significantly influence the composition of our Board and the approval of actions requiring shareholder approval. Accordingly, for such period of time, Vista will have significant influence with respect to our management, business plans and policies, including the appointment and removal of our officers, decisions on whether to raise future capital and amending our charter and bylaws, which govern the rights attached to our common stock. In particular, for so long as Vista continues to own a significant percentage of our stock, Vista will be able to cause or prevent a change of control of us or a change in the composition of our Board and could preclude any unsolicited acquisition of us. The concentration of ownership could deprive you of an opportunity to receive a premium for your shares of common stock as part of a sale of us and ultimately might affect the market price of our common stock.

THIS IS THE END OF A COMPOSITION COMPONENT

In addition, in connection with this offering, we will enter into a Director Nomination Agreement with Vista that provides Vista the right to designate: (i) all of the nominees for election to our Board for so long as Vista beneficially owns 40% or more of the total number of shares of our common stock it owns as of the date of this offering; (ii) a number of directors (rounded up to the nearest whole number) equal to 40% of the total directors for so long as Vista beneficially owns at least 30% and less than 40% of the total number of shares of our common stock it owns as of the date of this offering; (iii) a number of directors (rounded up to the nearest whole number) equal to 30% of the total directors for so long as Vista beneficially owns at least 20% and less than 30% of the total number of shares of our common stock it owns as of the date of this offering; (iv) a number of directors (rounded up to the nearest whole number) equal to 20% of the total directors for so long as Vista beneficially owns at least 10% and less than 20% of the total number of shares of our common stock it owns as of the date of this offering; and (v) one director for so long as Vista beneficially owns at least 5% and less than 10% of the total number of shares of our common stock it owns as of the date of this offering. The Director Nomination Agreement will also provide that Vista may assign such right to a Vista affiliate. The Director Nomination Agreement will prohibit us from increasing or decreasing the size of our Board without the prior written consent of Vista. See "Certain Relationships and Related Party Transactions – Related Party Transactions – Director Nomination Agreement" for more details with respect to the Director Nomination Agreement.

Vista and its affiliates engage in a broad spectrum of activities, including investments in the information and business services industry generally. In the ordinary course of their business activities, Vista and its affiliates may engage in activities where their interests conflict with our interests or those of our other shareholders, such as investing in or advising businesses that directly or indirectly compete with certain portions of our business or are suppliers or customers of ours. Our certificate of incorporation to be effective in connection with the closing of this offering will provide that none of Vista, any of its affiliates or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or its affiliates will have any duty to refrain from engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which we operate. Vista also may pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us. In addition, Vista may have an interest in pursuing acquisitions, divestitures and other transactions that, in its judgment, could enhance its investment, even though such transactions might involve risks to you.

Upon listing of our shares on NASDAQ, we will be a "controlled company" within the meaning of the rules of NASDAQ and, as a result, we will qualify for, and intend to rely on, exemptions from certain corporate governance requirements. You will not have the same protections as those afforded to stockholders of companies that are subject to such governance requirements.

After completion of this offering, the Vista Funds will continue to control a majority of the voting power of our outstanding common stock. As a result, we will be a "controlled company" within the meaning of the corporate governance standards of NASDAQ. Under these rules, a company of which more than 50% of the voting power for the election of directors is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of our Board consist of independent directors;
- the requirement that we have a nominating and corporate governance committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities;
- the requirement that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- the requirement for an annual performance evaluation of the nominating and corporate governance and compensation committees.

Following this offering, we intend to utilize these exemptions. As a result, we may not have a majority of independent directors on our Board, our Compensation and Nominating Committee may not consist entirely of independent directors and our Compensation and Nominating Committee may not be subject to annual performance evaluations. Accordingly, you will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of NASDAQ.

We are an "emerging growth company" and we expect to elect to comply with reduced public company reporting requirements, which could make our common stock less attractive to investors.

We are an "emerging growth company", as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we are eligible for certain exemptions from various public company reporting requirements. These exemptions include, but are not limited to, (i) not being required to comply with the auditor attestation requirements of Section 404 of Sarbanes-Oxley, (ii) reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements, (iii) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved and (iv) not being required to provide audited financial statements for the year ended December 31, 2016, or five years of Selected Consolidated Financial Data, in this prospectus. We could be an emerging growth company for up to five years after the first sale of our common stock pursuant to an effective registration statement under the Securities Act, which fifth anniversary will occur in 2024. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer", our annual gross revenue exceeds $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we would cease to be an emerging growth company prior to the end of such five-year period. We have made certain elections with regard to the reduced disclosure obligations regarding executive compensation in this prospectus and may elect to take advantage of other reduced disclosure obligations in future filings. As a result, the information that we provide to holders of our common stock may be different than you might receive from other public reporting companies in which you hold equity interests. We cannot predict if investors will find our common stock less attractive as a result of our reliance on these exemptions. If some investors find our common stock less attractive as a result of any choice we make to reduce disclosure, there may be a less active trading market for our common stock and the market price for our common stock may be more volatile.

Under the JOBS Act, emerging growth companies may also elect to delay adoption of new or revised accounting standards until such time as those standards apply to private companies. We have elected to "opt-in" to this extended transition period for complying with new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that comply with such new or revised accounting standards on a non-delayed basis.

The requirements of being a public company may strain our resources and distract our management, which could make it difficult to manage our business, particularly after we are no longer an "emerging growth company".

As a public company, we will incur legal, accounting and other expenses that we did not previously incur. We will become subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the Sarbanes-Oxley Act, the listing requirements of NASDAQ and other applicable securities rules and regulations. Compliance with these rules and regulations will increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and increase demand on our systems and resources, particularly after we are no longer an "emerging growth company". The Exchange Act requires that we file annual, quarterly and current reports with respect to our business, financial condition and results of operations. The Sarbanes-Oxley Act requires, among other things, that we establish and maintain effective internal controls and procedures for financial reporting. Furthermore, the need to establish the corporate infrastructure demanded of a public company may divert our management's attention from implementing our growth strategy, which could prevent us from improving our business, financial condition and results of operations. We have made, and will continue to make, changes to our internal controls and procedures for financial reporting and accounting systems to meet our reporting obligations as a public company. However, the measures we take may not be sufficient to satisfy our obligations as a public company. In addition, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur substantial costs to maintain the same or similar coverage. These additional obligations could have a material adverse effect on our business, financial condition and results of operations.

In addition, changing laws, regulations and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs and making some activities more time consuming. These laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of our management's time and attention from sales-generating activities to compliance activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to their application and practice, regulatory authorities may initiate legal proceedings against us and could have a material adversely effect on our business, financial condition and results of operations.

Provisions of our corporate governance documents could make an acquisition of us more difficult and may prevent attempts by our shareholders to replace or remove our current management, even if beneficial to our shareholders.

In addition to Vista's beneficial ownership of % of our common stock after this offering (or %, if the underwriters exercise in full their option to purchase additional shares), our certificate of incorporation and bylaws to be effective in connection with the closing of this offering and the Delaware General Corporation Law, or the DGCL, contain provisions that could make it more difficult for a third party to acquire us, even if doing so might be beneficial to our shareholders. Among other things:

- these provisions allow us to authorize the issuance of undesignated preferred stock, the terms of which may be established and the shares of which may be issued without shareholder approval, and which may include supermajority voting, special approval, dividend, or

other rights or preferences superior to the rights of shareholders;

- these provisions provide for a classified board of directors with staggered three-year terms;
- these provisions provide that, at any time when Vista beneficially owns, in the aggregate, less than 40% in voting power of the our stock entitled to vote generally in the election of directors, directors may only be removed for cause, and only by the affirmative vote of holders of at least $66^{2}/_{3}\%$ in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class;
- these provisions prohibit shareholder action by written consent from and after the date on which Vista beneficially owns, in the aggregate, less than 35% in voting power of our stock entitled to vote generally in the election of directors;
- these provisions provide that for as long as Vista beneficially owns, in the aggregate, at least 50% in voting power of our stock entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of our bylaws by our shareholders will require the affirmative vote of a majority in voting power of the outstanding shares of our stock and at any time when Vista beneficially owns, in the aggregate, less than 50% in voting power of all outstanding shares of our stock entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of our bylaws by our shareholders will require the affirmative vote of the holders of at least $66^{2}/_{3}\%$ in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class; and
- these provisions establish advance notice requirements for nominations for elections to our Board or for proposing matters that can be acted upon by shareholders at shareholder meetings; provided, however, at any time when Vista beneficially owns, in the aggregate, at least 10% in voting power of our stock entitled to vote generally in the election of directors, such advance notice procedure will not apply to it.

Our certificate of incorporation to be effective in connection with the closing of this offering will contain a provision that provides us with protections similar to Section 203 of the DGCL, and will prevent us from engaging in a business combination with a person (excluding Vista and any of its direct or indirect transferees and any group as to which such persons are a party) who acquires at least 15% of our common stock for a period of three years from the date such person acquired such common stock, unless board or shareholder approval is obtained prior to the acquisition. See "Description of Capital Stock – Anti-Takeover Effects of Our Certificate of Incorporation and Our Bylaws". These provisions could discourage, delay or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for you and other shareholders to elect directors of your choosing and cause us to take other corporate actions you desire, including actions that you may deem advantageous, or negatively affect the trading price of our common stock. In addition, because our Board is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our shareholders to replace current members of our management team.

These and other provisions in our certificate of incorporation, bylaws and Delaware law could make it more difficult for shareholders or potential acquirers to obtain control of our Board or initiate actions that are opposed by our then-current Board, including delay or impede a merger, tender offer or proxy contest involving our company. The existence of these provisions could negatively affect the price of our common stock and limit opportunities for you to realize value in a corporate transaction.

For information regarding these and other provisions, see "Description of Capital Stock".

Our certificate of incorporation will designate the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation that may be initiated by our shareholders, which could limit our shareholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our certificate of incorporation to be effective in connection with the closing of this offering, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our shareholders, (3) any action asserting a claim against us arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws or (4) any other action asserting a claim against us that is governed by the internal affairs doctrine; provided that for the avoidance of doubt, the forum selection provision that identifies the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation, including any "derivative action", will not apply to suits to enforce a duty or liability created by Securities Act, the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Our certificate of incorporation will further provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the provisions of our certificate of incorporation described above. See "Description of Capital Stock – Exclusive Forum". The forum selection clause in our certificate of incorporation may have the effect of discouraging lawsuits against us or our directors and officers and may limit our shareholders' ability to obtain a favorable judicial forum for disputes with us.

If you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of your investment.

The initial public offering price of our common stock is substantially higher than the pro forma net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our pro forma net tangible book value per share after this offering. Based on an assumed initial public offering price of $ per share, the mid-point of the price range set forth on the cover page of this prospectus, you will experience immediate dilution of $ per share, representing the difference between our pro forma net tangible book value per share after giving effect to this offering and the initial public offering price. In addition, purchasers of common stock in this offering will have contributed % of the aggregate price paid by all purchasers of our common stock but will own only approximately % of our common stock outstanding after this offering. See "Dilution" for more detail.

An active, liquid trading market for our common stock may not develop, which may limit your ability to sell your shares.

Prior to this offering, there was no public market for our common stock. Although we have applied to list our common stock on NASDAQ under the symbol "PING", an active trading market for our shares may never develop or be sustained following this offering. The initial public offering price will be determined by negotiations between us and the underwriters and may not be indicative of market prices of our common stock that will prevail in the open market after the offering. A public trading market having the desirable characteristics of depth, liquidity and orderliness depends upon the existence of willing buyers and sellers at any given time, such existence being dependent upon the individual decisions of buyers and sellers over which neither we nor any market maker has control. The failure of an active and liquid trading market to develop and continue would likely have a material adverse effect on the value of our common stock. The market price of our common stock may decline below the initial public offering price, and you may not be able to sell your shares of our common stock at or above the price you paid in this offering, or at all. An inactive market may also impair our ability to raise capital to continue to fund operations by issuing shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

Our operating results and stock price may be volatile, and the market price of our common stock after this offering may drop below the price you pay.

Our quarterly operating results are likely to fluctuate in the future. In addition, securities markets worldwide have experienced, and are likely to continue to experience, significant price and volume fluctuations. This market volatility, as well as general economic, market or political conditions, could subject the market price of our shares to wide price fluctuations regardless of our operating performance. Our operating results and the trading price of our shares may fluctuate in response to various factors, including:

- market conditions in our industry or the broader stock market;
- actual or anticipated fluctuations in our quarterly financial and operating results;
- introduction of new solutions or services by us or our competitors;
- issuance of new or changed securities analysts' reports or recommendations;
- sales, or anticipated sales, of large blocks of our stock;
- additions or departures of key personnel;
- regulatory or political developments;
- litigation and governmental investigations;
- changing economic conditions;
- investors' perception of us;
- events beyond our control such as weather and war; and
- any default on our indebtedness.

These and other factors, many of which are beyond our control, may cause our operating results and the market price and demand for our shares to fluctuate substantially. Fluctuations in our quarterly operating results could limit or prevent investors from readily selling their shares and may otherwise negatively affect the market price and liquidity of our shares. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the company that issued the stock. If any of our shareholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert the time and attention of our management from our business, which could significantly harm our profitability and reputation.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. After this offering, we will have outstanding shares of common stock based on the number of shares outstanding as of June 30, 2019. This includes shares that we are selling in this offering, which may be resold in the public market immediately. Following the consummation of this offering, shares that are not being sold in this offering will be subject to a 180-day lock-up period provided under lock-up agreements executed in connection with this offering described in "Underwriting" and restricted from immediate resale under the federal securities laws as described in "Shares Eligible for Future Sale". All of these shares will, however, be able to be resold after the expiration of the lock-up period, as well as pursuant to customary exceptions thereto or upon the waiver of the lock-up agreement by Goldman Sachs & Co. LLC on behalf of the underwriters. We also intend to register shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to the lock-up agreements. As restrictions on resale end, the market price of our stock could decline if the holders of currently restricted shares sell them or are perceived by the market as intending to sell them.

Because we have no current plans to pay regular cash dividends on our common stock following this offering, you may not receive any return on investment unless you sell your common stock for a price greater than that which you paid for it.

We do not anticipate paying any regular cash dividends on our common stock following this offering. Any decision to declare and pay dividends in the future will be made at the discretion of our Board and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions and other factors that our Board may deem relevant. In addition, our ability to pay dividends is, and may be, limited by covenants of existing and any future outstanding indebtedness we or our subsidiaries incur, including under our Credit Facilities. Therefore, any return on investment in our common stock is solely dependent upon the appreciation of the price of our common stock on the open market, which may not occur. See "Dividend Policy" for more detail.

If securities or industry analysts do not publish research or reports about our business, if they adversely change their recommendations regarding our shares or if our results of operations do not meet their expectations, our stock price and trading volume could decline.

The trading market for our shares will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not have any control over these analysts. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline. Moreover, if one or more of the analysts who cover us downgrade our stock, or if our results of operations do not meet their expectations, our stock price could decline.

We may issue shares of preferred stock in the future, which could make it difficult for another company to acquire us or could otherwise adversely affect holders of our common stock, which could depress the price of our common stock.

Our certificate of incorporation will authorize us to issue one or more series of preferred stock. Our Board will have the authority to determine the preferences, limitations and relative rights of the shares of preferred stock and to fix the number of shares constituting any series and the designation of such series, without any further vote or action by our shareholders. Our preferred stock could be issued with voting, liquidation, dividend and other rights superior to the rights of our common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discouraging bids for our common stock at a premium to the market price, and materially adversely affect the market price and the voting and other rights of the holders of our common stock.

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Forward-Looking Statements

FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that are subject to risks and uncertainties. All statements other than statements of historical fact included in this prospectus are forward-looking statements. Forward-looking statements give our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance and business. You can identify forward-looking statements by the fact that they do not relate strictly to historical or current facts. These statements may include words such as "anticipate", "estimate", "expect", "project", "plan", "intend", "believe", "may", "will", "should", "can have", "likely" and other words and terms of similar meaning in connection with any discussion of the timing or nature of future operating or financial performance or other events. For example, all statements we make relating to our estimated and projected costs, expenditures, cash flows, growth rates and financial results or our plans and objectives for future operations, growth initiatives, or strategies are forward-looking statements. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those that we expected, including:

- our ability to adapt to rapid technological change, evolving industry standards and changing customer needs, requirements or preferences;
- our ability to enhance and deploy our cloud-based offerings while continuing to effectively offer our on-premise offerings;
- our ability to maintain or improve our competitive position;

- the impact on our business of a network or data security incident or unauthorized access to our network or data or our customers' data;
- the effects on our business if we are unable to acquire new customers, if our customers do not renew their arrangements with us, or if we are unable to expand sales to our existing customers or develop new solutions that achieve market acceptance;
- our ability to manage our growth effectively, execute our business plan, maintain high levels of service and customer satisfaction or adequately address competitive challenges;
- our dependence on our senior management team and other key employees;
- our ability to enhance and expand our sales and marketing capabilities;
- our ability to attract and retain highly qualified personnel to execute our growth plan;
- the risks associated with interruptions or performance problems of our technology, infrastructure and service providers;
- our dependence on AWS cloud infrastructure services;
- the impact of data privacy concerns, evolving regulations of cloud computing, cross-border data transfer restrictions and other domestic and foreign laws and regulations;
- the impact of volatility in quarterly operating results;
- the risks associated with our revenue recognition policy and other factors may distort our financial results in any given period;
- the effects on our customer base and business if we are unable to enhance our brand cost-effectively;
- our ability to comply with anti-corruption, anti-bribery and similar laws;
- our ability to comply with governmental export and import controls and economic sanctions laws;
- our ability to comply with HIPAA;
- the potential adverse impact of legal proceedings;
- the impact of our frequently long and unpredictable sales cycle;
- our ability to identify suitable acquisition targets or otherwise successfully implement our growth strategy;
- the impact of a change in our pricing model;
- our ability to meet service level commitments under our customer contracts;
- the impact on our business and reputation if we are unable to provide high-quality customer support;
- our dependence on strategic relationships with third parties;
- the impact of adverse general and industry-specific economic and market conditions and reductions in IT and identity spending;
- the ability of our platform and solutions to interoperate with our customers' existing or future IT infrastructures;
- our dependence on adequate research and development resources and our ability to successfully complete acquisitions;
- our dependence on the integrity and scalability of our systems and infrastructures;
- our reliance on software and services from other parties;
- the impact of real or perceived errors, failures, vulnerabilities or bugs in our solutions;

- our ability to protect our proprietary rights;
- the impact on our business if we are subject to infringement claim or a claim that results in a significant damage award;
- the risks associated with our use of open source software in our solutions and subscriptions;
- our reliance on SaaS vendors to operate certain functions of our business;
- the risks associated with indemnity provisions in our agreements;
- the risks associated with liability claims if we breach our contracts;
- the impact of the failure by our customers to pay us in accordance with the terms of their agreements;
- our ability to expand the sales of our solutions to customers located outside of the United States;
- the risks associated with exposure to foreign currency fluctuations;
- the impact of the U.K. referendum on membership in the EU;
- the impact of potentially adverse tax consequences associated with our international operations;
- the impact of changes in tax laws or regulations;
- the impact of the Tax Act;
- our ability to maintain our corporate culture;
- our ability to remediate our existing material weakness in our internal control over financial reporting;
- our ability to develop and maintain proper and effective internal control over financial reporting;
- our management team's limited experience managing a public company;
- the risks associated with having operations and employees located in Israel;
- the risks associated with doing business with governmental entities;
- the impact of catastrophic events on our business; and
- other factors disclosed in the section entitled "Risk Factors" and elsewhere in this prospectus.

We derive many of our forward-looking statements from our operating budgets and forecasts, which are based on many detailed assumptions. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and it is impossible for us to anticipate all factors that could affect our actual results. Important factors that could cause actual results to differ materially from our expectations, or cautionary statements, are disclosed under the sections entitled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this prospectus. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by these cautionary statements as well as other cautionary statements that are made from time to time in our other SEC filings and public communications. You should evaluate all forward-looking statements made in this prospectus in the context of these risks and uncertainties.

We caution you that the important factors referenced above may not contain all of the factors that are important to you. In addition, we cannot assure you that we will realize the results or developments we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our operations in the way we expect. The forward-looking statements included in this prospectus are made only as of the date hereof. We undertake no obligation to update or revise any forward-looking statement as a result of new information, future events or otherwise, except as otherwise required by law.

Market and Industry Data

MARKET AND INDUSTRY DATA

Unless otherwise indicated, information in this prospectus concerning economic conditions, our industry, our markets and our competitive position is based on a variety of sources, including information from independent industry analysts and publications, as well as our own estimates and research. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we believe the information presented in this prospectus is generally reliable, forecasts, assumptions, expectations, beliefs, estimates and projects involve risk and uncertainties and are subject to change based on various factors, including those described under "Forward-Looking Statements" and "Risk Factors".

Certain information in the text of this prospectus is contained in independent industry publications. The sources of these independent industry publications are provided below:

- International Data Corporation, Worldwide Identity Forecast, 2019-2023: Hype Aside/Hope Ahead, Let's All Use Certificates, July 2019;
- International Data Corporation, Worldwide IT Industry 2018 Predictions, October 2017;
- International Data Corporation, Worldwide Global DataSphere IoT Device and Data Forecast 2019-2023, Doc# US45066919, May 2019;
- International Data Corporation, Quarterly Cloud IT Infrastructure Tracker, Q1 2019; and
- Market and industry data from D&B Hoovers was extracted from the D&B Hoovers subscription database (which is updated regularly) on June 30, 2019.

Use of Proceeds

USE OF PROCEEDS

We estimate that our net proceeds from this offering will be approximately $ million (or approximately $ million if the underwriters' option to purchase additional shares is exercised in full), assuming an initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting the underwriting discount and estimated offering expenses payable by us.

The principal purposes of this offering are to increase our capitalization and financial flexibility, create a public market for our common stock and enable access to the public equity markets for us and our shareholders. We expect to use approximately $ million of the net proceeds of this offering (or $ million of the net proceeds of this offering if the underwriters exercise their option to purchase additional shares in full) to repay outstanding borrowings under our Term Loan Facility and the remainder of such net proceeds will be used for general corporate purposes. At this time, other than repayment of indebtedness under our Term Loan Facility, we have not specifically identified a large single use for which we intend to use the net proceeds and, accordingly, we are not able to allocate the net proceeds among any of these potential uses in light of the variety of factors that will impact how such net proceeds are ultimately utilized by us. Pending use of the proceeds from this offering, we intend to invest the proceeds in a variety of capital preservation investments, including short-term, investment-grade and interest-bearing instruments.

We may also use a portion of our net proceeds to acquire or invest in complementary businesses, products, services or technologies. However, we do not have agreements or commitments for any acquisitions or investments at this time.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us from this offering by approximately $ million, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discount and estimated offering expenses payable by us.

Each 1,000,000 increase or decrease in the number of shares offered would increase or decrease the net proceeds to us from this offering by approximately $ million, assuming that the assumed initial public offering price per share for the offering remains at $, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us.

On January 25, 2018, we entered into our $275.0 million Credit Agreement with a syndicate of lenders, comprised of the $25.0 million Revolving Credit Facility and the $250.0 million Term Loan Facility. As of June 30, 2019, we had $247.5 million and no borrowings outstanding under our Term Loan Facility and Revolving Credit Facility, respectively. As of June 30, 2019, the interest rate on our Term Loan Facility and Revolving Credit Facility was approximately 6.19% and 0.25%, respectively.

Borrowings under the Credit Agreement bear interest at a rate per annum, at our option, equal to an applicable margin, plus, (a) for alternative base rate borrowings, the highest of (i) the prime rate as determined by the administrative agent in effect on such day, (ii) the Federal Funds Rate in effect on such day plus $^{1}/_{2}$ of 1.00% and (iii) the Adjusted LIBO Rate (for a one-month interest period and taking into account a 1.00% floor with respect to term loans) plus 1.00% and (b) for eurocurrency borrowings, the Adjusted LIBO Rate determined by the greater of (i) the LIBO rate for the relevant interest period divided by 1 minus the statutory reserves (if any) and (ii) with respect to term loans only, 1.00%.

The applicable margin for borrowings under the Credit Agreement is (a) with respect to term loan borrowings, 2.75% for alternate base rate borrowings and 3.75% for eurocurrency borrowings, and (b) with respect to both revolving and swingline loan borrowings, 2.75% for alternate base rate borrowings and 3.75% for eurocurrency borrowings when our first lien leverage ratio is greater than 5.00 to 1.00, with step downs to (i) 2.50% for alternate base rate borrowings and 3.50% for eurocurrency borrowings when our first lien leverage ratio is less than or equal to 5.00 to 1.00 but greater than 4.50 to 1.00 and (ii) 2.25% for alternate base rate borrowings and 3.25% for eurocurrency when our first lien leverage ratio is less than or equal to 4.50 to 1.00. Our first lien leverage ratio is determined in accordance with the terms of the Credit Agreement.

An affiliate of Goldman Sachs & Co. LLC serves as administrative agent, collateral agent, swingline lender, and issuing bank under the Credit Agreement. As a result, such affiliate will receive a portion of the net proceeds of this offering in connection with the repayment of our Term Loan Facility. Based upon our estimated receipt of net proceeds from this offering of approximately $ million (or $ million if the underwriters exercise their option to purchase additional shares in full) as described above, we expect that such affiliate will receive $ million of the total $ million (or $ million of the total $ million if the underwriters exercise their option to purchase additional shares in full) of such net proceeds used to repay outstanding borrowings under our Term Loan Facility.

In connection with our entry into the Term Loan Facility on January 25, 2018, affiliates of Vista collectively acquired $35.0 million of term loans under our Term Loan Facility and as of June 30, 2019, affiliates of Vista collectively owned $34.7 million of our Term Loan Facility. As a result, Vista will receive a portion of the net proceeds of this offering in connection with the repayment of our Term Loan Facility. Based upon our estimated receipt of net proceeds from this offering of approximately $ million (or $ million if the underwriters exercise their option to purchase additional shares in full) as described above, we expect that Vista will receive $ million of the total $ million (or $ million of the total $ million if the underwriters exercise their option to purchase additional shares in full) of such net proceeds used to repay outstanding borrowings under our Term Loan Facility.

Dividend Policy

DIVIDEND POLICY

We currently intend to retain all available funds and any future earnings to fund the development and growth of our business and to repay indebtedness and, therefore, we do not anticipate paying any cash dividends in the foreseeable future. Additionally, our ability to pay dividends on our common stock is limited by restrictions on the ability of our subsidiaries to pay dividends or make distributions to us. Any future determination to pay dividends will be at the discretion of our Board, subject to compliance with covenants in current and future agreements governing our and our subsidiaries' indebtedness, and will depend on our results of operations, financial condition, capital requirements and other factors that our Board may deem relevant.

Capitalization

CAPITALIZATION

The following table describes our cash and cash equivalents and capitalization as of June 30, 2019, as follows:

- on an actual basis; and
- on a pro forma basis, after giving effect to the sale of shares of common stock in this offering and the application of the net proceeds from this offering as set forth under "Use of Proceeds," assuming an initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us.

The pro forma information set forth in the table below is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table in conjunction with our consolidated financial statements and the related notes, "Use of Proceeds" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this prospectus.

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	As of June 30, 2019

	Actual	Pro Forma	
	(dollars in thousands)		
Cash and cash equivalents	$83,000		$
Long term Debt, Including Current Portions:			
Senior credit facilities:			
Revolving Credit Facility	$—		$
Term Loan Facility	242,725		
Total long-term debt[(1)(2)]	242,725		
Equity:			
Preferred stock, $0.001 par value, 200,000 shares authorized and no shares issued and outstanding, actual; shares authorized, no shares issued and outstanding, pro forma	—	—	
Common stock, $0.001 par value, 500,000 shares authorized, 383,185 shares issued and outstanding, actual, shares authorized, shares issued and outstanding, pro forma	—		
Additional paid-in capital	519,121		
Accumulated other comprehensive income (loss)	(472)		
Retained earnings (accumulated deficit)	(9,275)		
Total stockholders' equity	509,374		
Total capitalization	$752,099		$

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(1) Net of debt issuance costs of $4.8 million.

(2) We expect to use approximately $ million of the net proceeds of this offering (or $ million if the underwriters exercise their option to purchase additional shares in full) to repay outstanding borrowings under our Term Loan Facility.

A $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization on a pro forma basis by approximately $ million, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discount and estimated offering expenses payable by us.

Each 1,000,000 increase or decrease in the number of shares of common stock offered in this offering would increase or decrease each of cash and cash equivalents, additional paid-in capital, total stockholders' equity (deficit) and total capitalization on a pro forma basis by approximately $ million, based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us.

Except as otherwise indicated, the above discussion and table are based on shares of our common stock outstanding as of June 30, 2019 and excludes:

- shares of common stock issuable upon the exercise of options outstanding as of June 30, 2019, with a weighted average exercise price of $ per share;
- shares of common stock issuable upon the vesting and settlement of RSUs outstanding as of June 30, 2019; and
-

million shares of common stock reserved for future issuance under the 2019 Plan.

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Dilution

DILUTION

If you invest in our common stock in this offering, your interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock in this offering and the pro forma net tangible book value per share of our common stock immediately after this offering.

As of June 30, 2019, we had a net tangible book value of $ million, or $ per share of common stock. Net tangible book value per share is equal to our total tangible assets, less total liabilities, divided by the number of outstanding shares of our common stock.

After giving effect to the sale of shares of common stock in this offering, after deducting the underwriting discount and estimated offering expenses payable by us, and the application of the net proceeds of this offering to repay $ million of outstanding borrowings under our Term Loan Facility as set forth under "Use of Proceeds," at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover of this prospectus, our pro forma net tangible book value as of June 30, 2019 would have been $ million, or $ per share of common stock. This represents an immediate increase in net tangible book value of $ per share to our existing shareholders and an immediate dilution in net tangible book value of $ per share to investors participating in this offering at the assumed initial public offering price. The following table illustrates this per share dilution:

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Assumed initial public offering price per share	$
Historical net tangible book value per share as of June 30, 2019	$
Increase in net tangible book value per share attributable to the investors in this offering	
Pro forma net tangible book value per share after giving effect to this offering	
Dilution in net tangible book value per share to the investors in this offering	$

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A $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus, would increase or decrease our pro forma net tangible book value per share after this offering by $, and would increase or decrease the dilution per share to the investors in this offering by $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discount and estimated offering expenses payable by us. Similarly, each increase or decrease of one million shares in the number of shares of common stock offered by us would increase or decrease our pro forma net tangible book value per share after this offering by $ and would increase or decrease dilution per share to investors in this offering by $, assuming the assumed initial public offering price, which is the midpoint of the price range set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discount and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares in full, the pro forma net tangible book value per share after this offering would be $, and the dilution in pro forma net tangible book value per share to new investors in this offering would be $.

The following table presents, on a pro forma basis as described above, as of June 30, 2019, the differences between our existing shareholders and the investors purchasing shares of our common stock in this offering, with respect to the number of shares purchased, the total consideration paid to us, and the average price per share paid by our existing shareholders or to be paid to us by investors purchasing shares in this offering at an assumed offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting the underwriting discount and estimated offering expenses payable by us.

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					Average
	Shares Purchased		Total Consideration		Price per
	Number	Percentage	Amount	Percentage	Share

Existing shareholders	%		$%	$
New investors				
Total	100%	$100%		

end of user-specified TAGGED TABLE

A $1.00 increase or in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the total consideration paid by new investors by $ million and increase or decrease the percent of total consideration paid by new investors by %, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and before deducting the underwriting discount and estimated offering expenses payable by us.

Except as otherwise indicated, the above discussion and tables assume no exercise of the underwriters' option to purchase additional shares. After giving effect to sales of shares in this offering, assuming the underwriters' option to purchase additional shares is exercised in full, our existing shareholders would own % and our new investors would own % of the total number of shares of our common stock outstanding after this offering.

In addition, to the extent we issue any additional stock options or any stock options are exercised, or we issue any other securities or convertible debt in the future, investors participating in this offering may experience further dilution.

Except as otherwise indicated, the above discussion and tables are based on shares of our common stock outstanding as of June 30, 2019 and exclude:

- shares of common stock issuable upon the exercise of options outstanding as of June 30, 2019, with a weighted average exercise price of $ per share;
- shares of common stock issuable upon the vesting and settlement of RSUs outstanding as of June 30, 2019; and
- million shares of common stock reserved for future issuance under our 2019 Plan.

Selected Consolidated Financial Data

SELECTED CONSOLIDATED FINANCIAL DATA

The following tables present our selected consolidated financial data. The selected consolidated statements of operations data for the years ended December 31, 2017 and 2018 and the selected consolidated balance sheets data as of December 31, 2017 and 2018 are derived from our audited consolidated financial statements that are included elsewhere in this prospectus. The selected consolidated statements of operations data for the six months ended June 30, 2018 and 2019 and the selected consolidated balance sheet data as of June 30, 2019 are derived from our unaudited interim consolidated financial statements that are included elsewhere in this prospectus. The unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair statement of our unaudited interim consolidated financial statements.

Our historical results are not necessarily indicative of the results that may be expected in the future. You should read the selected historical financial data below in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and related notes included elsewhere in this prospectus.

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
	(in thousands, except share and per share amounts)			
Consolidated Statements of Operations Data:				
Revenue:				
Subscription	$160,219	$184,991	$90,576	$103,892
Professional services and other	12,320	16,571	8,874	9,006
Total revenue	172,539	201,562	99,450	112,898

Cost of revenue:				
Subscription (exclusive of amortization shown below)	14,054	17,512	8,259	10,833
Professional service and other (exclusive of amortization shown below)	9,155	12,703	5,837	6,916
Amortization expense	12,626	14,396	7,064	7,822
Total cost of revenue	35,835	44,611	21,160	25,571
Gross profit	136,704	156,951	78,290	87,327
Operating Expenses:				
Sales and marketing[(1)]	49,481	60,140	28,121	37,334
Research and development[(1)]	26,215	36,229	16,393	22,311
General and administrative[(1)]	20,202	28,355	13,079	15,748
Depreciation and amortization	16,526	16,341	8,356	8,274
Total operating expenses	112,424	141,065	65,949	83,667
Income from operations	24,280	15,886	12,341	3,660
Other Income (Expense):				
Interest expense	(19,277)	(15,837)	(7,791)	(8,249)
Loss on extinguishment of debt	—	(9,785)	(9,785)	—
Other income (expense), net	773	(335)	(912)	225
Total other income (expense)	(18,504)	(25,957)	(18,488)	(8,024)
Income (loss) before income taxes	5,776	(10,071)	(6,147)	(4,364)
Benefit (provision) for income taxes	13,185	(3,375)	391	1,241
Net income (loss)	$18,961	$(13,446)	$(5,756)	$(3,123)

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
	(in thousands, except share and per share amounts)			
Per Share Data[(2)]:				
Net income (loss) per share:				
Basic	$49.60	$(35.17)	$(15.05)	$(8.17)
Diluted	$49.60	$(35.17)	$(15.05)	$(8.17)
Weighted-average shares used in computing net income (loss) per share:				
Basic	382,258	382,365	382,364	382,425
Diluted	382,297	382,365	382,364	382,425

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(1)

Includes stock-based compensation as follows:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
	(in thousands)			
Sales and marketing	$626	$726	$351	$410
Research and development	297	342	108	433
General and administrative	1,601	1,780	821	1,256
Total	$2,524	$2,848	$1,280	$2,099

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(2)

See Note 13 to our consolidated financial statements appearing elsewhere in this prospectus for an explanation of the method used to calculate our basic and diluted net income (loss) per share and the weighted-average number of shares used in the computation of the per share amounts.

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	December 31,		June 30,
	2017	2018	2019
	(in thousands)		
Consolidated Balance Sheets Data:			
Cash and cash equivalents	$20,969	$83,499	$83,000
Working capital[(1)]	$69,487	$139,373	142,805
Total assets	$776,223	$857,023	849,437
Deferred revenue, current and noncurrent	$33,810	$35,367	35,490
Long-term debt, including current portion[(2)]	$165,206	$243,551	242,725
Total stockholders' equity	$520,680	$509,105	509,374

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(1)

We define working capital as current assets less current liabilities.

(2)

Net of debt issuance costs of $4.8 million, $5.2 million and $4.8 million as of December 31, 2017 and 2018 and June 30, 2019, respectively.

Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we believe the following non-GAAP measures are useful in evaluating our operating performance. We believe that non-GAAP financial information, when taken collectively, may be helpful to investors because it provides consistency and comparability with past financial performance and assists in comparisons with other companies, some of which use similar non-GAAP financial information to supplement their GAAP results. The non-GAAP financial information is presented for supplemental informational purposes only, and should not be considered a substitute for financial information presented in accordance with GAAP, and may be different from similarly-titled non-GAAP measures used by other companies. A reconciliation is provided below for each non-GAAP financial measure to the most directly comparable financial measure stated in accordance with GAAP. Investors are encouraged to review the related GAAP financial measures and the reconciliation of these non-GAAP financial measures to their most directly comparable GAAP financial measures.

Free Cash Flow

Free Cash Flow is a supplemental measure of liquidity that is not made under GAAP and that does not represent, and should not be considered as, an alternative to cash flow from operations, as determined by GAAP. We define Free Cash Flow as net cash provided by (used in) operating activities less cash used for purchases of property and equipment and capitalized software development costs.

We use Free Cash Flow as one measure of the liquidity of our business. We believe that Free Cash Flow is a useful indicator of liquidity that provides information to management and investors about the amount of cash generated from our core operations that, after the purchases of property and equipment and capitalized software development costs, can be used for strategic initiatives, including investing in our business and selectively pursuing acquisitions and strategic investments. We further believe that historical and future trends in Free Cash Flow, even if negative, provide useful information about the amount of cash generated (or consumed) by our operating activities that is available (or is not available) to be used for strategic initiatives. For example, if Free Cash Flow is negative, we may need to access cash reserves or other sources of capital to invest in strategic initiatives. We also believe that the use of Free Cash Flow enables us to more effectively evaluate our liquidity period-over-period and relative to our competitors.

A reconciliation of Free Cash Flow to net cash flow provided by (used in) operations, the most directly comparable GAAP measure, is as follows:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
	(in thousands)			
Net cash provided by operating activities	$3,423	$22,886	$13,015	$8,064
Less:				
Purchases of property and equipment	(2,519)	(3,437)	(1,362)	(2,330)
Capitalized software development costs	(3,442)	(6,310)	(2,790)	(4,492)
Free Cash Flow	$(2,538)	$13,139	$8,863	$1,242
Net cash used in investing activities	$ (5,961)	$ (26,661)	$ (21,566)	$ (6,822)
Net cash provided by (used in) financing activities	$101	$67,102	$68,921	$(1,951)
Cash paid for interest	$20,758	$13,598	$5,960	$7,739

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Free Cash Flow has limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for analysis of our results as reported under GAAP. For example, Free Cash Flow does not represent the total increase or decrease in our cash balance for a given period. Because of these limitations, Free Cash Flow should not be considered as a replacement for cash flow from operations, as determined by GAAP, or as a measure of our profitability. We compensate for these limitations by relying primarily on our GAAP results and using non-GAAP measures only for supplemental purposes.

Non-GAAP Gross Profit

Non-GAAP Gross Profit is a supplemental measure of operating performance that is not made under GAAP and that does not represent, and should not be considered as, an alternative to gross profit, as determined by GAAP. We define Non-GAAP Gross Profit as gross profit, adjusted for certain amortization expense of acquired intangible assets and software developed for internal use.

We use Non-GAAP Gross Profit to understand and evaluate our core operating performance and trends, to prepare and approve our annual budget, and to develop short-term and long-term operating plans. We believe that Non-GAAP Gross Profit is a useful measure to us and to our investors because it provides consistency and comparability with our past financial performance and between fiscal periods, as the metric generally eliminates the effects of the variability of amortization of acquired intangibles and internal-use software from period to period, which may fluctuate for reasons unrelated to overall operating performance. We believe that the use of this measure enables us to more effectively evaluate our performance period-over-period and relative to our competitors.

A reconciliation of Non-GAAP Gross Profit to gross profit, the most directly comparable GAAP measure, is as follows:

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	Year Ended December 31,		Six Months Ended June 30,	
2017	2018	2018	2019	
	(in thousands)			

Gross profit	$136,704	$156,951	$78,290	$87,327
Amortization expense	12,626	14,396	7,064	7,822
Non-GAAP Gross Profit	$149,330	$171,347	$85,354	$95,149

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Non-GAAP Gross Profit has limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for analysis of our results as reported under GAAP. Because of these limitations, non-GAAP Gross Profit should not be considered as a replacement for gross profit, as determined by GAAP, or as a measure of our profitability. We compensate for these limitations by relying primarily on our GAAP results and using non-GAAP measures only for supplemental purposes.

Adjusted EBITDA

Adjusted EBITDA is a supplemental measure of operating performance that is not made under GAAP and that does not represent, and should not be considered as, an alternative to net income (loss), as determined by GAAP. We define Adjusted EBITDA as net income (loss), adjusted for interest expense, loss on extinguishment of debt, benefit for income taxes, depreciation and amortization, stock-based compensation expense, acquisition related expense and other (income) expense.

We use Adjusted EBITDA to understand and evaluate our core operating performance and trends, to prepare and approve our annual budget, and to develop short-term and long-term operating plans. We believe that Adjusted EBITDA facilitates comparison of our operating performance on a consistent basis between periods, and when viewed in combination with our results prepared in accordance with GAAP, helps provide a broader picture of factors and trends affecting our results of operations.

A reconciliation of Adjusted EBITDA to net income (loss), the most directly comparable GAAP measure, is as follows:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
	(in thousands)			
Net income (loss)	$18,961	$(13,446)	$(5,756)	$(3,123)
Interest expense[(1)]	19,277	15,837	7,791	8,249
Loss on extinguishment of debt	—	9,785	9,785	—
(Benefit) provision for income taxes	(13,185)	3,375	(391)	(1,241)
Depreciation and amortization	29,152	30,737	15,420	16,096
Stock-based compensation expense	2,524	2,848	1,280	2,099
Acquisition related expense[(2)]	—	6,666	3,175	2,277
Other (income) expense, net[(3)]	(773)	335	912	(225)
Adjusted EBITDA	$55,956	$56,137	$32,216	$24,132

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(1) Includes amortization of debt issuance costs.

(2) Acquisition related expense for the year ended December 31, 2018 and the six months ended June 30, 2018 and 2019, respectively, included $5.2 million, $1.7 million and $2.3 million of contingent compensation and retention expense related to the acquisition of Elastic Beam, Inc. or Elastic Beam. For more information related to our acquisition of Elastic Beam and the payment of contingent compensation, please refer to Note 5 of our consolidated financial statements appearing elsewhere in this prospectus.

(3) See "Management's Discussion and Analysis of Financial Condition and Results of Operations" for the components of other (income) expense.

Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for analysis of our results as reported under GAAP. Because of these limitations, Adjusted EBITDA should not be considered as a replacement for net income (loss), as determined by GAAP, or as a measure of our profitability. We compensate for these limitations by relying primarily on our GAAP results and using non-GAAP measures only for supplemental purposes.

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Management's Discussion and Analysis of Financial Condition and Results of Operations

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS The following discussion and analysis summarizes the significant factors affecting the consolidated operating results, financial condition, liquidity and cash flows of our company as of and for the periods presented below. The following discussion and analysis should be read in conjunction with our consolidated financial statements and the related notes thereto included elsewhere in this prospectus. The discussion contains forward-looking statements that are based on the beliefs of management, as well as assumptions made by, and information currently available to, our management. Actual results could differ materially from those discussed in or implied by forward-looking statements as a result of various factors, including those discussed below and elsewhere in this prospectus, particularly in the sections entitled "Risk Factors" and "Forward-Looking Statements".

`Overview`

Ping is pioneering Intelligent Identity. We enable secure access to any service, application or API from any device. Our Intelligent Identity Platform can leverage AI and ML to analyze device, network, application and user behavior data to make real-time authentication and security control decisions, enhancing the user experience. Our platform is designed to detect anomalies and automatically insert additional security measures, such as multi-factor authentication, only when necessary. We built our platform to meet the requirements of the most demanding enterprises. Our platform can be deployed across cloud, hybrid and on-premise infrastructures, and offers a comprehensive suite of turnkey integrations and is able to scale to millions of identities and thousands of cloud and on-premise applications. As of June 30, 2019, our platform secures over two billion identities globally across our customer base.

Our Intelligent Identify Platform can secure all primary use cases, including customer, employee, partner and IoT. For example, enterprises can use our platform to enhance their customers' user experience by creating a single ID and login across web and mobile properties. For the year ended December 31, 2018, 44% of our subscription revenue was derived from the customer use case. Enterprises can also use our platform to provide their employees and commercial partners with secure, seamless access from any device to the applications, data and APIs they need to be productive. Enterprises are increasingly using our platform to manage and authenticate identities in a variety of IoT devices, such as connected vehicles and consumer devices.

We were born in the enterprise when we launched our SSO solution in 2003 with our first customer, a Fortune 100 financial services firm, to help it address its customer identity use case by delivering a unified, personalized and consistent log-in experience. Since then, we built our platform to meet the most demanding enterprise requirements, expanded our solutions and pioneered Intelligent Identity, as evidenced by the following key milestones.

- In 2010, we founded the leading identity industry conference.
- In 2012, we extended our SSO solution to include a cloud-based multi-tenant offering.
- In 2013, we introduced our Access Security solution.
- In 2014, we launched our adaptive MFA solution.
- In 2016, we were acquired by Vista.
- Also in 2016, we acquired UnboundID, Corp., which helped us launch our Directory and Data Governance solutions.
- Additionally, in 2016, we reached a milestone of $100 million in total ARR.
- In 2018, we acquired Elastic Beam and subsequently launched our API Intelligence solution.
- Additionally, in 2018, we reached a milestone of 25 customers with greater than $1,000,000 in ARR.

As of December 31, 2018, we had over 1,275 customers, including over 50% of the Fortune 100. Because our solutions were designed for enterprises, we primarily target customers with annual revenues in excess of $500 million. We define a customer as a separate legal entity with an individual subscription agreement and include in our customer count entities to which we have sold directly and entities that purchased one or more of our solutions from a reseller.

Our platform is comprised of six solutions (SSO, MFA, Access Security, Directory, Data Governance and API Intelligence) that can be purchased individually or as a set of integrated offerings. Our platform can be deployed across cloud, hybrid and on-premise infrastructures. Our offerings are predominately priced based on the number of identities, solutions and use cases.

We sell our platform through subscription-based contracts, primarily with either a 1-year or 3-year term, making the average contract term approximately 2 years. Substantially all of our customers pay annually in advance. We sell our solutions primarily through direct sales, which are enhanced by collaboration with our channel partners, resellers, system integrators and technology partners. Sixty percent of our new business for the year ended December 31, 2018 was channel-influenced, which includes sourcing new leads, aiding in pre-sale processes such as proof of concepts, demos or requests for proposals and reselling our solutions to customers. We also leverage a number of our channel partners and system integrators to provide the implementation services for some of our larger and more complex deployments, significantly increasing the time-to-value for our customers and maximizing the efficiency of our go-to-market efforts.

We focus our selling efforts on executives such as CIOs and CISOs who are often making strategic top-down decisions to purchase our platform. CIOs purchase our solutions as part of their digitalization initiatives to provide their customers with a more secure, unified, personalized and seamless end user experience across their digital services. CISOs purchase our solutions for an identity-centric security strategy as more applications, data, devices and users reside outside of the traditional network perimeter due to the adoption of cloud, mobile and IoT. We recently extended our cloud-based offering to target developers who represent a new addressable customer base for us.

The success of our strategy is validated by our strong dollar based net retention rates and our growing number of large customers. Our dollar-based net retention rates were 123%, 116% and 115% at December 31, 2017 and 2018 and June 30, 2019, respectively, and our dollar-based net retention rates have exceeded 115% for each of the past eight fiscal quarters. Our customers with ARR over $250,000 increased from 144 at December 31, 2017 to 202 at December 31, 2018, representing a growth rate of 40%. Our total customers increased from 1,264 at December 31, 2017 to 1,284 at December 31, 2018. The gross increase in total customers for the 2018 fiscal year was partially offset by customer churn, primarily consisting of low contract value churn of customers with ARR below $25,000. The increase of 58 net customers with ARR greater than $250,000 for the 2018 fiscal year is comprised of 16 new customers and 42 existing customers that had ARR grow to exceed $250,000 in 2018. Additionally, at December 31, 2018, we had 25 customers with greater than $1,000,000 in ARR. For definitions of dollar-based net retention rate and ARR and a description of how we calculate these metrics, see "– Key Business Metrics".

At June 30, 2019, our top 15 customers accounted for 15% of total ARR, while our top 10 customers accounted for 11% of total ARR. Our customers come from a variety of industries, with customers in financial services accounting for 30% of our revenue for the six months ended June 30, 2019. Our customer base is diversified, with no one customer or reseller accounting for more than 5% of our total revenue for the six months ended June 30, 2019.

Our ARR was $147.0 million and $183.6 million at December 31, 2017 and 2018, respectively, representing year-over-year growth of 25%. Our ARR was $159.6 million and $198.0 million at June 30, 2018 and 2019, respectively, representing period-over-period growth of 24%. We have grown revenue from $172.5 million for the year ended December 31, 2017 to $201.6 million for the year ended December 31, 2018, representing year-over-year growth of 17%. We have grown revenue from $99.5 million for the six months ended June 30, 2018 to $112.9 million for the six months ended June 30, 2019, representing period-over-period growth of 14%. Our net income was $19.0 million for the year ended December 31, 2017. Our net loss was $13.4 million for the year ended December 31 2018. We had net losses of $5.8 million and $3.1 million for the six months ended June 30, 2018 and 2019, respectively. Our cash provided by operations was $3.4 million and $22.9 million for the year ended December 31, 2017 and 2018, respectively. Our cash provided by operations was $13.0 million and $8.1 million for the six months ended June 30, 2018 and 2019, respectively. Our Free Cash Flow was $(2.5) million and $13.1 million, for the year ended December 31, 2017 and 2018, respectively. Our Free Cash Flow was $8.9 million and $1.2 million for the six months ended June 30, 2018 and 2019, respectively. Free Cash Flow is a supplemental measure that is not calculated and presented in accordance with GAAP. See "Selected Consolidated Financial Data – Non-GAAP Financial Measures" for a definition Free Cash Flow and a reconciliation to its most directly comparable GAAP financial measure.

Key Factors Affecting Our Performance

We believe that our future performance will depend on many factors, including the following:

Generate Additional Sales to Existing Customers

As part of our land and expand strategy, a customer journey often begins with the purchase of one of our solutions for one use case. Once customers realize the value of that solution, their spend with us expands by (i) adopting another identity use case, (ii) deploying additional solutions and/or (iii) adding more identities over time. As of June 30, 2019, our top 25 customers by ARR have increased their ARR on average by more than 25 times following their initial purchase.

As of December 31, 2018, only 13% of our customers had purchased three or more of our six solutions, providing a significant opportunity to drive incremental sales to our existing customers. Our future revenue growth is dependent upon our ability to continue to expand our customers' use of our platform. Our ability to increase sales to existing customers will depend on a number of factors, including satisfaction or dissatisfaction with our

solutions, competition, pricing, economic conditions and spending by customers on our solutions. We have adopted a customer success strategy and implemented processes across our customer base to drive revenue retention and expansion.

Increase the Size of our Customer Base

We believe there is significant opportunity to increase market adoption of our platform by new customers. Our SSO, Access Security and Directory solutions often replace legacy and homegrown systems. We also have significant greenfield opportunities with our MFA, Data Governance and API Intelligence solutions and, increasingly, the IoT use case. To increase our customer base, we plan to expand our sales force and channel partner network, both domestically and internationally, enhance our marketing efforts and target new buyers. For example, we have extended our cloud-based offering to target developers, who represent a new potential buyer for us. Over time, we believe sales to developers could increase the size of our customer base.

Maintain our Technology Differentiation and Product Leadership

Our Intelligent Identity Platform is designed for large enterprises with complex, hybrid IT requirements. We have spent over a decade building a standards-based platform with turnkey integrations designed to ensure that large enterprises can easily and rapidly deploy our platform within their complex infrastructures. We intend to continue making investments in research and development to extend our platform and technology capabilities while also expanding our solutions to address new use cases. For example, we recently released our API Intelligence solution that is designed to dynamically discover APIs that are inadvertently exposed and automatically detect and block attacks.

Invest for Growth

We believe that our market opportunity is large, and we plan to invest in order to continue to support further growth. This includes investing in our sales force and expanding our network of channel partners, resellers, system integrators and technology partners with which we partner to sell our Intelligent Identity Platform, both domestically and internationally. We have a large and growing international presence and intend to grow our customer base in various international regions by making investments in our sales team globally. In 2018, our international revenue was 23% of our total revenue. We expect international sales to be a meaningful revenue contributor in future periods.

During 2018, we made a decision with our board of directors to accelerate investments in our business to take advantage of our large market opportunity. Specifically, we invested in enhancing our salesforce globally to increase our selling capacity and capitalize on our large market opportunity. In addition, we have invested in new cloud-based offerings to broaden our Intelligent Identity Platform and the scope of our solutions to cover new identity security threats, such as APIs. We also invested in deploying our platform as a single tenant cloud-based offering, managed by us, to help extend the reach of our solutions within our customers' infrastructures, while providing them with the level of control and configuration they require. We have seen progress with these investments and expect to continue to invest heavily in these areas in the near future. However, we are not expecting these investments to provide our business with meaningful increases to ARR growth in the immediate term as we expect natural purchasing cycles will affect the speed of market adoption.

Seasonality

Given the purchasing patterns of our enterprise customers, we typically experience seasonality in terms of when we receive orders from our customers. Our customers often time their purchases and renewals of our solutions to coincide with their fiscal year end, which is typically June 30 or December 31. Because of these purchasing patterns, a greater percentage of our annual subscription revenue from term-based licenses, the revenue from which is recognized up front at the later of delivery or commencement of the license term, has come from our second and fourth quarters than from other quarters. For the year ended December 31, 2018, 25% and 30% of our annual revenue was in our second and fourth quarter, respectively. We believe this seasonality will continue to affect our quarterly results and may become more pronounced.

Key Business Metrics

In addition to our GAAP financial information, we review a number of operating and financial metrics, including the following key metrics, to evaluate our business, measure our performance, identify trends affecting our business, formulate business plans and make strategic decisions.

Annual Recurring Revenue

ARR represents the annualized value of all subscription contracts as of the end of the period. ARR mitigates fluctuations due to seasonality, contract term and the sales mix of subscriptions for term-based licenses and SaaS. ARR only includes the annualized value of subscription contracts. ARR does not have any standardized meaning and is therefore unlikely to be comparable to similarly titled measures presented by other companies. ARR should be viewed independently of revenue and deferred revenue and is not intended to be combined with or to replace either of those items. ARR is not a forecast and the active contracts at the end of a reporting period used in calculating ARR may or may not be extended or renewed by our customers.

Our ARR was $147.0 million and $183.6 million at December 31, 2017 and 2018, respectively, representing year-over-year growth of 25%. Our ARR was $159.6 million and $198.0 million at June 30, 2018 and 2019, respectively, representing period-over-period growth of 24%.

The table below sets forth our ARR as of the end of our last ten fiscal quarters.

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As of

	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018	March 31, 2019	June 30, 2019
	(in thousands)									
ARR	$115,320	$124,558	$132,439	$146,969	$151,729	$159,563	$167,659	$183,579	$190,476	$197,990

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Dollar-Based Net Retention Rate

To further illustrate the land and expand economics of our customer relationships, we examine the rate at which our customers increase their subscriptions for our solutions. Our dollar-based net retention rate measures our ability to increase revenue across our existing customer base through expanded use of our platform, offset by customers whose subscription contracts with us are not renewed or renew at a lower amount.

We calculate our dollar-based net retention rate as of the end of a reporting period as follows:

- *Denominator.* We measure ARR as of the last day of the prior reporting period.
- *Numerator.* We measure ARR as of the last day of the current reporting period from customers with associated ARR as of the last day of the prior reporting period.

The quotient obtained from this calculation is our dollar-based net retention rate. Our dollar-based net retention rates were 123%, 116% and 115% at December 31, 2017 and 2018 and June 30, 2019, respectively. We believe our ability to cross-sell our new solutions to our installed base, particularly MFA and API Intelligence, will continue to support our high dollar-based net retention rates.

Large Customers

We believe that our ability to increase the number of customers on our platform, particularly the number of customers with greater than ARR of $250,000, demonstrates our focus on the large enterprise market and our penetration within those enterprises. Increasing awareness of our platform, further developing our sales and marketing expertise and channel partner ecosystem, and continuing to build solutions that address the unique identity needs of large enterprises have increased our number of large customers across industries. We believe there are significant upsell and cross-sell opportunities within our customer base by expanding the number of use cases, adding additional identities and selling new solutions.

Our customers with ARR over $250,000 increased from 144 at December 31, 2017 to 202 at December 31, 2018, representing a growth rate of 40%. Our total customers increased from 1,264 at December 31, 2017 to 1,284 at December 31, 2018. The gross increase in total customers for the 2018 fiscal year was partially offset by customer churn, primarily consisting of low contract value churn of customers with ARR below $25,000. Additionally, at December 31, 2018, we had 25 customers with greater than $1,000,000 in ARR.

Components of Results of Operations

Revenue

We recognize revenue under ASC 606. Under ASC 606, we recognize revenue when our customer obtains control of goods or services in an amount that reflects the consideration that we expect to receive in exchange for those goods or services. See "Critical Accounting Policies – Revenue Recognition".

We derive revenue primarily from sales of subscriptions for our solutions to new and existing customers and, to a lesser extent, sales of professional services.

Subscription. Subscription revenue includes subscription term-based license revenue for solutions deployed on-premise within the customer's IT infrastructure, subscription support and maintenance revenue from our on-premise deployments, and SaaS subscriptions, which give customers the right to access our cloud-hosted software solutions. We typically invoice subscription fees annually in advance, though certain contracts require invoicing for the entire subscription in advance. Subscription term-based license revenue is recognized upon transfer of control of the software, which occurs at delivery or when the license term commences, if later. All of our support and maintenance revenue and revenue from SaaS subscriptions is recognized ratably over the term of the applicable agreement.

For the years ended December 31, 2017 and 2018, 71% and 66%, respectively, of our revenue was from subscription term-based licenses. For the six months ended June 30, 2018 and 2019, 66% and 65%, respectively, of our revenue was from subscription term-based licenses. We expect that a majority of our revenue will be from subscription term-based licenses for the foreseeable future. Changes in period-over-period subscription revenue growth are primarily impacted by the following factors:

- the type of new and renewed subscriptions (i.e., term-based or SaaS); and
- the duration of new and renewed term-based subscriptions.

While the number of new and increased subscriptions during a period impacts our subscription revenue growth, the type and duration of those subscriptions has a significantly greater impact on the amount and timing of revenue recognized in a period. Subscription revenue from term-based licenses is recognized at the beginning of the subscription term, while subscription revenue from SaaS and support and maintenance is recognized ratably over the subscription term. As a result, our revenue may fluctuate due to the timing of term-based licensing transactions. In addition, keeping other factors constant, when the percentage of subscription term-based licenses to total subscriptions sold or renewed in a period increases relative to the prior period, revenue growth will increase. Conversely, when the percentage of subscription SaaS and support and maintenance to total subscriptions sold or renewed in a period increases, revenue growth will generally decrease. A multi-year subscription term-based license will generally result in greater revenue recognition up-front relative to a one-year subscription term-based license. Therefore, keeping other factors constant, revenue growth will also trend higher in a period where the percentage of multi-year subscription term-based licenses to total subscription term-based licenses increases.

Professional Services and Other. Professional services and other revenue consists primarily of fees from professional services provided to our customers and partners to configure and optimize the use of our solutions, as well as training services related to the configuration and operation of our solutions. Our professional services are generally priced on a time and materials basis, which is generally invoiced monthly and for which revenue is recognized as the services are performed. Revenue from our training services and sponsorship fees is recognized on the date the services are complete. Over time, we expect our professional services revenue to remain relatively stable as a percentage of total revenue.

Cost of Revenue

Subscription. Subscription cost of revenue consists primarily of employee compensation costs for employees associated with supporting our subscription arrangements and certain third-party expenses. Employee compensation and related costs include cash compensation and benefits to employees, costs of third-party contractors and associated overhead costs. Third-party expenses consist of cloud infrastructure costs and other expenses directly associated with our customer support. We expect our subscription cost of revenue to increase in absolute dollars to the extent our subscription revenue increases.

Professional Services and Other. Professional services and other cost of revenue consists primarily of employee compensation costs directly associated with delivery of professional services and training, costs of third-party contractors and facility rental charges and other associated overhead costs. We expect our professional services and other cost of revenue to increase in absolute dollars relative to the growth of our business.

Amortization Expense. Amortization expense consists of amortization of developed technology and internal-use software.

Gross Profit and Gross Margin

Gross profit, or revenue less cost of revenue, and gross margin, or gross profit as a percentage of revenue, have been and will continue to be affected by various factors, including the timing of our acquisition of new customers and our renewal of and follow-on sales to existing customers, the mix of subscriptions for term-based licenses and SaaS subscriptions that we sell, the costs associated with operating our platform, the extent to which we expand our customer support team and the extent to which we can increase the efficiency of our technology and infrastructure through technological improvements. We expect our gross profit to increase in absolute dollars but our gross margin to remain consistent because we expect cost of subscription revenue to increase consistently with the growth in our subscription revenue, although our gross margin could fluctuate from period to period depending on the interplay of all of these factors.

Operating Expenses

Our operating expenses consist of sales and marketing, research and development and general and administrative expenses as well as depreciation and amortization. Personnel costs are the most significant component of operating expenses and consist of salaries, benefits, bonuses, payroll taxes and stock-based compensation expense.

Sales and Marketing. Sales and marketing expenses consist primarily of employee compensation costs, sales commissions, costs of general marketing and promotional activities, travel-related expenses and allocated overhead. Certain sales commissions earned by our sales force on subscription contracts are deferred and amortized over the period of benefit, which is generally four years. We expect to continue to invest in our sales force domestically and internationally, as well as in our channel relationships. We expect our sales and marketing expenses to increase on an absolute dollar basis and continue to be our largest operating expense category for the foreseeable future.

Research and Development. Research and development expenses consist primarily of employee compensation costs, allocated overhead and software and maintenance expenses. We will continue to invest in innovation and offer our customers new solutions to enhance our existing platform. See the section "Business — Research and Development" for more information. We expect such investment to increase on an absolute dollar basis as our business grows.

General and Administrative. General and administrative expenses consist primarily of employee compensation costs for corporate personnel, such as those in our executive, human resource, legal, facilities, accounting and finance, information security and information technology departments. In addition, general and administrative expenses include third-party professional fees, as well as all other supporting corporate expenses not allocated to other departments. General and administrative expense also includes acquisition related expenses, which primarily consist of third-party expenses related to business acquisitions, such as professional services and legal fees.

We expect our general and administrative expenses to increase on an absolute dollar basis as our business grows. Also, following the completion of this offering, we expect to incur additional general and administrative expenses as a result of operating as a public company, including costs to comply with the rules and regulations applicable to companies listed on a national securities exchange, costs related to compliance and reporting obligations pursuant to the rules and regulations of the SEC, and increased expenses for insurance, investor relations and professional services.

Depreciation and Amortization. Depreciation and amortization expense consists primarily of depreciation of our fixed assets and amortization of definite lived acquired intangible assets such as customer relationships, trade names and non-compete agreements.

Other Income (Expense)

Interest Expense. Interest expense consists primarily of interest payments on our outstanding borrowings under our Credit Facilities as well as the amortization of associated deferred financing costs. See "– Liquidity and Capital Resources – Senior Secured Credit Facility".

Other Income (Expense), Net. Other income (expense), net primarily consists of gains and losses from transactions denominated in a currency other than the functional currency, interest income and other income (expense). As we have expanded our international operations, our exposure to fluctuations in foreign currencies has increased, and we expect this to continue.

Provision for Income Taxes

Provision for income taxes consists primarily of income taxes related to U.S. federal and state income taxes and income taxes in foreign jurisdictions in which we conduct business.

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Results of Operations

The following table sets forth our consolidated statements of operations data for the periods indicated:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	**2018**	**2018**	**2019**
	(in thousands)			
Revenue:				
Subscription	$160,219	$184,991	$90,576	$103,892
Professional services and other	12,320	16,571	8,874	9,006
Total revenue	172,539	201,562	99,450	112,898
Cost of revenue:				
Subscription (exclusive of amortization shown below)	14,054	17,512	8,259	10,833
Professional service and other (exclusive of amortization shown below)	9,155	12,703	5,837	6,916
Amortization expense	12,626	14,396	7,064	7,822
Total cost of revenue	35,835	44,611	21,160	25,571
Gross profit	136,704	156,951	78,290	87,327
Operating Expenses:				
Sales and marketing[(1)]	49,481	60,140	28,121	37,334
Research and development[(1)]	26,215	36,229	16,393	22,311
General and administrative[(1)]	20,202	28,355	13,079	15,748
Depreciation and amortization	16,526	16,341	8,356	8,274
Total operating expenses	112,424	141,065	65,949	83,667
Income from operations	24,280	15,886	12,341	3,660
Other Income (Expense):				

Interest expense	(19,277)	(15,837)	(7,791)	(8,249)
Loss on extinguishment of debt	—	(9,785)	(9,785)	—
Other income (expense), net	773	(335)	(912)	225
Total other income (expense)	(18,504)	(25,957)	(18,488)	(8,024)
Income (loss) before income taxes	5,776	(10,071)	(6,147)	(4,364)
Benefit (provision) for income taxes	13,185	(3,375)	391	1,241
Net income (loss)	$18,961	$(13,446)	$(5,756)	$(3,123)

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(1)
Includes stock-based compensation as follows:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	**2018**	**2018**	**2019**
	(in thousands)			
Sales and marketing	$626	$726	$351	$410
Research and development	297	342	108	433
General and administrative	1,601	1,780	821	1,256
Total	$2,524	$2,848	$1,280	$2,099

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The following table sets forth our consolidated statements of operations data expressed as a percentage of total revenue for the periods indicated:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	**2018**	**2018**	**2019**
Revenue:				
Subscription	93%	92%	91%	92%
Professional services and other	7	8	9	8
Total revenue	100	100	100	100
Cost of Revenue:				
Subscription (exclusive of amortization shown below)	8	9	8	10
Professional services and other (exclusive of amortization shown below)	5	6	6	6
Amortization expense	7	7	7	7

Total cost of revenue	20	22	21	23
Gross profit	80	78	79	77
Operating Expenses:				
Sales and marketing	29	30	28	33
Research and development	15	18	16	20
General and administrative	12	14	13	14
Depreciation and amortization	10	8	8	7
Total operating expenses	66	70	65	74
Income from operations	14	8	14	3
Other Income (Expense):				
Interest expense	(11)	(8)	(8)	(7)
Loss on extinguishment of debt	—	(5)	(10)	—
Other income (expense), net	—	—	(1)	—
Total other income (expense)	(11)	(13)	(19)	(7)
Income (loss) before income taxes	3	(5)	(5)	(4)
Benefit (provision) for income taxes	8	(2)	—	1
Net income (loss)	11%	(7)%	(5)%	(3)%

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Comparison of the Six Months Ended June 30, 2018 and 2019

Revenue

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	Six Months Ended June 30,			
	2018	**2019**	**$ Change**	**% Change**
	(in thousands)			
Revenue:				
Subscription	$90,576	$103,892	$13,316	15%
Professional services and other	8,874	9,006	132	1%
Total revenue	$99,450	$112,898	$13,448	14%

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Total revenue increased by $13.4 million, or 14%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. 99% of the increase in total revenue was due to an increase in subscription revenue of $13.3 million.

The table below sets forth the components of subscription revenue for the six months ended June 30, 2018 and 2019.

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	Six Months Ended June 30,			
	2018	2019	$ Change	% Change
	(in thousands)			
Subscription term-based licenses:				
Multi-year subscription term-based licenses	$44,510	$52,425	$7,915	
1-year subscription term-based licenses	21,445	21,082	(363)	
Total subscription term-based licenses	65,955	73,507	7,552	
Subscription SaaS and support and maintenance	24,621	30,385	5,764	
Total subscription revenue	$90,576	$103,892	$13,316	15%

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Subscription revenue increased 15%, or $13.3 million, in the six months ended June 30, 2019 compared to the six months ended June 30, 2018.

The change in subscription revenue was primarily due to the following:

- *Change in subscription type.* Subscription term-based license revenue as a percentage of subscription revenue decreased from 73% to 71% in the six months ended June 30, 2018 and 2019, respectively. Subscription SaaS and support and maintenance as a percentage of subscription revenue increased from 27% to 29% in the six months ended June 30, 2018 and 2019, respectively. This resulted in greater deferral of revenue from subscriptions entered into or renewed during the six months ended June 30, 2019 compared to the six months ended June 30, 2018, which partially offset the increase in subscription revenue due to the changes in term-based subscription duration as described below.
- *Change in term-based subscription duration.* Multi-year subscription term-based license revenue as a percentage of total subscription term-based license revenue increased from 67% to 71% in the six months ended June 30, 2018 and 2019, respectively. This resulted in more upfront revenue recognition from subscriptions entered into or renewed during the six months ended June 30, 2019 compared to the six months ended June 30, 2018.

Cost of Revenue and Gross Margin

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	Six Months Ended June 30,			
	2018	2019	$ Change	% Change
	(in thousands)			
Cost of revenue:				
Subscription (exclusive of amortization shown below)	$8,259	$10,833	$2,574	31%
Professional services and other (exclusive of amortization shown below)	5,837	6,916	1,079	18
Amortization expense	7,064	7,822	758	11
Total cost of revenue	$21,160	$25,571	$4,411	21%
Gross margin:				
Subscription (exclusive of amortization)	91%	90%		
Professional services and other (exclusive of amortization)	34%	22%		
Total gross margin	79%	77%		

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Subscription cost of revenue increased by $2.6 million, or 31%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. $1.3 million of the increase was compensation-related and primarily attributable to an increase in headcount to support the growth of our subscription SaaS offerings and ongoing maintenance for our expanding customer base. $0.8 million of the increase was attributable to our increased cloud-based hosting costs largely associated with the increased adoption of our solutions. Substantially all of the remaining increase in subscription cost of revenue was due to an increase in allocated overhead.

Professional services and other cost of revenue increased by $1.1 million, or 18%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. $1.9 million of the increase was compensation related and primarily attributable to an increase in headcount to support growth of our business. This was partially offset by a decrease in consulting costs of $0.9 million. The remaining portion of the increase was primarily attributable to travel costs as well as allocated overhead.

Amortization expense increased by $0.8 million, or 11%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. The increase was attributable primarily to an increase in the amortization of our capitalized software.

Gross Margin. Subscription gross margin was 91% and 90% for the six months ended June 30, 2018 and 2019, respectively as our cost of subscription revenue increased relatively consistently with the growth in our subscription revenue.

Professional services and other gross margin decreased to 22% for the six months ended June 30, 2019 compared to 34% for the six months ended June 30, 2018. The decrease was attributable primarily to an increase in headcount as we continue to grow our professional services team.

Total gross margin was 79% and 77% for the six months ended June 30, 2018 and 2019, respectively as our total costs of revenue increased at a greater rate year-over-year as compared to our total revenue due to our increased headcount.

Operating Expenses

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	Six Months Ended June 30,			
	2018	**2019**	**$ Change**	**% Change**
	(in thousands)			
Sales and marketing	$28,121	$37,334	$9,213	33%
Research and development	16,393	22,311	5,918	36
General and administrative	13,079	15,748	2,669	20
Depreciation and amortization	8,356	8,274	(82)	(1)
Total operating expenses	$65,949	$83,667	$17,718	27%

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Sales and Marketing. Sales and marketing expenses increased by $9.2 million, or 33%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. $6.5 million of the increase was the result of increased commissions related to the increase in revenue, the increase in our sales force domestically and internationally and continued investment in our channel relationships. As our headcount increased, we also experienced a related increase in travel costs of $0.4 million as well as increased promotional expenses of $1.1 million primarily related to tradeshows and event sponsorships for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. Substantially all of the remaining increase in sales and marketing expenses was the result of increased partner commissions and consulting costs, as well as allocated overhead.

Research and Development. Research and development expenses increased by $5.9 million, or 36%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. $4.4 million of the increase was compensation-related and primarily the result of an increase in headcount to enhance and expand our solutions. Additionally, $0.5 million of the increase related to contingent compensation and retention expense for Elastic Beam, which we acquired in April 2018 (as further discussed in Note 5 of our consolidated financial statements appearing elsewhere in this prospectus). An additional $0.7 million was related to an increase in consulting costs. Substantially all of the remaining increase in research and development expenses was the result of increased software and maintenance expenses, primarily cloud-based hosting costs to support our development efforts for our SaaS offerings, and allocated overhead.

General and Administrative. General and administrative expenses increased by $2.7 million, or 20%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. $4.1 million of the increase was the result of an increase in corporate headcount to support the growth and scale of the business. This was partially offset by a decrease in acquisition costs of $1.4 million, $0.6 million of which related to our

acquisition of Elastic Beam in April 2018. The remaining increase in general and administrative expenses related to increased accounting and legal fees driven by our preparation for becoming a public company.

Depreciation and Amortization. Depreciation and amortization expense remained substantially the same for the six months ended June 30, 2019 compared to the six months ended June 30, 2018 as no major changes were made to our property and equipment or to certain acquired intangible assets from June 30, 2018 to June 30, 2019.

Other Income (Expense)

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	Six Months Ended June 30,			
	2018	**2019**	**$ Change**	**% Change**
	(in thousands)			
Interest expense	$(7,791)	$(8,249)	$(458)	6%
Loss on extinguishment of debt	(9,785)	—	9,785	(100)
Other income (expense), net	(912)	225	1,137	(125)
Total other income (expense)	$(18,488)	$(8,024)	$10,464	(57)%

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Interest Expense. Interest expense increased by $0.5 million, or 6%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. The increase was attributable primarily to an increase in interest rates, from a weighted average interest rate of 5.5% for the six months ended June 30, 2018 to 6.2% for the six months ended June 30, 2019, resulting in increased interest expense for the six months ended June 30, 2019.

Loss on Extinguishment of Debt. In conjunction with the refinancing of our debt in January 2018, we recorded a loss on extinguishment of debt for the six months ended June 30, 2018 of $9.8 million. There was no similar loss during the six months ended June 30, 2019.

Other Income (Expense), Net. Other income (expense), net increased by $1.1 million, from other expense of $0.9 million for the six months ended June 30, 2018 to other income of $0.2 million for the six months ended June 30, 2019. The change was attributable primarily to a change in the amount of foreign currency gains and losses, from a loss of $1.2 million in the six months ended June 30, 2018 compared to a loss of $0.5 million in the six months ended June 30, 2019. The foreign currency losses in each period were partially offset by interest income of $0.3 million and $0.7 million for the six months ended June 30, 2018 and 2019, respectively.

Benefit (Provision) for Income Taxes

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	Six Months Ended June 30,			
	2018	**2019**	**$ Change**	**% Change**
	(in thousands)			
Benefit (provision) for income taxes	$391	$1,241	$850	217%

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For the six months ended June 30, 2018 and 2019, we recorded a benefit for income taxes of $0.4 million and $1.2 million, respectively. Our quarterly tax benefit (provision), and estimate of our annual effective tax rate, is subject to variation due to several factors, including variability in pretax income (or loss), the mix of jurisdictions to which such income relates, changes in how we do business, and tax law developments. Our tax benefit (provision) for interim periods is determined using an estimate of our annual effective tax rate, adjusted for discrete items, if any, that arise during the period. Each quarter, we update our estimate of the annual effective tax rate, and if the estimated annual effective tax rate changes, we make a cumulative adjustment in such period. Our effective tax rates for the six months ended June 30, 2018 and 2019 were (6)% and (28)%, respectively. The difference in the effective tax rates is primarily due to larger non-deductible items in the six months ended June 30, 2018 as compared to the six months ended June 30, 2019.

Comparison of the Year Ended December 31, 2017 and 2018

Revenue

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	Year Ended December 31,			
	2017	**2018**	**$ Change**	**% Change**
	(in thousands)			
Revenue:				
Subscription	$160,219	$184,991	$24,772	15%
Professional services and other	12,320	16,571	4,251	35%
Total revenue	$172,539	$201,562	$29,023	17%

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Total revenue increased by $29.0 million, or 17%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. 85% of the increase in total revenue was due to an increase in subscription revenue of $24.8 million. The remaining $4.3 million of revenue growth was attributable to an increase in professional services and other revenue.

The table below sets forth the components of subscription revenue for the years ended December 31, 2017 and 2018.

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	Year Ended December 31,			
	2017	**2018**	**$ Change**	**% Change**
	(in thousands)			
Subscription term-based licenses:				
Multi-year subscription term-based licenses	$86,421	$88,925	$2,504	
1-year subscription term-based licenses	35,678	44,743	9,065	
Total subscription term-based licenses	122,099	133,668	11,569	
Subscription SaaS and support and maintenance	38,120	51,323	13,203	
Total subscription revenue	$160,219	$184,991	$24,772	15%

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Subscription revenue increased 15%, or $24.8 million, in the year ended December 31, 2018 compared to the year ended December 31, 2017.

The change in subscription revenue was primarily due to the following:

- *Change in subscription type.* Subscription term-based license revenue as a percentage of subscription revenue decreased from 76% to 72% in the years ended December 31, 2017 and 2018, respectively. Subscription SaaS and support and maintenance as a percentage of total subscription revenue increased from 24% to 28% in the years ended December 31, 2017 and 2018, respectively. This resulted in greater deferral of revenue from subscriptions entered into or renewed during the year ended December 31, 2018 compared to the year ended December 31, 2017.
- *Change in term-based subscription duration.* Multi-year subscription term-based license revenue as a percentage of total subscription term-based license revenue decreased from 71% to 67% in the years ended December 31, 2017 and 2018, respectively. This resulted in

less upfront revenue recognition from subscriptions entered into or renewed during the year ended December 31, 2018 compared to the year ended December 31, 2017.

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Cost of Revenue and Gross Margin

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	Year Ended December 31,			
	2017	2018	$ Change	% Change
	(in thousands)			
Cost of revenue:				
Subscription (exclusive of amortization shown below)	$14,054	$17,512	$3,458	25%
Professional services and other (exclusive of amortization shown below)	9,155	12,703	3,548	39
Amortization expense	12,626	14,396	1,770	14
Total cost of revenue	$35,835	$44,611	$8,776	24%
Gross margin:				
Subscription (exclusive of amortization)	91%	91%		
Professional services and other (exclusive of amortization)	26%	23%		
Total gross margin	79%	78%		

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Subscription cost of revenue increased by $3.5 million, or 25%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. $1.8 million of the increase was compensation-related and primarily attributable to an increase in headcount to support the growth of our subscription SaaS offerings and ongoing maintenance for our expanding customer base. $1.0 million of the increase was attributable to our increased cloud-based hosting costs largely associated with the increased adoption of our solutions. Substantially all of the remaining increase in subscription cost of revenue was due to an increase in travel costs and allocated overhead.

Professional services and other cost of revenue increased by $3.5 million, or 39%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. $2.8 million of the increase was compensation related and primarily attributable to an increase in headcount to support growth of our business. $0.5 million of the increase related to consulting costs. The remaining portion of the increase was primarily attributable to travel costs as well as allocated overhead.

Amortization expense increased by $1.8 million, or 14%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. The increase was attributable primarily to an increase in the amortization of our capitalized software.

Gross Margin. Subscription gross margin was 91% for the years ended December 31, 2017 and 2018 as our cost of subscription revenue increased consistently with the growth in our subscription revenue.

Professional services and other gross margin decreased to 23% for the year ended December 31, 2018 compared to 26% for the year ended December 31, 2017. The decrease was attributable primarily to an increase in headcount as we continue to grow our professional services team.

Total gross margin was 79% and 78% for the years ended December 31, 2017 and 2018, respectively, as our total costs of revenue marginally increased year-over-year as compared to our total revenue due to our increased headcount.

Operating Expenses

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	Year Ended December 31,			
	2017	2018	$ Change	% Change
	(in thousands)			
Sales and marketing	$49,481	$60,140	$10,659	22%

Research and development	26,215	36,229	10,014	38
General and administrative	20,202	28,355	8,153	40
Depreciation and amortization	16,526	16,341	(185)	(1)
Total operating expenses	$112,424	$141,065	$28,641	25%

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Sales and Marketing. Sales and marketing expenses increased by $10.7 million, or 22%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. $6.0 million of the increase was the result of increased commissions related to the increase in revenue, the increase in our sales force domestically and internationally and continued investment in our channel relationships. As our headcount increased, we also experienced a related increase in travel costs of $1.2 million and increased promotional expenses of $1.5 million primarily related to tradeshows and event sponsorships for the year ended December 31, 2018 compared to the year ended December 31, 2017. Substantially all of the remaining increase in sales and marketing expenses was the result of increased partner commissions and consulting costs, as well as allocated overhead.

Research and Development. Research and development expenses increased by $10.0 million, or 38%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. $4.0 million of the increase was compensation-related and primarily the result of an increase in headcount to enhance and expand our solutions. Additionally, $5.2 million of the increase related to contingent compensation and retention expense that was payable on the first anniversary of our acquisition of Elastic Beam, which we acquired in April 2018 (as further discussed in Note 5 of our consolidated financial statements appearing elsewhere in this prospectus). Substantially all of the remaining increase in research and development expenses was the result of increased software and maintenance expenses, primarily cloud-based hosting costs to support our development efforts for our SaaS offerings, consulting costs and allocated overhead.

General and Administrative. General and administrative expenses increased by $8.2 million, or 40%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. $3.9 million of the increase was the result of an increase in corporate headcount to support the growth and scale of the business. An additional $1.3 million of the increase resulted from an increase in consulting costs, driven primarily by the implementation of new accounting standards and our preparation for becoming a public company. General and administrative expenses for the year ended December 31, 2018 also included $0.6 million of acquisition-related expenses related to our acquisition of Elastic Beam. Substantially all of the remaining increase in general and administrative expenses related to increased accounting and legal fees driven by our preparation for becoming a public company.

Depreciation and Amortization. Depreciation and amortization expense remained substantially the same for the year ended December 31, 2018 compared to the year ended December 31, 2017 as no major changes were made to our property and equipment or to certain acquired intangible assets from December 31, 2017 to December 31, 2018.

Other Income (Expense)

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	Year Ended December 31,			
	2017	**2018**	**$ Change**	**% Change**
	(in thousands)			
Interest expense	$(19,277)	$(15,837)	$3,440	(18)%
Loss on extinguishment of debt	—	(9,785)	(9,785)	NM
Other income (expense), net	773	(335)	(1,108)	(143)
Total other income (expense)	$(18,504)	$(25,957)	$(7,453)	40%

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Interest Expense. Interest expense decreased by $3.4 million, or 18%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. The decrease was attributable primarily to the refinancing of our debt in January 2018, through which we increased our borrowings of long-term debt from a principal amount of $170.0 million to $250.0 million but were able to obtain more favorable interest rates, from a weighted average interest rate of 10.4% for the year ended December 31, 2017 to 5.8% for the year ended December 31, 2018, resulting in reduced interest expense for the year ended December 31, 2018.

Loss on Extinguishment of Debt. In conjunction with the refinancing of our debt in January 2018, we recorded a loss on extinguishment of debt for the year ended December 31, 2018 of $9.8 million. There was no similar loss during the year ended December 31, 2017.

Other Income (Expense), Net. Other income (expense), net decreased by $1.1 million, or 143%, for the year ended December 31, 2018 compared to the year ended December 31, 2017. The decrease was attributable primarily to a change in the amount of foreign currency gains and losses, from a gain of $0.7 million in the year ended December 31, 2017 compared to a loss of $2.0 million in the year ended December 31, 2018.

Benefit (Provision) for Income Taxes

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	Year Ended December 31,			
	2017	**2018**	**$ Change**	**% Change**
	(in thousands)			
Benefit (provision) for income taxes	$13,185	$(3,375)	$(16,560)	(126)%

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For the year ended December 31, 2017, we recorded a benefit for income taxes of $13.2 million. For the year ended December 31, 2018, we recorded a provision for income taxes of $3.4 million. Our effective tax rates for the years ended December 31, 2017 and 2018 were (228.2)% and (33.5)%, respectively. The increase in our effective tax rate for 2018 compared to 2017 was primarily driven by the enactment of the Tax Act in 2017. As a result of the Tax Act, we remeasured our deferred tax assets and liabilities at the lower U.S. federal tax rate, which resulted in a one-time tax benefit during the year ended December 31, 2017 of $17.0 million. This one-time tax benefit was partially offset by the one-time transition tax expense on certain unremitted earnings of our foreign subsidiaries during the year ended December 31, 2017 of $1.2 million. Additionally, there were changes to our state tax rates which resulted in tax expense of $1.9 million and $4.2 million during the years ended December 31, 2017 and December 31, 2018, respectively. During the year ended December 31, 2018, we recorded tax expense of $1.0 million for contingent deal consideration related to the Elastic Beam acquisition (as further discussed in Note 5 of our consolidated financial statements included elsewhere in this prospectus).

Quarterly Results of Operations and Other Data

The following tables set forth selected unaudited consolidated quarterly statements of operations data for each of the ten fiscal quarters ended June 30, 2019, as well as the percentage of revenue that each line item represents for each quarter. The information for each of these quarters has been prepared on the same basis as the audited annual consolidated financial statements included elsewhere in this prospectus and, in the opinion of management, includes all adjustments, which consist only of normal recurring adjustments, necessary for the fair statement of the results of operations for these periods. This data should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this prospectus. These quarterly results are not necessarily indicative of our results of operations to be expected for any future period.

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	Three Months Ended									
	March 31, 2017	**June 30, 2017**	**September 30, 2017**	**December 31, 2017**	**March 31, 2018**	**June 30, 2018**	**September 30, 2018**	**December 31, 2018**	**March 31, 2019**	**June 30, 2019**
	(in thousands)									
Revenue:										
Subscription	$30,706	$39,404	$31,089	$59,020	$46,173	$44,403	$38,481	$55,934	$47,620	$56,272
Professional services and other	3,406	3,671	2,337	2,906	3,774	5,100	4,138	3,559	2,818	6,188
Total revenue	34,112	43,075	33,426	61,926	49,947	49,503	42,619	59,493	50,438	62,460
Cost of Revenue:										
Subscription (exclusive of amortization shown below)	3,177	3,236	3,567	4,074	3,918	4,341	4,526	4,727	5,181	5,652
Professional services and other (exclusive of amortization shown below)	1,682	2,099	2,580	2,794	3,151	2,686	3,347	3,519	3,241	3,675

Amortization expense	2,969	3,106	3,199	3,352	3,478	3,586	3,549	3,783	3,866	3,956
Total cost of revenue	7,828	8,441	9,346	10,220	10,547	10,613	11,422	12,029	12,288	13,283
Gross profit	26,284	34,634	24,080	51,706	39,400	38,890	31,197	47,464	38,150	49,177
Operating Expenses:										
Sales and marketing(2)	11,055	13,011	11,287	14,128	12,623	15,498	13,690	18,329	17,308	20,026
Research and development(2)	6,143	6,148	6,588	7,336	7,026	9,367	9,634	10,202	11,454	10,857
General and administrative(2)	5,121	4,821	4,864	5,396	7,380	5,699	6,411	8,865	7,084	8,664
Depreciation and amortization	4,136	4,115	4,129	4,146	4,174	4,182	3,976	4,009	4,121	4,153
Total operating expenses	26,455	28,095	26,868	31,006	31,203	34,746	33,711	41,405	39,967	43,700
Income (loss) from operations	(171)	6,539	(2,788)	20,700	8,197	4,144	(2,514)	6,059	(1,817)	5,477
Other Income (Expense):										
Interest expense	(4,694)	(4,754)	(4,909)	(4,920)	(3,956)	(3,835)	(3,959)	(4,087)	(4,116)	(4,133)
Loss on extinguishment of debt	–	–	–	–	(9,785)	–	–	–	–	–
Other income (expense), net	41	403	282	47	396	(1,308)	(131)	708	(9)	234
Total other income (expense)	(4,653)	(4,351)	(4,627)	(4,873)	(13,345)	(5,143)	(4,090)	(3,379)	(4,125)	(3,899)
Income (loss) before income taxes	(4,824)	2,188	(7,415)	15,827	(5,148)	(999)	(6,604)	2,680	(5,942)	1,578
Benefit (provision) for income taxes	1,522	(691)	2,216	10,138	1,086	(695)	983	(4,749)	1,063	178
Net income (loss)	$(3,302)	$1,497	$(5,199)	$25,965	$(4,062)	$(1,694)	$(5,621)	$(2,069)	$(4,879)	$1,756

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(2)

Includes stock-based compensation as follows:

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	Three Months Ended									
	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018	March 31, 2019	June 30, 2019
	(in thousands)									

Sales and marketing	$125	$171	$150	$180	$169	$182	$184	$191	$222	$188
Research and development	65	72	88	72	71	37	76	158	215	218
General and administrative	327	435	393	446	386	435	444	515	622	634
Total	$517	$678	$631	$698	$626	$654	$704	$864	$1,059	$1,040

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	Three Months Ended									
	March 31, 2017	**June 30, 2017**	**September 30, 2017**	**December 31, 2017**	**March 31, 2018**	**June 30, 2018**	**September 30, 2018**	**December 31, 2018**	**March 31, 2019**	**June 30, 2019**
Revenue:										
Subscription	90%	91%	93%	95%	92%	90%	90%	94%	94%	90%
Professional services and other	10	9	7	5	8	10	10	6	6	10
Total revenue	100	100	100	100	100	100	100	100	100	100
Cost of Revenue:										
Subscription (exclusive of amortization shown below)	9	8	11	7	8	9	11	8	10	9
Professional services and other (exclusive of amortization shown below)	5	5	8	5	6	5	8	6	6	6
Amortization expense	9	7	10	5	7	7	8	6	8	6
Total cost of revenue	23	20	29	17	21	21	27	20	24	21
Gross profit	77	80	71	83	79	79	73	80	76	79
Operating Expenses:										
Sales and marketing	32	30	34	23	25	31	32	31	34	32
Research and development	18	14	20	12	14	19	23	17	23	17
General and administrative	15	11	15	9	15	12	15	15	14	14
Depreciation and amortization	12	10	12	7	8	8	9	7	8	7
Total operating expenses	77	65	81	51	62	70	79	70	79	70
Income (loss) from operations	—	15	(10)	32	17	9	(6)	10	(3)	9
Other Income (Expense):										
Interest expense	(14)	(11)	(15)	(8)	(8)	(8)	(9)	(7)	(8)	(7)
Loss on extinguishment of debt	—	—	—	—	(20)	—	—	—	—	—
Other income (expense), net	—	1	1	—	1	(3)	—	1	—	0
Total other income (expense)	(14)	(10)	(14)	(8)	(27)	(11)	(9)	(6)	(8)	(6)

Income (loss) before income taxes	(14)	5	(24)	24	(10)	(2)	(15)	5	(11)	3
Benefit (provision) for income taxes	4	(2)	7	16	2	(1)	2	(8)	2	0
Net income (loss)	(10)%	3%	(17)%	40%	(8)%	(3)%	(13)%	(3)%	(9)%	3%

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Quarterly Revenue Trends

Except for the three months ended December 31, 2018, our quarterly revenue increased in each of the periods presented when compared to the results of the same quarter in the prior year due primarily to increases in the number of new customers as well as retention within existing customers and sales of new products year-over-year. Revenue decreased in the three months ended December 31, 2018 compared to the three months ended December 31, 2017 because multi-year subscription term-based license revenue as a percentage of total subscription term-based license revenue decreased to 70% from 81%, respectively. We typically experience seasonality in terms of when we receive orders from our customers. We generally receive a greater number of orders from new customers, as well as renewal or upsell orders from existing customers, in our second and fourth quarter because of purchasing patterns of our enterprise customers. Our customers often time their purchases and renewals of our solutions to coincide with their fiscal year end, which is typically June 30 or December 31. Our subscription term-based license revenue is recognized up front at the later of delivery or commencement of the license term, thus creating fluctuations in subscription revenue quarter-over-quarter depending on the number and size of term-based licenses sold each quarter. Conversely, our subscription SaaS and support and maintenance revenue is recognized on a straight-line basis over the contract term. For our subscription SaaS and support and maintenance revenue, a portion of the revenue that we report in each period may be attributable to the recognition of deferred revenue recorded in prior periods. As such, increases or decreases in new sales or renewals in any one period may not be immediately reflected in our revenue for that period and may instead affect future periods.

Quarterly Operating Expense Trends

Our operating expenses have generally increased sequentially due to our growth and are primarily related to increases in personnel-related costs and related overhead in order to support our expanding operations and our continued investments in our solutions and service capabilities.

Liquidity and Capital Resources

General

As of June 30, 2019, our principal sources of liquidity were cash and cash equivalents totaling $83.0 million, which was held for working capital purposes, as well as the available balance of our Term Loan Facility and Revolving Credit Facility, described further below. As of June 30, 2019, our cash equivalents were comprised of money market funds. During the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019, our positive cash flows from operations have enabled us to make continued investments in supporting the growth of our business. Following the completion of this offering, we expect that our operating cash flows, in addition to our cash and cash equivalents, will enable us to continue to make such investments in the future. We expect our operating cash flows to further improve as we increase our operational efficiency and experience economies of scale.

We have financed our operations primarily through cash received from operations and debt financing. We believe our existing cash and cash equivalents, our Term Loan Facility and Revolving Credit Facility and cash provided by sales of our solutions and services will be sufficient to meet our working capital and capital expenditure needs for at least the next 12 months. Our future capital requirements will depend on several factors, including but not limited to our subscription growth rate, subscription renewal activity, billing frequency, the timing and extent of spending to support development efforts, the expansion of sales and marketing activities, the introduction of new and enhanced solutions and the continuing market adoption of our platform. In the future, we may enter into arrangements to acquire or invest in complementary businesses, services and technologies, including intellectual property rights.

We may be required to seek additional equity or debt financing. In the event that additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us or at all. If we are unable to raise additional capital or generate cash flows necessary to expand our operations and invest in new technologies, this could reduce our ability to compete successfully and harm our results of operations.

A majority of our customers pay in advance for annual subscriptions, a portion of which is recorded as deferred revenue. Deferred revenue consists of the unearned portion of billed fees for our subscriptions, which is later recognized as revenue in accordance with our revenue recognition policy. As of June 30, 2019, we had deferred revenue of $35.5 million, of which $33.3 million was recorded as a current liability and is expected to be recorded as revenue in the next 12 months, provided all other revenue recognition criteria have been met.

Senior Secured Credit Facilities

On January 25, 2018, we entered into our $275.0 million Credit Agreement with a syndicate of lenders, comprised of the $25.0 million Revolving Credit Facility and the $250.0 million Term Loan Facility. A portion of the proceeds from borrowing under the Credit Agreement were used to repay our then existing credit facilities, together with accrued interest and related prepayment penalties and expenses. As of June 30, 2019, we had $247.5 million and no borrowings outstanding under our Term Loan Facility and Revolving Credit Facility, respectively. As of June 30, 2019, the interest rate on our Term Loan Facility and Revolving Credit Facility was approximately 6.19% and 0.25%, respectively.

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Borrowings under the Credit Agreement bear interest at a rate per annum, at our option, equal to an applicable margin, plus, (a) for alternative base rate borrowings, the highest of (i) the prime rate as determined by the administrative agent in effect on such day, (ii) the Federal Funds Rate in effect on such day plus $^{1}/_{2}$ of 1.00% and (iii) the Adjusted LIBO Rate (for a one-month interest period and taking into account a 1.00% floor with respect to term loans) plus 1.00% and (b) for eurocurrency borrowings, the Adjusted LIBO Rate determined by the greater of (i) the LIBO rate for the relevant interest period divided by 1 minus the statutory reserves (if any) and (ii) with respect to term loans only, 1.00%.

The applicable margin for borrowings under the Credit Agreement is (a) with respect to term loan borrowings, 2.75% for alternate base rate borrowings and 3.75% for eurocurrency borrowings, and (b) with respect to both revolving and swingline loan borrowings, 2.75% for alternate base rate borrowings and 3.75% for eurocurrency borrowings when our first lien leverage ratio is greater than 5.00 to 1.00, with step downs to (i) 2.50% for alternate base rate borrowings and 3.50% for eurocurrency borrowings when our first lien leverage ratio is less than or equal to 5.00 to 1.00 but greater than 4.50 to 1.00 and (ii) 2.25% for alternate base rate borrowings and 3.25% for eurocurrency when our first lien leverage ratio is less than or equal to 4.50 to 1.00. Our first lien leverage ratio is determined in accordance with the terms of the Credit Agreement.

The Credit Agreement contains customary representations and warranties, affirmative covenants, reporting obligations, negative covenants and events of default. See "Description of Certain Indebtedness".

Cash Flows

The following table presents a summary of our consolidated cash flows from operating, investing and financing activities for the periods indicated.

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
	(in thousands)			
Net cash provided by operating activities	$3,423	$22,886	$13,015	$8,064
Net cash used in investing activities	(5,961)	(26,661)	(21,566)	(6,822)
Net cash provided by (used in) financing activities	101	67,102	68,921	(1,951)
Effect of exchange rates on cash and cash equivalents and restricted cash	274	(653)	(408)	220
Net (decrease) increase in cash and cash equivalents and restricted cash	$(2,163)	$62,674	$59,962	$(489)
Cash and cash equivalents and restricted cash at beginning of period	23,632	21,469	21,469	84,143
Cash and cash equivalents and restricted cash at end of period	$21,469	$84,143	$81,431	$83,654

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Operating Activities

Our largest source of operating cash is cash collections from our customers for subscriptions and professional services. Our primary uses of cash from operating activities are for employee-related expenditures, marketing expenses and third-party hosting costs.

For the six months ended June 30, 2018, net cash provided by operating activities was $13.0 million, reflecting our net loss of $5.8 million, adjusted for non-cash charges of $28.1 million and net cash outflows of $9.3 million provided by changes in our operating assets and liabilities. Non-cash charges primarily consisted of stock-based compensation, amortization of deferred commissions, depreciation and amortization of property and equipment and intangible assets, loss on extinguishment of debt and deferred income taxes. The primary drivers of the changes in operating assets and liabilities related to a $3.8 million increase in contract assets and a $2.7 million increase in deferred commissions, as well as a $2.8 million

decrease in deferred revenue and a $2.3 million decrease in accrued expenses and other due to the timing of cash disbursements, partially offset by a $2.5 million decrease in accounts receivable due to the timing of receipt of payment from our customers and a $1.0 million increase in accounts payable.

During the six months ended June 30, 2019, net cash provided by operating activities was $8.1 million due to our net loss of $3.1 million that was adjusted for non-cash charges of $20.0 million and net cash outflows of $8.8 million provided by changes in our operating assets and liabilities. Non-cash charges primarily consisted of stock-based compensation, amortization of deferred commissions, depreciation and amortization of property and equipment and intangible assets and deferred income taxes. The primary drivers of the changes in operating assets and liabilities related to an $8.2 million increase in contract assets, a $3.6 million increase in deferred commissions, a $4.6 million decrease in accrued compensation and a $1.5 million decrease in accrued expenses and other due to the timing of payments, partially offset by a $6.0 million decrease in accounts receivable due to the timing of receipt of payment from our customers and a $3.1 million decrease in prepaid expenses and other current assets due to the timing of cash disbursements.

For the year ended December 31, 2017, net cash provided by operating activities was $3.4 million, reflecting our net income of $19.0 million, adjusted for non-cash charges of $23.3 million and net cash outflows of $38.8 million provided by changes in our operating assets and liabilities. Non-cash charges primarily consisted of stock-based compensation, amortization of deferred commissions, depreciation and amortization of property and equipment and intangible assets and deferred income taxes. The primary drivers of the changes in operating assets and liabilities related to a $22.2 million increase in contract assets, a $7.7 million increase in deferred commissions and a $6.2 million increase in deferred revenue, primarily driven by the increase in subscription sales in the fourth quarter of 2017 and the associated recognition of revenue, as well as a $10.0 million increase in accounts receivable due to the timing of receipt of payment from our customers and a $3.8 million decrease in accrued compensation due to the timing of cash disbursements.

During the year ended December 31, 2018, net cash provided by operating activities was $22.9 million due to our net loss of $13.4 million that was adjusted for non-cash charges of $52.2 million and net cash outflows of $15.9 million provided by changes in our operating assets and liabilities. Non-cash charges primarily consisted of stock-based compensation, amortization of deferred commissions, depreciation and amortization of property and equipment and intangible assets, loss on extinguishment of debt and deferred income taxes. The primary drivers of the changes in operating assets and liabilities related to a $6.8 million increase in contract assets, a $10.0 million increase in deferred commissions and a $5.8 million increase in prepaid expenses and other current assets due to the timing of payments, and a $1.5 million increase in accounts receivable due to the timing of receipt of payment from our customers, offset by a $1.4 million increase in deferred revenue resulting from the timing of when we recognize revenue, as well as a $6.1 million increase in accrued compensation and a $1.1 million increase in accrued expenses and other due to the timing of payments.

Investing Activities

Net cash used in investing activities was $21.6 million and $6.8 million during the six months ended June 30, 2018 and 2019, respectively, a decrease of $14.8 million. The net decrease is primarily attributable to the acquisition of Elastic Beam for $17.4 million in cash during the six months ended June 30, 2018, partially offset by an increase in the capitalization of internal-use software costs of $1.7 million associated with the development of additional features and functionality of our hosted platform.

Net cash used in investing activities was $6.0 million and $26.7 million during the years ended December 31, 2017 and 2018, respectively, an increase of $20.7 million. The net increase is primarily attributable to the acquisition of Elastic Beam for $17.4 million in cash as well as an increase in the capitalization of internal-use software costs of $2.9 million associated with the development of additional features and functionality of our hosted platform.

Financing Activities

Net cash provided by financing activities was $68.9 million during the six months ended June 30, 2018. Net cash used in financing activities was $2.0 million during the six months ended June 30, 2019. The net change primarily relates to the receipt of proceeds from our new term loan of $250.0 million, partially offset by issuance costs of $6.0 million and the repayment of our previous term loan and revolving credit facility and payment of the associated debt extinguishment costs of $170.0 million and $5.1 million, respectively, all of which occurred during the six months ended June 30, 2018. This is partially offset by $1.3 million related to quarterly principal payments on our Term Loan Facility as well as payment of Elastic Beam consideration and holdbacks of $1.1 million, payment of deferred offering costs of $0.5 million and receipt of $1.0 million from stock options exercises, all of which occurred during the six months ended June 30, 2019.

Net cash provided by financing activities was $0.1 million and $67.1 million during the years ended December 31, 2017 and 2018, respectively, an increase of $67.0 million. The net increase primarily relates to the receipt of proceeds from our new term loan of $250.0 million, partially offset by issuance costs of $6.0 million and the repayment of our previous term loan and revolving credit facility and payment of the associated debt extinguishment costs of $170.0 million and $5.1 million, respectively. This is offset by an additional $1.3 million related to quarterly principal payments on our Term Loan Facility that began in September 2018.

Contractual Obligations and Commitments

Our principal commitments consist of obligations under operating leases for office space and repayments of long-term debt.

The following table summarizes our contractual obligations as of December 31, 2018:

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	Payments Due by Period				
	Total	Less than 1 Year	1 - 3 years	3 - 5 Years	More than 5 years
	(in thousands)				
Operating lease obligations	$17,480	$2,515	$5,370	$4,653	$4,942
Long-term debt — principal	248,750	2,500	5,000	5,000	236,250
Long-term debt — interest[(1)]	90,630	15,313	30,204	29,544	15,569
Other obligations[(2)]	2,810	2,810	—	—	—
Total	$359,670	$23,138	$40,574	$39,197	$256,761

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(1) Interest payments that relate to long-term debt are calculated and estimated for the periods presented based on the expected principal balance for each period and the interest rate at December 31, 2018 of 6.09%, given that our debt is at floating interest rates. Excluded from these payments is the amortization of debt issuance costs related to our indebtedness.

(2) Other obligations represents a non-cancelable minimum annual commitment with AWS of $5.6 million for hosting services to be provided during the year ended December 31, 2019, of which 50% was paid upfront in December 2018.

The contractual commitment amounts in the table above are associated with agreements that are enforceable and legally binding. Obligations under contracts that we can cancel without a significant penalty are not included in the table above. Purchase orders issued in the ordinary course of business are not included in the table above, as our purchase orders represent authorizations to purchase rather than binding agreements.

Indemnification Agreements

In the ordinary course of business, we enter into agreements of varying scope and terms pursuant to which we agree to indemnify customers, vendors, lessors, business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of the breach of such agreements, services to be provided by us or from intellectual property infringement claims made by third parties. In addition, in connection with the completion of this offering we intend to enter into indemnification agreements with our directors and certain officers and employees that will require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers or employees. No demands have been made upon us to provide indemnification under such agreements and there are no claims that we are aware of that could have a material effect on our consolidated balance sheets, consolidated statements of operations and comprehensive loss, or consolidated statements of cash flows.

Off-Balance Sheet Arrangements

As of June 30, 2019, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structure finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or for other contractually narrow or limited purposes.

JOBS Act Accounting Election

We qualify as an emerging growth company pursuant to the provisions of the JOBS Act. For as long as we are an emerging growth company, we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, exemptions from the requirements of holding advisory "say-on-pay" votes on executive compensation and shareholder advisory votes on golden parachute compensation.

The JOBS Act also permits an emerging growth company like us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We have elected to use the extended transition period until we are no longer an emerging growth company or until we choose to affirmatively and irrevocably opt out of the extended transition period. As a result, our financial statements

may not be comparable to companies that comply with new or revised accounting pronouncements applicable to public companies. See "Risk Factors – Risks Relating to Our Common Stock and This Offering – We are an 'emerging growth company' and we expect to elect to comply with reduced public company reporting requirements, which could make our common stock less attractive to investors".

Critical Accounting Policies

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets and liabilities, revenue and expenses and related disclosures of contingent assets and liabilities at the date of our financial statements. Actual results may differ from these estimates under different assumptions or conditions, impacting our reported results of operations and financial condition.

Certain accounting policies involve significant judgments and assumptions by management, which have a material impact on the carrying value of assets and liabilities and the recognition of income and expenses. Management considers these accounting policies to be critical accounting policies. The estimates and assumptions used by management are based on historical experience and other factors, which are believed to be reasonable under the circumstances. The significant accounting policies which we believe are the most critical to aid in fully understanding and evaluating our reported financial results are described below. Refer to "Note 2 – Summary of Significant Accounting Policies" to the consolidated financial statements included elsewhere in this prospectus for more detailed information regarding our critical accounting policies.

Revenue Recognition

We recognize revenue under ASC 606. In accordance with ASC 606, revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized reflects the consideration that we expected to be entitled to receive in exchange for those goods or services. To adhere to the requirements of the new standard, we determine revenue recognition through the following steps:

(1)

Identification of the contract, or contracts, with a customer: We primarily contract with our customers through order forms, which in some cases are governed by master sales agreements. We determine that we have a contract with a customer when (i) the contract is approved, (ii) we can identify each party's rights and obligations under the contract, (iii) we can identify the payment terms, (iv) we determine the customer has the ability

and intent to pay, and (v) we conclude that the contract has commercial substance. We are required to use judgment to determine whether the customer has the ability and intent to pay, which is based on a variety of factors including the customer's historical payment experience or, when the contract is with a new customer, the credit, reputation and financial information of that customer. At contract inception we evaluate whether two or more contracts should be combined and accounted for as a single contract and whether the combined or single contract includes more than one performance obligation.

(2)

Identification of the performance obligations in the contract: We identify performance obligations in a contract based on the goods and services that will be transferred to the customer. Those goods or services must (i) be capable of being distinct, so the customer can benefit from a good or service either on its own or together with readily available resources (either from third parties or from us) and (ii) be distinct in the context of the contract, where the transfer of control is separately identifiable from other promises in the contract. We sell our software using a subscription model. Our subscriptions for solutions deployed on-premise within the customer's IT infrastructure are comprised of a term-based license and an obligation to provide support and maintenance, where the term-based license and the support and maintenance constitute separate performance obligations. Our SaaS subscriptions provide customers the right to access cloud-hosted software and support for the SaaS service, which we consider to be a single performance obligation. Additionally, we renew subscriptions for support and maintenance, which we consider to be a single performance obligation.

We have also identified services-related performance obligations that relate to the provision of consulting and training services. These services are distinct from subscriptions and do not result in significant customization of the software.

(3)

Determination of the transaction price: We determine the transaction price based on the consideration to which we expect to be entitled in exchange for transferring goods or services to the customer in accordance with the contract. Our transaction price excludes amounts collected on behalf of third parties, such as sales tax and value-added tax. Because we typically do not offer refunds, rebates, or credits to customers in the normal course of business, the impact of variable consideration has not been material.

In instances where the timing of revenue recognition differs from the timing of invoicing, we have determined that our contracts generally do not contain a significant financing component. The primary purpose of our invoicing terms is to provide our customers with simple and predictable ways to purchase our subscriptions and not to provide them with financing.

(4)

Allocation of the transaction price to the performance obligations in the contract: If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Conversely, some of our contracts with customers contain

multiple performance obligations. For these contracts, we account for individual performance obligations separately if they are distinct. The transaction price is allocated to the separate performance obligations on a relative standalone selling price, or SSP, basis.

We determine SSP based on an observable standalone selling price when it is available. In situations where SSP is not available, for example where software licenses are not sold separately, we determine SSP using information such as market conditions and other observable inputs that may require significant judgment. There is typically a range

of standalone selling prices for individual products and services due to a stratification of those products and services by quantity and other circumstances. If a performance obligation is outside the SSP range, we determine the SSP to be the nearest endpoint of the range.

(5)

Recognition of revenue when, or as, we satisfy a performance obligation: Revenue is recognized at the time the performance obligation is satisfied by transferring control of the promised good or service to a customer.

Our subscription term-based license revenue is recognized upfront at the later of delivery or commencement of the license term. Support and maintenance revenue is recognized ratably over the contract period based on the stand-ready nature of those subscription elements. Our SaaS subscription revenue is recognized ratably over the contract period as we satisfy the performance obligation.

Professional services revenue is recognized on a time and materials basis as the services are performed. Revenue from training services and sponsorship fees is recognized on the date the services are complete.

Channel Partner Sales. We generate sales directly through our sales team as well as through our channel partners. Where channel partners are involved, we have determined that we are generally the principal in these arrangements. Sales to channel partners are generally made at a discount, and revenues are recorded at the discounted price once the revenue recognition criteria above have been met. In certain instances, we pay referral fees to our partners, which we have determined to be commensurate with our internal sales commissions, so we record these payments as sales commissions. Channel partners generally receive an order from an end customer prior to placing an order with us, and payment from channel partners is not contingent on the partner's collection from end customers.

Deferred Revenue

Deferred revenue consists of customer billings in advance of revenue being recognized. We primarily invoice customers for subscription arrangements annually in advance, though certain contracts require invoicing for the entire subscription in advance. Amounts anticipated to be recognized within one year of the balance sheet date are recorded as deferred revenue, current; the remaining portion is recorded as deferred revenue, noncurrent in the consolidated balance sheets.

Deferred Commissions

Sales commissions earned by our internal and external sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for new revenue contracts and additional sales to existing customers are deferred and recorded in deferred commissions, current and noncurrent in the consolidated balance sheets. Deferred commissions are amortized over the period of benefit, which we have determined to be generally four years. We determined the period of benefit by taking into consideration our customer contracts, technology, and other factors. Deferred commissions are amortized consistent with the pattern of revenue recognition for each performance obligation for contracts for which the commissions paid were earned. We include amortization of deferred commissions in sales and marketing expense in the consolidated statements of operations. We periodically review the carrying amount of deferred commissions to determine whether events or changes in circumstances have occurred that could impact the period of benefit of these deferred costs.

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Accounts Receivable and Allowance for Doubtful Accounts

Our accounts receivable represents amounts owed to us by our customers that are recorded at the invoiced amount. We report accounts receivable net of allowance for doubtful accounts. Management makes judgments and estimates of the probable loss related to uncollectible accounts receivable considering a number of factors including collection trends, prevailing and anticipated economic conditions and specific customer credit risk. Unanticipated events and circumstances may occur that could affect the accuracy of management's estimates, which may result in changes to our estimates. Probable losses are recorded in general and administrative expense in the accompanying consolidated statements of operations and comprehensive loss included elsewhere in this prospectus. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.

Capitalized Software Costs

For software products sold to customers, we expense costs for the development of new software products and substantial enhancements to existing software products as incurred until technological feasibility has been established. Once technological feasibility has been established, we capitalize certain costs during the application development stage as part of intangible assets. Maintenance and training costs, however, are expensed as incurred.

For software used internally, we capitalize qualifying costs during the application development stage and amortize those costs on a straight-line basis over the software's estimated useful life, which is generally three to four years. Costs related to preliminary project activities and post implementation activities, however, are expensed as incurred.

Acquisitions, Goodwill and Identifiable Intangible Assets

We account for acquired businesses using the acquisition method of accounting, which requires that the assets acquired and liabilities assumed be recorded at the date of acquisition at their respective fair values. The fair value of identifiable intangible assets is based on significant judgments and estimates made by management. We typically engage third-party valuation appraisal firms to assist in determining the fair values and useful lives of the assets acquired. Such valuations and useful life determinations require us to make significant estimates and assumptions. These estimates and assumptions are based on historical experience and information obtained from the management of the acquired companies, and also include, but are not limited to, future expected cash flows earned from the product-related technology and discount rates applied in determining the present value of those cash flows. Unanticipated events and circumstances may occur that could affect the accuracy or validity of such assumptions, estimates or actual results.

Goodwill represents the excess of the purchase price over the fair value of net assets acquired in business combinations using the acquisition method of accounting, which requires that the assets acquired and liabilities assumed be recorded at the date of acquisition at their respective fair values. We evaluate goodwill for impairment at least annually in the fourth quarter of each year, and as events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Our test for goodwill impairment starts with a qualitative assessment to determine whether it is necessary to perform a quantitative goodwill impairment test. If qualitative factors indicate that the fair value of the reporting unit is more likely than not less than its carrying amount, then a quantitative goodwill impairment test is performed. Under the quantitative impairment test, if the carrying amount of the reporting unit exceeds its fair value, then an impairment loss is recognized in an amount equal to that excess, not to exceed the total amount of goodwill.

We record acquired in-process research and development as indefinite-lived intangible assets. Purchased intangible assets with indefinite lives are not amortized but assessed for potential impairment annually and when events or circumstances indicate that their carrying amounts might be impaired.

We review long-lived assets, including property and equipment and finite-lived intangible assets, for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Such events and changes may include significant changes in performance relative to expected operating results, significant changes in asset use, significant negative industry or economic trends and changes in our business strategy. An impairment loss is recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount.

Stock-Based Compensation

We recognize stock-based compensation expense in accordance with the provisions of Accounting Standards Codification 718, *Compensation – Stock Compensation*, or ASC 718. ASC 718 requires compensation expense for all stock-based compensation awards made to employees and directors to be measured and recognized based on the grant date fair value of the awards. Stock-based compensation expense for time-based awards is determined based on the grant-date fair value and is recognized on a straight-line basis over the requisite service period of the award, which is typically the vesting term of the award. Stock-based compensation expense for awards subject to market and performance conditions is determined based on the grant-date fair value and is recognized on a graded vesting basis over the term of the award once it is probable that the performance conditions will be met.

Stock-based compensation expense is recognized net of forfeitures. On January 1, 2018, we elected to adopt Accounting Standards Update No. 2016-09, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, or ASU 2016-09. Prior to the adoption of ASU 2016-09, we estimated forfeiture rates annually using our historical experience of forfeited awards and subsequently adjusted for actual forfeitures at each vesting date. After the adoption of ASU 2016-09, we recognize forfeitures as they occur. Adoption of this provision on January 1, 2018 resulted in a cumulative-effect adjustment to retained earnings of $38 thousand.

To estimate the grant date fair value of our time-based awards, we utilize the Black-Scholes option pricing model. For awards subject to performance and market conditions, we use a Monte Carlo simulation model, which utilizes multiple inputs to estimate the probability that market conditions will be achieved. Both models involve inherent uncertainties and require the following highly subjective assumptions as inputs:

- *Risk-free rate*: We base the risk-free interest rate on the implied yield currently available on U.S. Treasury securities with a remaining term commensurate with the estimated expected term.
- *Expected term*: For time-based awards, the estimated expected term of options granted is generally calculated as the vesting period plus the midpoint of the remaining contractual term, as we do not have sufficient historical information to develop reasonable expectations surrounding future exercise patterns and post-vesting employment termination behavior. For awards subject to market and performance conditions, the expected term represents the period of time that the options granted are expected to be outstanding.
- *Dividend yield*: We estimate the dividend yield at zero, as we do not currently issue dividends and have no plans to issue dividends in the future.

- *Volatility*: Since we do not have a trading history of our common stock, expected volatility is estimated based on the historical volatility of peer companies over the period commensurate with the estimated expected term.
- *Fair value*: Because our common stock is not yet publicly traded, we are required to estimate the fair value of our common stock, as discussed in "Common Stock Valuation" below.

The following assumptions were used for the time-based options that we granted during the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
Risk-free rate	2.0% - 2.2%	2.6% - 3.0%	2.7%	—%
Expected life	6.1 years	6.1 years	6.1 years	— years
Dividend yield	—%	—%	—%	—%
Volatility	38% - 42%	38% - 42%	39%	—%
Weighted-average granted date fair value of options granted during period	$583.36	$822.02	$614.08	$—

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The following assumptions were used for the awards subject to performance and market conditions that we granted during the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018	2019
Risk-free rate	1.5% - 1.9%	2.5% - 2.8%	2.5%	—%
Expected life	3.8 - 4.5 years	1.7 - 3.3 years	3.3 years	— years
Dividend yield	—	—	—%	—%
Volatility	57% - 62%	45% - 55%	55%	—%
Weighted-average granted date fair value of options granted during period	$388.74	$388.63	$478.03	$—

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For our RSUs we calculate the fair value of each unit based on the estimated fair value of our common stock (as discussed below in "Common Stock Valuation") on the date of grant and subsequently record compensation expense over the vesting period using a straight-line method. Prior to the adoption of ASU 2016-09, we factored an estimated forfeiture rate in calculating compensation expense on RSUs and adjusted for actual forfeitures upon the vesting of each tranche of RSUs. After the adoption of ASU 2016-09, we account for forfeitures as they occur.

Common Stock Valuation

Because our common stock is not yet publicly traded, our Board establishes the fair value of the shares of common stock underlying our stock options. These estimates are based in part upon valuations provided by third-party valuation firms.

As there is no public market for our common stock, our Board exercises reasonable judgment and considers numerous objective and subjective factors to determine the best estimate of the fair value of our common stock in accordance with the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, or the AICPA Guide. The factors considered by our Board in estimating the fair value of our common stock include the following:

- contemporaneous valuations performed regularly by unrelated third-party specialists;
- our historical operating and financial performance;
-

likelihood of achieving a liquidity event, such as the consummation of an initial public offering or the sale of our company given prevailing market conditions and the nature and history of our business;

- market multiples of comparable companies in our industry;
- stage of development;
- industry information such as market size and growth;
- the lack of marketability of our securities because we are a private company; and
- general macroeconomic conditions.

In valuing our common stock, our Board determines the value using both the income and the market approach valuation methods. The income approach estimates value based on the expectation of future cash flows that a company will generate. These future cash flows are discounted to their present values using a discount rate based on our weighted average cost of capital, or WACC. To derive our WACC, a cost of equity was developed using the Capital Asset Pricing Model and comparable company betas, and a cost of debt was determined based on our estimated cost of borrowing. The costs of debt and equity were then weighted based on our actual capital structure. The market approach estimates value based on a comparison of our company to comparable public companies in a similar line of business. From the comparable companies, a representative market multiple is determined and subsequently applied to our financial results to estimate our enterprise value.

Application of these approaches involves the use of estimates, judgment and assumptions that are highly complex and subjective, including those regarding our future expected revenue, expenses, cash flows, discount rates, market multiples, the selection of comparable public companies and the probability of future events. Changes in any or all of these estimates and assumptions impact our valuations at each valuation date and may have a material impact on the valuation of our common stock.

Following this offering, it will not be necessary to determine the fair value of our common stock, as the shares will be traded in the public market.

Based on the assumed initial public offering price per share of $, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, the aggregate intrinsic value of our outstanding stock options as of June 30, 2019 was $ million, with $ million related to vested stock options.

Income Taxes

We account for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for temporary differences between the financial statement basis and the income tax basis of assets and liabilities that will result in taxable or deductible amounts in the future. Our temporary differences result primarily from net operating losses, stock-based compensation, deferred revenue, intangible assets and accrued expenses.

Deferred income tax asset and liability computations are based on enacted tax laws and rates anticipated to be in effect when these differences reverse. We then assess the likelihood that our deferred tax assets will be recovered from future taxable income and, to the extent we believe that it is more likely than not that all or a portion of the deferred tax assets will not be realized, we establish a valuation allowance to reduce deferred income tax assets to the amounts expected to be realized.

We evaluate our tax positions taken or expected to be taken in the course of preparing our tax returns to determine whether the tax positions are more likely than not of being sustained by the applicable tax authority. Tax positions not deemed to meet the more likely than not threshold would not be recorded as a tax benefit or expense in the current period. We include interest and penalties related to income tax liabilities in our benefit (provision) for income taxes.

Recent Accounting Pronouncements

For a description of our recently adopted accounting pronouncements and recently issued accounting standards not yet adopted, see Note 2 to our consolidated financial statements: "Summary of Significant Accounting Policies – Recent Accounting Pronouncements" appearing elsewhere in this prospectus.

Quantitative and Qualitative Disclosures About Market Risk

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. As we have operations in the United States and internationally, our market risk exposure is primarily a result of exposure due to potential changes in inflation or interest rates. We do not hold financial instruments for trading purposes.

Foreign Currency Exchange Risk

Our revenues and expenses are primarily denominated in U.S. dollars. For the years ended December 31, 2017 and 2018, we recorded a gain of $0.7 million and a loss of $2.0 million on foreign exchange transactions, respectively. For the six months ended June 30, 2018 and 2019, we recorded losses of $1.2 million and $0.5 million, respectively, on foreign exchange transactions. To date, we have not entered into any hedging arrangements

with respect to foreign currency risk or other derivative financial instruments, but we may do so in the future if our exposure to foreign currency should become more significant. For business conducted outside of the United States, we may have both revenue and costs incurred in the local currency of the subsidiary, creating a partial natural hedge. Changes to exchange rates therefore have not had a significant impact on the business to date. However, we will continue to reassess our foreign exchange exposure as we continue to grow our business globally. During the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019, a hypothetical 10% change in foreign currency exchange rates applicable to our business would not have had a material impact on our consolidated financial statements.

Interest Rate Risk

Our primary market risk exposure is changing LIBO-based interest rates. Interest rate risk is highly sensitive due to many factors, including U.S. monetary and tax policies, U.S. and international economic factors and other factors beyond our control. Our Term Loan Facility bears interest at a floating rate equal to our option of a rate per annum equal to (a) an Adjusted LIBO Rate (with a floor of 1.0% per annum) plus an applicable margin of 3.75%, or (b) the Alternate Base Rate (with a floor of 2.0% per annum) plus an applicable margin of 2.75%. At June 30, 2019, we had total outstanding debt of $247.5 million and $0 million under our Term Loan Facility and Revolving Credit Facility, respectively. Based on the amounts outstanding, a 100-basis point increase or decrease in market interest rates over a twelve-month period would result in a change to interest expense of $2.5 million.

Inflation Risk

Based on our analysis of the periods presented, we believe that inflation has not had a material effect on our operating results. There can be no assurance that future inflation will not have an adverse impact on our operating results and financial condition.

THIS IS THE END OF A COMPOSITION COMPONENT TOC_END

Business

BUSINESS

Our Mission

Our mission is to secure the digital world through Intelligent Identity.

Overview

Ping is pioneering Intelligent Identity. We enable secure access to any service, application or API from any device. Our Intelligent Identity Platform can leverage AI and ML to analyze device, network, application and user behavior data to make real-time authentication and security control decisions, enhancing the user experience. Our platform is designed to detect anomalies and automatically insert additional security measures, such as multi-factor authentication, only when necessary. We built our platform to meet the requirements of the most demanding enterprises. Our platform can be deployed across cloud, hybrid and on-premise infrastructures, offers a comprehensive suite of turnkey integrations and is able to scale to millions of identities and thousands of cloud and on-premise applications in a single deployment. As of June 30, 2019, our platform secures over two billion identities globally across our customer base.

Enterprises are undergoing digital transformation as they seek to create new revenue streams, transition business models and increase customer engagement. Concurrently, enterprises are becoming more distributed as the adoption of cloud, mobile and IoT, moves data, applications and access requirements beyond the traditional network perimeter. These enterprises must contend with an evolving cyber-threat landscape, new privacy directives and stringent regulatory requirements. As a result, enterprises require Intelligent Identity solutions that proactively ensure the right user has authorized access to resources at the appropriate time.

Our Intelligent Identify Platform can secure all primary use cases, including customer, employee, partner and IoT. For example, enterprises can use our platform to enhance their customers' user experience by creating a single ID and login across web and mobile properties. For the year ended December 31, 2018, 44% of our subscription revenue was derived from the customer use case. Enterprises can also use our platform to provide their employees and commercial partners with secure, seamless access from any device to the applications, data and APIs they need to be productive. Enterprises are increasingly using our platform to manage and authenticate IoT devices, such as connected vehicles and consumer devices.

Our Intelligent Identity Platform is comprised of six solutions that can be purchased individually or as a set of integrated offerings for the customer, employee, partner or IoT use case:

- secure single sign-on, or SSO;
- adaptive multi-factor authentication, or MFA;
- security control for applications and APIs, or Access Security;
- personalized and unified profile directories, or Directory;
- data governance to control access to identity data, or Data Governance; and

- AI and ML powered API security, or API Intelligence.

We have spent over a decade building a comprehensive suite of turnkey integrations designed to ensure that enterprises can use our platform to secure their applications wall-to-wall, facilitating easier deployment and rapid time-to-value.

We sell our solutions via a subscription model through a direct sales force, with increasing influence from our channel partners. We also utilize channel partners and system integrators to assist our customers in the implementation process. Our SSO, Access Security and Directory solutions typically replace legacy and homegrown systems. We also have significant greenfield opportunities with our MFA, Data Governance and API Intelligence solutions and, increasingly, the IoT use case.

Our land and expand strategy targets enterprises with a specific solution and use case and then seeks to grow our footprint with additional solutions, use cases and identities. The success of our strategy is validated by our strong dollar-based net retention rates and our growing number of large customers. Our dollar-based net retention rates were 123%, 116% and 115% at December 31, 2017 and 2018 and June 30, 2019, respectively, and our dollar-based net retention rates have exceeded 115% for each of the past eight fiscal quarters. Our customers with ARR over $250,000 increased from 144 at December 31, 2017 to 202 at December 31, 2018, representing a growth rate of 40%. Our total customers increased from 1,264 at December 31, 2017 to 1,284 at December 31, 2018. The gross increase in total customers for the 2018 fiscal year was partially offset by customer churn, primarily consisting of low contract value churn of customers with ARR below $25,000. The increase of 58 net customers with ARR greater than $250,000 for the 2018 fiscal year is comprised of 16 new customers and 42 existing customers that had ARR grow to exceed $250,000 in 2018. Additionally, at December 31, 2018, we had 25 customers with greater than $1,000,000 in ARR. An increasing number of our customers are deploying a combination of our solutions across multiple business units, functions and use cases in their initial purchase. We have seen strong market demand for our cloud-based offerings and from enterprises deploying our solutions across the customer use case. Over the past 18 months, our ARR growth rates in those two areas significantly exceeded the ARR growth rate of the overall business. For definitions of ARR and dollar-based net retention rate and descriptions of how we calculate these metrics, see "Management's Discussion and Analysis of Financial Condition and Results of Operations".

Our customers include many of the world's largest enterprises, including over 50% of the Fortune 100. These customers are security-focused, and typically operate in regulated industries, have hybrid IT infrastructures, require turnkey integrations and have demanding scalability requirements. Our solutions secure 12 of the 12 largest U.S. banks (measured by assets), 8 of the 10 largest bio-pharmaceutical companies (measured by revenue), 4 of the 5 largest healthcare plans (measured by revenue) and 5 of the 7 largest U.S. retailers (measured by revenue). Our customer base is diversified, with no one customer or reseller accounting for more than 5% of our total revenue for the six months ended June 30, 2019.

Since our inception, we have been an innovator in identity. We pioneered the concept of Intelligent Identity, which leverages AI and ML to analyze device, network, application and user behavior data to secure access and enhance the user experience. We founded Ping with the vision of enabling enterprise security in a highly-connected world, replacing legacy security controls such as web gateways, virtual private networks, or VPNs, and firewalls. We contributed to or co-authored many of the open identity standards such as SAML, OAuth, SCIM and OpenID Connect, which form the foundation of our industry. We have consistently been recognized as a leader in the IAM industry by Gartner and KuppingerCole. We founded Identiverse, the leading identity industry conference, which brought together more than 1,500 thought leaders in 2018.

We sell our solutions via a subscription model typically billed annually in advance. We have grown revenue from $172.5 million for the year ended December 31, 2017 to $201.6 million for the year ended December 31, 2018, representing year-over-year growth of 17%. Our ARR was $147.0 million and $183.6 million at December 31, 2017 and 2018, respectively, representing year-over-year growth of 25%. Our ARR was $159.6 million and $198.0 million at June 30, 2018 and 2019, respectively, representing period-over-period growth of 24%. We have grown revenue from $99.5 million for the six months ended June 30, 2018 to $112.9 million for the six months ended June 30, 2019, representing period-over-period growth of 14%. Our net income was $19.0 million for the year ended December 31, 2017. Our net loss was $13.4 million for the year ended December 31, 2018. We had net losses of $5.8 million and $3.1 million for the six months ended June 30, 2018 and 2019, respectively. Our cash provided by operations was $3.4 million and $22.9 million for the years ended December 31, 2017 and 2018, respectively. Our cash provided by operations was $13.0 million and $8.1 million for the six months ended June 30, 2018 and 2019, respectively. Our Free Cash Flow was $(2.5) million and $13.1 million for the years ended December 31, 2017 and 2018, respectively. Our Free Cash Flow was $8.9 million and $1.2 million for the six months ended June 30, 2018 and 2019, respectively. Free Cash Flow is a supplemental measures that is not calculated and presented in accordance with GAAP. See "Selected Consolidated Financial Data—Non-GAAP Financial Measures" for a definition of Free Cash Flow and a reconciliation to its most directly comparable GAAP financial measure.

Industry Background

IAM is the foundation for maximizing security and enhancing user experience in a distributed and highly-connected digital world, where the traditional network perimeter has dissolved and the attack surface has expanded. In this digital world, legacy IAM solutions are proving ill-suited to address cloud, mobile, IoT and API requirements. Similarly, cloud-only IAM vendors are unable to meet the requirements of large enterprises that have hybrid IT infrastructures.

Enterprises are Undergoing Digital Transformations and Embracing Technology Trends

Digital Transformation is Critical to Driving Competitive Differentiation. Enterprises are investing in technology to grow their digital presence, create new revenue streams, transition business models and increase customer engagement. In order to accomplish this, enterprises must engage with their customers across digital channels. As consumers have become accustomed to seamless access and high-quality experiences from companies such as Amazon, Google and Netflix, all enterprises are under pressure to meet rising expectations or risk being disrupted by competitors.

Enterprises are Embracing Cloud Computing, SaaS and Mobility. Enterprises are transitioning a portion of their IT budgets to invest in cloud computing to build new services, shorten time-to-value and drive cost efficiency. The adoption of SaaS applications and mobility is empowering business users and partners to increase productivity, facilitate collaboration, reengineer business processes and drive new opportunities for growth. The consumerization of IT and shift towards a distributed workforce has caused employees and partners to demand seamless access to cloud and on-premise applications from any device.

APIs and IoT Devices are Dramatically Expanding the Number of New Connections. APIs have become critical to software development and act as gateways to other digital services by facilitating the connection and data sharing between heterogeneous systems and applications. APIs have become the building blocks of the web and will help drive the future of software by powering new applications, enabling communications and automating business processes.

Enterprises are also deploying IoT devices embedded with software and sensors to connect with their customers, collect streaming data and analyze endpoint performance. According to IDC, the worldwide installed base of IoT devices will grow from 23 billion in 2018 to more than 41 billion in 2025, representing a CAGR of 9%. APIs and IoT will continue drive innovation for enterprises, creating a myriad of new digital channels, connections and identities.

Digital Transformation Initiatives have Created Challenges and Complexity for Enterprises

Cloud, Mobile and IoT Have Expanded the Attack Surface. The rapid adoption of cloud-based offerings and the proliferation of mobile and IoT devices have expanded the attack surface for cyber threats, moving users, devices, applications and data outside the traditional network perimeter. As a result of this shift, identity has become the most common vulnerability that hackers seek to exploit. According to a 2017 Verizon report, 81% of hacking-related breaches leveraged stolen and/or weak passwords. Once cyber attackers have gained access to an enterprise's systems, they have the ability to move laterally for months, even years, escalating access privileges, performing recognizance and stealing sensitive data while going undetected.

New Technology Adoption has Created Complex Hybrid and Multi-Cloud IT Challenges. Enterprises are increasingly reliant on both cloud and on-premise applications, which is creating complex hybrid IT infrastructures. According to IDC, public cloud spending is projected to grow from 33% of worldwide IT infrastructure spend in 2018 to 38% in 2023. A significant portion of IT budgets, however, will continue to be allocated to on-premise IT infrastructure. As a result, enterprises increasingly require solutions capable of spanning both cloud and on-premise infrastructures to support their hybrid realities.

As the adoption of cloud matures, enterprises are focused on optimizing for performance, cost and security while also maintaining flexibility to operate across multiple clouds. IDC expects more than 90% of enterprise IT organizations will commit to multi-cloud architectures by 2020. Enterprises facing this complexity and fragmentation need independent and vendor-agnostic solutions capable of scaling across multi-cloud environments.

The Rise of APIs has Created New Security Vulnerabilities. The rapid proliferation of APIs has created new security vulnerabilities due to their connectivity with critical systems and access to data. Breaches associated with API gateways can remain undetected for extended periods of time because of a lack of visibility into API traffic and an inability to monitor anomalies or abuse.

The Identity Landscape is Large and Evolving

Identity is a vast landscape, comprised of three distinct established markets that each require different solutions. Our Intelligent Identity Platform focuses on the largest of these markets, IAM. We partner with leading companies in the adjacent markets, PAM and IGA. The objectives, workflows and interfaces of these three markets remain distinct and have little overlap.

- *Identity and Access Management.* Solutions that store user information and enable the authentication of a user and the subsequent access management and security control of that user as the user attempts to access applications, data and APIs. IAM ensures that the right user has authorized access to resources at the appropriate time.
  Within IAM, CIAM represents a large and growing opportunity and includes solutions that provide a consistent, modern, omni-channel customer experience through personalized access to all digital services. Historically, large corporations often managed customer identities in silos using homegrown solutions. However, the landscape has changed dramatically for this use case as enterprises now recognize the value of centralized CIAM.

- *Privileged Access Management.* Solutions that help organizations secure, control, manage and monitor privileged accounts or privileged rights. Privileged accounts and rights are pervasive throughout large enterprises and can provide a user with impactful and potentially dangerous access to databases, production code, robotics, firewalls, load balancers, DNS and network equipment that are beyond the rights granted to them through IAM solutions.

- *Identity Governance and Administration.* Solutions designed to encapsulate the governance and policies that a company uses to meet its identity management related audit and compliance obligations. IGA solutions aggregate users into groups, roles and responsibilities to efficiently provide new users with appropriate access when joining companies or changing positions within a company. In addition, IGA is helpful for ensuring that access is removed when users are terminated. Typically, IGA solutions require the presence of IAM and PAM solutions for security because IGA solutions are designed to address specific access or privilege but cannot ensure that the user has been authenticated or authorized to use that access or privilege.

Existing IAM Solutions are Limited

Legacy Providers. Legacy IAM solutions generally do not meet enterprises' evolving requirements because of these inherent limitations:

- not being designed for cloud environments, mobile and IoT devices or APIs;
- being cumbersome and expensive to deploy;
- providing poor administrative and user experience;
- being built with closed, proprietary and siloed architectures;
- being designed for access administration, not access security;
- having a tendency to experience stability problems; and
- being at or near end of life.

Cloud-Only Vendors. Cloud-only IAM solutions generally do not meet enterprises' evolving requirements because of these inherent limitations:

- lacking in-depth enterprise features and robust integrations across on-premise applications;
- primarily being focused on the employee use case;
- having an unproven ability to scale;
- only meeting minimal security requirements;
- being unable to provide off-line authentication when cloud services are unavailable; and
- having manual, policy-driven decision-making.

Intelligent Identity is Needed Now More than Ever

Enterprises are under pressure to innovate faster, improve productivity and deliver exceptional user experiences through digitalization, all while maximizing security. The question "Who are you?" must be asked and satisfactorily answered as a precondition to every digital interaction. Intelligent Identity asks and answers the question by leveraging AI and ML to analyze device, network, application and user behavior data to make real-time authentication and security control decisions. Additional security measures, which impose friction on the user experience, are only utilized if anomalies in behavior or data are detected or in high-value transactions. This optimizes the balance between securing access and providing an enhanced user experience.

Our Market Opportunity

According to IDC, the worldwide market for IAM is expected to grow from $6.6 billion in 2018 to $9.0 billion in 2023, representing a CAGR of approximately 6%. Based on management's internal analysis, we estimate that our market opportunity is greater than $25 billion across our use cases. We quantify this opportunity by identifying the total number of global companies above $500 million in annual revenue as identified by D&B Hoovers as of June 30, 2019, which was 19,900 companies, and segmenting these companies into four revenue bands. We then multiply the number of companies within each revenue band by our internal ARR data for that revenue band, assuming deployment of all our solutions and use cases.

We believe our market opportunity has the potential to expand in the future as the proliferation of IoT and APIs increases connections, complexity and the number of identities, in the enterprise. According to IDC, the worldwide installed base of IoT devices will grow from 23 billion in 2018 to more than 41 billion in 2025, representing a CAGR of 9%. Our Intelligent Identity Platform is built to address the scale and complexity that will arise from IoT and API proliferation.

Our market includes opportunities for both greenfield expansion and replacement of legacy and homegrown solutions. We believe security budgets are shifting from network-centric to identity-centric solutions because the adoption of cloud, mobile and IoT has led to a disappearing network perimeter. We believe the focus of cybersecurity will continue to shift to the user as targeted attacks against users and their credentials increase. As a result, we believe that IAM will represent a larger portion of future security budgets, which we are well positioned to capture.

Our Growth Strategy

The key elements of our growth strategy include:

- *Increase Sales to Existing Customers.* Of our more than 1,275 customers at December 31, 2018, only 13% had purchased three or more of our six solutions, providing a significant opportunity to further penetrate our existing customer base. We believe there are significant upsell and cross-sell opportunities within our existing customer base by adding identities and use cases and selling new solutions. We have a strong track record of growing sales to our existing customers, as evidenced by our dollar-based net retention rates, which were 123%, 116% and 115% at December 31, 2017 and 2018 and June 30, 2019, respectively.
- *Innovate and Enhance our Offerings.* We intend to continue investing in research and development to enhance our existing solutions, add new solutions and deployment options and expand use cases, such as IoT. We believe these emerging devices present a significant opportunity for us as the number of IoT identities and human-to-machine and machine-to-machine connections continue to increase. Additionally, we may from time to time assess acquisition opportunities to supplement our organic development of new solutions or capabilities.
- *Expand our Customer Base by Investing in Sales and our Partner Network.* We continue to make investments in sales and marketing to grow our customer base and drive broader awareness of our Intelligent Identity Platform. We plan to deepen and expand our joint go-to-market efforts with our channel partners, system integrators and technology partners. For the year ended December 31, 2018, 60% of our new business was influenced by our channel partners.
- *Expand our Customer Base by Targeting New Buyers.* We focus our selling efforts on executives such as CIOs and CISOs who are often making strategic top-down decisions to purchase our platform. We recently extended our cloud-based offering to target developers who represent a new addressable customer base for us. The ability for developers to directly integrate identity into their applications accelerates the adoption of identity within the enterprise.
- *Continue to Expand our Global Presence.* We have a large and growing international presence and intend to grow our customer base in various international regions by making investments in our sales team globally. In 2018, our international revenue was 23% of our total revenue. We expect international sales to be a meaningful revenue contributor in future periods.

Our Intelligent Identity Platform

We enable secure access to any service, application or API from any device. Our Intelligent Identity Platform can leverage AI and ML to analyze device, network, and user behavior data to make real-time authentication and security control decisions, enhancing the user experience. Our platform is designed to detect anomalies and automatically insert additional security measures, such as MFA, only when necessary. Our Intelligent Identity Platform provides the following key benefits:

- intelligent authentication of users based on contextual signals and risk attributes;
- one platform for all primary use cases;
- flexible hybrid deployment options;
- turnkey integrations across cloud and on-premise applications;
- high standards for critical security and resiliency; and
- scalable to billions of identities.

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Our Intelligent Identity Platform Supports All Primary Use Cases

- *Customer*. Our platform helps enterprises better engage with their customers by providing a consistent, modern, omni-channel user experience through personalized access to all digital services. This enhanced digital experience improves brand loyalty and drives

additional revenue, while also strengthening security.

- *Employee*. Our platform allows enterprises to provide their employees with seamless and secure access to all of their cloud and on-premise applications and APIs to enable better employee productivity.
- *Partner*. Our platform helps enterprises rapidly connect with partners and manage their access privileges when onboarding and offboarding users.
- *IoT*. Our platform is increasingly being used to manage IoT identities, such as connected vehicles and consumer devices, and authenticate machine-to-machine and human-to-machine interactions.

Deployment Flexibility

We have designed our solutions for flexible deployment because every enterprise has different customization, control, security and privacy needs. Our deployment flexibility provides the optionality to adopt cloud-based offerings for rapid deployment, remain on-premise for maximum control or to comply with industry regulations, or deploy in a hybrid manner. Our deployment options include:

- *Multi-Tenant Cloud.* For enterprises seeking to outsource identity infrastructure, often in coordination with cloud-first initiatives.
- *Single-Tenant Cloud.* For enterprises seeking a higher degree of control, customization and segregation, often in response to regulatory compliance or other corporate mandates.
- *On-Premise.* For enterprises seeking the highest degree of control over identity for security, privacy and other specialized requirements.

Our Solutions

Our Intelligent Identity Platform is comprised of six solutions (SSO, MFA, Access Security, Directory, Data Governance and API Intelligence) that can be purchased individually or as a set of integrated offerings for the customer, employee, partner or IoT use case. Our modular design allows customers to easily integrate with existing applications and infrastructures and does not require an all-or-nothing rip and replace. All of our solutions use open standards for maximum interoperability and extensibility.

Single Sign-On. Our SSO solution allows users to sign on using one set of secure credentials, giving them one-click access to their applications and resources regardless of location. Our SSO solution provides turnkey integrations for a wide range of applications, cloud services, IT infrastructures and directory solutions, including third party directories, as well as our Directory solution. Within our SSO solution, our adaptive authentication policies enable organizations to predictively authenticate users in real-time based on device, network, application and user behavior data. Our advanced SSO features include:

- utilization of open-standards such as SAML, OAuth, OIDC, WS-*, SCIM, FIDO2;
- support for identity, OpenID Connect Token, and service providers;
- advanced protocol translation to maximize interoperability with partners;
- flexible authentication mechanisms (Adapters, Policy Tree and SDK);
- advanced user identity attribute aggregation (LDAP, JDBC and SDK);
- inbound and outbound SaaS user provisioning; and
- advanced enterprise SIEM and audit logging.

Multi-Factor Authentication. Our adaptive MFA solution helps optimize the balance between security and user experience by enforcing additional authentication factors as necessary when accessing sensitive resources, conducting high-value transactions and engaging in other elevated risk scenarios. Adaptive MFA allows users to conduct low-value transactions from trusted devices without interruption, while prompting MFA during high-value transactions, activity from untrusted devices and networks or in response to anomalous behavior. Our MFA solution works across use cases with personal or corporate-owned mobile devices and integrates with enterprise mobility management and mobile device management solutions. Our advanced MFA features include:

- multiple authentication factors: one-time passwords that are sent via SMS, email or voice call; secure key; smartwatch; mobile applications for iOS/Android (including biometrics or swipe); and desktop applications;

- advanced adaptive authentication policies;
- off-line use cases;
- FIDO2 compatible devices;
- mobile SDK to embed MFA functionality directly within an enterprise's mobile application; and
- support for SSH applications, Windows login/RDP or any RADIUS-compliant VPN server or remote access system.

Access Security. Our Access Security solution allows enterprises to apply a greater depth of security control over their web applications and APIs in any domain for users on any device. We offer a comprehensive policy engine down to the URL level that is designed to ensure only an authorized user can access resources. Our solution evaluates access decisions in real-time based on network, browser and authentication attributes, while continuously validating the risk profile of the user or device. Our advanced Access Security features include:

- security for web and API-based resources, either in gateway or agent mode;
- integrations with any OpenID Connect identity provider;
- Attribute-Based Access Control or Role-Based Access Control;
- advanced HTTP header or JSON Web Token identity mappings;
- open-standards web session management;
- flexible step-up authentication rules;
- site authenticators, load-balancing and failover;
- access rules (i.e., network range, time range), processing rules (i.e., URL rewriting) or custom rules (Groovy or Java SDK); and
- enterprise SIEM and audit logging.

Directory. Our Directory solution securely stores and manages sensitive identity and device data at scale. It includes real-time, bidirectional synchronization capabilities to migrate or sync data from multiple sources into a secure, scalable and unified profile. This single source of data is designed to provide a consistent experience across digital business interactions, no matter where the applications and services are deployed. Our advanced Directory features include:

- scalability to millions of identities;
- millisecond response times;
- advanced data modeling and access features for structured and unstructured data;
- real-time data synchronization for easy migration from legacy LDAP directories;
- developer-friendly REST APIs;
- encryption for maximum security of all data "at rest" (database files, database indexes, log files, backups and exports) and "in transit" (network connections from clients and peer servers);
- encryption keys that can be stored independent of encrypted data using enterprise password vaults and hardware security modules;
- flexible plugin architecture; and
- advanced multi-region and multi-master replication for low latency data access.

Data Governance. Our Data Governance solution provides centralized, fine-grained control over access to sensitive identity and device data across use cases. This enables organizations to restrict internal and external applications from accessing specific identity attributes such as social security numbers, credit card numbers, billing addresses or the entire user profile. Data access policies can evaluate attributes and preferences of the profile being requested, data from other repositories and information about the application and user making the request. Our Data Governance solution enables enterprises to comply with a broad range of regulatory requirements, such as GDPR, by restricting data that a user has not consented to share and denying access to personal information that applications and users do not need to perform their tasks. Our advanced Data Governance features include:

- centralized policy controls via XACML and JEXL to govern data access;
- customer management of opt-in/opt-outs and preferences;
- support for LDAP v3 and various other data sources for user and data backend stores; and
- support for other OpenID Connect providers as identity providers.

API Intelligence. Our API Intelligence solution can apply AI and ML to continuously inspect, report and act on all API activity. Our solution is purpose-built to recognize and respond to attacks that are designed to exploit the unique vulnerabilities of individual APIs. These attacks often go undetected by traditional security tools, such as application firewalls and API gateways. Our advanced API Intelligence features include:

- API traffic monitoring, visibility and security using AI and ML;
- automated API discovery;
- API deception and honeypot;
- API threat detection and blocking; and
- deployment in-line or to the side of API gateways.

Our Technology

Our technology has been developed to the highest standards for security, performance, scale and interoperability. Our platform is built on the following core tenets:

- *Open Standards.* We pioneered open identity standards that reduce the cost and complexity of interoperability and integration between IT vendors and partners. We also participated in the creation of many of the Internet Engineering Task Force standards in the identity space and continue to support the evolution and creation of new standards.
- *Turnkey Integrations.* We provide a broad range of out-of-the-box adapters for "first-mile" and "last-mile" integration to cloud and on-premise applications and other systems. For example, we integrate with major enterprise identity systems, such as CA Technologies, IBM, Oracle and Microsoft, as well as environments and application platforms such as Apache, Java, IIS, NGINX and WebSphere. In addition, we provide an extensive set of SaaS and social identity connectors that provide full integration with API functions. For example, our ServiceNow integration leverages over 20 user attributes. We also have out-of-the-box integrations with a variety of cloud-based and on-premise data sources, adaptive authentication providers and security and intelligence service providers.
- *Artificial Intelligence and Machine Learning.* Our API Intelligence solution utilizes our proprietary AI/ML capabilities to continuously inspect, report and act on all API activity. We are in the process of leveraging and expanding these AI/ML capabilities across our broader platform to deliver Intelligent Identity security based on device, network, application and user behavior data instead of manual rules and policies. Currently, our core identity and access management solutions can be deployed with AI and ML capabilities that we license from a third party. However, we do not actively market or sell the AI and ML capabilities of these solutions. Our platform's ultimate goal is to deliver password-less, zero-login capabilities to secure access and enhance user experience. See "Risk Factors—Risks Related to our Business—We rely on software and services from other parties. Defects in or the loss of access to software or services from third parties could increase our costs and adversely affect the quality of our solutions."
- *Uptime and Availability.* We provide critical uptime and offer advanced redundancy features such as off-line modes to ensure services are available even when internet connectivity is lost. Our multi-tenant cloud-based offering is hosted in multiple regions around the world for redundancy and continuity. Our maintenance windows do not require any downtime, and our platform has delivered over 99.9% uptime across our customer base over the past 12 months.

- *Scalability and Performance.* Our enterprise customers often have millions of identities secured by our Intelligent Identity Platform. As of June 30, 2019, our platform secures over two billion identities globally across our customer base.
- *Self-service.* Self-service is becoming increasingly important as IT and IAM teams with limited resources seek to provide centralized IAM to the entire enterprise. The ability for developers to directly integrate identity into their applications accelerates the adoption of identity within the enterprise. We have invested heavily in our self-service capabilities.
- *Security by Design.* We integrate security into all of our solutions. Our security analysts maintain the security of our solutions by monitoring core services, both corporate and customer-facing, for indications of attack or compromise. We partner with trusted third party security firms to perform full-scope assessments and additional architectural reviews of our solutions. We also engage with third-party audit firms to perform SOC2 Type II audits, and ISO 27001-2013 certification of our security program.

Sales and Marketing

Sales

We sell our solutions primarily through direct sales. We have a stratified direct sales organization that is organized by customer size and the type of solution and deployment. Within our sales organization, our strategic account executives focus on the largest and most complex enterprises that typically purchase multiple products or deployment options. In addition, we have account executives that target less complex enterprise customers that typically purchase a single solution or deployment option initially. Finally, our inside sellers focus on our cloud-based offerings and more common use cases.

Our direct sales are enhanced by collaboration with our channel partners, system integrators and technology partners. For the year ended December 31, 2018, 60% of our new business was influenced by our channel partners, which includes sourcing new leads, aiding in pre-sale processes such as proof of concepts, demos or requests for proposals and reselling our solutions to customers. For the year ended December 31, 2018, our channel partners included more than 50 resellers, 35 systems integrators and ten managed service providers. We also leverage a number of our channel partners and system integrators to provide the implementation services for some of our larger and more complex deployments, significantly increasing the time-to-value for our customers and maximizing the efficiency of our go-to-market efforts.

Marketing

We focus our marketing strategy on building brand recognition through thought leadership and differentiated messaging that communicates the business value of our platform. Our efforts include content marketing, social media, SEO, events and public and analyst relations. We convert this brand awareness into our pipeline through campaigns that integrate digital, social, web and field marketing tactics aimed at adding new customers and cross-marketing our solutions into our existing customer base. We host user conferences in select cities around the globe to tap into the power of our passionate customer base and our broader ecosystem. We also founded and host the leading identity industry conference called Identiverse. Identiverse is held annually and attendees include architects, IAM professionals, IT administrators, developers, security professionals and CISOs, as well as technology vendors, system integrators, industry analysts and thought leaders.

Operational Efficiency

Since 2016, we have enacted a series of strategic transformation projects through our "Ping Next" initiative focused on operational improvements to accelerate revenue generation and improve profitability. Ping Next capitalizes on key efficiency opportunities in nearly all areas of the business, including sales, marketing, customer success, technical support, professional services and general and administrative functions. The adoption of several key best practices by our sales and marketing organizations is contributing to revenue acceleration. Examples of these best practices include:

Customer and Prospect Database. Our implementation of algorithm-based customer and prospect targeting has delivered improved win-rates and larger average deal sizes and has allowed us to prioritize deployment of our sales and marketing resources where we believe they have the highest likelihood of success.

Marketing Optimization. We track the return on investment of our marketing tactics, which allows us to allocate marketing resources to the highest yielding activities.

Customer Success Best Practices. We employ a stratified customer success strategy across our customer base to drive revenue retention while minimizing the requirement for additional investment. Our customer success platform allows us to tier and standardize customer retention activities while maximizing upsell opportunities.

Our Customers

As of December 31, 2018, we had over 1,275 customers. Our customer base is comprised of over 50% of the Fortune 100. As of June 30, 2019, our customer base included 12 of the 12 largest U.S. banks (measured by assets), 8 of the 10 largest bio-pharmaceutical companies (measured by revenue), 4 of the 5 largest healthcare plans (measured by revenue) and 5 of the 7 largest U.S. retailers (measured by revenue). Our customer base is diversified, with no one customer or reseller accounting for more than 5% of our total revenue for the six months ended June 30, 2019. We have a highly satisfied customer base, as evidenced by our Net Promoter Score of 62 in 2018.

Customer Case Studies

The following case studies are representative examples of how our customers have benefited from, and expanded their use of, our platform.

A Leading European Financial Institution

The Challenge. A leading European financial institution had IAM capabilities that were isolated, proprietary, offered limited extensibility, or were out of support. The bank needed a secure IAM solution that could be deployed across all of its use cases and provide a streamlined user experience. At the same time, the bank needed to enable access to its APIs and implement strong customer authentication to prepare for the digital business regulatory requirements of the PSD2 and Open Banking directives.

The Solution. The institution chose the Ping Intelligent Identity Platform because of Ping's commitment to open standards and its ability to bridge on-premise and cloud environments. In Ping, the institution found the single solution it needed for secure identity and access management so it could move away from proprietary systems and custom-written solutions. Ping's solutions provided the technology platform required to support both internal employees and external customers. Ping's SSO solution allows the institution to give its users convenient SSO, while Ping's Access Security solution helps ensure secure access to all applications and APIs in any domain or location. Ping's Directory and Data Governance solutions enable the institution to securely store user identity data and maintain fine-grained control and governance over access to that data. These capabilities, combined with open standards support, provide the institution with financial-grade security and access for 10 million customers and 100,000 employees.

HP, Inc.

The Challenge. HP, Inc., or HP, one of the world's largest printer and personal computer manufacturers, had a fragmented user base with more than a dozen separate legacy IAM systems. Siloed data created a disjointed customer experience, and systems integration complexity increased management burden and costs. Additionally, HP had regional requirements in different countries that restricted how data could be stored or how it could be moved in and out of systems around the world. To address these complexities, HP undertook its largest identity initiative to date, in which over 100 applications, including HP Shopping, HP Partner First Portal, Instant Ink and more needed to be migrated to new IAM solutions. Because of the large number of concurrent work streams and dependencies, any delay or misstep in implementation of the new solutions could have adverse consequences across HP.

The Solution. The HP and Ping teams worked in close partnership to implement Ping's Directory and Data Governance solutions with fully automated, multi-region deployment in AWS.

The new solutions provide applications with easy access to user data when they need it and offer the necessary infrastructure to provide segregation of data by country or regional requirements. Before HP's Ping deployment, more than a dozen legacy IAM systems were in use across the enterprise. Today, HP has a single IAM platform deployed across the entire organization—providing a unified experience for more than 160 million customers while reducing complexity, optimizing spend and enabling new business as HP evolves.

BlueCross BlueShield of Tennessee

The Challenge. BlueCross BlueShield of Tennessee, or BCBST, Tennessee's largest health benefits plan serving more than 3.5 million individuals, sought to improve its online member experience. Achieving this goal required an IAM solution that accommodated BCBST's members' unique qualities, while also providing a member data directory that synchronized data across systems and appropriately governed access to data.

The Solution. Ping has improved BCBST's member experience by providing members with a secure authentication through Ping's SSO, Access Security and MFA solutions. These technologies help ensure a consistent and user-friendly experience for members across BCBST's digital properties. BCBST also uses Ping's Directory solution for a centralized source of member data with improved flexibility, administration, security and data integrity and accuracy. BCBST also leveraged Ping's Data Governance solution to provide fine-grained control over member identity attributes. BCBST's information security leadership has commended Ping on the quick and simple installation of its technology and the technology's ability to quicken BCBST's reactions to business needs and requirements. Through Ping, BCBST has been able to cut the complexity and cost of multi-vendor identity management by leveraging these solutions to support BCBST's business needs.

A Leading Global Airline

The Challenge. One of the world's largest global airlines helps more than 180 million travelers get to the places they want to go to each year. The airline's internal authentication experience was too cumbersome, with security issues ranging from inconsistent user names, ineffective security questions, and an excessive amount of sign-in prompts. In addition, user access to key applications was slow, with inefficient manual steps and over-reliance on internal IT support. The airline was in need of an access solution to establish a secure authentication framework for its business.

The Solution. Ping addressed these needs with Ping's SSO and Access Security solutions. The airline ultimately chose Ping based on its open standards, broad protocol suite, and responsiveness around both support and enhancements. As part of the transformation, the airline migrated over 350 applications to Ping's SSO solution. In addition, the airline federated IBM's mainframe access tool with Ping's SSO solution. This allowed the airline to utilize Ping's SSO solution to create a seamless single sign-on experience from the airline's distributed system to the critical mainframe-based crew bidding and crew scheduling applications. Ultimately this reduced the number of sign-in attempts for the airline's indispensable frontline employees—pilots and flight attendants—enabling them to better serve the customer expeditiously.

Partnerships and Strategic Relationships

The PingPartner Network is comprised of key partnerships across our solution provider and technology alliance programs. This global network delivers expertise, value-added services and technology that are critical to the success of our customers.

Solution Provider Program

We have built strong relationships with channel partners, system integrators and technology partners that have allowed us to generate new business opportunities and enhance existing practices such as strategic planning, program management, architecture, design, implementation, ongoing change management and support.

Technology Alliance

We have built a broad ecosystem of over 100 technology partners. Our Technology Alliance Partner ecosystem spans the landscape of IAM and related technologies, giving our customers access to comprehensive, cross-application, integrated solutions. Our technology partners expand and extend the value of their solutions, and our solutions, by integrating their technology with our Intelligent Identity Platform. Additionally, our partners provide us with complementary technology and sales and marketing collateral that help us to more effectively sell together.

We partner with Microsoft, and this partnership has led to key product integrations. Through our collaboration, customers can leverage our platform to connect to the Microsoft Azure or Office365 services and enjoy rapid deployments via our integrations. We also enable non-Microsoft applications and environments to be easily integrated into the Microsoft ecosystem. Lastly, our MFA solution works directly with Microsoft ADFS and AzureAD to provide enterprise-grade adaptive authentication to Microsoft's cloud-based offerings.

We also partner with AWS to provide provisioning and deployment of our solutions to our customers through this collaboration. We offer AWS single sign-on integration for a leading enterprise cloud experience. We also offer a hybrid deployment that can scale across AWS for enterprise applications.

Professional Services and Customer Support

Professional Services

Our professional services organization helps customers architect, deploy, configure, extend and integrate our platform into their IT environments. We offer a variety of packaged and configured offerings and expert guidance that leverage our best practices and experience, all of which are available for our robust partner community to use or resell. We complement our professional services with formal instructor-led and web-based on-demand training courses.

Customer Support

We offer three tiers of support, each building on the previous tier to most closely align with a customer's requirements. Support is included for our cloud and on-premise offerings during the term of a customer's subscription. All support tiers offer maintenance releases, patches and access to our support services and portal. Our support portal offers customers documentation, how-to guides, videos and a community where they can ask questions and find answers. Our customer support organization includes experienced, trained personnel and engineering resources located around the world to provide 24x7x365 support for critical issues.

Research and Development

Innovation is at the core of what we do. Approximately one-third of our employees are devoted to research and development. Our research and development efforts are focused on building industry leading solutions, addressing all primary use cases, enhancing deployment flexibility and providing seamless integration across cloud and on-premise applications. We believe that the ongoing and timely development of new solutions and features is imperative to maintaining our competitive position. We continue to invest in our solutions across our development centers in: Denver, Colorado; Austin, Texas; Tel Aviv, Israel; Vancouver, Canada; and Bangalore, India.

Intellectual Property

Our success depends in part on our ability to protect our intellectual property. We rely on copyrights and trade secret laws, confidentiality procedures, employment agreements and proprietary information and invention assignment agreements, trademarks and patents to protect our intellectual property rights.

We control access to, and use of, our solutions and other confidential information through the use of internal and external controls, including contractual protections with employees, contractors, customers and partners, and our software is protected by U.S. and international copyright and trade secret laws. Despite our efforts to protect our trade secrets and proprietary rights through intellectual property rights, licenses and confidentiality agreements, unauthorized parties may still copy or otherwise obtain and use our software and technology.

As of June 30, 2019, we have 15 issued patents and 9 patent applications pending in the United States relating to certain aspects of our technology. Our issued patents expire between December 14, 2031 and May 4, 2035. We cannot assure you whether any of our patent applications will result in the issuance of a patent or whether the examination process will require us to narrow our claims. Any of our existing patents and any that are issued in the future may be contested, circumvented, found unenforceable or invalidated, and we may not be able to prevent third parties from infringing them. In addition, we have international operations and intend to continue to expand these operations, and effective patent, copyright, trademark and trade secret protection may not be available or may be limited in foreign countries.

Competition

We face competition from (1) legacy providers, (2) cloud-only providers and (3) homegrown solutions.

Legacy providers include CA Technologies, IBM and Oracle, among others. These providers generally designed their solutions when enterprise applications were monolithic and on-premise. Their solutions utilize proprietary architectures, which require customized features and integrations to scale. Today, these solutions have the reputation of being complex, costly and increasingly fragile. Thus, legacy providers often struggle to offer a single comprehensive solution that spans all IT environments, including cloud and on-premise.

We also compete with cloud-only providers, such as Okta and OneLogin that primarily focus on the employee use case. These providers have solutions that are generally geared towards small and medium-sized businesses that have IT infrastructures hosted entirely in the cloud. Large enterprises typically do not have cloud-only infrastructures, and while many are moving components of their IT environments to the cloud, we believe the majority of applications and workloads will continue to reside on-premise. Thus, a cloud-only IAM solution cannot deliver a single comprehensive solution to enterprises that provides wall-to-wall coverage across their complex hybrid IT environments.

Microsoft also competes in our market and has tied its identity services to both Azure and its Office365 offerings. However, we partner with Microsoft to provide SSO, security control and adaptive MFA where non-Microsoft environments require integration or independence is preferred. Microsoft's integration and interoperability with our solutions benefits enterprises while providing optionality and choice.

We believe the principal competitive factors in the IAM market include: (1) the ability to address all primary use cases from one platform; (2) the ability to deploy in large, complex hybrid IT environments; (3) the ability to integrate easily with all applications (cloud and on-premise); (4) technology uptime, reliability, scalability and performance; (5) the ability to support open standards; and (6) customer, technology and platform support. We believe we compete favorably on these factors.

Employees

As of June 30, 2019, we had a total of 897 full time employees, of which approximately one-third were in research and development. We have a strong corporate culture, high employee engagement and are consistently ranked by third parties as one of the best places to work.

Facilities

Our corporate headquarters are in Denver, Colorado, where we lease 108,761 square feet of office space as of June 30, 2019. We also have domestic offices in Boston, Massachusetts, Austin, Texas and San Francisco, California and international offices in the United Kingdom, Australia, Canada, India, Israel, France and Switzerland.

We lease all of our facilities. We believe that our facilities are adequate for our current needs and anticipate that suitable additional space will be readily available to accommodate any foreseeable expansion of our operations.

Legal Proceedings

We are not currently a party to any material legal proceedings.

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Management

MANAGEMENT

Our Executive Officers and Directors Below is a list of the names, ages, positions and a brief account of the business experience of the individuals who serve as our executive officers and directors.

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Name	Age	Position
Andre Durand	51	Chief Executive Officer and Director
Raj Dani	49	Chief Financial Officer
B. Kristian Nagel	52	Chief Operating Officer
Lauren Romer	43	Chief Legal Officer and Secretary
Bernard Harguindeguy	61	Chief Technology Officer
Rod Aliabadi	34	Director
David A. Breach	52	Director
Clifford K. Chiu	60	Director
Michael Fosnaugh	41	Director

Lisa Hook	61	Director
John McCormack	60	Director
Brian N. Sheth	43	Director
Yancey L. Spruill	52	Director

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Andre Durand has served as our Chief Executive Officer since founding Ping Identity Corporation in 2001. Prior to founding Ping Identity Corporation, Mr. Durand founded Jabber, Inc., an instant messaging open source platform used by businesses globally, in 2000. Mr. Durand earned a bachelor's degree in biology and economics from the University of California at Santa Barbara. We believe Mr. Durand is qualified to serve on our Board because of his extensive knowledge of our business and strategy, as well as his experience in the technology industry and leadership role with us as our Chief Executive Officer.

Raj Dani has served as our Chief Financial Officer since 2016. Before joining Ping Identity Corporation, Mr. Dani served as chief financial officer of AVI-SPL, Inc., a systems integration firm from 2014 to 2016. Prior to that, Mr. Dani held senior positions within technology services companies and began his career with PricewaterhouseCoopers LLP, serving in its audit and transaction advisory practices. Mr. Dani earned a master's degree in accounting from the University of Florida and a bachelor's degree in business administration from Emory University. Mr. Dani is an actively licensed certified public accountant.

B. Kristian Nagel has served as our Chief Operating Officer since December 2018. Before serving in this role, Mr. Nagel was chief executive officer for Vindicia, Inc. from 2016 to 2018 and was responsible for all of its strategic and daily operations. Prior to that, Mr. Nagel was special vice president – field operations for Vindicia, Inc. from 2008 to 2016. Prior to that, Mr. Nagel held a number of senior leadership positions in both venture-backed and public companies. Mr. Nagel began his career with Apple Inc. after earning a master's of business administration from San Jose State University and a bachelor's degree in Management Information Systems at Pennsylvania State University.

Lauren Romer has served as our Chief Legal Officer since 2018, after initially joining Ping Identity Corporation as our Director of Legal Affairs in 2010. Before joining Ping Identity Corporation, Ms. Romer served as corporate counsel at Collective Intellect, Inc. from 2009 to 2010. Prior to that, Ms. Romer also worked as a corporate associate at Cooley LLP from 2005 to 2009. Ms. Romer earned a bachelor's degree in public policy studies from Duke University, a master's degree in higher education administration from Florida State University and a juris doctorate from the University of Denver's Sturm College of Law.

Bernard Harguindeguy has served as our Chief Technology Officer since 2018, by way of our acquisition of Elastic Beam, where Mr. Harguindeguy served as chief executive officer after founding it in 2014. Prior to that, Mr. Harguindeguy served as chairman, president and chief executive officer at Atlantis Computing from 2009 to 2014. Prior to that, Mr. Harguindeguy served as the chairman of a number of technology companies. Mr. Harguindeguy earned a bachelor's degree in electrical engineering from the University of California Irvine, where he was inducted into the Engineering Hall of Fame, and a master's degree in engineering management from Stanford University.

Rod Aliabadi has served on our Board since June 2016. Mr. Aliabadi is a Senior Vice President at Vista. Prior to joining Vista in 2008, Mr. Aliabadi worked at the Stanford Genome Technology Center, focusing on the development of nanotechnology-driven diagnostics. Mr. Aliabadi currently serves on the board of several of Vista's private portfolio companies, including EAB Global Inc., Integral Ad Science Inc. and Market Track, LLC. Mr. Aliabadi received a bachelor of engineering in biomedical engineering from Vanderbilt University. Mr. Aliabadi's extensive experience in the areas of corporate strategy, technology, finance and engineering, as well as his experience on the boards of other technology and software companies, make him a valuable member of our Board.

David Breach has served on our Board since March 2019. Mr. Breach is the Chief Operating Officer and Chief Legal Officer at Vista. Prior to joining Vista in 2014, Mr. Breach worked as a Senior Corporate Partner at Kirkland & Ellis LLP, where his practice focused on representation of private equity funds in all aspects of their business. Mr. Breach was a founding partner of Kirkland & Ellis's San Francisco office, and received numerous professional accolades while at Kirkland & Ellis. Mr. Breach is also a Principal of Vista and sits on Vista's Private Equity Funds' Investment Committees. Mr. Breach also sits on the boards of Vista portfolio companies Solera Holdings Inc., Mediaocean LLC, and Vertafore, Inc. Mr. Breach received a bachelor of business administration in marketing from Eastern Michigan University and received a juris doctorate from the University of Michigan, *magna cum laude,* Order of the Coif. Mr. Breach is currently a member of the State Bars of California, Illinois and Michigan. Mr. Breach's extensive experience in the areas of corporate strategy, private equity and firm governance, as well as his experience on the boards of other companies, make him a valuable member of our Board.

Clifford K. Chiu has served on our Board since January 2017. Mr. Chiu is a corporate director and private investment firm senior advisor, as well as a board or committee appointee to government bodies and non-governmental organizations in the financial services, enterprise software, data and technology-enabled solutions, healthcare, education, social welfare and the arts sectors located in the United States and Hong Kong. Prior to that, Mr. Chiu was a partner at Kohlberg Kravis Roberts & Co., an investment firm that specializes in alternative assets, until his retirement in 2014. Over his 39-year career in the financial services industry, Mr. Chiu has held a number of public and private leadership positions. Mr. Chiu is currently a director of Finastra plc, TIBCO Software, Inc., Infoblox, Inc., Regulatory DataCorp., Inc., and was previously on the board of Cambium Learning Group, a formerly publicly-traded education company, and Hsin Chong Construction Group. Mr. Chiu received a master's of business administration from the University of Chicago and a bachelor's degree in economics from the University of Pennsylvania. Mr. Chiu's board experience, coupled with his extensive experience in the financial services industry and with technology companies, make him a valuable member of our Board.

Michael Fosnaugh has served on our Board since June 2016. Mr. Fosnaugh is a principal at Vista. Mr. Fosnaugh is co-head of the Chicago office and sits on the Vista Flagship Funds' Investment Committee. Prior to joining Vista in 2005, Mr. Fosnaugh worked in the Technology, Media & Telecommunications group at SG Cowen & Co., where he focused on the software, services and financial technology sectors. While at SG Cowen, Mr. Fosnaugh advised clients on buy-side and sell-side transactions, public and private equity financings and other strategic advisory initiatives. Mr. Fosnaugh currently serves on the board of several of Vista's private portfolio companies, including Advicent Solutions Inc., Alegeus Technologies Holdings Corp., EAB Global Inc., Greenway Health, LLC, Integral Ad Science Inc, Jamf Software LLC and Mediaocean LLC. Mr. Fosnaugh received a bachelor's degree in economics from Harvard College. Mr. Fosnaugh's extensive experience in the areas of corporate strategy, technology, finance, marketing, business transactions and software investments, as well as his experience working with other technology and software companies, make him a valuable member of our Board.

Lisa Hook has served on our board since August 2019. Ms. Hook served as president and chief executive officer of Neustar, Inc., a technology company, from October 2010 until July 2018 and as president and chief operating officer from January 2008 until 2010. She joined the Neustar board in 2010 and continued to serve in that capacity until July 2019. Previously, Ms. Hook served as president and chief executive officer of Sunrocket, Inc., held several executive-level posts at America Online, Inc., was a partner at Brera Capital Partners, a global private equity investment firm, managing director of Alpine Capital Group, LLC, an investment banking firm, held several executive positions at Time Warner, Inc., was legal advisor to the Chairman of the Federal Communications Commission, and was a senior attorney at Viacom International, Inc. Ms. Hook serves on the boards of Philip Morris International, a publicly-traded leading international tobacco company, Fidelity National Information Services Inc., a publicly-traded global leader in banking and payment solutions, Unisys Corporation, a publicly-traded global information technology company, CubeIQ, a private company in the location intelligence space, and is a senior advisor on the Advisory Board of Trilantic Capital Partners. Ms. Hook has previously served as Senior Independent Director of RELX PLC and RELX NV, providers of information solutions, Covad Communications, Time Warner Telecom, K-12 Inc. and National Geographic Ventures. She currently serves on the National Security Telecommunications Advisory Committee to which she was appointed in 2012 by President Obama. Ms. Hook received a juris doctorate from Dickinson School of Law at Pennsylvania State University and a bachelor's degree from Duke University. Ms. Hook's extensive board experience, her experience as an executive for both private and public companies and her experience in the identity, security and data privacy space make her a valuable member of our Board.

John McCormack has served on our Board since June 2016. Mr. McCormack is an operating executive at Marlin Equity Partners, a global investment firm, and was the chairman and interim chief executive officer of Fidelis CyberSecurity, a cybersecurity firm that specializes in threat detection, from January 2017 to July 2018. Mr. McCormack also was an advisor to the board of Forcepoint LLC (formerly Raytheon -- Websense), a cyber security firm, from April 2016 to December 2016. From 2013 to 2016, Mr. McCormack was the chief executive officer of Forcepoint LLC and was the president prior to that. Mr. McCormack currently is chairman of the Board of AppRiver, a company that specializes in cloud-based cybersecurity, a position he has held since October 2017. Mr. McCormack received a master's degree in information management from The George Washington University and a bachelor's degree in computer science from the University of New Hampshire. Mr. McCormack's board and advisory experience, coupled with his senior management experience at technology companies, and his extensive experience and leadership at technology companies, make him a valuable member of our Board.

Brian N. Sheth has served on our board since June 2016. Mr. Sheth co-founded Vista Equity Partners in 2000. Mr. Sheth is currently the president of Vista Equity Partners and the vice-chairman of the Vista Private Equity Funds' investment committees. Prior to founding Vista in 2000, Mr. Sheth worked at Bain Capital, where he focused on leveraged buyouts of technology companies, and also worked at Goldman, Sachs & Co. and Deutsche Morgan & Grenfell Group, where he advised clients in a variety of industries, including software, hardware, semiconductors and online media. Mr. Sheth currently serves on the board of several of Vista's private portfolio companies, including Infoblox, Tibco, Forcepoint and Datto. Mr. Sheth received a bachelor's degree in economics from the University of Pennsylvania. Mr. Sheth's board and advisory experience, coupled with his senior management experience as the President of Vista and his extensive experience in the areas of technology, finance, marketing, business transactions and mergers and acquisitions, make him a valuable member of our Board.

Yancey L. Spruill has served on our board since March 2019. Mr. Spruill is currently the chief executive officer of DigitalOcean, Inc. Mr. Spruill was the chief operating officer and chief financial officer of SendGrid, Inc., a formerly publicly-traded provider of e-mail marketing services, where he served from June 2015 until its February 2019 sale to publicly-traded Twilio, Inc. Prior to joining SendGrid, Mr. Spruill served as chief financial officer at TwentyEighty, Inc., a provider of training and performance improvement solutions, from September 2014 to June 2015. From August 2004 to September 2014, Mr. Spruill served as executive vice president and chief financial officer at DigitalGlobe, Inc., a formerly publicly-traded provider of geospatial information products and services. Mr. Spruill also served on the board of directors for Rally Software Development Corp., a formerly publicly-traded provider of agile development software, from 2014 until its acquisition by CA, Inc. in 2015, and currently serves on the boards of Allscripts Healthcare Solutions, Inc., a publicly-traded electronic healthcare records technology company and Zayo Group Holdings, a publicly-traded provider of telecommunications infrastructure services. Mr. Spruill received a bachelor of electrical engineering from the Georgia Institute of Technology and a master's of business administration from the Amos Tuck School of Business at Dartmouth College. Mr. Spruill's extensive financial expertise, leadership experience, experience with serving on boards of other technology companies and significant experience in the technology industry and at other technology companies, make him a valuable member of our Board.

Family Relationships

There are no family relationships between any of our executive officers or directors.

Corporate Governance

Board Composition and Director Independence

Our business and affairs are managed under the direction of our Board. Following completion of this offering, our Board will be composed of nine directors. Our certificate of incorporation will provide that the authorized number of directors may be changed only by resolution of our Board. Our certificate of incorporation will also provide that our Board will be divided into three classes of directors, with the classes as nearly equal in number as possible. Subject to any earlier resignation or removal in accordance with the terms of our certificate of incorporation and bylaws, our Class I directors will be Messrs. Breach, Fosnaugh and Sheth and will serve until the first annual meeting of shareholders following the completion of this offering, our Class II directors will be Messrs. Aliabadi, Chiu and Durand and will serve until the second annual meeting of shareholders following the completion of this offering and our Class III directors will be Ms. Hook and Messrs. McCormack and Spruill and will serve until the third annual meeting of shareholders following the completion of this offering. Upon completion of this offering, we expect that each of our directors will serve in the classes as indicated above. In addition, our certificate of incorporation will provide that our directors may be removed with or without cause by the affirmative vote of at least a majority of the voting power of our outstanding shares of stock entitled to vote thereon, voting together as a single class for so long as Vista beneficially owns 40% or more of the total number of shares of our common stock then outstanding. If Vista's beneficial ownership falls below 40% of the total number of shares of our common stock outstanding, then our directors may be removed only for cause upon the affirmative vote of at least $66^{2}/_{3}$% of the voting power of our outstanding shares of stock entitled to vote thereon. Our bylaws will provide that Vista will have the right to designate the Chairman of the Board for so long as Vista beneficially owns at least 30% or more of the voting power of the then outstanding shares of our capital stock then entitled to vote generally in the election of directors. Following this offering, Mr. Sheth will be the Chairman of our Board.

The listing standards of NASDAQ require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act.

We anticipate that, prior to our completion of this offering, the Board will determine that Ms. Hook and Messrs. McCormack and Spruill meet the NASDAQ requirements to be independent directors. In making this determination, our Board considered the relationships that each such non-employee director has with the Company and all other facts and circumstances that our Board deemed relevant in determining their independence, including beneficial ownership of our common stock.

Controlled Company Status

After completion of this offering, Vista Funds will continue to control a majority of our outstanding common stock. As a result, we will be a "controlled company". Under NASDAQ rules, a company of which more than 50% of the voting power for the election of directors is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain NASDAQ corporate governance requirements, including the requirements that, within one year of the date of the listing of our common stock:

- we have a board that is composed of a majority of "independent directors", as defined under the rules of such exchange;
- we have a compensation committee that is composed entirely of independent directors; and
- we have a nominating and corporate governance committee that is composed entirely of independent directors.

Following this offering, we intend to rely on this exemption. As a result, we may not have a majority of independent directors on our Board. In addition, our Compensation and Nominating Committee may not consist entirely of independent directors or be subject to annual performance evaluations. Accordingly, you may not have the same protections afforded to shareholders of companies that are subject to all of the NASDAQ corporate governance requirements.

Board Committees

Upon completion of this offering, our Board will have an Audit Committee and a Compensation and Nominating Committee. The composition, duties and responsibilities of these committees will be as set forth below. In the future, our Board may establish other committees, as it deems appropriate, to assist it with its responsibilities.

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Board Member	Audit Committee	Compensation and Nominating Committee
Rod Aliabadi	X	
David A. Breach		X
Clifford K. Chiu		
Michael Fosnaugh		X (Chair)
Lisa Hook		X
John McCormack	X	

Brian N. Sheth		X
Yancey L. Spruill	X (Chair)	

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Audit Committee

Following this offering, our Audit Committee will be composed of Messrs. Aliabadi, McCormack and Spruill, with Mr. Spruill serving as chairman of the committee. We intend to comply with the audit committee requirements of the SEC and NASDAQ, which require that the Audit Committee be composed of at least one independent director at the closing of this offering, a majority of independent directors within 90 days following this offering and all independent directors within one year following this offering. We anticipate that, prior to the completion of this offering, our Board will determine that Messrs. McCormack and Spruill meet the independence requirements of Rule 10A-3 under the Exchange Act and the applicable listing standards of NASDAQ. We anticipate that, prior to our completion of this offering, our Board will determine that Mr. Spruill is an "audit committee financial expert" within the meaning of SEC regulations and applicable listing standards of NASDAQ. The Audit Committee's responsibilities upon completion of this offering will include:

- appointing, approving the compensation of, and assessing the qualifications, performance and independence of our independent registered public accounting firm;
- pre-approving audit and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- review our policies on risk assessment and risk management;
- reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending, based upon the Audit Committee's review and discussions with management and the independent registered public accounting firm, whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the Audit Committee report required by the rules of the SEC to be included in our annual proxy statement;
- reviewing all related party transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing and discussing with management and our independent registered public accounting firm our earnings releases and scripts.

Compensation and Nominating Committee

Following this offering, our Compensation and Nominating Committee will be composed of Ms. Hook and Messrs. Breach, Fosnaugh and Sheth, with Mr. Fosnaugh serving as chairman of the committee. The Compensation and Nominating Committee's responsibilities upon completion of this offering will include:

- annually reviewing and approving corporate goals and objectives relevant to the compensation of our chief executive officer;
- evaluating the performance of our chief executive officer in light of such corporate goals and objectives and determining and approving the compensation of our chief executive officer;
- reviewing and approving the compensation of our other executive officers;
- appointing, compensating and overseeing the work of any compensation consultant, legal counsel or other advisor retained by the compensation committee;
- conducting the independence assessment outlined in NASDAQ rules with respect to any compensation consultant, legal counsel or other advisor retained by the compensation committee;

- annually reviewing and reassessing the adequacy of the committee charter in its compliance with the listing requirements of NASDAQ;
- reviewing and establishing our overall management compensation, philosophy and policy;
- overseeing and administering our compensation and similar plans;
- reviewing and making recommendations to our Board with respect to director compensation;
- reviewing and discussing with management the compensation discussion and analysis to be included in our annual proxy statement or Annual Report on Form 10-K;
- developing and recommending to our Board criteria for board and committee membership;
- subject to the rights of Vista under the Director Nomination Agreement, identifying and recommending to our Board the persons to be nominated for election as directors and to each of our Board's committees;
- developing and recommending to our Board best practices and corporate governance principles;
- developing and recommending to our Board a set of corporate governance guidelines; and
- reviewing and recommending to our Board the functions, duties and compositions of the committees of our Board.

`Compensation Committee Interlocks and Insider Participation`

None of our executive officers currently serves, or in the past fiscal year has served, as a member of the Board or compensation committee of any entity that has one or more executive officers serving on our Board or Compensation and Nominating Committee.

`Code of Business Conduct and Ethics`

Prior to completion of this offering, we intend to adopt a code of business conduct and ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. Upon the closing of this offering, our code of business conduct and ethics will be available on our website. We intend to disclose any amendments to the code, or any waivers of its requirements, on our website.

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Executive Compensation

EXECUTIVE COMPENSATION

Unless we state otherwise or the context otherwise requires, in this Executive Compensation section the terms "Ping Identity Corporation", "we", "us", "our" and the "Company" refer to Ping Identity Corporation, a wholly-owned subsidiary of Ping Identity Holding Corp., for the period up to this offering, and for all periods following this offering, to Ping Identity Holding Corp.

This section discusses the material components of the executive compensation program for our Chief Executive Officer and our two other most highly compensated officers who we refer to as our "Named Executive Officers". As of the year ended December 31, 2018, our Named Executive Officers were as follows:

- Andre Durand;
- B. Kristian Nagel; and
- Bernard Harguindeguy.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt in the future may differ materially from the currently planned programs summarized in this discussion.

`Summary Compensation Table`

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Name and principal position	Year	Salary	Option awards[1]	Nonequity incentive plan compensation[2]	Total
Andre Durand, *Chief Executive Officer*[3]	2018	$400,000	—	$309,653	$709,653
B. Kristian Nagel, *Chief Operating Officer*	2018	$ 21,875	$ 2,051,397	$ 17,500	$ 2,090,722
Bernard Harguindeguy, *Chief Technology Officer*	2018	$ 194,916	$ 939,807	$ 89,856	$ 1,224,579

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(1) Amounts represent the grant date fair value of stock options granted to the Named Executive Officers as computed in accordance with FASB ASC 718. The assumptions used in calculating the grant-date fair value of the stock options are set forth in Notes 2 and 10 to the consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these stock options and do not correspond to the actual economic value that may be received by the Named Executive Officers for the stock options.

(2) Amounts represent the actual amount earned by each of our Named Executive Officers under the performance-based cash incentive bonus provided for in their letter agreements. See "– Employment, Severance and Change in Control Arrangements – Letter Agreements."

(3) Mr. Durand serves on the Board, but is not paid additional compensation for such service.

The following table summarizes, for each of the Named Executive Officers, the number of shares of our common stock underlying outstanding stock options held as of December 31, 2018.

Outstanding Equity Awards at Fiscal Year End

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	Option Awards(1)						
Name	Grant Date	Vesting Commencement Date	Number of securities underlying unexercised options (#) exercisable(2)	Number of securities underlying unexercised options (#) unexercisable	Equity incentive plan awards: Number of securities underlying unexercised unearned options (#)(3)	Option exercise price ($)	Option expiration date
Andre Durand	6/30/2016	6/30/2016	5,333	—	2,667	1,333.33	6/29/2026
	9/25/2017	9/30/2017	650	—	325	1,440.25	9/24/2027
B. Kristian Nagel	12/28/2018	12/10/2018	1,871	—	935	2,283.18	12/27/2028
Bernard Harguindeguy	9/26/2018	9/26/2018	1,000	—	500	2,003.71	9/25/2028

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(1) Each stock option was granted pursuant to our 2016 Stock Option Plan.

(2) The shares underlying the options will vest over a four-year period, with 25% of the shares to vest upon completion of one year of service measured from the vesting commencement date, and the balance to vest in 12 successive equal quarterly installments, subject to continuous service. The shares underlying the options will fully vest and will be fully exercised through a cashless net exercise automatically upon a change of control of the Company.

(3) The shares underlying the options will vest and become exercisable when Vista's realized cash return on its investment in the Company equals or exceeds $1.491 billion.

Emerging Growth Company Status

As an emerging growth company we will be exempt from certain requirements related to executive compensation, including the requirements to hold a nonbinding advisory vote on executive compensation and to provide information relating to the ratio of total compensation of our Chief Executive Officer to the median of the annual total compensation of all of our employees, each as required by the Investor Protection and Securities Reform Act of 2010, which is part of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Employment, Severance and Change in Control Arrangements

Letter Agreements

We have letter agreements with each of our Named Executive Officers that provide for at-will employment and set forth each executive's annual base salary, target and maximum bonus opportunity and eligibility to participate in our benefit plans generally. Each Named Executive Officer is subject to our standard confidentiality, invention assignment, non-solicit, non-compete and arbitration agreement.

Mr. Durand's current annual base salary is $435,000 and his target and maximum performance-based cash incentive annual bonus is equal to 65.0% and 84.5% of his base salary, respectively. Mr. Nagel's current annual base salary is $350,000 and his target and maximum performance-based cash incentive annual bonus is equal to 80.0% and 100.0% of his base salary, respectively. Mr. Harguindeguy's current annual base salary is $300,000 and his target and maximum performance-based cash incentive annual bonus is equal to 50.0% and 60.0% of his base salary, respectively. The performance-based cash incentive bonus for each of our Named Executive Officers provides incentive payments correlated to individual management by objectives and the attainment of pre-established objective financial goals.

The letter agreements provide that upon a termination by us for any reason other than for "cause" or resignation for "good reason", each as defined therein, subject to the execution and delivery of a fully effective release of claims in favor of the Company, Mr. Durand and Mr. Nagel will receive a lump sum cash payment equal to 12 months and six months of base salary, respectively, and Mr. Harguindeguy will receive a cash payment equal to one month of base salary per full year of service completed with the Company at the time of termination, up to a maximum of three months. Mr. Durand is also entitled to a monthly cash payments equal to our contribution toward health insurance for up to 12 months.

Non-Equity Incentive Compensation

For 2018, our Named Executive Officers were eligible to receive an annual performance-based cash incentive award. Performance was assessed against goals and targets that were established for the fiscal year by our Board in the first quarter of 2018. Each performance goal was assigned a "target" level of performance and certain of the performance goals for 2018 included a "stretch" level at which the award opportunity was capped. Achievement of the target performance level would earn the target award, and achievement at or above the stretch performance level (where applicable) would earn a multiple of the target opportunity. Achievements falling below the target or between the target and stretch levels would result in a pro-rated payout. The performance goals used to determine cash incentive awards for 2018 were based on new ARR, Adjusted EBITDA, and customer churn rate, as well as the successful completion of various operational objectives.

Equity Incentives — 2016 Stock Option Plan

Our 2016 Stock Option Plan, or the 2016 Plan, was originally adopted by our Board and approved by our shareholders in connection with the Vista Acquisition. Under the 2016 Plan, we have reserved for issuance an aggregate of 40,000 shares of our common stock. The number of shares of common stock reserved for issuance is subject to automatic adjustment in the event of a stock split, stock dividend or other change in our capitalization.

The 2016 Plan permits the granting of (i) options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and (ii) options that do not so qualify. The option exercise price of each option is determined by the administrator but may not be less than 100% of the fair market value of our common stock on the date of grant. The term of each option will be fixed by the administrator and may not exceed ten years from the date of grant.

Our Board is the administrator of the 2016 Plan. The administrator has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, and to determine the specific terms and conditions of each award. The administrator is authorized to exercise its discretion to reduce the exercise price of outstanding stock options or effect the repricing of such awards through cancellation and re-grants without shareholder approval. Persons eligible to participate in the plan are those officers, employees, directors, consultants and other advisors (including prospective employees, but conditioned upon their employment) of the company and its subsidiaries as selected from time to time by the administrator in its discretion.

The 2016 Plan provides that upon a change of control of the Company, the shares underlying the service-based options will fully vest and will be fully exercised through a cashless net exercise automatically upon such change of control.

Our Board has determined not to make any further awards under the 2016 Plan following the completion of this offering.

Equity and Cash Incentives — Summary of the 2019 Omnibus Incentive Plan

Prior to the consummation of this offering, we anticipate that our Board will adopt, and our shareholders will approve, the 2019 Plan, pursuant to which employees, consultants and directors of our company and our affiliates performing services for us, including our executive officers, will be eligible to receive awards. We anticipate that the 2019 Plan will provide for the grant of stock options, stock appreciation rights, restricted stock, restricted stock units, bonus stock, dividend equivalents, other stock-based awards, substitute awards, annual incentive awards and performance

awards intended to align the interests of participants with those of our shareholders. The following description of the 2019 Plan is based on the form we anticipate will be adopted, but since the 2019 Plan has not yet been adopted, the provisions remain subject to change. As a result, the following description is qualified in its entirety by reference to the final 2019 Plan once adopted, a copy of which in substantially final form has been filed as an exhibit to the registration statement of which this prospectus is a part.

Share Reserve

In connection with its approval by the Board and adoption by our shareholders, we will reserve shares of our common stock for issuance under the 2019 Plan. In addition, the following shares of our common stock will again be available for grant or issuance under the 2019 Plan:

- shares subject to awards granted under the 2019 Plan that are subsequently forfeited or cancelled;
- shares subject to awards granted under the 2019 Plan that otherwise terminate without shares being issued; and
- shares surrendered, cancelled or exchanged for cash (but not shares surrendered to pay the exercise price or withholding taxes associated with the award).

Administration

The 2019 Plan will be administered by our Compensation and Nominating Committee. The Compensation and Nominating Committee has the authority to construe and interpret the 2019 Plan, grant awards and make all other determinations necessary or advisable for the administration of the plan. Awards under the 2019 Plan may be made subject to "performance conditions" and other terms.

Eligibility

Our employees, consultants and directors, and employees, consultants and directors of our affiliates, will be eligible to receive awards under the 2019 Plan. The Compensation and Nominating Committee will determine who will receive awards, and the terms and conditions associated with such award.

Term

The 2019 Plan will terminate ten years from the date our Board approves the plan, unless it is terminated earlier by our Board.

Award Forms and Limitations

The 2019 Plan authorizes the award of stock awards, performance awards and other cash-based awards. An aggregate of shares will be available for issuance under awards granted pursuant to the 2019 Plan. For stock options that are intended to qualify as incentive stock options, or ISOs, under Section 422 of the Code, the maximum number of shares subject to ISO awards shall be .

Stock Options

The 2019 Plan provides for the grant of ISOs only to our employees. All options other than ISOs may be granted to our employees, directors and consultants. The exercise price of each option to purchase stock must be at least equal to the fair market value of our common stock on the date of grant. The exercise price of ISOs granted to 10% or more shareholders must be at least equal to 110% of that value. Options granted under the 2019 Plan may be exercisable at such times and subject to such terms and conditions as the Compensation and Nominating Committee determines. The maximum term of options granted under the 2019 Plan is 10 years (five years in the case of ISOs granted to 10% or more shareholders).

Stock Appreciation Rights

Stock appreciation rights provide for a payment, or payments, in cash or common stock, to the holder based upon the difference between the fair market value of our common stock on the date of exercise and the stated exercise price of the stock appreciation right. The exercise price must be at least equal to the fair market value of our common stock on the date the stock appreciation right is granted. Stock appreciation rights may vest based on time or achievement of performance conditions, as determined by the Compensation and Nominating Committee in its discretion.

Restricted Stock

The Compensation and Nominating Committee may grant awards consisting of shares of our common stock subject to restrictions on sale and transfer. The price (if any) paid by a participant for a restricted stock award will be determined by the Compensation and Nominating Committee. Unless otherwise determined by the Compensation and Nominating Committee at the time of award, vesting will cease on the date the participant no longer provides services to us and unvested shares will be forfeited to or repurchased by us. The Compensation and Nominating Committee may condition the grant or vesting of shares of restricted stock on the achievement of performance conditions and/or the satisfaction of a time-based vesting schedule.

Performance Awards

A performance award is an award that becomes payable upon the attainment of specific performance goals. A performance award may become payable in cash or in shares of our common stock. These awards are subject to forfeiture prior to settlement due to termination of a participant's employment or failure to achieve the performance conditions.

Other Cash-Based Awards

The Compensation and Nominating Committee may grant other cash-based awards to participants in amounts and on terms and conditions determined by them in their discretion. Cash-based awards may be granted subject to vesting conditions or awarded without being subject to conditions or restrictions.

Additional Provisions

Awards granted under the 2019 Plan may not be transferred in any manner other than by will or by the laws of descent and distribution, or as determined by the Compensation and Nominating Committee. Unless otherwise restricted by our Committee, awards that are non-ISOs or SARs may be exercised during the lifetime of the optionee only by the optionee, the optionee's guardian or legal representative or a family member of the optionee who has acquired the non-ISOs or SARs by a permitted transfer. Awards that are ISOs may be exercised during the lifetime of the optionee only by the optionee or the optionee's guardian or legal representative.

In the event of a change of control (as defined in the 2019 Plan), the Compensation and Nominating Committee may, in its discretion, provide for any or all of the following actions: (i) awards may be continued, assumed or substituted with new rights, (ii) awards may be purchased for cash equal to the excess (if any) of the highest price per share of common stock paid in the change in control transaction over the aggregate exercise price of such awards, (iii) outstanding and unexercised stock options and stock appreciation rights may be terminated prior to the change in control (in which case holders of such unvested awards would be given notice and the opportunity to exercise such awards), or (iv) vesting or lapse of restrictions may be accelerated. All awards will be equitably adjusted in the case of the division of stock and similar transactions.

401(k) Plan

We maintain a tax-qualified retirement plan that provides all regular U.S. employees with an opportunity to save for retirement on a tax-advantaged basis. Under our 401(k) plan, participants may elect to defer a portion of their compensation on a pre-tax basis and have it contributed to the plan subject to applicable annual limits under the Code. Pre-tax contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. Employee elective deferrals are 100% vested at all times. As a U.S. tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan and all contributions are deductible by us when made.

Non-Employee Director Compensation

The following table presents the total compensation for each person who served as a non-employee member of our Board during 2018. Other than as set forth in the table and described more fully below, we did not pay any compensation, reimburse any expense of, make any equity awards or non-equity awards to, or pay any other compensation to, any of the other non-employee members of our Board or representatives of Vista in 2018. Mr. Durand, our Chief Executive Officer, and representatives of Vista receive no compensation for service as directors and, consequently, are not included in this table. The compensation received by Mr. Durand as an employee of the Company is presented in "– Summary Compensation Table".

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Name	Fees earned or paid in cash ($)	Stock awards ($)[(1)]	Total ($)
Clifford Chiu	100,000	–	100,000
John McCormack	100,000	–	100,000

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(1) Mr. McCormack and Mr. Chiu were each granted 125 RSUs upon joining our Board pursuant to our 2016 Stock Option Plan. Beginning August 31, 2016 and January 1, 2017 for RSUs owned by Mr. McCormack and Mr. Chiu, respectively, vesting began over a four-year period, with 25% of the RSUs vesting upon completion of one year of service, and an additional 25% of the RSUs to vest at the end of each full twelve month period thereafter, subject to continuous service. In July 2019, the Company fully accelerated the vesting of the RSUs.

Non-Employee Director Compensation Policy

We do not currently have a formal policy with respect to compensating our non-employee directors for service as directors. Following the completion of this offering, we will implement a formal policy pursuant to which our non-employee directors will be eligible to receive compensation for service on our board of directors and committees of our board of directors.

THIS IS THE END OF A COMPOSITION COMPONENT TOC_END

Principal Shareholders

PRINCIPAL SHAREHOLDERS

The following table sets forth information about the beneficial ownership of our common stock as of , 2019 and as adjusted to reflect the sale of the common stock in this offering, for

- each person or group known to us who beneficially owns more than 5% of our common stock immediately prior to this offering;
- each of our directors;
- each of our Named Executive Officers; and
- all of our directors and executive officers as a group.

Each shareholder's percentage ownership before the offering is based on common stock outstanding as of , 2019. Each shareholder's percentage ownership after the offering is based on common stock outstanding immediately after the completion of this offering. We have granted the underwriters an option to purchase up to additional shares of common stock.

Beneficial ownership for the purposes of the following table is determined in accordance with the rules and regulations of the SEC. These rules generally provide that a person is the beneficial owner of securities if such person has or shares the power to vote or direct the voting thereof, or to dispose or direct the disposition thereof or has the right to acquire such powers within 60 days. Common stock subject to options or RSUs that are currently exercisable or exercisable within 60 days of , 2019 are deemed to be outstanding and beneficially owned by the person holding the options or RSUs. These shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. Except as disclosed in the footnotes to this table and subject to applicable community property laws, we believe that each shareholder identified in the table possesses sole voting and investment power over all common stock shown as beneficially owned by the shareholder.

Unless otherwise noted below, the address of each beneficial owner listed on the table is c/o Ping Identity Corporation, 1001 17th St, Suite 100, Denver, CO 80202. Beneficial ownership representing less than 1% is denoted with an asterisk (*).

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	Shares Beneficially Owned Prior to this Offering		Shares Beneficially Owned After this Offering		
				No Exercise of Underwriters' Option	Full Exercise of Underwriters' Option
Name of Beneficial Owner	Number of shares	Percentage	Number of shares	Percentage	Percentage
5% Stockholders:					
Vista Funds[1]		%		%	%
Directors and Named Executive Officers:					
Andre Durand[2]					
B. Kristian Nagel[3]					
Bernard Harguindeguy[4]					
Rod Aliabadi					
David A. Breach					
Clifford K. Chiu[5]					
Michael Fosnaugh					
Lisa Hook[6]					
John McCormack[7]					
Brian N. Sheth					
Yancey L. Spruill[8]					

Directors and executive officers as a group (13 individuals)	%	%	%

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(1) Represents shares held directly by Vista Equity Partners Fund VI, L.P., shares held directly by Vista Equity Partners Fund VI-A, L.P. and shares held directly by VEPF VI FAF, L.P. Vista Equity Partners Fund VI GP, L.P., or Fund VI GP, is the sole general partner of each of the Vista Funds. Fund VI GP's sole general partner is VEPF VI GP, Ltd., or Fund VI UGP. Robert F. Smith is the Sole Director of Fund VI UGP, as well as one of its 11 Members. VEPF Management, L.P., or Management Company, is the sole management company of each of the Vista Funds. The Management Company's sole general partner is VEP Group, LLC, or the VEP Group, and the Management Company's sole limited partner is Vista Equity Partners Management, LLC, or VEPM. VEP Group is the Senior Managing Member of the VEPM. Robert F. Smith is the sole Managing Member of VEP Group. Consequently, Mr. Smith, Fund VI UGP and VEP Group may be deemed the beneficial owners of the shares held by the Vista Funds. The principal business address of each of the Vista Funds, Fund VI UGP, the Management Company and the VEP Group is c/o Vista Equity Partners, 4 Embarcadero Center, 20th Fl., San Francisco, California 94111. The principal business address of Mr. Smith is c/o Vista Equity Partners, 401 Congress Drive, Suite 3100, Austin, Texas 78701.

(2) Includes shares that may be acquired within 60 days upon the exercise of vested options.

(3) Represents shares that may be acquired within 60 days upon the exercise of vested options.

(4) Represents shares that may be acquired within 60 days upon the exercise of vested options.

(5) Represents shares that may be acquired within 60 days upon vesting and settlement of RSUs.

(6) Represents shares that may be acquired within 60 days upon vesting and settlement of RSUs.

(7) Represents shares that may be acquired within 60 days upon vesting and settlement of RSUs.

(8) Represents shares that may be acquired within 60 days upon vesting and settlement of RSUs.

Certain Relationships and Related Party Transactions

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Policies for Approval of Related Party Transactions

Prior to completion of this offering, we intend to adopt a policy with respect to the review, approval and ratification of related party transactions. Under the policy, our Audit Committee is responsible for reviewing and approving related person transactions. In the course of its review and approval of related party transactions, our Audit Committee will consider the relevant facts and circumstances to decide whether to approve such transactions. In particular, our policy requires our Audit Committee to consider, among other factors it deems appropriate:

- the related person's relationship to us and interest in the transaction;
- the material facts of the proposed transaction, including the proposed aggregate value of the transaction;
- the impact on a director's independence in the event the related person is a director or an immediate family member of the director;
- the benefits to us of the proposed transaction;
- if applicable, the availability of other sources of comparable products or services; and
- an assessment of whether the proposed transaction is on terms that are comparable to the terms available to an unrelated third party or to employees generally.

The Audit Committee may only approve those transactions that are in, or are not inconsistent with, our best interests and those of our shareholders, as the Audit Committee determines in good faith.

In addition, under our code of business conduct and ethics, which will be adopted prior to the consummation of this offering, our employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest.

All of the transactions described below were entered into prior to the adoption of the Company's written related party transactions policy (which policy will be adopted prior to the consummation of this offering), but all were approved by our Board considering similar factors to those described above.

Related Party Transactions

Other than compensation arrangements for our directors and named executive officers, which are described in the section entitled "Executive Compensation", below we describe transactions since January 1, 2016 to which we were a participant or will be a participant, in which:

- the amounts involved exceeded or will exceed $120,000; and
- any of our directors, executive officers, or holders of more than 5% of our capital stock, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

Director Nomination Agreement

In connection with this offering, we will enter into a Director Nomination Agreement with Vista that provides Vista the right to designate nominees for election to our Board for so long as Vista beneficially owns 5% or more of the total number of shares of our common stock that it owns as of the completion of this offering. Vista may also assign its designation rights under the Director Nomination Agreement to an affiliate.

The Director Nomination Agreement will provide Vista the right to designate: (i) all of the nominees for election to our Board for so long as Vista beneficially owns 40% or more of the total number of shares of our common stock beneficially owned by Vista upon completion of this offering, as adjusted for any reorganization, recapitalization, stock dividend, stock split, reverse stock split or similar changes in the Company's capitalization, or such amount of shares, as adjusted, the Original Amount; (ii) a number of directors (rounded up to the nearest whole number) equal to 40% of the total directors for so long as Vista beneficially owns at least 30% and less than 40% of the Original Amount; (iii) a number of directors (rounded up to the nearest whole number) equal to 30% of the total directors for so long as Vista beneficially owns at least 20% and less than 30% of the Original Amount; (iv) a number of directors (rounded up to the nearest whole number) equal to 20% of the total directors for so long as Vista beneficially owns at least 10% and less than 20% of the Original Amount; and (v) one director for so long as Vista beneficially owns at least 5% and less than 10% of the Original Amount. In each case, Vista's nominees must comply with applicable law and stock exchange rules. In addition, Vista shall be entitled to designate the replacement for any of its board designees whose board service terminates prior to the end of the director's term regardless of Vista's beneficial ownership at such time. Vista shall also have the right to have its designees participate on committees of our Board proportionate to its stock ownership, subject to compliance with applicable law and stock exchange rules. The Director Nomination Agreement will also prohibit us from increasing or decreasing the size of our Board without the prior written consent of Vista. This agreement will terminate at such time as Vista owns less than 5% of the Original Amount.

Registration Rights Agreement

In connection with this offering, we intend to enter into a registration rights agreement with Vista. Vista will be entitled to request that we register Vista's shares on a long-form or short-form registration statement on one or more occasions in the future, which registrations may be "shelf registrations". Vista will also be entitled to participate in certain of our registered offerings, subject to the restrictions in the registration rights agreement. We will pay Vista's expenses in connection with Vista's exercise of these rights. The registration rights described in this paragraph apply to (i) shares of our common stock held by Vista and its affiliates and (ii) any of our capital stock (or that of our subsidiaries) issued or issuable with respect to the common stock described in clause (i) with respect to any dividend, distribution, recapitalization, reorganization, or certain other corporate transactions, or Registrable Securities. These registration rights are also for the benefit of any subsequent holder of Registrable Securities; provided that any particular securities will cease to be Registrable Securities when they have been sold in a registered public offering, sold in compliance with Rule 144 of the Securities Act of 1933, as amended, or the Securities Act, or repurchased by us or our subsidiaries. In addition, with the consent of the company and holders of a majority of Registrable Securities, any Registrable Securities held by a person other than Vista and its affiliates will cease to be Registrable Securities if they can be sold without limitation under Rule 144 of the Securities Act.

Indemnification of Officers and Directors

Upon completion of this offering, we intend to enter into indemnification agreements with each of our executive officers and directors. The indemnification agreements will provide the executive officers and directors with contractual rights to indemnification, expense advancement and reimbursement, to the fullest extent permitted under the DGCL. Additionally, we may enter into indemnification agreements with any new directors or officers that may be broader in scope than the specific indemnification provisions contained in Delaware law.

Management Agreement

In connection with the Vista Acquisition, as amended and restated January in 2018, we entered into a management agreement with VEPM, pursuant to which VEPM was retained to provide us with certain management and consulting services. We agreed to indemnify VEPM against liabilities that may arise by reason of their service. We reimburse VEPM for any out-of-pocket costs and expenses, and have recorded expenses under the

management agreement of $0.1 million, zero ($0) and $0.1 million for the years ended December 31, 2016, 2017 and 2018, respectively. The management agreement will terminate at no additional cost to us in connection with the completion of this offering.

Relationship with VCG

Following the Vista Acquisition, we have utilized Vista Consulting Group, LLC, or VCG, the operating and consulting arm of Vista, for consulting services and executive recruitment, and have also reimbursed VCG for expenses related to participation by Ping employees in VCG sponsored events and for certain enterprise software licenses utilized by Ping, and also paid to VCG related fees and expenses. We recorded expenses to VCG of $0.6 million, $0.4 million, $0.9 million and $0.3 million for the years ended December 31, 2016, 2017 and 2018 and the six months ended June 30, 2019, respectively. Following this offering, we may continue to engage VCG from time to time, subject to compliance with our related party transactions policy.

Arrangements with Companies Controlled by Vista

We have subscription arrangements for our solutions with companies controlled by Vista. We recognized revenue in connection with these agreements of $2.6 million, $0.8 million, $1.9 million and $0.2 million for the years ended December 31, 2016, 2017 and 2018 and the six months ended June 30, 2019, respectively. We also purchase services from companies controlled by Vista. We recognized expense of $0.1 million, $0.5 million, $0.3 million and $0.3 million for the years ended December 31, 2016, 2017 and 2018 and the six months ended June 30, 2019, respectively. We believe all of these arrangements are on comparable terms that are provided to unrelated third parties.

Term Loan Facility

From time to time, Vista may acquire loans incurred by us either from us, in open market transactions or through loan syndications. In connection with our entry into the Term Loan Facility on January 25, 2018, affiliates of Vista collectively acquired $35.0 million of term loans under our Term Loan Facility and as of June 30, 2019, affiliates of Vista collectively owned $34.7 million of our Term Loan Facility. During the year ended December 31, 2018, the largest principal amount of debt under the Term Loan Facility held by affiliates of Vista was $35.0 million. During the year ended December 31, 2018 and the six months ended June 30, 2019, affiliates of Vista were paid $0.2 million and $0.1 million in principal, respectively and $1.9 million and $1.1 million, respectively, in interest on the portion of the Term Loan Facility held by them. As of June 30, 2019, the portion of the Term Loan Facility held by affiliates of Vista bears interest at 6.19%.

Vista will receive a portion of the net proceeds of this offering in connection with the repayment of our Term Loan Facility. Based upon our estimated receipt of net proceeds from this offering of approximately $ million (or $ million if the underwriters exercise their option to purchase additional shares in full) as described above, we expect that Vista will receive $ million of the total $ million (or $ million of the total $ million if the underwriters exercise their option to purchase additional shares in full) of such net proceeds used to repay outstanding borrowings under our Term Loan Facility.

Elastic Beam Acquisition

On April 5, 2018, we entered into a Securities Purchase Agreement, by and among Ping Identity Corporation, the sellers party thereto and Bernard Harguindeguy, pursuant to which we acquired 100% of the voting equity interest in Elastic Beam. $4.8 million and $4.2 million, respectively, of contingent compensation is payable on the first and second anniversary of the acquisition, contingent on certain individuals remaining employed as of those dates. During the six months ended June 30, 2019, we paid the first anniversary payment of $4.8 million. In connection with our acquisition of Elastic Beam, Mr. Harguindeguy, who became our Chief Technology Officer following the acquisition, received $5.8 million in consideration of his equity in Elastic Beam. On the first anniversary of the Elastic Beam Acquisition, Mr. Harguindeguy received (i) $2.4 million in earn-out consideration and (ii) $0.3 million in holdback consideration. In addition, Mr. Harguindeguy may receive up to $2.0 million in additional earn-out consideration, payable on the second anniversary of the Elastic Beam Acquisition.

Directed Share Program

At our request, the underwriters have reserved up to shares of common stock, or % of the shares of common stock to be offered by this prospectus for sale, at the initial public offering price, to directors, officers, and their friends and family members through a directed share program.

Description of Certain Indebtedness

DESCRIPTION OF CERTAIN INDEBTEDNESS

Set forth below is a summary of the terms of the credit agreement governing certain of our outstanding indebtedness. This summary is not a complete description of all of the terms of the credit agreement. The credit agreement setting forth the terms and conditions of certain of our outstanding indebtedness is filed as an exhibit to the registration statement of which this prospectus forms a part.

Senior Secured Credit Facilities

On January 25, 2018, Ping Identity Corporation and Roaring Fork Intermediate, LLC, or Holdings, each of which are wholly-owned subsidiaries of ours, entered into the $275.0 million Credit Agreement with a syndicate of lenders, comprised of the $25.0 million Revolving Credit Facility and the $250.0 million Term Loan Facility. The proceeds from borrowing under the Credit Agreement were used to repay our then existing credit facilities,

together with accrued interest and related prepayment penalties and expenses. As of June 30, 2019, we had $247.5 million and no borrowings outstanding under our Term Loan Facility and Revolving Credit Facility, respectively. As of June 30, 2019, the interest rate on our Term Loan Facility and Revolving Credit Facility was 6.19% and 0.25%, respectively.

Interest Rates and Fees

Borrowings under the Credit Agreement bear interest at a rate per annum, at Holdings' option, equal to an applicable margin, plus, (a) for alternative base rate borrowings, the highest of (i) the prime rate as determined by the administrative agent in effect on such day, (ii) the Federal Funds Rate in effect on such day plus $^{1}/_{2}$ of 1.00% and (iii) the Adjusted LIBO Rate (for a one-month interest period and taking into account a 1.00% floor with respect to term loans) plus 1.00% and (b) for eurocurrency borrowings, the Adjusted LIBO Rate determined by the greater of (i) the LIBO Rate for the relevant interest period divided by 1 minus the statutory reserves (if any) and (ii) with respect to term loans only, 1.00%.

The applicable margin for borrowings under the Credit Agreement is (a) with respect to term loan borrowings, 2.75% for alternate base rate borrowings and 3.75% for eurocurrency borrowings and (b) with respect to both revolving and swingline loan borrowings, 2.75% for alternate base rate borrowings and 3.75% for eurocurrency borrowings when Holdings' first lien leverage ratio is greater than 5.00 to 1.00, with step downs to (i) 2.50% for alternate base rate borrowings and 3.50% for eurocurrency borrowings when Holdings' first lien leverage ratio is less than or equal to 5.00 to 1.00 but greater than 4.50 to 1.00 and (ii) 2.25% for alternate base rate borrowings and 3.25% for eurocurrency when Holdings' first lien leverage ratio is less than or equal to 4.50 to 1.00. Our first lien leverage ratio is determined in accordance with the terms of the Credit Agreement.

Additionally, Holdings is required to pay the following fees pursuant to the terms of the Credit Agreement: (a) a commitment fee on the average daily unused portion of the revolving credit commitments of 0.50% per annum when Holdings' first lien leverage ratio is greater than 3.50 to 1.00, with a step down to 0.375% when Holdings' first lien leverage ratio is greater than 5.00, with step downs to (i) 0.375% when Holdings' first lien leverage ratio is less than or equal to 5.00 to 1.00 but greater than 4.50 to 1.00 and (ii) 0.25% when Holdings' first lien leverage ratio is less than or equal to 4.50 to 1.00, (b) a customary administrative agent fee to the first lien administrative agent and (c) a fronting fee on the daily amount of letter of credit exposure of each letter of credit issued by each issuing bank at a rate equal to 3.75% when Holdings' first lien leverage ratio is greater than 5.00, with step downs to (i) 3.75% when Holdings' first lien leverage ratio is less than or equal to 5.00 to 1.00 but greater than 4.50 to 1.00 and (ii) 3.25% when Holdings' first lien leverage ratio is less than or equal to 4.50 to 1.00.

Voluntary Prepayments

Holdings may voluntarily prepay outstanding loans under the Credit Agreement without premium or penalty, subject to certain notice and priority requirements.

Mandatory Prepayments

The Credit Agreement requires Holdings to prepay, subject to certain exceptions, the first lien term loans with:

- commencing with the fiscal year ending on December 31, 2018, 50% of excess cash flow for the fiscal year then ended, minus, at Holdings' option, certain optional prepayments and repurchases of *pari passu* indebtedness, subject to a step down when Holdings' first lien leverage ratio is less than or equal to 4.50 to 1.00, to 25% and a step down when Holdings' first lien leverage ratio is less than or equal to 4.50 to 1.00, to 0%;
- 100% of the net cash proceeds of certain asset sales or insurance/condemnation events above a threshold amount, subject to reinvestment rights and other exceptions and step downs to 50% and 0% when the first lien leverage ratio is less than 5.00 and 4.50, respectively; and
- 100% of the net cash proceeds of any issuance or incurrence of debt other than debt permitted under the Credit Agreement.

Final Maturity and Amortization

The Term Loan Facility will mature on January 25, 2025 and the Revolving Credit Facility will mature on January 25, 2023. The Term Loan Facility requires quarterly amortization payments equal to approximately 0.25% of the original principal amount. The Revolving Credit Facility does not amortize.

Guarantors

All obligations under the Credit Agreement are unconditionally guaranteed by Holdings, and substantially all of its existing and future direct and indirect wholly-owned domestic subsidiaries, other than certain excluded subsidiaries.

Security

All obligations under the Credit Agreement are secured, subject to permitted liens and other exceptions, by first-priority perfected security interests in substantially all of the borrower's and the guarantors' assets.

Certain Covenants, Representations and Warranties

The Credit Agreement contains customary representations and warranties, affirmative covenants, reporting obligations and negative covenants. The negative covenants restrict Ping Identity Corporation and its subsidiaries' ability, among other things, to (subject to certain exceptions set forth in the Credit Agreement):

- incur additional indebtedness or other contingent obligations;
- create liens;
- make investments, acquisitions, loans and advances;
- consolidate, merge, liquidate or dissolve;
- sell, transfer or otherwise dispose of its assets, including capital stock of its subsidiaries;
- pay dividends on its equity interests or make other payments in respect of capital stock;
- engage in transactions with its affiliates;
- make payments in respect of subordinated debt;
- modify organizational documents in a manner that is materially adverse to the lenders under the Credit Agreement;
- with respect to Holdings, modify its holding company status;
- enter into burdensome agreements with negative pledge clauses or restrictions on subsidiary distributions;
- materially alter the business it conducts; and
- change its fiscal year.

Financial Covenant

Additionally, the Revolving Credit Facility requires, in the event amounts utilized under the Revolving Credit Facility (borrowings plus the amount of outstanding letters of credit in excess of $2.5 million) exceed 35% of the aggregate revolving commitments, Ping Identity Corporation is to maintain a first lien leverage ratio, determined in accordance with the terms of the Credit Agreement, of no greater than 8.25:1.00.

In the event that we fail to comply with the financial covenant, the parent guarantor has the option to issue equity or make certain equity contributions to the borrower in order to increase consolidated adjusted EBITDA for the purpose of calculating and determining compliance with such covenant, subject to certain other conditions and limitations.

Events of Default

The lenders under the Credit Agreement are permitted to accelerate the loans and terminate commitments thereunder or exercise other remedies upon the occurrence of certain customary events of default, subject to certain grace periods and exceptions. These events of default include, among others, payment defaults, cross-defaults to certain material indebtedness, covenant defaults, material inaccuracy of representations and warranties, certain events of bankruptcy, material judgments, material defects with respect to lenders' perfection on the collateral, invalidity of subordination provisions of the subordinated debt and changes of control, none of which are expected to be triggered by this offering.

THIS IS THE END OF A COMPOSITION COMPONENT TOC_END

Description of Capital Stock

DESCRIPTION OF CAPITAL STOCK

General Upon completion of this offering, our authorized capital stock will consist of shares of common stock, par value $0.001 per share, and shares of undesignated preferred stock, par value $0.001 per share. As of June 30, 2019, we had shares of common stock outstanding held by ten shareholders of record and no shares of preferred stock outstanding, shares of common stock issuable upon exercise of outstanding stock options and shares of common stock issuable upon the vesting and settlement of outstanding RSUs. After consummation of this offering and the use of proceeds therefrom, we expect to have shares of our common stock outstanding, assuming no exercise by the underwriters of their option to purchase additional shares, and expect to have no shares of preferred stock outstanding. The following description of our capital stock is intended as

a summary only and is qualified in its entirety by reference to our certificate of incorporation and bylaws to be in effect at the closing of this offering, which are filed as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of the DGCL.

Common Stock

Dividend Rights

Subject to preferences that may apply to shares of preferred stock outstanding at the time, holders of outstanding shares of common stock will be entitled to receive dividends out of assets legally available at the times and in the amounts as our Board may determine from time to time.

Voting Rights

Each outstanding share of common stock will be entitled to one vote on all matters submitted to a vote of shareholders. Holders of shares of our common stock shall have no cumulative voting rights.

Preemptive Rights

Our common stock will not be entitled to preemptive or other similar subscription rights to purchase any of our securities.

Conversion or Redemption Rights

Our common stock will be neither convertible nor redeemable.

Liquidation Rights

Upon our liquidation, the holders of our common stock will be entitled to receive pro rata our assets that are legally available for distribution, after payment of all debts and other liabilities and subject to the prior rights of any holders of preferred stock then outstanding.

Preferred Stock

Our Board may, without further action by our shareholders, from time to time, direct the issuance of shares of preferred stock in series and may, at the time of issuance, determine the designations, powers, preferences, privileges, and relative participating, optional or special rights as well as the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of the common stock. Satisfaction of any dividend preferences of outstanding shares of preferred stock would reduce the amount of funds available for the payment of dividends on shares of our common stock. Holders of shares of preferred stock may be entitled to receive a preference payment in the event of our liquidation before any payment is made to the holders of shares of our common stock. Under certain circumstances, the issuance of shares of preferred stock may render more difficult or tend to discourage a merger, tender offer or proxy contest, the assumption of control by a holder of a large block of our securities or the removal of incumbent management. Upon the affirmative vote of a majority of the total number of directors then in office, our Board, without shareholder approval, may issue shares of preferred stock with voting and conversion rights which could adversely affect the holders of shares of our common stock and the market value of our common stock.

Anti-Takeover Effects of Our Certificate of Incorporation and Our Bylaws

Our certificate of incorporation, bylaws and the DGCL will contain provisions, which are summarized in the following paragraphs, that are intended to enhance the likelihood of continuity and stability in the composition of our Board. These provisions are intended to avoid costly takeover battles, reduce our vulnerability to a hostile change of control and enhance the ability of our Board to maximize shareholder value in connection with any unsolicited offer to acquire us. However, these provisions may have an anti-takeover effect and may delay, deter or prevent a merger or acquisition of the Company by means of a tender offer, a proxy contest or other takeover attempt that a shareholder might consider in its best interest, including those attempts that might result in a premium over the prevailing market price for the shares of common stock held by shareholders.

These provisions include:

Classified Board

Our certificate of incorporation will provide that our Board will be divided into three classes of directors, with the classes as nearly equal in number as possible, and with the directors serving three-year terms. As a result, approximately one-third of our Board will be elected each year. The classification of directors will have the effect of making it more difficult for shareholders to change the composition of our Board. Our certificate of incorporation will also provide that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors will be fixed exclusively pursuant to a resolution adopted by our Board. Upon completion of this offering, we expect that our Board will have nine members.

Shareholder Action by Written Consent

Our certificate of incorporation will preclude shareholder action by written consent at any time when Vista beneficially owns, in the aggregate, less than 35% in voting power of the stock of the Company entitled to vote generally in the election of directors.

Special Meetings of Shareholders

Our certificate of incorporation and bylaws will provide that, except as required by law, special meetings of our shareholders may be called at any time only by or at the direction of our Board or the chairman of our Board; provided, however, at any time when Vista beneficially owns, in the aggregate, at least 35% in voting power of the stock of the Company entitled to vote generally in the election of directors, special meetings of our shareholders shall also be called by our Board or the chairman of our Board at the request of Vista. Our bylaws will prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of the Company.

Advance Notice Procedures

Our bylaws will establish an advance notice procedure for shareholder proposals to be brought before an annual meeting of our shareholders, including proposed nominations of persons for election to our Board; provided, however, at any time when Vista beneficially owns, in the aggregate, at least 10% in voting power of the stock of the Company entitled to vote generally in the election of directors, such advance notice procedure will not apply to Vista. Shareholders at an annual meeting will only be able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our Board or by a shareholder who was a shareholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given our Secretary timely written notice, in proper form, of the shareholder's intention to bring that business before the meeting. Although the bylaws will not give our Board the power to approve or disapprove shareholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the Company. These provisions do not apply to nominations by Vista pursuant to the Director Nomination Agreement. See "Certain Relationships and Related Party Transactions – Related Party Transactions – Director Nomination Agreement" for more details with respect to the Director Nomination Agreement.

Removal of Directors; Vacancies

Our certificate of incorporation will provide that directors may be removed with or without cause upon the affirmative vote of a majority in voting power of all outstanding shares of stock entitled to vote thereon, voting together as a single class; provided, however, at any time when Vista beneficially owns, in the aggregate, less than 40% in voting power of the stock of the Company entitled to vote generally in the election of directors, directors may only be removed for cause, and only by the affirmative vote of holders of at least $66^2/3\%$ in voting power of all the then-outstanding shares of stock of the Company entitled to vote thereon, voting together as a single class. In addition, our certificate of incorporation will provide that, subject to the rights granted to one or more series of preferred stock then outstanding, any newly created directorship on our Board that results from an increase in the number of directors and any vacancies on our Board will be filled only by the affirmative vote of a majority of the remaining directors, even if less than a quorum, by a sole remaining director.

Supermajority Approval Requirements

Our certificate of incorporation and bylaws will provide that our Board is expressly authorized to make, alter, amend, change, add to, rescind or repeal, in whole or in part, our bylaws without a shareholder vote in any matter not inconsistent with the laws of the State of Delaware and our certificate of incorporation. For as long as Vista beneficially owns, in the aggregate, at least 50% in voting power of the stock of the Company entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of our bylaws by our shareholders will require the affirmative vote of a majority in voting power of the outstanding shares of our stock entitled to vote on such amendment, alteration, change, addition, rescission or repeal. At any time when Vista beneficially owns, in the aggregate, less than 50% in voting power of all outstanding shares of the stock of the Company entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of our bylaws by our shareholders will require the affirmative vote of the holders of at least $66^2/3\%$ in voting power of all the then-outstanding shares of stock of the Company entitled to vote thereon, voting together as a single class.

The DGCL provides generally that the affirmative vote of a majority of the outstanding shares entitled to vote thereon, voting together as a single class, is required to amend a corporation's certificate of incorporation, unless the certificate of incorporation requires a greater percentage.

Our certificate of incorporation will provide that at any time when Vista beneficially owns, in the aggregate, less than 50% in voting power of the stock of the Company entitled to vote generally in the election of directors, the following provisions in our certificate of incorporation may be amended, altered, repealed or rescinded only by the affirmative vote of the holders of at least $66^2/3\%$ (as opposed to a majority threshold that would apply if Vista beneficially owns, in the aggregate, 50% or more) in voting power of all the then-outstanding shares of stock of the Company entitled to vote thereon, voting together as a single class:

- the provision requiring a $66^2/3\%$ supermajority vote for shareholders to amend our bylaws;
- the provisions providing for a classified board of directors (the election and term of our directors);
- the provisions regarding resignation and removal of directors;
- the provisions regarding entering into business combinations with interested shareholders;

- the provisions regarding shareholder action by written consent;
- the provisions regarding calling special meetings of shareholders;
- the provisions regarding filling vacancies on our Board and newly created directorships;
- the provisions eliminating monetary damages for breaches of fiduciary duty by a director; and
- the amendment provision requiring that the above provisions be amended only with a $66^2/3\%$ supermajority vote.

The combination of the classification of our Board, the lack of cumulative voting and the supermajority voting requirements will make it more difficult for our existing shareholders to replace our Board as well as for another party to obtain control of us by replacing our Board. Because our Board has the power to retain and discharge our officers, these provisions could also make it more difficult for existing shareholders or another party to effect a change in management.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock will be available for future issuance without shareholder approval, subject to stock exchange rules. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. One of the effects of the existence of authorized but unissued common stock or preferred stock may be to enable our Board to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our shareholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Business Combinations

Upon completion of this offering, we will not be subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested shareholder" for a three-year period following the time that the person becomes an interested shareholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested shareholder. An "interested shareholder" is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested shareholder status, 15% or more of the corporation's voting stock.

Under Section 203, a business combination between a corporation and an interested shareholder is prohibited unless it satisfies one of the following conditions: (1) before the shareholder became an interested shareholder, the board of directors approved either the business combination or the transaction which resulted in the shareholder becoming an interested shareholder; (2) upon consummation of the transaction which resulted in the shareholder becoming an interested shareholder, the interested shareholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or (3) at or after the time the shareholder became an interested shareholder, the business combination was approved by the board of directors and authorized at an annual or special meeting of the shareholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested shareholder.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a shareholders' amendment approved by at least a majority of the outstanding voting shares.

We will opt out of Section 203; however, our certificate of incorporation will contain similar provisions providing that we may not engage in certain "business combinations" with any "interested shareholder" for a three-year period following the time that the shareholder became an interested shareholder, unless:

- prior to such time, our Board approved either the business combination or the transaction which resulted in the shareholder becoming an interested shareholder;
- upon consummation of the transaction that resulted in the shareholder becoming an interested shareholder, the interested shareholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding certain shares; or
- at or subsequent to that time, the business combination is approved by our Board and by the affirmative vote of holders of at least $66^2/3\%$ of our outstanding voting stock that is not owned by the interested shareholder.

Under certain circumstances, this provision will make it more difficult for a person who would be an "interested shareholder" to effect various business combinations with the Company for a three-year period. This provision may encourage companies interested in acquiring the Company to negotiate in advance with our Board because the shareholder approval requirement would be avoided if our Board approves either the business combination or the transaction which results in the shareholder becoming an interested shareholder. These provisions also may have the effect of preventing changes in our Board and may make it more difficult to accomplish transactions which shareholders may otherwise deem to be in their best interests.

Our certificate of incorporation will provide that Vista, and any of its direct or indirect transferees and any group as to which such persons are a party, do not constitute "interested shareholders" for purposes of this provision.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our shareholders will have appraisal rights in connection with a merger or consolidation of us. Pursuant to the DGCL, shareholders who properly request and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Shareholders' Derivative Actions

Under the DGCL, any of our shareholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the shareholder bringing the action is a holder of our shares at the time of the transaction to which the action relates or such shareholder's stock thereafter devolved by operation of law.

Exclusive Forum

Our certificate of incorporation will provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, the United States District Court for the District of Delaware) will be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our shareholders, (3) any action asserting a claim against the Company or any director or officer of the Company arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws or (4) any other action asserting a claim against the Company or any director or officer of the Company that is governed by the internal affairs doctrine; provided that for the avoidance of doubt, the forum selection provision that identifies the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation, including any "derivative action", will not apply to suits to enforce a duty or liability created by the Securities Act, the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to the provisions of our certificate of incorporation described above. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against us or our directors and officers.

Conflicts of Interest

Delaware law permits corporations to adopt provisions renouncing any interest or expectancy in certain opportunities that are presented to the corporation or its officers, directors or shareholders. Our certificate of incorporation will, to the maximum extent permitted from time to time by Delaware law, renounce any interest or expectancy that we have in, or right to be offered an opportunity to participate in, specified business opportunities that are from time to time presented to certain of our officers, directors or shareholders or their respective affiliates, other than those officers, directors, shareholders or affiliates who are our or our subsidiaries' employees. Our certificate of incorporation will provide that, to the fullest extent permitted by law, none of Vista or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or his or her affiliates will have any duty to refrain from (1) engaging in a corporate opportunity in the same or similar lines of business in which we or our affiliates now engage or propose to engage or (2) otherwise competing with us or our affiliates. In addition, to the fullest extent permitted by law, in the event that Vista or any non-employee director acquires knowledge of a potential transaction or other business opportunity which may be a corporate opportunity for itself or himself or its or his affiliates or for us or our affiliates, such person will have no duty to communicate or offer such transaction or business opportunity to us or any of our affiliates and they may take any such opportunity for themselves or offer it to another person or entity. Our certificate of incorporation will not renounce our interest in any business opportunity that is expressly offered to a non-employee director solely in his or her capacity as a director or officer of the Company. To the fullest extent permitted by law, no business opportunity will be deemed to be a potential corporate opportunity for us unless we would be permitted to undertake the opportunity under our certificate of incorporation, we have sufficient financial resources to undertake the opportunity, and the opportunity would be in line with our business.

Limitations on Liability and Indemnification of Officers and Directors

The DGCL authorizes corporations to limit or eliminate the personal liability of directors to corporations and their shareholders for monetary damages for breaches of directors' fiduciary duties, subject to certain exceptions. Our certificate of incorporation will include a provision that eliminates the personal liability of directors for monetary damages for any breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the DGCL. The effect of these provisions will be to eliminate the rights of us and our shareholders, through shareholders' derivative suits on our behalf, to recover monetary damages from a director for breach of fiduciary duty as a

director, including breaches resulting from grossly negligent behavior. However, exculpation will not apply to any director if the director has acted in bad faith, knowingly or intentionally violated the law, authorized illegal dividends or redemptions or derived an improper benefit from his or her actions as a director.

Our bylaws will provide that we must indemnify and advance expenses to our directors and officers to the fullest extent authorized by the DGCL. We also will be expressly authorized to carry directors' and officers' liability insurance providing indemnification for our directors, officers and certain employees for some liabilities. We believe that these indemnification and advancement provisions and insurance will be useful to attract and retain qualified directors and officers.

The limitation of liability, indemnification and advancement provisions that will be included in our certificate of incorporation and bylaws may discourage shareholders from bringing a lawsuit against directors for breaches of their fiduciary duty. These provisions also may have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our shareholders. In addition, your investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

There is currently no pending material litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent's address is 6201 15th Avenue, Brooklyn, NY 11219 and its phone number is (800) 937-5449.

Listing

We have applied to list our common stock on NASDAQ under the symbol "PING".

Shares Eligible for Future Sale

SHARES ELIGIBLE FOR FUTURE SALE

Before this offering, there has been no public market for our common stock. As described below, only a limited number of shares currently outstanding will be available for sale immediately after this offering due to contractual and legal restrictions on resale. Nevertheless, future sales of substantial amounts of our common stock, including shares issued upon the exercise of outstanding options, in the public market after this offering, or the perception that those sales may occur, could cause the prevailing market price for our common stock to fall or impair our ability to raise capital through sales of our equity securities.

Upon the closing of this offering, based on the number of shares of our common stock outstanding as of June 30, 2019, we will have outstanding shares of our common stock, after giving effect to the issuance of shares of our common stock in this offering, assuming no exercise by the underwriters of their option to purchase additional shares.

Of the shares that will be outstanding immediately after the closing of this offering, we expect that the shares to be sold in this offering will be freely tradable without restriction under the Securities Act unless purchased by our "affiliates", as that term is defined in Rule 144 under the Securities Act. Shares purchased by our affiliates may not be resold except pursuant to an effective registration statement or an exemption from registration, including the safe harbor under Rule 144 of the Securities Act described below. In addition, following this offering, shares of common stock issuable pursuant to awards granted under certain of our equity plans that are covered by a registration statement on Form S-8 will be freely tradable in the public market, subject to certain contractual and legal restrictions described below.

The remaining shares of our common stock outstanding after this offering will be "restricted securities", as that term is defined in Rule 144 of the Securities Act, and we expect that substantially all of these restricted securities will be subject to the lock-up agreements described below. These restricted securities may be sold in the public market only if the sale is registered or pursuant to an exemption from registration, such as Rule 144 or Rule 701 of the Securities Act, which are summarized below.

Lock-up Agreements

We, each of our directors and executive officers and other shareholders and optionholders owning substantially all of our common stock and options to acquire common stock, have agreed that, without the prior written consent of Goldman Sachs & Co. LLC on behalf of the underwriters, we and they will not, subject to limited exceptions, directly or indirectly sell or dispose of any shares of common stock or any securities convertible into or exchangeable or exercisable for shares of common stock for a period of 180 days after the date of this prospectus. The lock-up restrictions and specified exceptions are described in more detail under "Underwriting".

Prior to the consummation of the offering, certain of our employees, including our executive officers, and/or directors may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

Following the lock-up periods set forth in the agreements described above, and assuming that the representatives of the underwriters do not release any parties from these agreements, all of the shares of our common stock that are restricted securities or are held by our affiliates as of the date of this prospectus will be eligible for sale in the public market in compliance with Rule 144 under the Securities Act.

Registration Rights Agreement

Pursuant to the registration rights agreement, we have granted Vista the right to cause us, in certain instances, at our expense, to file registration statements under the Securities Act covering resales of our common stock held by Vista or to piggyback on registered offerings initiated by us in certain circumstances. See "Certain Relationships and Related Party Transactions — Related Party Transactions — Registration Rights Agreement". These shares will represent % of our outstanding common stock after this offering, or % if the underwriters exercise their option to purchase additional shares in full.

Rule 144

In general, under Rule 144, beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act, any person who is not our affiliate, who was not our affiliate at any time during the preceding three months and who has held their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, may sell shares without restriction, subject to the availability of current public information about us and subject to applicable lock-up restrictions. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than one of our affiliates, then that person would be entitled to sell those shares without complying with any of the requirements of Rule 144.

Beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act and subject to applicable lock-up restrictions, a person who is our affiliate or who was our affiliate at any time during the preceding three months and who has beneficially owned restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, is entitled to sell a number of shares within any three-month period that does not exceed the greater of: (1) 1% of the number of shares of our common stock outstanding, which will equal approximately shares immediately after this offering; and (2) the average weekly trading volume of our common stock on NASDAQ during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales under Rule 144 by our affiliates are also subject to certain manner of sale provisions, notice requirements and to the availability of current public information about us.

Rule 701

In general, under Rule 701, any of our employees, directors or officers who acquired shares from us in connection with a compensatory stock or option plan or other compensatory written agreement before the effective date of this offering are, subject to applicable lock-up restrictions, eligible to resell such shares in reliance upon Rule 144 beginning 90 days after the date of this prospectus. If such person is not an affiliate and was not our affiliate at any time during the preceding three months, the sale may be made subject only to the manner-of-sale restrictions of Rule 144. If such a person is an affiliate, the sale may be made under Rule 144 without compliance with the holding period requirements under Rule 144, but subject to the other Rule 144 restrictions described above.

Equity Incentive Plans

Following this offering, we intend to file with the SEC a registration statement on Form S-8 under the Securities Act covering the shares of common stock that are subject to outstanding options and other awards issuable pursuant to our 2019 Plan. Shares covered by such registration statement will be available for sale in the open market following its effective date, subject to certain Rule 144 limitations applicable to affiliates and the terms of lock-up agreements applicable to those shares.

THIS IS THE END OF A COMPOSITION COMPONENT TOC_END

Material U.S. Federal Income Tax Consequences to Non-U.S. Holders

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the Code, Treasury regulations promulgated thereunder, or Treasury Regulations, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or the IRS, in each case as in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to those discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the U.S.;
- persons subject to the alternative minimum tax;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies and other financial institutions;
- real estate investment trusts or regulated investment companies;
- brokers, dealers or traders in securities;
- "controlled foreign corporations", "passive foreign investment companies", and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- persons that own, or are deemed to own, more than five percent of our capital stock (except to the extent specifically set forth below);
- "qualified foreign pension funds" (within the meaning of Section 897(1)(2) of the Code and entities, all of the interests of which are held by qualified foreign pension funds); and
- tax-qualified retirement plans.

If any partnership or arrangement classified as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a "Non-U.S. Holder" is any beneficial owner of our common stock that is neither a "United States person" nor an entity treated as a partnership for U.S. federal income tax purposes. A United States person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the U.S.;
- a corporation, or an entity treated as a corporation for U.S. federal income tax purposes, created or organized under the laws of the U.S. any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
-

a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section entitled "Dividend Policy", we do not anticipate declaring or paying dividends to holders of our common stock in the foreseeable future. However, if we do make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "Sale or Other Taxable Disposition".

Subject to the discussion below on effectively connected income, backup withholding, and the Foreign Account Tax Compliance Act, dividends paid to a Non-U.S. Holder of our common stock will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes to us or our paying agent prior to the payment of dividends a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the U.S. (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the U.S. to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the U.S.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits (as adjusted for certain items), which will include such effectively connected dividends. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

Subject to the discussion below on backup withholding and the Foreign Account Tax Compliance Act, a Non-U.S. Holder generally will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the U.S. (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the U.S. to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the U.S. for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest, or USRPI, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits (as adjusted for certain items), which will include such effectively connected gain.

A Non-U.S. Holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on any gain derived from the disposition, which may generally be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the U.S.), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder of our common stock will not be subject to U.S. federal income tax if our common stock is "regularly traded", as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, five percent or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period. If we were to become a USRPHC and our

common stock were not considered to be "regularly traded" on an established securities market during the calendar year in which the relevant disposition by a Non-U.S. holder occurs, such Non-U.S. holder (regardless of the percentage of stock owned) would be subject to U.S. federal income tax on a sale or other taxable disposition of our common stock and a 15% withholding tax would apply to the gross proceeds from such disposition.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our common stock generally will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the Non-U.S. Holder is a United States person and the Non-U.S. Holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any dividends on our common stock paid to the Non-U.S. Holder, regardless of whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the U.S. or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such Non-U.S. Holder is a United States person, or the Non-U.S. Holder otherwise establishes an exemption. If a Non-U.S. Holder does not provide the certification described above or the applicable withholding agent has actual knowledge or reason to know that such Non-U.S. Holder is a United States person, payments of dividends or of proceeds of the sale or other taxable disposition of our common stock may be subject to backup withholding at a rate currently equal to 24% of the gross proceeds of such dividend, sale, or taxable disposition Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Subject to the discussion below regarding recently issued Proposed Treasury Regulations, withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code) (including, in some cases, when such foreign financial institution or non-financial foreign entity is acting as an intermediary), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each direct and indirect substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to noncompliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the U.S. governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock, and subject to recently issued Proposed Treasury Regulations described below, will apply to payments of gross proceeds from the sale or other disposition of such stock on or after January 1, 2019. On December 13, 2018, the U.S. Department of the Treasury released proposed regulations which, if finalized in their present form, would eliminate FATCA withholding on the gross proceeds from a sale or other disposition of our common stock.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

Underwriting

UNDERWRITING

We and the underwriters named below have entered into an underwriting agreement with respect to the shares of common stock being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares of common stock indicated in the following table. Goldman Sachs & Co. LLC and BofA Securities, Inc. are the representatives of the underwriters.

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Underwriters	Number of Shares
Goldman Sachs & Co. LLC	
BofA Securities, Inc.	
RBC Capital Markets, LLC	
Citigroup Global Markets Inc.	
Barclays Capital Inc.	
Credit Suisse Securities (USA) LLC	
Deutsche Bank Securities Inc.	
Wells Fargo Securities, LLC	
Raymond James & Associates, Inc.	
Stifel, Nicolaus & Company, Incorporated	
William Blair & Company, L.L.C.	
Mizuho Securities USA LLC	
Oppenheimer & Co. Inc.	
Total	

end of user-specified TAGGED TABLE

The underwriters are committed to take and pay for all of the shares being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional shares from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for a period of 30 days following the consummation of this offering. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following tables show the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to additional shares from us.

Paid by the Company

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No Exercise	Full Exercise
Per Share	$$
Total	$$

end of user-specified TAGGED TABLE

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. After the initial offering of the shares, the representatives may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

We and our officers, directors and holders of substantially all of the common stock and securities convertible into and exchangeable for our common stock, including the Vista Funds, have agreed or will agree with the underwriters, subject to certain exceptions, not to dispose of or hedge any of our or their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of Goldman Sachs & Co. LLC. This agreement does not apply to any existing employee benefit plans. See the section entitled "Shares Eligible for Future Sale" for a discussion of certain transfer restrictions.

Prior to the offering, there has been no public market for the shares. The initial public offering price has been negotiated among us and the representatives. Among the factors to be considered in determining the initial public offering price of the shares, in addition to prevailing market conditions, will be our historical performance, estimates of our business potential and earnings prospects, an assessment of our management and the consideration of the above factors in relation to market valuation of companies in related businesses.

We have applied to quote the common stock on NASDAQ under the symbol "PING".

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A "covered short position" is a short position that is not greater than the amount of additional shares for which the underwriters' option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. "Naked" short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of the Company's stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on NASDAQ, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $ million. We have agreed to reimburse the underwriters for certain of their expenses in an amount up to $35,000.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

`European Economic Area`

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive, or each, a Relevant Member State, an offer to the public of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of our common stock may be made at any time under the following exemptions under the Prospectus Directive:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the Representatives for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer or shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to public" in relation to our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and our common stock to be offered so as to enable an investor to decide to purchase our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (as amended), including by Directive 2010/73/EU and includes any relevant implementing measure in the Relevant Member State.

This European Economic Area selling restriction is in addition to any other selling restrictions set out below.

`United Kingdom`

In the United Kingdom, this prospectus is only addressed to and directed at qualified investors who are (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order); or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as

"relevant persons"). Any investment or investment activity to which this prospectus relates is available only to relevant persons and will only be engaged with relevant persons. Any person who is not a relevant person should not act or rely on this prospectus or any of its contents.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The securities may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong), or the Companies (Winding Up and Miscellaneous Provisions) Ordinance, or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), or the Securities and Futures Ordinance, or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the securities may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the securities may not be circulated or distributed, nor may the securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the securities are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the securities under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore, or Regulation 32.

Where the securities are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the securities under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA. The securities may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale,

directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

Directed Share Program

At our request, the underwriters have reserved up to shares of common stock, or % of the shares of common stock to be offered by this prospectus for sale, at the initial public offering price, to directors, officers, and their friends and family members through a directed share program. If purchased by these persons, these shares will not be subject to a lock-up restriction, except in the case of shares purchased by any director or officer. The number of shares of common stock available for sale to the general public will be reduced to the extent these individuals or entities purchase such reserved shares. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus. The underwriters will receive the same discount from such reserved shares as they will from other shares of our common stock sold to the public in this offering. We have agreed to indemnify the underwriters against certain liabilities and expenses, including liabilities under the Securities Act, in connection with sales of the reserved shares.

Other Relationships

The Company estimates that its share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $.

The Company has agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses. Certain of the underwriters or their affiliates may have an indirect ownership interest in us through various private equity funds, including the Vista Funds or other funds affiliated with Vista.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively traded securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments. An affiliate of Goldman Sachs & Co. LLC serves as administrative agent, collateral agent, swingline lender, and issuing bank under the Credit Agreement. As a result, such affiliate will receive a portion of the net proceeds of this offering in connection with the repayment of our Term Loan Facility. See "Use of Proceeds."

Legal Matters

LEGAL MATTERS

The validity of the issuance of our common stock offered in this prospectus will be passed upon for us by Kirkland & Ellis LLP, Chicago, Illinois. Certain partners of Kirkland & Ellis LLP are members of a limited partnership that is an investor in one or more investment funds affiliated with Vista. Kirkland & Ellis LLP represents entities affiliated with Vista in connection with legal matters. Certain legal matters will be passed upon for the underwriters by Cooley LLP, Broomfield, Colorado.

Experts

EXPERTS

The financial statements as of December 31, 2017 and 2018 and for the years then ended included in this prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP, or PwC, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

In connection with this offering, PwC completed an independence assessment to evaluate the services and relationships with the Company and its affiliates that may bear on PwC's independence under the SEC and the PCAOB (United States) independence rules for an audit period commencing January 1, 2017. PwC informed us that certain of its member firms within PricewaterhouseCoopers International Limited, each member firm of which is a separate legal entity ("PwC member firm"), were engaged to perform non-audit services by entities that were under common control by Vista. These non-audit services and business relationships are not in accordance with the auditor independence standards of Regulation S-X and the Public Company Accounting Oversight Board and are described below.

- Commencing in January 2018 and continuing through March 2018, a PwC member firm provided certain legal services to an entity under common control by Vista. The fees for these services were approximately EUR 2,900 (approximately $3,300) (fees for the services were not invoiced or collected).
- Commencing in May 2018 and continuing through August 2018, a PwC member firm entered into a business relationship for the purposes of jointly providing services with an entity under common control by Vista. While there was an active joint business relationship agreement in place during the period of affiliation, no joint marketing activities or services took place during such period. There were no fees paid in connection with this business relationship.
- Commencing in May 2018 and continuing through August 2018, a PwC member firm assisted an entity under common control by Vista with the drafting and filing of a statistical payroll related report with a local non-tax authority. The fees for these services were approximately EUR 1,400 per month (approximately $1,600 per month).
- Commencing in May 2018 and continuing through August 2018, a PwC member firm provided legal and secretarial services to an entity under common control by Vista. The fees for these services were approximately EUR 700 (approximately $800).
- Commencing in January 2017 and continuing through September 2017, a PwC member firm had a business relationship consisting of a license fee for access to a project management template with an entity under common control by Vista. The fees associated with this relationship were approximately $4,300 CAD (approximately $3,300).

PwC noted the business relationship and non-audit services were entered into when the entities were not considered affiliates of the Company pursuant to the standards under which the audit engagement was performed (U.S. GAAS). The filing of the registration statement of which this prospectus is a part necessitates compliance with the SEC's independence rules. The Board and management of the Company and PwC have separately considered the impact that the business relationships and non-audit services may have had on PwC's independence with respect to us. After consideration of the relevant facts and circumstances, management, our Board and PwC have concluded that PwC is capable of exercising objective and impartial judgment in connection with their audits of the Company's financial statements for each of the years ended December 31, 2017 and 2018 and that no reasonable investor would conclude otherwise.

Where You Can Find More Information

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act to register our common stock being offered in this prospectus. This prospectus, which forms part of the registration statement, does not contain all of the information included in the registration statement and the attached exhibits. You will find additional information about us and our common stock in the registration statement. References in this prospectus to any of our contracts, agreements or other documents are not necessarily complete, and you should refer to the exhibits attached to the registration statement for copies of the actual contracts, agreements or documents.

You may read and copy the registration statement, the related exhibits and other information we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of this information by mail from the Public Reference Room at prescribed rates. You may obtain information regarding the operation of the Public Reference Room by calling 1-800-SEC-0330. The SEC also maintains a website that contains reports, proxy statements and other information about companies like us, who file electronically with the SEC. The address of that website is http://www.sec.gov. This reference to the SEC's website is an inactive textual reference only and is not a hyperlink.

Upon the effectiveness of the registration statement, we will be subject to the reporting, proxy and information requirements of the Exchange Act, and will be required to file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the SEC's Public Reference Room and the website of the SEC referred to above, as well as on our website, https://www.pingidentity.com. This reference to our website is an inactive textual reference only and is not a hyperlink. The contents of our website are not part of this prospectus, and you should not consider the contents of our website in making an investment decision with respect to our common stock. We will furnish our shareholders with annual reports containing audited financial statements and quarterly reports containing unaudited interim financial statements for each of the first three quarters of each year.

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Index to Consolidated Financial Statements

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.) Index

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Report of Independent Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm To the Board of Directors and Stockholders of Ping Identity Holding Corp.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.) and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP Denver, Colorado
April 1, 2019 We have served as the Company's auditor since 2016.

THIS IS THE END OF A COMPOSITION COMPONENT

Consolidated Balance Sheets as of December 31, 2017 and 2018 and June 30, 2019 (unaudited)

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Consolidated Balance Sheets

(In thousands, except share amounts)

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	December 31,		June 30, 2019
	2017	**2018**	**(unaudited)**
Assets			
Current assets:			
Cash and cash equivalents	$20,969	$83,499	$83,000
Accounts receivable, net of allowances of $370, $455, and $513 at December 31, 2017 and 2018 and June 30, 2019 (unaudited), respectively	48,940	50,108	43,984
Contract assets, current	46,049	53,435	59,985
Deferred commissions, current	1,858	3,746	4,505
Prepaid expenses and other current assets	3,644	10,644	9,485
Total current assets	121,460	201,432	200,959
Noncurrent assets:			
Property and equipment, net	5,083	5,630	6,493
Goodwill	401,724	417,696	417,696
Intangible assets, net	225,958	207,043	196,917
Contract assets, noncurrent	14,613	14,033	15,652
Deferred commissions, noncurrent	4,496	7,287	7,397
Deferred income taxes, net	1,711	1,829	2,465
Other noncurrent assets	1,178	2,073	1,858
Total noncurrent assets	654,763	655,591	648,478
Total assets	$776,223	$857,023	$849,437
Liabilities and stockholders' equity			
Current liabilities:			
Accounts payable	$1,790	$1,766	$1,370
Accrued expenses and other current liabilities	6,219	7,906	7,086
Accrued compensation	12,470	18,394	13,854
Deferred revenue, current	31,494	31,493	33,344
Current portion of long-term debt	—	2,500	2,500
Total current liabilities	51,973	62,059	58,154
Noncurrent liabilities:			
Deferred revenue, noncurrent	2,316	3,874	2,146
Long-term debt, net of current portion	165,206	241,051	240,225
Deferred income taxes, net	35,886	39,112	38,209
Other liabilities, noncurrent	162	1,822	1,329

Total noncurrent liabilities	203,570	285,859	281,909
Total liabilities	255,543	347,918	340,063
Commitments and contingencies (Note 12)			
Stockholders' equity:			
Preferred stock; $0.001 par value; 200,000 shares authorized at December 31, 2017 and 2018 and June 30, 2019 (unaudited); no shares issued or outstanding at December 31, 2017 or 2018 or June 30, 2019 (unaudited)	—	—	—
Common stock; $0.001 par value; 500,000 shares authorized at December 31, 2017 and 2018 and June 30, 2019 (unaudited); 382,333, 382,358, and 383,185 shares issued and outstanding at December 31, 2017 and 2018 and June 30, 2019 (unaudited), respectively	—	—	—
Additional paid-in capital	513,234	516,044	519,121
Accumulated other comprehensive income (loss)	114	(787)	(472)
Retained earnings (accumulated deficit)	7,332	(6,152)	(9,275)
Total stockholders' equity	520,680	509,105	509,374
Total liabilities and stockholders' equity	$776,223	$857,023	$849,437

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The accompanying notes are an integral part of these consolidated financial statements.

THIS IS THE END OF A COMPOSITION COMPONENT

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Consolidated Statements of Operations

(In thousands, except share and per share amounts)

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	Year Ended		**Six Months Ended June 30,**	
	December 31,		**2018**	**2019**
	2017	**2018**	**(unaudited)**	**(unaudited)**
Revenue:				
Subscription	$160,219	$184,991	$90,576	$103,892
Professional services and other	12,320	16,571	8,874	9,006
Total revenue	172,539	201,562	99,450	112,898
Cost of revenue:				
Subscription (exclusive of amortization shown below)	14,054	17,512	8,259	10,833
Professional services and other (exclusive of amortization shown below)	9,155	12,703	5,837	6,916
Amortization expense	12,626	14,396	7,064	7,822
Total cost of revenue	35,835	44,611	21,160	25,571
Gross profit	136,704	156,951	78,290	87,327
Operating expenses:				

Sales and marketing	49,481	60,140	28,121	37,334
Research and development	26,215	36,229	16,393	22,311
General and administrative	20,202	28,355	13,079	15,748
Depreciation and amortization	16,526	16,341	8,356	8,274
Total operating expenses	112,424	141,065	65,949	83,667
Income from operations	24,280	15,886	12,341	3,660
Other income (expense):				
Interest expense	(19,277)	(15,837)	(7,791)	(8,249)
Loss on extinguishment of debt	—	(9,785)	(9,785)	—
Other income (expense), net	773	(335)	(912)	225
Total other income (expense)	(18,504)	(25,957)	(18,488)	(8,024)
Income (loss) before income taxes	5,776	(10,071)	(6,147)	(4,364)
Benefit (provision) for income taxes	13,185	(3,375)	391	1,241
Net income (loss)	$18,961	$(13,446)	$(5,756)	$(3,123)
Net income (loss) per share:				
Basic	$49.60	$(35.17)	$(15.05)	$(8.17)
Diluted	$49.60	$(35.17)	$(15.05)	$(8.17)
Weighted-average shares used in computing net income (loss) per share:				
Basic	382,258	382,365	382,364	382,425
Diluted	382,297	382,365	382,364	382,425

end of user-specified TAGGED TABLE

The accompanying notes are an integral part of these consolidated financial statements.

THIS IS THE END OF A COMPOSITION COMPONENT

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Consolidated Statements of Comprehensive Income (Loss)

(In thousands)

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	Year Ended	Six Months Ended June 30,		

	December 31,		2018	2019
	2017	2018	(unaudited)	(unaudited)
Net income (loss)	$18,961	$(13,446)	$(5,756)	$(3,123)
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	333	(901)	(486)	315
Total other comprehensive income (loss)	333	(901)	(486)	315
Comprehensive income (loss)	$19,294	$(14,347)	$(6,242)	$(2,808)

end of user-specified TAGGED TABLE
The accompanying notes are an integral part of these consolidated financial statements.

THIS IS THE END OF A COMPOSITION COMPONENT

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Consolidated Statements of Stockholders' Equity

(In thousands, except share amounts)

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				Accumulated	Retained	
			Additional	Other	Earnings	Total
	Common Stock		Paid-in	Comprehensive	(Accumulated	Stockholders'
	Shares	Amount	Capital	Income (Loss)	Deficit)	Equity
Balances at January 1, 2017	382,226	$—	$510,609	$(219)	$(11,629)	$498,761
Net income	—	—	—	—	18,961	18,961
Stock-based compensation	—	—	2,524	—	—	2,524
Exercise of stock options	76	—	101	—	—	101
Vesting of restricted stock	31	—	—	—	—	—
Foreign currency translation adjustments, net of tax	—	—	—	333	—	333
Balances at December 31, 2017	382,333	$—	$513,234	$114	$7,332	$520,680
Cumulative-effect adjustment for adoption of ASU 2016-09	—	—	38	—	(38)	—
Net loss	—	—	—	—	(13,446)	(13,446)
Stock-based compensation	—	—	2,848	—	—	2,848
Vesting of restricted stock	63	—	—	—	—	—
Repurchase of common stock	(38)	—	(76)	—	—	(76)
Foreign currency translation adjustments, net of tax	—	—	—	(901)	—	(901)
Balances at December 31, 2018	382,358	$—	$516,044	$(787)	$(6,152)	$509,105
Net loss (unaudited)	—	—	—	—	(3,123)	(3,123)
Stock-based compensation (unaudited)	—	—	2,099	—	—	2,099
Exercise of stock options (unaudited)	733	—	978			978
Vesting of restricted stock (unaudited)	94	—	—	—	—	—

Foreign currency translation adjustments, net of tax (unaudited)	—	—	—	315	—	315
Balances at June 30, 2019 (unaudited)	383,185	$—	$519,121	$(472)	$(9,275)	$509,374

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				Accumulated	Retained	
			Additional	Other	Earnings	Total
	Common Stock		Paid-in	Comprehensive	(Accumulated	Stockholders'
	Shares	Amount	Capital	Income (Loss)	Deficit)	Equity
Balances at January 1, 2018	382,333	$—	$513,234	$114	$7,332	$520,680
Cumulative-effect adjustment for adoption of ASU 2016-09 (unaudited)	—	—	38	—	(38)	—
Net loss (unaudited)	—	—	—	—	(5,756)	(5,756)
Stock-based compensation (unaudited)	—	—	1,280	—	—	1,280
Vesting of restricted stock (unaudited)	31	—	—	—	—	—
Foreign currency translation adjustments, net of tax (unaudited)	—	—	—	(486)	—	(486)
Balances at June 30, 2018 (unaudited)	382,364	$—	$514,552	$(372)	$1,538	$515,718

end of user-specified TAGGED TABLE

The accompanying notes are an integral part of these consolidated financial statements.

THIS IS THE END OF A COMPOSITION COMPONENT

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Consolidated Statements of Cash Flows

(In thousands)

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	Year Ended		Six Months Ended June 30,	
	December 31,		2018	2019
	2017	2018	(unaudited)	(unaudited)
Cash flows from operating activities				
Net income (loss)	$18,961	$(13,446)	$(5,756)	$(3,123)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:				
Loss on extinguishment of debt	—	9,785	9,785	—
Depreciation and amortization	29,152	30,737	15,420	16,096
Stock-based compensation expense	2,524	2,848	1,280	2,099
Amortization of deferred commissions	3,460	5,302	1,693	2,760
Amortization of deferred debt issuance costs	1,372	889	457	424

Deferred taxes	(13,286)	3,073	(582)	(1,471)
Other	61	(440)	10	69
Changes in operating assets and liabilities:				
Accounts receivable	(9,967)	(1,465)	2,545	6,044
Contract assets	(22,171)	(6,806)	(3,788)	(8,169)
Deferred commissions	(7,693)	(9,981)	(2,681)	(3,629)
Prepaid expenses and other current assets	(218)	(5,770)	(151)	3,087
Other assets	(31)	(763)	126	225
Accounts payable	(34)	298	1,000	(376)
Accrued compensation	(1,087)	6,070	(1,315)	(4,611)
Accrued expenses and other	(3,824)	1,113	(2,263)	(1,484)
Deferred revenue	6,204	1,442	(2,765)	123
Net cash provided by operating activities	3,423	22,886	13,015	8,064
Cash flows from investing activities				
Purchases of property and equipment and other	(2,519)	(3,437)	(1,362)	(2,330)
Capitalized software development costs	(3,442)	(6,310)	(2,790)	(4,492)
Acquisition of Elastic Beam, net of cash acquired of $0	—	(17,414)	(17,414)	—
Other investing activities	—	500	—	—
Net cash used in investing activities	(5,961)	(26,661)	(21,566)	(6,822)
Cash flows from financing activities				
Payment of Elastic Beam consideration and holdbacks	—	—	—	(1,136)
Payment of deferred offering costs	—	(493)	—	(543)
Proceeds from stock option exercises	101	—	—	978
Repurchase of common stock	—	(76)	—	—
Proceeds from long-term debt	—	250,000	250,000	—
Issuance costs of long-term debt	—	(5,994)	(5,994)	—
Payment of long-term debt	—	(171,250)	(170,000)	(1,250)
Payment of debt extinguishment costs	—	(5,085)	(5,085)	—
Net cash provided by (used in) financing activities	101	67,102	68,921	(1,951)
Effect of exchange rates on cash and cash equivalents and restricted cash	274	(653)	(408)	220
Net (decrease) increase in cash and cash equivalents and restricted cash	(2,163)	62,674	59,962	(489)
Cash and cash equivalents and restricted cash				
Beginning of period	23,632	21,469	21,469	84,143
End of period	$21,469	$84,143	$81,431	$83,654
Supplemental disclosures of cash flow information:				

Cash paid for interest	$20,758	$13,598	$5,960	$7,739
Cash paid for taxes	199	284	129	308
Noncash investing and financing activities:				
Purchases of property and equipment in accounts payable	$367	$77	$82	$50
Accruals related to the acquisition of Elastic Beam	—	1,560	1,560	—
Deferred offering costs, accrued but not yet paid	—	833	—	1,546
Reconciliation of cash and cash equivalents and restricted cash within the consolidated balance sheets to the amounts shown in the statements of cash flows above:				
Cash and cash equivalents	$20,969	$83,499	$80,783	$83,000
Restricted cash included in other noncurrent assets	500	644	648	654
Total cash and cash equivalents and restricted cash	$21,469	$84,143	$81,431	$83,654

end of user-specified TAGGED TABLE
The accompanying notes are an integral part of these consolidated financial statements.

THIS IS THE END OF A COMPOSITION COMPONENT

Notes to Consolidated Financial Statements

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Notes to Consolidated Financial Statements

For the Years Ended December 31, 2017 and 2018 and the Six Months Ended June 30, 2018 and 2019 (unaudited)

1. Organization and Description of Business

Ping Identity Holding Corp. and its wholly owned subsidiaries, referred to herein as the "Company", is headquartered in Denver, Colorado with international locations principally in Canada, Australia, the United Kingdom, Israel, and India. On August 22, 2019, the Board of Directors and stockholders approved the name change for the Company from Roaring Fork Holding, Inc. to Ping Identity Holding Corp. The Company, doing business as Ping Identity Corporation ("Ping Identity"), provides customers, employees, and partners with secure access to any service, application, or application programming interface ("API"), while also managing identity and profile data at scale.

2. Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated. The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP"). All amounts are reported in U.S. dollars. Certain amounts as of and for the year ended December 31, 2017 have been reclassified to conform with current period presentation.

Unaudited Interim Consolidated Financial Information

The accompanying interim consolidated balance sheet as of June 30, 2019, the consolidated statements of operations, of comprehensive income (loss), and of cash flows for the six months ended June 30, 2018 and 2019, the consolidated statements of stockholders' equity for the six months ended June 30, 2018 and 2019, and the related footnote disclosures are unaudited. These unaudited interim consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements and, in management's opinion, include all adjustments necessary to state fairly the consolidated financial position of the Company as of June 30, 2019 and the results of operations and cash flows for the six months ended June 30, 2018 and 2019. The results for the six months ended June 30, 2019 are not necessarily indicative of the results to be expected for the year ending December 31, 2019 or for any future period.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, establishing allowances for doubtful accounts, determining useful lives for definite

lived assets, assessing the recoverability of long lived assets (property and equipment, intangible assets, and goodwill), determining the fair values of assets acquired and liabilities assumed in business combinations, accounting for income taxes and related valuation allowances against deferred tax assets, valuing stock option awards, recognizing revenue, determining the amortization period for deferred commissions, and assessing the accounting treatment for

commitments and contingencies. Management evaluates these estimates and assumptions on an ongoing basis and makes estimates based on historical experience and various other assumptions that are believed to be reasonable. Actual results may differ from these estimates.

Segment and Geographic Information

The Company operates in a single operating segment. Operating segments are defined as components of an enterprise for which discrete financial information is available and is regularly reviewed by the chief operating decision maker in order to make decisions regarding resource allocation and performance assessment. The Company has determined that its chief operating decision maker is its Chief Executive Officer. The Company's chief operating decision maker reviews the Company's financial information on a consolidated basis for purposes of allocating resources and evaluating financial performance. Since the Company operates in one operating segment, all required financial segment information can be found in the consolidated financial statements.

Revenue by geographic region is based on the delivery address of the customer, and is summarized by geographic area as follows:

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	Year Ended		Six Months Ended June 30,	
	December 31,		2018	2019
	2017	2018	(unaudited)	(unaudited)
	(in thousands)			
United States	$130,135	$154,609	$75,641	$89,705
International	42,404	46,953	23,809	23,193
Total revenue	$172,539	$201,562	$99,450	$112,898

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Other than the United States, no other individual country exceeded 10% of total revenue for the years ended December 31, 2017 and 2018 or the six months ended June 30, 2018 and 2019 (unaudited).

The Company's long-lived assets are composed of property and equipment, net, and are summarized by geographic area as follows:

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	December 31,		June 30, 2019
	2017	2018	(unaudited)
	(in thousands)		
United States	$3,733	$4,388	$5,222
Canada	770	526	420
Other international locations	580	716	851
Total property and equipment, net	$5,083	$5,630	$6,493

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2. Summary of Significant Accounting Policies (Continued)

Outside of the United States and Canada, no other individual country held greater than 10% of total long-lived assets at December 31, 2017 and 2018 or June 30, 2019 (unaudited).

Foreign Currency

The reporting currency of the Company is the U.S. dollar. The functional currency of each subsidiary is the applicable local currency. For the subsidiary where the U.S. dollar is the functional currency, foreign currency denominated monetary assets and liabilities are remeasured into U.S. dollars at current exchange rates and foreign currency denominated nonmonetary assets and liabilities are remeasured into U.S. dollars at historical exchange rates. Transactions denominated in currencies other than the subsidiaries' functional currencies are recorded based on the exchange rates at the time such transactions arise. Resulting gains and losses are recorded in other income (expense), net in the consolidated statements of operations in the period of occurrence.

The Company's foreign subsidiaries are translated from the applicable functional currency to the U.S. dollar using the average exchange rates during the reporting period, while assets and liabilities are translated at the period-end exchange rates. Resulting gains or losses from translating foreign currency are included in accumulated other comprehensive income (loss).

Cash and Cash Equivalents

Cash consists of deposits with financial institutions whereas cash equivalents primarily consist of money market funds. The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable represent amounts owed to the Company by its customers that are recorded at the invoiced amount. The Company reports accounts receivable net of allowance for doubtful accounts. Management makes judgments and estimates of the probable loss related to uncollectible accounts receivable considering a number of factors including collection trends, prevailing and anticipated economic conditions, and specific customer credit risk. The Company's allowance for doubtful accounts activity has historically not been significant. Probable losses are recorded in general and administrative expense in the accompanying consolidated statements of operations. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.

Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash and cash equivalents on deposit at several financial institutions as well as accounts receivable. The Company deposits cash with high-credit-quality financial institutions, which, at times, may exceed federally insured amounts. The Company invests its cash equivalents in highly-rated money market funds. Additionally, the Company performs ongoing credit evaluations

2. Summary of Significant Accounting Policies (Continued)

of its customers' financial condition and will limit the amount of credit as deemed necessary, but currently does not require collateral from customers.

As of December 31, 2017 and 2018 and June 30, 2019 (unaudited), no single customer represented greater than 10% of accounts receivable.

For the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019, no single customer represented greater than 10% of revenue.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. GAAP establishes a three-level valuation hierarchy for the disclosure of fair value measurements. The determination of the applicable level within the hierarchy of a particular asset or liability depends on the inputs used in its valuation as of the measurement date, and notably the extent to which the inputs are market-based (observable) or internally determined (unobservable). The three levels are defined as follows:

- *Level 1:* Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.
- *Level 2:* Observable inputs, other than Level 1 inputs, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- *Level 3:* Unobservable inputs reflecting the Company's own assumptions used to measure assets and liabilities at fair value and which require significant management judgment or estimation.

Property and Equipment

Property and equipment are stated at historical cost less accumulated depreciation. Maintenance, repairs and minor renewals are expensed as incurred.

Depreciation is computed using the straight-line method based on the following estimated useful lives:

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Asset Type	Useful Life
Computer equipment	3 years
Purchased computer software	1 - 3 years
Furniture and fixtures	3 - 5 years
Leasehold improvements	Lesser of the lease term or 10 years
Other	3 - 5 years

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2. Summary of Significant Accounting Policies (Continued)

Capitalized Software Costs

Costs for the development of new software products sold to customers and substantial enhancements to existing software products sold to customers are expensed as incurred until technological feasibility has been established, at which time any additional costs are capitalized during the development stage and until the software is generally released. The Company believes its current process for developing software will be essentially completed concurrently with the establishment of technological feasibility; hence, no costs have been capitalized to date.

For development costs related to software to be used internally, the Company follows guidance of ASC 350-40, *Internal Use Software*. ASC 350-40 set forth the guidance for costs incurred for computer software developed or obtained for internal use and requires companies to capitalize qualifying computer software costs that are incurred during the application development stage. These capitalized costs are included in intangible assets in the consolidated balance sheets and are amortized on a straight-line basis over the expected useful life of the software, which is estimated to be between three and four years. Costs related to preliminary project activities and post-implementation activities are expensed as incurred. For the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019, the Company capitalized $3.4 million, $6.3 million, $2.8 million, and $4.5 million, respectively, related to internal-use software costs.

The Company capitalizes the cost of software purchased from third-party vendors and has classified such costs as property and equipment in the consolidated balance sheets. These costs are amortized over their useful lives, which are primarily estimated to be three years.

Goodwill

Goodwill represents the excess of the purchase price over the fair value of net assets acquired in business combinations using the acquisition method of accounting, which requires that the assets acquired and liabilities assumed be recorded at the date of acquisition at their respective fair values. The Company evaluates goodwill for impairment annually in the fourth quarter of each year and as events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. The Company's test for goodwill impairment starts with a qualitative assessment to determine whether it is necessary to perform a quantitative goodwill impairment test. If qualitative factors indicate that the fair value of the reporting unit is more likely than not less than its carrying amount, then a quantitative goodwill impairment test is performed. Under the quantitative impairment test, if the carrying amount of the reporting unit exceeds its fair value, then an impairment loss is recognized in

an amount equal to that excess, not to exceed the total amount of goodwill. For purposes of the annual impairment test, the Company has determined it has one reporting unit. There was no impairment of goodwill recorded during the years ended December 31, 2017 and 2018 or the six months ended June 30, 2018 and 2019 (unaudited).

2. Summary of Significant Accounting Policies (Continued)

Intangible Assets

Intangible assets with finite lives arising from business combinations are initially recorded at fair value and amortized over their useful lives using the straight-line method. The estimated useful life for each acquired intangible asset class is as follows:

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Asset Type	Useful Life
Developed technology	4 - 9 years
Customer relationships	9 - 13 years
Trade names	10 years
Product backlog	2 - 3 years
Non-compete agreements	3 years

end of user-specified TAGGED TABLE

The Company records acquired in-process research and development as indefinite-lived intangible assets. Purchased intangible assets with indefinite lives are not amortized but assessed for potential impairment annually and when events or circumstances indicate that their carrying amounts might be impaired. There was no impairment of indefinite-lived intangible assets recorded during the years ended December 31, 2017 and 2018 or the six months ended June 30, 2018 and 2019 (unaudited). On completion of the related development projects, the in-process research and development assets are reclassified to developed technology and amortized over their estimated useful lives.

Impairment of Long-Lived Assets

The Company reviews long-lived assets, including property and equipment and finite-lived intangible assets, for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Such events and changes may include significant changes in performance relative to expected operating results, significant changes in asset use, significant negative industry or economic trends, and changes in the Company's business strategy. An impairment loss is recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount. There were no events or changes in circumstances that indicated the Company's long-lived assets were impaired during the years ended December 31, 2017 and 2018 or the six months ended June 30, 2018 and 2019 (unaudited).

Deferred Debt Issuance Costs

Issuance costs incurred to obtain debt financing are deferred and amortized to interest expense using the effective interest method over the contractual term of the debt. Total deferred debt issuance costs incurred by the Company were $6.8 million and $6.0 million, related to the 2016 Credit Facilities and the 2018 Credit Facilities, respectively (discussed in Note 7). The carrying value of deferred debt issuance costs was $4.8 million, $5.2 million, and $4.8 million at December 31, 2017 and 2018 and June 30, 2019 (unaudited), respectively, which is included as a reduction to long-term debt in the accompanying consolidated balance sheets.

THIS IS THE END OF A COMPOSITION COMPONENT

2. Summary of Significant Accounting Policies (Continued)

Deferred Rent

Certain of the Company's operating leases contain credits for tenant improvements, rent holidays, and rent escalation clauses. For these leases, the Company recognizes the related rent expense on a straight-line basis. The difference between the amounts charged to expense and the rent paid is recorded as deferred lease costs and amortized over the lease term.

Revenue Recognition

The Company recognizes revenue under Accounting Standards Codification Topic 606 ("ASC 606"), *Revenue from Contracts with Customers*. Under ASC 606, the Company recognizes revenue when its customer obtains control of promised goods or services in an amount that reflects the consideration that the Company expects to receive in exchange for those goods or services. To determine the appropriate amount of revenue to be recognized as it fulfills its obligations under each of its agreements, the Company performs the following steps:

1. *Identification of the contract with a customer*

The Company contracts with its customers through order forms, which in some cases are governed by master sales agreements. The Company determines that it has a contract with a customer when the order form has been approved, each party's rights regarding the products or services to be transferred can be identified, the payment terms for the products or services can be identified, the Company has determined the customer has the ability and intent to pay, and the contract has commercial substance. The Company applies judgment in determining the customer's ability and intent to pay, which is based on a variety of factors, including the customer's historical payment experience or, in the case of a new customer, credit, reputation, and financial or other information pertaining to the customer. At contract inception, the Company evaluates whether two or more contracts should be combined and accounted for as a single contract and whether the combined or single contract includes more than one performance obligation.

2. *Determination of whether the goods or services in a contract comprise performance obligations*

Performance obligations promised in a contract are identified based on the products and services that will be transferred to the customer that are both (i) capable of being distinct, whereby the customer can benefit from a product or service either on its own or together with other resources that are readily available from third parties or from the Company, and (ii) are distinct in the context of the contract, whereby the transfer of certain products or services is separately identifiable from other promises in the contract.

The Company sells its solutions through subscription-based contracts. The Company's subscriptions for solutions deployed on-premise within the customer's technology infrastructure are comprised of a term-based license and an obligation to provide support and maintenance, where the term-based license and the support and maintenance constitute separate performance obligations. The Company's SaaS subscriptions provide customers the right to access cloud-hosted software and support for the SaaS service, which the Company considers to be a single

performance obligation. The Company also renews subscriptions for support and maintenance, which the Company considers to be a single performance obligation.

Professional services consist of consulting and training services. These services are distinct performance obligations from subscriptions and do not result in significant customization of the software.

3. *Measurement of the transaction price*

The Company determines the transaction price based on the consideration that the Company expects to receive in exchange for transferring the promised goods or services to the customer. This transaction price is exclusive of amounts collected on behalf of third parties, such as sales tax and value-added tax. The Company does not offer refunds, rebates, or credits to customers in the normal course of business, so the impact of variable consideration has not been material.

In instances where the timing of revenue recognition differs from the timing of invoicing, the Company has determined that its contracts generally do not include a significant financing component. The primary purpose of the Company's invoicing terms is to provide customers with a simple and predictable way to purchase the Company's subscriptions, not to provide customers with financing.

4.

Allocation of the transaction price to separate performance obligations

If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. For contracts that contain multiple performance obligations, the Company allocates the transaction price to each performance obligation based on each obligation's relative standalone selling price ("SSP").

The SSP is determined based on the prices at which the Company separately sells the product, assuming the majority of these fall within a pricing range. In instances where SSP is not directly observable, such as when the Company does not sell the software license separately, the Company determines the SSP using information that may include market conditions and other observable inputs that can require significant judgment. There is typically a range of standalone selling prices for individual products and services based on a stratification of those products and services by quantity and other circumstances. If one of the performance obligations is outside of the SSP range, the Company determines SSP to be the nearest endpoint of the range.

5.

Recognition of revenue when or as the Company satisfies each performance obligation

Revenue is recognized at the time the related performance obligation is satisfied by transferring the promised product or service to the customer. The Company's software subscriptions include both upfront revenue recognition when the Company transfers control of the term-based license to the customer, as well as revenue recognized ratably over the contract period for support and maintenance based on the stand-ready nature of these subscription elements. Revenue for the Company's SaaS products is recognized ratably over the contract period as the Company satisfies the performance obligation.

2. Summary of Significant Accounting Policies (Continued)

Professional services revenue provided on a time and materials basis is recognized as these services are performed. Revenue from training services and sponsorship fees is recognized on the date the services are complete.

The Company generates sales directly through its sales team as well as through its channel partners. Where channel partners are involved, the Company has determined that it is the principal in these arrangements. Sales to channel partners are generally made at a discount, and revenues are recorded at the discounted price once the revenue recognition criteria above have been met. In certain instances, the Company pays referral fees to its partners, which the Company has determined to be commensurate with internal sales commissions and thus records these payments as sales commissions. Channel partners generally receive an order from an end customer prior to placing an order with the Company, and payment from channel partners is not contingent on the partner's collection from end customers.

Disaggregation of Revenue The following table presents revenue by category:

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			Six Months Ended	
	Year Ended		June 30,	
	December 31,		2018	2019
	2017	2018	(unaudited)	(unaudited)
	(in thousands)			
Subscription term-based licenses:				
Multi-year subscription term-based licenses	$86,421	$88,925	$44,510	$52,425
1-year subscription term-based licenses	35,678	44,743	21,445	21,082
Total subscription term-based licenses	122,099	133,668	65,955	73,507
Subscription SaaS and support and maintenance	38,120	51,323	24,621	30,385
Professional services and other	12,320	16,571	8,874	9,006

Total revenue	$172,539	$201,562	$99,450	$112,898

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Contract Balances

Contract assets represent amounts for which the Company has recognized revenue, pursuant to its revenue recognition policy, for contracts that have not yet been invoiced to customers where there is a remaining performance obligation, typically for multi-year arrangements. In multi-year agreements, the Company generally invoices customers on an annual basis on each anniversary of the contract start date. Amounts anticipated to be billed within one year of the balance sheet date are recorded as contract assets, current; the remaining portion is recorded as contract assets, noncurrent in the consolidated balance sheets. The change in the total contract asset balance relates to entering into new multi-year contracts and billing on existing contracts.

2. Summary of Significant Accounting Policies (Continued)

The opening and closing balances of contract assets were as follows:

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			Six Months Ended	
	Year Ended		June 30,	
	December 31,		2018	2019
	2017	2018	(unaudited)	(unaudited)
	(in thousands)			
Beginning balance	$38,491	$60,662	$60,662	$67,468
Ending balance	60,662	67,468	64,450	75,637
Change	$22,171	$6,806	$3,788	$8,169

end of user-specified TAGGED TABLE

Contract liabilities consist of customer billings in advance of revenue being recognized. The Company primarily invoices its customers for subscription arrangements annually in advance, though certain contracts require invoicing for the entire subscription in advance. Amounts anticipated to be recognized within one year of the balance sheet date are recorded as deferred revenue, current; the remaining portion is recorded as deferred revenue, noncurrent in the consolidated balance sheets.

The opening and closing balances of contract liabilities included in deferred revenue were as follows:

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			Six Months Ended	
	Year Ended		June 30,	
	December 31,		2018	2019
	2017	2018	(unaudited)	(unaudited)
	(in thousands)			
Beginning balance	$27,606	$33,810	$33,810	$35,367
Ending balance	33,810	35,367	31,160	35,490

Change	$6,204	$1,557	$(2,650)	$123

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The change in deferred revenue relates primarily to invoicing customers and recognizing revenue in conjunction with the satisfaction of performance obligations. Revenue recognized during the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 that was included in the deferred revenue balances at the beginning of the respective periods was as follows:

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	Year Ended December 31,		Six Months Ended June 30, 2018	Six Months Ended June 30, 2019
	2017	2018	(unaudited)	(unaudited)
	(in thousands)			
Deferred revenue recognized as revenue	$26,332	$31,391	$22,697	$24,301

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2. Summary of Significant Accounting Policies (Continued)

Remaining Performance Obligations Revenue allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, which includes deferred revenue and noncancelable amounts to be invoiced. As of December 31, 2017 and 2018, the Company had $81.3 million and $95.8 million of transaction price allocated to remaining performance obligations, respectively. As of June 30, 2019 (unaudited), the Company had $114.3 million of transaction price allocated to remaining performance obligations, of which 88% is expected to be recognized as revenue over the next 24 months, with the remainder to be recognized thereafter.

Deferred Commissions

Sales commissions earned by the Company's internal and external sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for new contracts and additional sales to existing customers, are deferred and recorded in deferred commissions, current and noncurrent in the Company's consolidated balance sheets. Deferred commissions are amortized over the period of benefit, which the Company has determined to be generally four years. The Company determined the period of benefit by taking into consideration its customer contracts, its technology, and other factors. Deferred commissions are amortized consistent with the pattern of revenue recognition for each performance obligation for contracts for which the commissions were earned. The Company includes amortization of deferred commissions in sales and marketing expense in the consolidated statements of operations. The Company periodically reviews the carrying amount of deferred commissions to determine whether events or changes in circumstances have occurred that could impact the period of benefit of these deferred costs. The Company did not recognize an impairment of deferred commissions during the years ended December 31, 2017 and 2018 or the six months ended June 30, 2018 and 2019 (unaudited).

The following table summarizes the account activity of deferred commissions for the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019:

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	Year Ended December 31,		Six Months Ended June 30, 2018	Six Months Ended June 30, 2019
	2017	2018	(unaudited)	(unaudited)
	(in thousands)			
Beginning balance	$2,121	$6,354	$6,354	$11,033
Additions to deferred commissions	7,693	9,981	2,681	3,629

Amortization of deferred commissions	(3,460)	(5,302)	(1,693)	(2,760)
Ending balance	$6,354	$11,033	$7,342	$11,902
Deferred commissions, current	$1,858	$3,746	$2,221	$4,505
Deferred commissions, noncurrent	4,496	7,287	5,121	7,397
Total deferred commissions	$6,354	$11,033	$7,342	$11,902

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2. Summary of Significant Accounting Policies (Continued)

Research and Development

Research and development costs include direct and allocated expenses. Other than software development costs that qualify for capitalization, as discussed above, research and development costs are expensed as incurred.

Advertising Costs

The Company expenses advertising costs as incurred. Advertising expense is included within sales and marketing expense in the consolidated statements of operations. For the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited), advertising expenses were $1.2 million, $1.5 million, $0.6 million, and $0.7 million, respectively.

Stock-Based Compensation

Stock-based compensation expense for time-based awards is determined based on the grant-date fair value, net of forfeitures, and is recognized on a straight-line basis over the requisite service period of the award, which is typically the vesting term of the award. Prior to the adoption of ASU 2016-09 on January 1, 2018, the Company estimated the forfeiture rate annually using its historical experience of forfeited awards. The Company then adjusted for actual forfeitures at each vesting date. After the adoption of ASU 2016-09, forfeitures are accounted for as they occur.

Stock-based compensation expense for awards subject to both performance and market conditions is determined based on the grant-date fair value and is recognized on a graded vesting basis over the term of the award once it is probable that the performance conditions will be met.

The fair value of each time-based option grant is estimated on the date of the grant using the Black-Scholes option pricing model. For awards subject to performance and market conditions, the Company uses a Monte Carlo simulation model, which utilizes multiple inputs to estimate the probability that market conditions will be achieved. Both models require highly subjective assumptions as inputs, including the following:

- *Risk-free rate*: The risk-free interest rate is based on the implied yield currently available on U.S. Treasury securities with a remaining term commensurate with the estimated expected term.
- *Expected term*: For time-based awards, the estimated expected term of options granted is generally calculated as the vesting period plus the midpoint of the remaining contractual term, as the Company does not have sufficient historical information to develop reasonable expectations surrounding future exercise patterns and post-vesting employment termination behavior. For awards subject to market and performance conditions, the expected term represents the period of time that the options granted are expected to be outstanding.
- *Dividend yield*: The Company uses a dividend yield of zero, as it does not currently issue dividends and has no plans to issue dividends in the foreseeable future.

2. Summary of Significant Accounting Policies (Continued)

- *Volatility*: Since the Company does not have a trading history of its common stock, expected volatility is estimated based on the historical volatility of peer companies over the period commensurate with the estimated expected term.
- *Fair value*: The board of directors establishes the fair value of the shares of common stock underlying the Company's stock options. These estimates are based in part upon valuations provided by third-party valuation firms. Because there is no public market for the Company's common stock, the board of directors considers the independent valuations as well as other factors, including, but not limited to, results of operations and financial condition, projected revenue growth, technical success of the Company's products and service offerings, and the Company's stage of development in order to establish the fair value of the Company's common stock at the grant date of each option.

The following assumptions were used for time-based options granted during the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018 (unaudited)	2019 (unaudited)
Risk-free rate	2.0% - 2.2%	2.6% - 3.0%	2.7%	—%
Expected term	6.1 years	6.1 years	6.1 years	— years
Dividend yield	—	—	—	—
Volatility	38% - 42%	39% - 42%	39%	—%
Weighted-average grant date fair value of options granted during period	$583.36	$822.02	$614.08	$—

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The following assumptions were used for awards subject to performance and market conditions that were granted during the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018 (unaudited)	2019 (unaudited)
Risk-free rate	1.5% - 1.9%	2.5% - 2.8%	2.5%	—%
Expected term	3.8 - 4.5 years	1.7 - 3.3 years	3.3 years	— years
Dividend yield	—	—	—	—
Volatility	57% - 62%	45% - 55%	55%	—%
Weighted-average grant date fair value of options granted during period	$388.74	$388.63	$478.03	$—

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The Company calculates the fair value for restricted stock units ("RSUs") based on the estimated fair value of the Company's common stock on the date of grant and records

2. Summary of Significant Accounting Policies (Continued)

compensation expense over the vesting period using a straight-line method. Prior to the adoption of ASU 2016-09, the Company factored an estimated forfeiture rate in calculating compensation expense on RSUs and adjusted for actual forfeitures upon the vesting of each tranche of RSUs. After the adoption of ASU 2016-09, forfeitures are accounted for as they occur.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred income tax assets and liabilities are computed annually for temporary differences between the financial statement basis and the income tax basis of assets and liabilities that will result in taxable or deductible amounts in the future. The Company's temporary differences result primarily from net operating losses, stock compensation, deferred revenue, intangible assets, and accrued expenses. Deferred income tax asset and liability computations are based on enacted tax laws and rates applicable to the years in which the differences are expected to affect taxable income. A valuation allowance is established when necessary to reduce deferred income tax assets to the amounts expected to be realized.

The Company evaluates the tax positions taken or expected to be taken in the course of preparing the Company's tax returns to determine whether the tax positions are more likely than not of being sustained by the applicable tax authority. Tax positions not deemed to meet the more likely than not threshold would not be recorded as a tax benefit or expense in the current year. Interest and penalties related to income tax liabilities are included in the benefit (provision) for income taxes.

Deferred Offering Costs

Deferred offering costs are capitalized and consist of fees incurred in connection with the anticipated sale of common stock in an initial public offering ("IPO") and include legal, accounting, printing, and other IPO-related costs. Upon completion of an IPO, these deferred costs will be reclassified to stockholders' equity and recorded against the proceeds from the offering. In the event an IPO is terminated, the deferred offering costs would be expensed in the period of termination as a charge to operating expenses in the consolidated statements of operations.

The balance of deferred offering costs included within prepaid expenses and other current assets at December 31, 2018 and June 30, 2019 (unaudited) was $1.3 million and $3.2 million, respectively. As of December 31, 2017, the Company had not incurred such costs.

Net Income Per Share

Basic net income per share is computed by dividing net income by the weighted-average number of shares of common stock outstanding during the period. Diluted net income per share is computed by dividing net income by the weighted-average number of shares of common stock outstanding during the period, plus the dilutive effects of RSUs and stock options. Dilutive shares of common stock are determined by applying the treasury stock method.

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Notes to Consolidated Financial Statements (Continued)

For the Years Ended December 31, 2017 and 2018 and the Six Months Ended June 30, 2018 and 2019 (unaudited)

2. Summary of Significant Accounting Policies (Continued)

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02"), which supersedes the guidance in topic ASC 840, *Leases*. The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. In July 2018, the FASB issued ASU No. 2018-10, *Codification Improvements to Topic 942, Leases,* and ASU No. 2018-11, *Leases (Topic 842): Targeted Improvements,* which affect certain aspects of the previously issued guidance. Amendments include an additional transition method that allows entities to apply the new standard on the adoption date and recognize a cumulative effect adjustment to the opening balance of retained earnings, as well as a new practical expedient for lessors. The new leasing guidance is effective for fiscal years beginning after December 15, 2019 and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted. While the Company is currently determining its implementation approach and assessing the impact on its consolidated financial statements and related disclosures, the Company expects that the majority of its operating lease commitments will increase total assets and total liabilities on its consolidated balance sheet upon adoption.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"), which aligns with the FASB's current simplification initiatives. The major areas for simplification in ASU 2016-09 involve several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Specifically, ASU 2016-09 has introduced updates to minimum statutory tax withholding requirements, policy elections surrounding forfeitures, expected term, intrinsic values, and changes to the classification of certain share-based payment related transactions on the statement of cash flows. ASU 2016-09 is effective for fiscal years beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018, though early adoption is permitted. Effective January 1, 2018, the Company adopted ASU 2016-09 for the fiscal year as well as the interim periods within the fiscal year. The new guidance allows entities to make an election to account for forfeitures as they occur, which the Company adopted on a modified retrospective basis. An adjustment of $38.0 thousand was made to decrease retained earnings in the period of adoption for the cumulative prior years' impact. The adoption of the remaining provisions of ASU 2016-09 did not have a significant impact on the Company's consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classifications of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"), which addresses how certain cash receipts and cash payments are presented and classified in the statement of cash flows. ASU 2016-15 addresses eight specific cash flow issues with the intention of reducing the

existing diversity in practice. The amendments are effective for fiscal years beginning after December 15, 2018 and interim periods within fiscal years beginning after December 15, 2019, though early adoption is permitted. Effective January 1, 2017, the Company adopted ASU 2016-15. There was no material impact to the Company's consolidated financial statements except that after adoption, the Company included cash payments for debt prepayment and debt extinguishment costs as cash outflows for financing activities.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* ("ASU 2016-18"), which requires entities to show the changes in total of cash, cash equivalents, restricted cash, and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and restricted cash equivalents in the statement of cash flows. ASU 2016-18 is effective for fiscal years beginning after December 15, 2017 as well as the interim periods within those years, and is applied retrospectively when adopted. Early adoption is permitted, and the Company elected to early adopt ASU 2016-18 effective January 1, 2017. Upon adoption, the Company has included restricted cash with cash and cash equivalents on its consolidated statements of cash flows and has excluded changes in restricted cash from net cash used in operating activities.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* ("ASU 2017-01"), which clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions or disposals of assets or businesses. The new guidance is effective for fiscal years beginning after December 15, 2018 and interim periods within annual periods beginning after December 15, 2019. The impact to the Company's consolidated financial statements will depend on the facts and circumstances of any specific future transaction.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"), which simplifies how companies test goodwill for impairment. Under the new guidance, entities are no longer required to perform Step 2 of the impairment test, where a goodwill impairment loss is measured by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of the goodwill. Instead, if the carrying amount of a reporting unit exceeds its fair value, then an impairment loss is recognized in the amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. This guidance is effective for fiscal years beginning after December 15, 2020, though early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company adopted this standard effective October 1, 2017, and the adoption did not have a material effect on its consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation – Stock Compensation (Topic 718): Scope of Modification Accounting* ("ASU 2017-09"), which clarifies which changes to the terms or conditions of a share-based payment award are subject to the guidance on modification accounting. Upon adoption, entities shall apply the modification guidance to any changes to the terms or conditions of a share-based payment award unless the fair value, vesting conditions, and classification of a modified award are the same immediately before and after the modification. The amendments in this guidance are effective for all entities for annual periods beginning after December 15, 2017, including interim periods therein, and should be applied

2. Summary of Significant Accounting Policies (Continued)

prospectively to an award modified on or after the adoption date. Effective January 1, 2018, the Company adopted ASU 2017-09 for the fiscal year and the interim periods within the fiscal year. Since the Company does not regularly modify the terms and conditions of its share-based payment awards, the adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, *Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* ("ASU 2018-02"), which provides financial statement preparers with an option to reclassify stranded tax effects within accumulated other comprehensive income to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act (or portion thereof) is recorded. For all entities, it is effective for fiscal years beginning after December 15, 2018, and interim periods therein, though early adoption is permitted. Effective January 1, 2019, the Company adopted ASU 2018-02 for the fiscal year and the interim periods within the fiscal year. The adoption did not have a material impact on the Company's consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"), which simplifies the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. ASU 2018-07 is effective for the Company for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020, though early adoption is permitted. Effective January 1, 2018, the Company adopted ASU 2018-07 for the fiscal year and the interim periods within the fiscal year, and the adoption did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which improves the disclosure requirements for fair value measurements. The updated guidance is effective for all entities for fiscal years beginning after December 15, 2019, and interim periods therein. Early adoption is permitted. Further, an entity is permitted to early adopt any removed or modified disclosures upon the issuance of ASU 2018-13 while delaying the adoption of the additional disclosures until their effective date. The Company is currently assessing the impact of adopting the updated provisions on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15"), which requires implementation costs incurred by customers in a cloud computing arrangement to be deferred over the noncancelable term of the cloud computing arrangement plus any optional renewal periods that (1) are reasonably certain to be exercised by the customer, or (2) for which exercise of the renewal option is controlled by the cloud service provider. The effective date of this pronouncement is for fiscal years beginning after December 15, 2020, and interim periods within annual periods beginning after December 15, 2021, though early adoption is permitted. The Company is currently evaluating the impact of this pronouncement on its consolidated financial statements.

2. Summary of Significant Accounting Policies (Continued)

Recent Accounting Pronouncements (unaudited)

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which changes the impairment model for most financial assets. The new model uses a forward-looking expected loss method, which will generally result in earlier recognition of allowances for losses. ASU 2016-13 is effective for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years, though early adoption is permitted. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements.

3. Fair Value of Financial Instruments

The Company invests primarily in money market funds, which are measured and recorded at fair value on a recurring basis and are classified within Level 1 of the fair value hierarchy because they are valued based on quoted market prices in active markets. The fair value of these financial instruments were as follows:

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	December 31, 2017			
	Level 1	Level 2	Level 3	Total

	(in thousands)			
Cash and cash equivalents:				
Money market funds	$789	$—	$—	$789

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	December 31, 2018			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash and cash equivalents:				
Money market funds	$57,974	$—	$—	$57,974

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	June 30, 2019 (unaudited)			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash and cash equivalents:				
Money market funds	$50,434	$—	$—	$50,434

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The carrying amounts of the Company's accounts receivable, accounts payable, and other current liabilities approximate their fair values due to their short maturities. The carrying value of the Company's long-term debt approximates its fair value based on Level 2 inputs as the principal amounts outstanding are subject to variable interest rates that are based on market rates (see Note 7).

THIS IS THE END OF A COMPOSITION COMPONENT

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Notes to Consolidated Financial Statements (Continued)

For the Years Ended December 31, 2017 and 2018 and the Six Months Ended June 30, 2018 and 2019 (unaudited)

4. Property and Equipment

Property and equipment consisted of the following:

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	December 31,		June 30, 2019
	2017	2018	(unaudited)
	(in thousands)		
Computer equipment	$2,258	$4,218	$5,019
Furniture and fixtures	1,546	1,920	2,161
Purchased computer software	950	450	700
Leasehold improvements	2,627	2,868	3,236
Other	363	363	424
Property and equipment, gross	7,744	9,819	11,540
Less: Accumulated depreciation	(2,661)	(4,189)	(5,047)
Property and equipment, net	$5,083	$5,630	$6,493

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Depreciation expense for the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited) was $1.9 million, $2.2 million, $1.0 million, and $1.4 million, respectively.

5. Business Combinations

Elastic Beam Inc. Acquisition

On April 5, 2018, Ping Identity Corporation acquired 100% of the voting equity interest in Elastic Beam Inc., a Delaware Corporation ("Elastic Beam"). Elastic Beam is a machine learning/artificial intelligence API behavioral security software which detects, reports, and stops cyberattacks on data and applications via APIs. The purpose of this acquisition was to expand the Company's capabilities in identity security, particularly with regard to artificial intelligence.

The total purchase price was $19.0 million, which includes up-front cash consideration of $17.4 million that was funded with existing cash resources, and $1.6 million, of which $1.1 million and $0.5 million is payable on the first and second anniversary of the acquisition, respectively. During the six months ended June 30, 2019 (unaudited), the Company paid the first anniversary payment of $1.1 million.

$4.8 million and $4.2 million of contingent compensation is payable on the first and second anniversary of the acquisition, contingent on certain individuals remaining employed as of those dates. As these payments are subject to the continued employment of those individuals, they will be recognized through compensation expense as incurred. During the six months ended June 30, 2019 (unaudited), the Company paid the first anniversary payment of $4.8 million.

5. Business Combinations (Continued)

The following table summarizes the allocation of the purchase price, based on the estimated fair value of the assets acquired and liabilities assumed at the acquisition date:

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	April 5, 2018	Useful Life
	(in thousands)	
Fair value of net assets acquired		
In process research and development	$3,006	Indefinite
Goodwill	15,972	Indefinite
Deferred tax asset	108	
Other assets	3	
Total assets acquired	19,089	
Deferred revenue	(115)	
Total liabilities assumed	(115)	
Net assets acquired	$18,974	

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Goodwill is primarily attributable to the workforce acquired and the expected synergies arising from integrating Elastic Beam's behavioral security software with the Company's existing security platform. None of the goodwill is deductible for tax purposes. The Company incurred $0.6 million of acquisition related expenses in conjunction with the Elastic Beam acquisition which are included in general and administrative expenses on the consolidated statements of operations for the year ended December 31, 2018 and the six months ended June 30, 2018 (unaudited).

Additional Acquisition Related Information

The operating results of Elastic Beam are included in the Company's consolidated statements of operations from the date of acquisition. Revenue and earnings of Elastic Beam since the date of acquisition and pro forma results of operations have not been prepared because the effect of the acquisition was not material to the consolidated statements of operations.

Additional information, such as that related to income tax and other contingencies, existing as of the acquisition date but unknown to the Company may become known during the remainder of the measurement period, not to exceed one year from the acquisition date, which may result in changes to the amounts and allocations recorded.

6. Goodwill and Intangible Assets

The changes in the carrying amount of the Company's goodwill balance were as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	December 31,		June 30, 2019
	2017	2018	(unaudited)
	(in thousands)		
Beginning balance	$401,724	$401,724	$417,696
Additions to goodwill related to acquisitions	—	15,972	—
Ending balance	$401,724	$417,696	$417,696

end of user-specified TAGGED TABLE

The Company's intangible assets as of December 31, 2017 were as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	December 31, 2017		
	Gross Amount	Accumulated Amortization	Net Carrying Value
	(in thousands)		
Developed technology	$104,932	$(17,120)	$87,812
Customer relationships	94,875	(11,199)	83,676
Trade names	56,436	(8,441)	47,995
Product backlog	2,185	(1,547)	638
Capitalized internal-use software	5,112	(1,043)	4,069
Non-compete agreements	1,224	(606)	618
Other intangible assets	716	(152)	564
Total intangible assets subject to amortization	265,480	(40,108)	225,372
In-process research and development	586	—	586
Total intangible assets	$266,066	$(40,108)	$225,958

end of user-specified TAGGED TABLE

6. Goodwill and Intangible Assets (Continued)

The Company's intangible assets as of December 31, 2018 were as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	December 31, 2018		
	Gross Amount	Accumulated Amortization	Net Carrying Value
	(in thousands)		
Developed technology	$107,938	$(29,433)	$78,505
Customer relationships	94,875	(18,702)	76,173
Trade names	56,436	(14,084)	42,352
Product backlog	2,185	(2,117)	68
Capitalized internal-use software	11,422	(2,995)	8,427
Non-compete agreements	1,224	(1,014)	210
Other intangible assets	1,055	(333)	722
Total intangible assets subject to amortization	275,135	(68,678)	206,457
In-process research and development	586	—	586
Total intangible assets	$275,721	$(68,678)	$207,043

end of user-specified TAGGED TABLE

The Company's intangible assets as of June 30, 2019 were as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	June 30, 2019 (unaudited)		
	Gross Amount	Accumulated Amortization	Net Carrying Value
	(in thousands)		
Developed technology	$107,938	$(35,847)	$72,091
Customer relationships	94,875	(22,453)	72,422
Trade names	56,584	(16,924)	39,660
Product backlog	2,185	(2,168)	17
Capitalized internal-use software	15,914	(4,338)	11,576
Non-compete agreements	1,224	(1,218)	6
Other intangible assets	1,001	(442)	559
Total intangible assets subject to amortization	279,721	(83,390)	196,331
In-process research and development	586	—	586
Total intangible assets	$280,307	$(83,390)	$196,917

end of user-specified TAGGED TABLE

Amortization expense for the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited) was $27.2 million, $28.6 million, $14.4 million, and $14.7 million, respectively. During the years ended December 31, 2017 and 2018, $3.0 million of in-process research and development was reclassified to developed technology when ready for intended use.

THIS IS THE END OF A COMPOSITION COMPONENT

6. Goodwill and Intangible Assets (Continued)

As of December 31, 2018, expected amortization expense for intangible assets subject to amortization for the next five years is as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

Year Ending December 31,	December 31, 2018
	(in thousands)
2019	$29,028
2020	28,764
2021	27,979
2022	26,124
2023	24,572
Thereafter	69,990
Total	$206,457

end of user-specified TAGGED TABLE

As of June 30, 2019, expected amortization expense for intangible assets subject to amortization for the next five years is as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

Year Ending December 31,	June 30, 2019 (unaudited)
	(in thousands)
2019 (remaining six months)	$14,985
2020	29,915
2021	29,130
2022	27,276
2023	25,092
Thereafter	69,933
Total	$196,331

end of user-specified TAGGED TABLE

7. Debt

In 2016, the Company entered into new credit facilities with a consortium of lenders comprised of (a) a term loan in an initial principal amount of $150.0 million, which was borrowed on June 30, 2016 and subsequently increased on August 3, 2016 by $20.0 million (the "2016 Term Loan"), and (b) a revolving line of credit in a principal committed amount of $10.0 million (the "2016 Revolver" and, collectively with the 2016 Term Loan, the "2016 Credit Facilities"). The 2016 Credit Facilities mature on June 30, 2021.

The principal amount of the 2016 Term Loan is payable at the maturity date. The 2016 Term Loan bears interest at the option of the Company at a rate per annum equal to (a) an adjusted LIBO rate (with a floor of 1.00% per annum) plus an applicable margin of 9.25%, payable on the last day of the applicable interest period applicable thereto, or (b) the alternate base rate (with a floor of 2.00% per annum) plus an applicable margin of 8.25%, payable quarterly in arrears the last

7. Debt (Continued)

business day of each March, June, September, and December. The initial 2016 Term Loans were borrowed as LIBO rate loans.

In conjunction with the 2016 Credit Facilities, the Company was required to comply with various financial debt covenants, including a recurring revenue leverage ratio of 2.1 to 1.0 beginning September 30, 2016 and decreasing quarterly to 1.3 to 1.0 on September 30, 2018, and a total leverage ratio of 8.3 to 1.0 beginning December 31, 2018 and decreasing quarterly to 2.4 to 1.0 on and after June 30, 2021. As of December 31, 2017, the Company was in compliance with all financial covenants.

In 2018, the Company refinanced its outstanding debt. In connection with the refinancing, the Company entered into new credit facilities with a consortium of lenders comprised of (a) a term loan with a principal amount of $250.0 million (the "2018 Term Loan"), and (b) a revolving line of credit in a principal committed amount of $25.0 million (the "2018 Revolver" and, collectively with the 2018 Term Loan, the "2018 Credit Facilities"). The 2018 Term Loan and 2018 Revolver mature on January 25, 2025 and January 25, 2023, respectively. Borrowings under the 2018 Credit Facilities are collateralized by substantially all of the assets of the Company.

There are no significant financial covenants to which the Company must comply in relation to the 2018 Term Loan. The wholly owned indirect subsidiary, Ping Identity Corporation, as borrower under the 2018 Credit Facilities, is limited to declare dividends or make any payment on account of its capital stock to, directly or indirectly, fund a dividend or other distribution to Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.) (the "Parent"), subject to limited exceptions, including (1) stock repurchases in an amount not to exceed the greater of $1.5 million per year or 3.75% of consolidated EBITDA, with any unused amount being carried forward to future periods, (2) unlimited amounts subject to compliance with a 4.25 to 1.00 total leverage ratio giving pro forma effect to any distribution, (3) unlimited amounts up to 7% of the Parent's market capitalization, and (4) payment of the Parent's overhead expenses.

In conjunction with entering into the 2018 Credit Facilities, the Company paid all remaining balances of the 2016 Term Loan and terminated the 2016 Revolver, which resulted in a loss on extinguishment of debt of $9.8 million, included in the consolidated statements of operations for the year ended December 31, 2018 and the six months ended June 30, 2018 (unaudited).

Beginning September 2018, 0.25% of the principal amount of the 2018 Term Loan is payable quarterly. The 2018 Term Loan bears interest at the option of the Company at a rate per annum equal to (a) an adjusted LIBO rate (with a floor of 1.00% per annum) plus an applicable margin of 3.75%, payable on the last day of the applicable interest period applicable thereto ("Eurodollar" loan), or (b) the alternate base rate (with a floor of 2.00% per annum) plus an applicable margin of 2.75%, payable quarterly in arrears the last business day of each March, June, September, and December. The 2018 Term Loan was borrowed as a Eurodollar loan.

The Company recognized $17.9 million, $14.9 million, $7.3 million, and $7.8 million in interest expense in the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited), respectively.

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Notes to Consolidated Financial Statements (Continued)

For the Years Ended December 31, 2017 and 2018 and the Six Months Ended June 30, 2018 and 2019 (unaudited)

7. Debt (Continued)

As of December 31, 2017 and 2018 and June 30, 2019 (unaudited), the Company's outstanding long-term debt balance was $165.2 million, $241.1 million, and $240.2 million, respectively (net of the current portion of long-term debt of $0.0 million, $2.5 million, and $2.5 million, and debt issuance costs of $4.8 million, $5.2 million, and $4.8 million, respectively), which was included in long-term debt. Debt issuance costs are a direct deduction from the long-term debt liability and are amortized into interest expense over the contractual term of the borrowings using the effective interest method. During the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited), the Company amortized $1.4 million, $0.9 million, $0.5 million, and $0.4 million of debt issuance costs, respectively.

Future principal payments on outstanding borrowings as of December 31, 2018 are as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

Year Ending December 31,	December 31, 2018
	(in thousands)

2019	$2,500
2020	2,500
2021	2,500
2022	2,500
2023	2,500
Thereafter	236,250
Total	$248,750

end of user-specified TAGGED TABLE
Future principal payments on outstanding borrowings as of June 30, 2019 are as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

Year Ending December 31,	June 30, 2019 (unaudited)
	(in thousands)
2019 (remaining six months)	$1,250
2020	2,500
2021	2,500
2022	2,500
2023	2,500
Thereafter	236,250
Total	$247,500

end of user-specified TAGGED TABLE

8. Income Taxes

On December 22, 2017, the U.S. Tax Cuts and Jobs Act (the "Tax Act") was signed into law. The Tax Act significantly changed U.S. income tax law by, among other things, reducing the U.S. federal income tax rate from 35 percent to 21 percent, transitioning from a global tax system to a modified territorial tax system, and limiting the tax deduction for interest expense. The Company has included the impact of the Tax Act in its benefit for income taxes for the years ended

8. Income Taxes (Continued)

December 31, 2017 and 2018 in accordance with its understanding of the Tax Act and the guidance available on the date the financial statements were available to be issued. The recorded effects of the Tax Act include the following:

- *Reduction of U.S. federal corporate tax rate*: During the year ended December 31, 2017, the Company recorded an increase to its tax benefit of $17.0 million for the estimated impact of revaluing its net deferred tax liability position in the U.S. at the new 21 percent corporate tax rate.
- *Transition tax*: During the year ended December 31, 2017, the Company recorded tax expense of $1.2 million to reflect the impact of the tax on accumulated untaxed earnings and profits ("E&P") of certain foreign affiliates.

With regard to the new provisions for global intangible low-taxed income ("GILTI"), the Company is allowed to make an accounting policy choice of either (1) treating taxes due for GILTI as a current-period expense when incurred or (2) factoring such amounts into the Company's measurement of its deferred taxes. In 2018, the Company elected to treat the taxes due for GILTI as a current-period expense when incurred.

The amounts of income (loss) from continuing operations before income taxes was as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	Year Ended December 31,	
	2017	2018
	(in thousands)	
United States	$3,996	$(12,488)
Foreign	1,780	2,417
Income (loss) before income taxes	$5,776	$(10,071)

end of user-specified TAGGED TABLE

The income taxes of foreign subsidiaries not included in the U.S. tax group are presented based on a separate return basis for each tax-paying entity.

8. Income Taxes (Continued)

The benefit (provision) for income taxes from continuing operations was as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	Year Ended December 31,	
	2017	2018
	(in thousands)	
Current		
Federal	$—	$(23)
State	—	(55)
Foreign	(96)	(225)
Total current expense	(96)	(303)
Deferred		
Federal	14,501	1,416
State	(2,201)	(4,756)
Foreign	981	268
Total deferred benefit	13,281	(3,072)
Benefit (provision) for income taxes	$13,185	$(3,375)

end of user-specified TAGGED TABLE

The benefit (provision) for income taxes from continuing operations differs from the provision determined by applying the U.S. statutory tax rate to pretax earnings as a result of the following:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	Year Ended December 31,			
	2017		2018	
	(dollars in thousands)			
Statutory U.S. federal income taxes	$(2,021)	(35.0)%	$2,115	(21.0)%
State income taxes, net of federal taxes	(166)	(2.9)	405	(4.0)
Foreign taxes rate differential	257	4.4	18	(0.2)
Rate changes — tax reform	17,040	295.0	—	—
Rate changes — other	(1,901)	(32.9)	(4,210)	41.8
Income tax credits	1,358	23.5	536	(5.3)
Change in valuation allowance	(533)	(9.2)	—	—
Deemed repatriation of untaxed foreign earnings	(1,158)	(20.0)	—	—
Contingent deal consideration	—	—	(985)	9.8
Meals and entertainment	(519)	(9.0)	(706)	7.0
GILTI inclusion	—	—	(338)	3.4
Acquisition costs	—	—	(134)	1.3
State net operating loss adjustment	746	12.9	—	—
Return to provision	131	2.3	36	(0.4)
Other permanent items	(45)	(0.8)	(159)	1.6
Other	(4)	(0.1)	47	(0.5)
Benefit (provision) for income taxes	$13,185	228.2%	$(3,375)	33.5%

end of user-specified TAGGED TABLE

8. Income Taxes (Continued)

Undistributed earnings of foreign subsidiaries were $10.6 million as of December 31, 2018, of which $8.9 million was deemed to be repatriated at December 31, 2017, pursuant to the Tax Act. The deemed repatriation resulted in $1.2 million of additional U.S. income tax expense. The Company considers the current earnings and any future foreign earnings to be indefinitely reinvested, and therefore does not record deferred taxes related to these earnings. Upon repatriation of earnings, in the form of dividends or otherwise, the Company would be subject to both U.S. income taxes (subject to a dividends received deduction) and withholding taxes payable to certain foreign jurisdictions. Withholding taxes of less than $0.6 million would be payable upon remittance of all previously unremitted earnings at December 31, 2018.

The significant components of deferred tax assets and liabilities at December 31, 2017 and 2018 were as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	December 31,	
	2017	2018
	(in thousands)	
Deferred tax assets		
Accruals and reserves	$681	$—

Fixed assets and intangible assets	332	130
Tax credits	3,163	3,386
Deferred share-based compensation	812	1,525
Loss and other carryforwards	46,297	35,191
Other	452	720
Gross deferred tax assets	51,737	40,952
Valuation allowance	(1,812)	(1,812)
Net deferred tax asset	49,925	39,140
Deferred tax liabilities		
Accruals and reserves	—	(138)
Fixed assets and intangible assets	(55,469)	(53,849)
Deferred revenue	(28,096)	(21,896)
Other, net	(535)	(540)
Gross deferred tax liabilities	(84,100)	(76,423)
Net deferred tax liability	$(34,175)	$(37,283)

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8. Income Taxes (Continued)

The components giving rise to the net deferred income tax liabilities detailed above have been included in the accompanying consolidated balance sheet at December 31, 2017 and 2018 as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	December 31,	
	2017	**2018**
	(in thousands)	
Noncurrent deferred tax assets	$1,711	$1,829
Noncurrent deferred tax liabilities	(35,886)	(39,112)
Net deferred tax liability	$(34,175)	$(37,283)

end of user-specified TAGGED TABLE

At December 31, 2018, the Company had U.S. net operating loss carryforwards of $144.1 million and U.S. research and development ("R&D") credit carryforwards of $1.3 million. If not used, the U.S. net operating loss and R&D credit carryforwards will begin expiring in 2021 and 2024, respectively. The Company also has disallowed interest carryforwards of $1.6 million, which do not expire. Additionally, the Company had $2.3 million of foreign R&D credit carryforwards at December 31, 2018 which, if not used, will begin expiring in 2030. Section 382 and Section 383 of the Internal Revenue Code contain provisions that limit the utilization of net operating loss and tax credit carryforwards if there has been a change of ownership. The Company has completed an analysis of the historical changes in ownership, and has determined that $2.5 million of the net operating loss carryforward at December 31, 2018 will expire prior to utilization due to the Section 382 limitation. As such, the Company has

established a valuation allowance against the deferred tax asset related to these net operating loss carryforwards. Additionally, a change in ownership could be triggered by subsequent sales of securities by the Company or its shareholders resulting in a limitation of the net operating loss and tax credit carryforwards in the future.

The Company has determined that it is more likely than not it will be unable to realize the benefit of its deferred tax assets for R&D credit carryforwards in the U.S. prior to their expiration and has, therefore, established a valuation allowance offset against the deferred tax asset. A valuation allowance has not been established against the net deferred tax assets attributed to foreign jurisdictions. The valuation allowance for deferred tax assets was $1.8 million at December 31, 2017 and 2018. Changes in the valuation allowance for deferred tax assets during the years ended December 31, 2017 and 2018 were as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	December 31,	
	2017	2018
	(in thousands)	
Valuation allowance at beginning of year	$1,279	$1,812
Increases recorded to income tax provision	533	—
Valuation allowance at end of year	$1,812	$1,812

end of user-specified TAGGED TABLE THIS IS THE END OF A COMPOSITION COMPONENT

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Notes to Consolidated Financial Statements (Continued)

For the Years Ended December 31, 2017 and 2018 and the Six Months Ended June 30, 2018 and 2019 (unaudited)

8. Income Taxes (Continued)

The Company files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. The tax years for the Company that remain subject to examination are:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

Jurisdiction	Years Under Examination	Additional Open Years
U.S. Federal	None	2015 - 2017
United Kingdom	None	2013 - 2017
Canada	None	2013 - 2017
Australia	None	2013 - 2017
Israel	None	2014 - 2017
France	None	2016 - 2017

end of user-specified TAGGED TABLE

Additionally, U.S. federal net operating losses and other foreign tax credits carried forward into open years may be subject to adjustment. The Company has evaluated its tax positions and has determined that it has certain unrecognized tax benefits. Accordingly, as of December 31, 2017 and 2018, the Company has reduced certain tax attributes to the extent they would be utilized to offset an unrecognized tax benefit. Changes in the unrecognized tax benefits during the years ended December 31, 2017 and 2018 were as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	December 31,	
	2017	2018
	(in thousands)	
Unrecognized tax benefits at beginning of the year	$706	$292
Statute expiration	(365)	(78)
Currency	11	(13)

Tax rate changes	(60)	10
Unrecognized tax benefits at end of the year	$292	$211

end of user-specified TAGGED TABLE

The Company does not currently anticipate significant changes in its unrecognized tax benefits over the next 12 months. No interest or penalties for the Company's unrecognized tax benefits were recorded for the years ended December 31, 2017 and 2018.

9. Stockholders' Equity

On June 30, 2016, the Board of Directors and stockholders approved the Second Amended and Restated Certificate of Incorporation authorizing the Company to issue up to 500,000 shares of common stock and 200,000 shares of preferred stock, each with a par value of $0.001 per share.

Common stock

The Company's Second Amended and Restated Certificate of Incorporation authorizes issuance of 500,000 shares of common stock with a par value of $0.001 per share. The common stock confers upon its holders the right to vote on all matters to be voted on by the stockholders of

9. Stockholders' Equity (Continued)

the Company (with each share representing one vote) and to ratably participate in any distribution of dividends or payments in the event of liquidation or dissolution on a per share basis. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of holders of any preferred stock that may be issued in the future.

Preferred stock

The Company is authorized, without stockholder approval but subject to any limitations prescribed by law, to issue up to an aggregate of 200,000 shares of preferred stock (in one or more series or classes), to create additional series or classes of preferred stock, and to establish the number of shares to be included in such series or class. The Board of Directors is also authorized to increase or decrease the number of shares of any series or class subsequent to the issuance of shares of that series or class. Each series will have such rights, preferences and limitations, including voting rights, dividend rights, conversion rights, redemption privileges, and liquidation preferences as determined by the Board of Directors. As of December 31, 2017 and 2018 and June 30, 2019 (unaudited), the Company did not have any shares of preferred stock outstanding and currently has no plans to issue shares of preferred stock.

10. Stock-Based Compensation

On June 30, 2016, the Company established the 2016 Stock Option Plan ("2016 Plan"). The 2016 Plan provides for grants of restricted stock units and stock options to executives, directors, consultants, advisors, and key employees which allow option holders to purchase stock in Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.). The Company has 40,000 shares of common stock reserved for issuance under the 2016 Plan.

Stock-based compensation expense for all equity arrangements for the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 was as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	Year Ended December 31,		Six Months Ended June 30, 2018	2019
	2017	2018	(unaudited)	(unaudited)
	(in thousands)			
Sales and marketing	$626	$726	$351	$410
Research and development	297	342	108	433
General and administrative	1,601	1,780	821	1,256

Total	$2,524	$2,848	$1,280	$2,099

end of user-specified TAGGED TABLE

Restricted Stock Units

The Company grants RSUs that vest annually over one to four years. The weighted-average grant-date fair value of RSUs granted during the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited) was $1,333, $1,596, $1,596, and $2,260,

10. Stock-Based Compensation (Continued)

respectively. The total intrinsic value of RSUs vested during the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited) was $0.0 million, $0.1 million, $0.0 million, and $0.1 million, respectively. As of December 31, 2018 and June 30, 2019 (unaudited), there was $0.2 million and $0.2 million of total unrecognized compensation, which will be recognized over the remaining weighted-average vesting periods of 1.6 years and 1.0 years, respectively, using the straight-line method. A summary of the status of the Company's unvested RSUs and activity for the years ended December 31, 2017 and 2018 and the six months ended June 30, 2019 is as follows:

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	Shares	Weighted Average Grant Date Fair Value
Unvested as of January 1, 2017	125	$1,333
Granted	125	1,333
Forfeited/canceled	—	—
Vested	(31)	1,333
Unvested as of December 31, 2017	219	$1,333
Granted	63	1,596
Forfeited/canceled	—	—
Vested	(63)	1,333
Unvested as of December 31, 2018	219	$1,409
Granted (unaudited)	62	2,260
Forfeited/canceled (unaudited)	—	—
Vested (unaudited)	(94)	1,509
Unvested as of June 30, 2019 (unaudited)	187	$1,641

end of user-specified TAGGED TABLE

Stock Options

During the year ended December 31, 2017, the Company granted 3,353 time-based options and 1,676 options subject to performance and market conditions, both of which grant the holder the option to purchase common stock upon vesting. During the year ended December 31, 2018, the Company granted 8,313 time-based options and 4,157 options subject to performance and market conditions. During the six months ended June 30,

2018 (unaudited), the Company granted 833 time-based options and 417 options subject to performance and market conditions. No options were granted during the six months ended June 30, 2019 (unaudited). Time-based options vest over four years with 25% vesting one year after grant and the remainder vesting ratably on a quarterly basis thereafter. Options subject to performance and market conditions vest upon the sale of the business subject to certain conditions specified in the 2016 Plan. An option holder must be an employee of the Company at the date of sale of the business.

10. Stock-Based Compensation (Continued)

A summary of the Company's stock option activity and related information is as follows:

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	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
			(in years)	(in thousands)
Outstanding — January 1, 2017	25,880	$1,333	9.5	$—
Granted	5,029	1,381		111
Forfeited/canceled	(2,500)	1,333		86
Exercised	(76)	1,333		8
Outstanding — December 31, 2017	28,333	$1,342	8.7	$2,849
Granted	12,470	2,062		84
Forfeited/canceled	(3,162)	1,333		493
Exercised	—	—		—
Outstanding — December 31, 2018	37,641	$1,581	8.4	$25,678
Granted (unaudited)	—	—		—
Forfeited/canceled (unaudited)	(867)	1,333		1,346
Exercised (unaudited)	(733)	1,333		1,477
Outstanding — June 30, 2019 (unaudited)	36,041	$1,592	8.0	$63,242
As of June 30, 2019 (unaudited)				
Vested and expected to vest (unaudited)	24,014	$1,592	8.0	$42,135
Vested and exercisable (unaudited)	10,915	$1,342	7.2	$21,878

end of user-specified TAGGED TABLE

All options have a 10 year contractual life. As of December 31, 2018 and June 30, 2019 (unaudited), unamortized stock-based compensation expense related to the time-based awards was $10.6 million and $8.4 million, respectively, which will be recognized over the respective remaining weighted-average vesting terms of 3.0 years and 2.7 years. As of December 31, 2018 and June 30, 2019 (unaudited), the awards subject to performance and market conditions were not considered probable of meeting vesting requirements, and accordingly, no expense was recorded. For these awards, unrecognized stock-based compensation expense as of December 31, 2018 and June 30, 2019 (unaudited) was $5.3 million and $5.1 million, respectively. As the awards were not probable of meeting vesting requirements, the timing of when this expense will be recognized is unknown.

11. Related Party Transactions

Vista Equity Partners ("Vista") is a U.S.-based investment firm that controls the funds which own a majority of the Company. During the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited), the Company paid for consulting services and other expenses related to services provided by Vista and Vista affiliates. The total expenses incurred by the Company for Vista were $0.9 million, $1.3 million, $0.6 million, and $0.6 million for the years

11. Related Party Transactions (Continued)

ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited), respectively. The Company had $0.3 million and $0.1 million in accounts payable related to these expenses at December 31, 2018 and June 30, 2019 (unaudited), respectively.

The Company also has revenue arrangements with Vista affiliates. The Company recognized revenue of $0.8 million, $1.9 million, $1.5 million, and $0.2 million in the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited), respectively. The Company had $1.0 million, $0.5 million, and $0.2 million in accounts receivable related to these agreements at December 31, 2017 and 2018 and June 30, 2019 (unaudited), respectively.

As discussed in Note 7, the Company entered into the 2018 Term Loan and 2018 Revolver on January 25, 2018 with a consortium of lenders for a principal amount of $250.0 million and principal committed amount of $25.0 million, respectively. At December 31, 2018, affiliates of Vista held $34.8 million of the 2018 Term Loan and there were no amounts drawn on the 2018 Revolver. During the year ended December 31, 2018, affiliates of Vista were paid $0.2 million in principal (beginning in September 2018) and $1.9 million in interest on the portion of the 2018 Term Loan held by them. During the six months ended June 30, 2018 (unaudited), affiliates of Vista were paid $0.8 million in interest.

At June 30, 2019 (unaudited), affiliates of Vista held $34.7 million of the 2018 Term Loan and there were no amounts drawn on the 2018 Revolver. During the six months ended June 30, 2019 (unaudited), affiliates of Vista were paid $0.1 million in principal and $1.1 million in interest on the portion of the 2018 Term Loan held by them.

12. Commitments and Contingencies

Letters of Credit

As of December 31, 2017 and 2018 and June 30, 2019 (unaudited), the Company had outstanding letters of credit under an office lease agreement that totaled $0.5 million, $0.6 million, and $0.7 million, respectively, which primarily guaranteed early termination fees in the event of default. The Company collateralizes the letters of credit with restricted cash balances which were classified in other noncurrent assets at December 31, 2017 and 2018 and June 30, 2019.

Leases

The Company leases office space and certain office equipment under noncancelable leases. Most of the leases contain renewal options at then market rates.

12. Commitments and Contingencies (Continued)

At December 31, 2018, future minimum lease payments under the existing leases were as follows:

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Year Ending December 31,	December 31, 2018
	(in thousands)
2019	$2,515
2020	2,955
2021	2,415
2022	2,315
2023	2,338
Thereafter	4,942

Total	$17,480

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At June 30, 2019, future minimum lease payments under the existing leases were as follows:

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Year Ending December 31,	June 30, 2019 (unaudited)
	(in thousands)
2019 (remaining six months)	$1,267
2020	2,975
2021	2,420
2022	2,314
2023	2,338
Thereafter	4,943
Total	$16,257

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Rent expense under noncancelable operating leases totaled $2.1 million, $2.3 million, $1.2 million, and $1.6 million for the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited), respectively.

Hosting Services Agreement

In December 2018, the Company entered into a non-cancelable contractual agreement for hosting services for the period from January 1, 2019 until December 31, 2019. The Company is required to pay a minimum annual commitment of $5.6 million for these services, of which 50% was paid upfront in December 2018. The Company expects to pay the additional $2.8 million during the remaining six months of the year ended December 31, 2019.

Employment Agreements

The Company has entered into various employment agreements with certain officers and foreign-based employees. The employment agreements provide for minimum annual base salaries,

allowances for benefits and insurance coverage, termination rights, and other provisions commonly found in such agreements. Under the terms of the employment agreements, the officers and employees are subject to noncompete provisions, as defined. Terms of the employment agreements vary and may be extended.

Employee Benefit Plans

The Company established a defined contribution savings plan under Section 401(k) of the Internal Revenue Code (the "401(k) Plan") in which full-time U.S. employees are eligible to participate on the first day of the subsequent month of his or her date of employment. The 401(k) Plan covers substantially all employees who meet minimum age and service requirements and allows participants to defer a percentage of their annual compensation as defined in the 401(k) Plan. Employees in the United Kingdom and Canada are covered by defined contribution savings arrangements that are administered based upon the legislative and tax requirements of the respective countries.

The Company made contributions to its employee benefit plans of $1.4 million, $2.0 million, $1.0 million, and $1.4 million for the years ended December 31, 2017 and 2018 and the six months ended June 30, 2018 and 2019 (unaudited), respectively.

Litigation

From time to time, the Company may be subject to various claims, charges, and litigation. The Company records a liability when it is both probable that a liability will be incurred and the amount of the loss can be reasonably estimated. The Company maintains insurance to cover certain actions and believes that resolution of such claims, charges, or litigation will not have a material impact on the Company's financial position, results of operations, or liquidity.

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13. Net Income (Loss) Per Share

The following table provides a reconciliation of the numerator and denominator used in the Company's calculation of basic and diluted net income (loss) per share:

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	Year Ended December 31,		Six Months Ended June 30,	
	2017	2018	2018 (unaudited)	2019 (unaudited)
	(in thousands, except share and per share amounts)			
Numerator				
Net income (loss)	$18,961	$(13,446)	$(5,756)	$(3,123)
Denominator				
Basic shares:				
Weighted-average common stock outstanding — basic	382,258	382,365	382,364	382,425
Diluted shares:				
Weighted-average common stock outstanding — basic	382,258	382,365	382,364	382,425
Effect of potentially dilutive securities:				
RSUs	39	—	—	—
Weighted-average common stock outstanding — diluted	382,297	382,365	382,364	382,425
Net income (loss) per share:				
Basic	$49.60	$(35.17)	$(15.05)	$(8.17)
Diluted	$49.60	$(35.17)	$(15.05)	$(8.17)

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The following shares were excluded from the computation of diluted net income (loss) per share for the periods presented, as their effect would have been antidilutive:

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	Year Ended		Six Months Ended June 30,	
	December 31,		2018	2019
	2017	2018	(unaudited)	(unaudited)
RSUs	—	219	251	187
Stock options	18,863	25,081	17,601	24,014
Total antidilutive shares	18,863	25,300	17,852	24,201

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Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Notes to Consolidated Financial Statements (Continued)

For the Years Ended December 31, 2017 and 2018 and the Six Months Ended June 30, 2018 and 2019 (unaudited)

14. Condensed Financial Information of Registrant (Parent Company Only)

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)
(Parent Company Only) Condensed Balance Sheets (In thousands, except share amounts)

COMMAND=ADD_TABLEWIDTH,"100%" User-specified TAGGED TABLE

	December 31,	
	2017	2018
Assets		
Current assets:		
Cash and cash equivalents	$—	$—
Total current assets	—	—
Noncurrent assets:		
Investment in subsidiaries	520,680	509,105
Total noncurrent assets	520,680	509,105
Total assets	$520,680	$509,105
Liabilities and stockholders' equity		
Current liabilities:		
Current liabilities	$—	$—
Total current liabilities	—	—
Noncurrent liabilities:		

Liabilities, noncurrent	—	—
Total noncurrent liabilities	—	—
Total liabilities	—	—
Commitments and contingencies		
Stockholders' equity:		
Preferred stock; $0.001 par value; 200,000 shares authorized at December 31, 2017 and 2018; no shares issued or outstanding at December 31, 2017 or 2018	—	—
Common stock; $0.001 par value; 500,000 shares authorized at December 31, 2017 and 2018; 382,333 and 382,358 shares issued and outstanding at December 31, 2017 and 2018, respectively	—	—
Additional paid-in capital	513,234	516,044
Accumulated other comprehensive income (loss)	114	(787)
Retained earnings (accumulated deficit)	7,332	(6,152)
Total stockholders' equity	520,680	509,105
Total liabilities and stockholders' equity	$520,680	$509,105

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Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)

Notes to Consolidated Financial Statements (Continued)

For the Years Ended December 31, 2017 and 2018 and the Six Months Ended June 30, 2018 and 2019 (unaudited)

14. Condensed Financial Information of Registrant (Parent Company Only) (Continued)

Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)
(Parent Company Only) Condensed Statements of Operations (In thousands)

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	Year Ended December 31,	
	2017	**2018**
Revenue	$—	$—
Operating expenses	—	—
Income from operations	—	—
Other income (expense), net	—	—
Income before income taxes and equity in net income of subsidiaries	—	—
Benefit for income taxes	—	—
Equity in net income (loss) of subsidiaries	18,961	(13,446)
Net income (loss)	$18,961	$(13,446)

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Ping Identity Holding Corp. (formerly known as Roaring Fork Holding, Inc.)
(Parent Company Only) Condensed Statements of Comprehensive Income (Loss) (In thousands)

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	Year Ended December 31,	
	2017	**2018**
Net income (loss)	$18,961	$(13,446)
Other comprehensive income (loss), net of tax:		
Subsidiaries' other comprehensive income (loss)	333	(901)
Total other comprehensive income (loss)	333	(901)
Comprehensive income (loss)	$19,294	$(14,347)

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Basis of Presentation

Parent is a holding company with no material operations of its own that conducts substantially all of its activities through its subsidiaries. Parent has no direct outstanding debt obligations. However, Ping Identity Corporation, a wholly owned indirect subsidiary, as borrower under its 2016 Credit Facilities, is limited in its ability to declare dividends or make any payment on account of its capital stock to, directly or indirectly, fund a dividend or other distribution to the Parent, subject to limited exceptions, including (1) stock repurchases, (2) unlimited amounts subject to compliance with a 4.0 to 1.0 total leverage ratio giving pro forma effect to any distribution, (3) unlimited

amounts up to 5% of the Parent's market capitalization and (4) payment of the Parent's overhead expenses. For a discussion of the 2016 Credit Facilities, see Note 7. Ping Identity Corporation is limited in its ability to declare dividends or make any payment on account of its capital stock to, directly or indirectly, fund a dividend or other distribution to the Parent as borrower under its 2018 Credit Facilities. For a discussion of the 2018 Credit Facilities and the associated dividend restrictions, refer to Note 7.

These condensed financial statements have been presented on a "parent-only" basis. Under a parent-only presentation, the Parent's investments in subsidiaries are presented under the equity method of accounting. A condensed statement of cash flows was not presented because the Parent has no material operating, investing, or financing cash flow activities for the year ended December 31, 2017 or 2018. Certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted. As such, these parent-only statements should be read in conjunction with the accompanying notes to consolidated financial statements.

15. Subsequent Events

At April 1, 2019, the date at which the consolidated financial statements for the years ended December 31, 2017 and 2018 were available to be issued, the Company had not identified any material subsequent events requiring disclosure.

16. Subsequent Events (Unaudited)

In preparing the unaudited interim consolidated financial statements as of June 30, 2019 and for the six months ended June 30, 2018 and 2019, the Company has evaluated subsequent events through August 2, 2019, the date at which the unaudited interim consolidated financial statements were available to be issued. The Company has not identified any material subsequent events requiring disclosure.

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Part Ii Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all costs and expenses, other than the underwriting discounts and commissions payable by us, in connection with the offer and sale of the securities being registered. All amounts shown are estimates except for the Securities and Exchange Commission, or SEC, registration fee and the FINRA filing fee.

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SEC registration fee	$*
FINRA filing fee	*
listing fee	*
Printing expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent fees and registrar fees	*
Miscellaneous expenses	*
Total expenses	$*

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To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

Section 102(b)(7) of the Delaware General Corporation Law, or DGCL, allows a corporation to provide in its certificate of incorporation that a director of the corporation will not be personally liable to the corporation or its shareholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation will provide for this limitation of liability.

Section 145 of the DGCL, or Section 145, provides that a Delaware corporation may indemnify any person who was, is or is threatened to be made, party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his conduct was illegal. A Delaware corporation may indemnify any persons who are, were or are a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests, provided that no indemnification is permitted without judicial approval if the officer, director, employee or agent is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him against the expenses which such officer or director has actually and reasonably incurred.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would otherwise have the power to indemnify him under Section 145.

Our bylaws will provide that we will indemnify our directors and officers to the fullest extent authorized by the DGCL and must also pay expenses incurred in defending any such proceeding in advance of its final disposition upon delivery of an undertaking, by or on behalf of an indemnified person, to repay all amounts so advanced if it should be determined ultimately that such person is not entitled to be indemnified under this section or

otherwise.

Upon completion, of this offering we intend to enter into indemnification agreements with each of our executive officers and directors. The indemnification agreements will provide the executive officers and directors with contractual rights to indemnification, expense advancement and reimbursement, to the fullest extent permitted under the DGCL.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, provision of our certificate of incorporation or bylaws, agreement, vote of shareholders or disinterested directors or otherwise.

We will maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments that we may make to such directors and officers. The proposed form of Underwriting Agreement to be filed as Exhibit 1.1 to this Registration Statement provides for indemnification of our directors and officers by the underwriters party thereto against certain liabilities arising under the Securities Act of 1933 or otherwise.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding securities sold by us within the past three years that were not registered under the Securities Act. Also included is the consideration, if any, received by us for such securities and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

Since January 1, 2016, we have made sales of the following unregistered securities:

- On June 30, 2016, we issued an aggregate of 357,000 shares of common stock to funds managed by affiliates of Vista Equity Partners, or Vista, for aggregate total consideration of $476.0 million in connection with Vista acquiring Ping Identity Corporation.
- On August 3, 2016, we issued an aggregate of 15,750 shares of common stock to funds managed by affiliates of Vista for aggregate total consideration of $21.0 million in connection with our acquisition of UnboundID, Corp.
- On August 3, 2016, we issued an aggregate of 6,476 shares of our common stock to a co-investor of Vista for aggregate total consideration of $8.6 million in connection with our acquisition of UnboundID, Corp.
- Between January 1, 2016 and June 30, 2019, we issued an aggregate of 3,959 shares of our common stock to directors, executive officers and employees for aggregate total consideration of $5.0 million.
- Between January 1, 2016, and June 30, 2019, we granted stock options under our 2016 plan to purchase an aggregate of 43,379 shares of our common stock, of which 36,041 are outstanding, at exercise prices ranging between $1,333.33 and $2,283.18 per share to certain of our executive officers, employees and directors.
- Between January 1, 2016, and June 30, 2019, we issued restricted stock units for an aggregate of 375 shares of our common stock (of which 187 are unvested) to certain directors and consultants.

The offers and sales of the above securities were deemed to be exempt from registration under the Securities Act of 1933 in reliance upon Section 4(a)(2) of the Securities Act of 1933 or Regulation D promulgated thereunder, or Rule 701 promulgated under Section 3(b) of the Securities Act, as transactions by an issuer not involving any public offering or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the above securities represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof. Appropriate legends were placed upon any stock certificates issued in these transactions.

Item 16. Exhibits and Financial Statement Schedules.

(i) Exhibits

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Exhibit Number		Description
1.1	*	Form of Underwriting Agreement.
3.1		Third Amended and Restated Certificate of Incorporation of Ping Identity Holding Corp. to be in effect upon the closing of this offering
3.2		Amended and Restated Bylaws of Ping Identity Holding Corp. to be in effect upon the closing of this offering
4.1		Registration Rights Agreement.

5.1	*	Opinion of Kirkland & Ellis LLP.
10.1		Credit Agreement, dated as of January 25, 2018, among Ping Identity Corporation, as borrower, Roaring Fork Intermediate, LLC, as holdings, the other guarantors from time to time party thereto, the lenders and issuing banks from time to time party thereto and Goldman Sachs Bank USA, as administrative agent, collateral agent, swingline lender and issuing bank.
10.2		Master Services Agreement, effective as of February 23, 2017, between Vista Consulting Group, LLC and Ping Identity Corporation.
10.3		Form of Ping Identity Holding Corp. Omnibus Incentive Plan.
10.4		Form of Option Award Agreement.
10.5		Form of Restricted Shares Award Agreement.
10.6		Form of Stock Appreciation Right Award Agreement.
10.7		Form of Restricted Stock Unit Award Agreement.
10.8		Form of Indemnification Agreement.
10.9		Director Nomination Agreement.

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Exhibit Number		Description
10.10		Lease Agreement, dated as of January 21, 2011, by and between FSP 1001 17th Street LLC (as successor in interest to MG-1005, LLC), as landlord and Ping Identity Corporation, as tenant.
10.11		First Amendment to Lease Agreement, dated as of November 12, 2015, by and between FSP 1001 17th Street LLC, as landlord and Ping Identity Corporation, as tenant.
10.12		Second Amendment to Lease Agreement, dated as of December 6, 2017, by and between FSP 1001 17th Street LLC, as landlord and Ping Identity Corporation, as tenant.
10.13		Third Amendment to Lease Agreement, dated as of August 21, 2018, by and between FSP 1001 17th Street LLC, as landlord and Ping Identity Corporation, as tenant.
10.14		Fourth Amendment to Lease Agreement, dated as of February 1, 2019, by and between FSP 1001 17th Street LLC, as landlord and Ping Identity Corporation, as tenant.
10.15		Fifth Amendment to Lease Agreement, dated as of March 18, 2019, by and between FSP 1001 17th Street LLC, as landlord and Ping Identity Corporation, as tenant.
10.16	+	Letter Agreement, dated as of June 20, 2016, by and between Andre Durand and Ping Identity Corporation.
10.17	+	Letter Agreement, dated as of November 2, 2018, by and between B. Kristian Nagel and Ping Identity Corporation.
10.18	+	Letter Agreement, dated as of October 22, 2018, by and between Bernard Harguindeguy and Ping Identity Corporation.
10.19	+	Letter Agreement, dated as of June 24, 2016, by and between Lauren Romer and Ping Identity Corporation.
10.20	+	Letter Agreement, dated as of July 7, 2016, by and between Raj Dani and Ping Identity Corporation.
10.21	+	Roaring Fork Holding, Inc. 2016 Stock Option Plan, as amended.
10.22	+	Form of Stock Option Agreement under the 2016 Stock Option Plan, as amended (409A Compliant Form).
10.23	+	Form of Stock Option Agreement under the 2016 Stock Option Plan, as amended (409A Exempt Form).
10.24	+	Form of Restricted Stock Unit Agreement under the 2016 Stock Option Plan, as amended.
10.25	+	Form of amended Restricted Stock Unit Agreement under the 2016 Stock Option Plan, as amended.
21.1		List of subsidiaries of Ping Identity Holding Corp.
23.1		Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.
23.2	*	Consent of Kirkland & Ellis LLP (included in Exhibit 5.1).
24.1		Powers of Attorney (included on signature page).

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Indicates a management contract or compensatory plan or agreement.

*

Indicates to be filed by amendment.

(ii)

Financial statement schedules

No financial statement schedules are provided because the information called for is not applicable or is shown in the financial statements or notes.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions referenced in Item 14 of this Registration Statement, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered hereunder, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1)

For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in the form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective;

(2)

For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.

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Signatures

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Denver, State of Colorado, on August 23, 2019.

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Ping Identity Holding Corp.		
By:	/s/ ANDRE DURAND	
	Name:	Andre Durand
	Title:	*Chief Executive Officer*

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Powers of Attorney (included on signature page).

POWER OF ATTORNEY The undersigned directors and officers of Ping Identity Holding Corp. hereby appoint each of Lauren Romer and Raj Dani, as attorney-in-fact for the undersigned, with full power of substitution and resubstitution, for and in the name, place and stead of the undersigned, to sign and file with the Securities and Exchange Commission under the Securities Act of 1933 any and all amendments (including post-effective amendments) and exhibits to this registration statement on Form S-1 (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933) and any and all applications and other documents to be filed with the Securities and Exchange Commission pertaining to the registration of the securities covered hereby, with full power and authority to do and perform any and all acts and things whatsoever requisite and necessary or desirable, hereby ratifying and confirming all that said attorney-in-fact, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

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Signature	Title	Date
/s/ ANDRE DURAND Andre Durand	Chief Executive Officer and Director (Principal Executive Officer)	August 23, 2019
/s/ RAJ DANI Raj Dani	Chief Financial Officer (Principal Financial Officer)	August 23, 2019
/s/ ADRIANA CARPENTER Adriana Carpenter	Chief Accounting Officer (Principal Accounting Officer)	August 23, 2019
/s/ ROD ALIABADI Rod Aliabadi	Director	August 23, 2019

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Signature	Title	Date
/s/ DAVID A. BREACH David A. Breach	Director	August 23, 2019
/s/ CLIFFORD CHIU Clifford Chiu	Director	August 23, 2019
/s/ MICHAEL FOSNAUGH Michael Fosnaugh	Director	August 23, 2019
/s/ LISA HOOK Lisa Hook	Director	August 23, 2019
/s/ JOHN MCCORMACK John McCormack	Director	August 23, 2019
/s/ BRIAN N. SHETH Brian N. Sheth	Director	August 23, 2019
/s/ YANCEY L. SPRUILL Yancey L. Spruill	Director	August 23, 2019

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