**Contact:**
**James Turino, Managing Partner**
*james.turino@drakestar.com*
212.508.7108

**Mohit Pareek**, **Vice President**
*Mohit.pareek@drakestar.com*
310.696.4006

**Chris Flores, Analyst**
*Chris.flores@drakestar.com*
212.508.7118

**Drake Star Partners**
950 Third Avenue
20th Floor
New York, NY 10022
*www.drakestar.com*

**March 2017**

# IT Automation Sector Report

## Introduction

As more and more business is conducted through software driven, online and mobile channels in today's digital economy, the classic distinctions between IT departments and business units are becoming blurred; today IT *is* the business.

To succeed in the digital economy, companies of all kinds are writing, deploying and supporting more and more application software and having to do so at a faster and faster pace. This requires increasingly sophisticated tools to automate processes wherever possible and use available resources more efficiently, while insuring the highest network and application performance quality and enabling optimized productivity of the workforce. In much the same way, the distinctions between IT and business are becoming blurred, so is the distinction between the creation and deployment of software and management of the infrastructure to deliver applications and other IT resources.

This report focuses specifically on technologies that enable the IT department to function more efficiently through automation, process management and analytics-driven intelligence. The report looks at current trends in the IT Automation sector, including the impact of newer technologies such as artificial intelligence, virtualization, cloud delivery and analytics. It also looks at market growth, spending trends, M&A activity, capital formation, and valuation trends.

We define IT Automation as comprising four fundamental activities:

I. **Development Operations (DevOps)** – creation, deployment and support of software applications
- Software code development
- Testing and QA
- Release management

II. **Infrastructure Management** – design and deployment of IT infrastructure; monitoring and management of network and application delivery
- Infrastructure performance management
- Asset and configuration management
- Network capacity planning

III. **Process and Incident Management** – ongoing support for IT users and other consumers
- IT service desk and trouble ticketing
- Incident response management and automation

IV. **Data Management and Analytics** – intelligence loop, improvement process and compliance management
- Data management and integration
- Analysis and reporting
- Compliance

In addition, network, endpoint and data security are paramount concerns to both IT departments and business leaders, and becoming more so as the frequency, scale, severity and negative consequences of breaches become ever greater. While security is a fundamental requirement and has impact on many of the technologies discussed in this report, the technology, M&A and capital markets trends are covered separately in our reports on IT Security.

(2016 IT Security Report)

## Market Sizing

According to Gartner, the DevOps market has been growing approximately 21%, from $1.9bn in 2014 to $2.3bn in 2015[1]. The high rate of growth is largely driven by DevOps moving from being a niche strategy employed by large cloud providers to becoming a core business activity now broadly employed by 25% of Global 2000 companies.

Gartner also estimates that $21 billion was spent on IT Operations Management (ITOM) Software in 2014, encompassing the essential components of Infrastructure Management and Process and Incident Management[2]. While this market is fairly mature, growing at 7% annually, a closer look reveals that major incumbents such as IBM, CA Technologies and BMC Software are ceding market share to more recent entrants such as ServiceNow and Solarwinds which offer lighter, easy to deploy, cloud based offerings. Despite the fact that over 50% of ITOM market revenues are attributable to the top 5 vendors[3], this is still a highly-fragmented market with a number of legacy technologies, individual point solutions and emerging, newer entrants with newer, disruptive technologies.

## Market Trends

### DevOps and the Need for Speed

*EVERY BUSINESS WILL BECOME A SOFTWARE BUSINESS, BUILD APPLICATIONS, USE ADVANCED ANALYTICS AND PROVIDE SAAS SERVICES, SATYA NADELLA, 2015*

Significant advances in the automation of software development operations, particularly by companies that rely on the creation of software as a core business activity for customer acquisition and revenue generation have created a widening gap between new, automated methodologies and traditional DevOps. While traditional DevOps release cycles are still measured in months, some companies have significantly accelerated the DevOps process, deploying code as much as 30x more frequently and shortening deployment cycle times with meaningfully higher success rates and fewer errors[4]. This trend is epitomized by companies such as Amazon and Google, which rely on web applications as a fundamental driver of customer engagement and revenue generation. These companies have completely redefined standards in DevOps with release lead times counted in minutes and deployment frequencies now counted in seconds. Among the several elements that make this possible:

- **Continuous Integration and Delivery**: Shortening of the time span between the integrations and deployments of new code reduces the potential for deep rooted errors, fosters closer daily collaboration and keeps code in a condition that is always closer to deployable status. Companies such as Atlassian and ThoughtWorks were early leaders in this area, providing software to orchestrate and visualize workflows, as well as track changes and automate testing. Newer companies such as CircleCI and PuppetLabs are automating the full release – test – deploy cycle for all types of applications, including web and mobile apps.

- **Test automation**: In order to manage more rapid development cycles, the automation of testing is becoming a need to have. Current estimates are that only 28% of tests are currently being automated[5]. While large players such as IBM and HP have dominated this market for many years, more complex requirements for device diversity and automation are driving high growth among newer, more sophisticated products such as the ones being offered by TestPlant, Ranorex, Gatling and LeftShift. There is also increasingly widespread use of open source tools such as Jenkins, especially in less complex environments.

- **Release management**: Faster release cycles and continuous delivery require visibility and orchestration into the entire chain of resources. There are a handful of emerging category leaders in this area and both IBM and CA acquired relevant targets in 2013: Urbancode and Nolio, respectively. Other vendors such as Automic, Electric Cloud and Xebia Labs, however, are expanding the focus of release management from deployment to all aspects of the development cycle, including pipeline, production and testing. Most of these companies also provide a full documentation trail and an analytics feedback loop providing enhanced end to end visibility into the DevOps process and identification of potential problems and bottlenecks. They also provide plug-ins for commonly used third party products such as the ones being they leverage, rather than replace, existing infrastructure. As evidence of the emerging strategic importance of these companies, CA, which has emerged as one of the most active acquirers in DevOps over the past few years, acquired Automic for $635 million in January 2017.

- **Containerization and microservices**: While virtualization increases the efficient use of hardware resources, containerization and microservices create more modular, portable systems for developing, testing and deploying applications. Borrowing in some respects from

---

[1] http://www.gartner.com/newsroom/id/2999017

[2] https://www.gartner.com/doc/3061126/market-share-analysis-it-operations

[3] http://www.kerrisdalecap.com/wp-content/uploads/2012/11/ITOM-market_share_analysis_it_ope_229037.pdf

[4] https://puppet.com/resources/whitepaper/2016-state-of-devops-report

[5] TestPlant, 2015

the mobile app model, containerized apps can be moved easily from machine to machine without having to make changes, providing a high degree of flexibility in how and where applications are deployed, whether for example on a laptop, virtual machine or in the cloud. By doing so, containerized applications also provide a high degree of reliability in application performance. Among open source containerization platforms, Docker and Kubernetes are perhaps the most widely deployed, with the former emerging as a leading commercial vendor. Other products from vendors such as BlueData and Rancher Labs are extending the utility of containers (for example in large data applications in the case of BlueData) and also making them easier to manage in large scale deployments.

## IT Infrastructure Management

### Infrastructure Performance Management

With the increasing adoption of cloud delivery and virtualization, the performance of applications has become more dependent on the networks used to deliver them and as a result, the traditional disciplines of network and application performance management have converged. Although many of the players in today's market may have initially focused on one or the other, we consider this a single, unified market and refer to the combined whole as Infrastructure Performance Management. As such, single vendor solutions that provide full visibility into network and application performance are gaining traction at the expense of point solutions. Several companies, including Appneta, Heroix, LogicMonitor and NetDialog are providing converged network and application performance management platforms.

Some of the drivers of these trends include:

- **Prevalence of high bandwidth apps**: Many of the apps we use today consume high bandwidth and as a result are more sensitive to network performance. Some need to be delivered in real time, such as VoIP and IP video, however there is increasing awareness that the performance of non-real time apps, such as Microsoft Office 365, Google Apps and Salesforce also have meaningful impact on user experience and productivity. To help them manage scarce bandwidth resources, mobile telecom providers have for several years deployed technologies that prioritize traffic depending on the nature of the application and the user, often driven by predetermined policies. We expect to find more of this type of technology being used in the enterprise, effectively making networks "application-aware". Boundary was a good example of a company focused on application-aware performance management. The company was acquired by BMC in August 2015.

- **Reliance on third parties for delivery**: Enterprise IT departments no longer control the end-to-end delivery chain of many network-accessed applications making SLAs harder to monitor and substantiate. As more companies rely on outsourced service providers to manage IT and deliver resources through the cloud, managing and troubleshooting performance has become more complex. Appneta, for example, provides unified performance management for any type of web, mobile or cloud deployment. At the same time, MSPs need solutions that can scale with their user bases and provide centralized visibility across the entire user domain. LogicMonitor's SaaS based platform, for example supports MSPs by making their platform easy to deploy, including auto-discovery of elements connected to the network, and intuitive dashboards for the NOC that enable more rapid response to issues.

- **Importance of mobility**: The large and expanding number of end-user and mobile devices being used to access enterprise applications adds further complexity: different network protocols, operating systems, user interfaces all affect performance and user experience. AppDynamics, for example, extends its application performance management product to the mobile world, monitoring the user experience on a real-time, per-session basis across all types of devices, operating systems and networks. Cisco announced the acquisition of AppDynamics for $4.0 billion in January 2017.

## Asset Management

Asset management is a broad area, incorporating activities such as logistics and installation, network provisioning, updates and patches and upgrades and warranties. It also includes the management of basic data about IT assets such as identity, license terms, maintenance history, warranties, upgrade cycles and other lifecycle information. With the growth in cloud adoption, however, comes the need to keep track of and actively manage diverse and remote IT assets from a central point, extending the discipline of asset management to the stateful monitoring of network-connected devices including their operational status and performance.

Many of the manufacturers of switches, routers and servers now provide the means to manage remote devices in the cloud, however these products tend to be manufacturer-specific. To prevent having to maintain separate cloud platforms for each vendor, users are increasingly seeking unified platforms to manage all device types. This is an active area for R&D and Corporate Development, especially among network OEMs and MSPs with large installed bases of remote infrastructure. Examples in M&A include Cisco's $175 million acquisition of Tail-f in 2014, which provided Cisco with a single platform for universal management of any type of device or application, and Riverbed's early 2016 acquisition of Ocedo, which provided a multi-tenant cloud service solution deploying distributed policies across the entire network.

Independent companies delivering such solutions today include Tallac Networks, whose platform provides the ability to centrally manage any kind of device and from any vendor (with the vendor's support for integration), including switches, access points and endpoints. The company's platform has been built for large scale MSP and OEM deployment, with multi-tenant, full "masterview" visibility and stateless capabilities. Another company which has attracted attention is Cloudgenix, which is addressing issues in managing hybrid WANs, as well as related problems in application performance and network security.

## IT Service Management

Although many IT automation technologies described in prior sections of this report enable the efficient creation, delivery and maintenance of IT infrastructure, IT departments are typically also tasked with interfacing with the users themselves. IT Service Management products have traditionally supported the administration, call center and trouble ticketing functions of IT. Because incident resolution often relies heavily on referenceable data on IT assets, many of the existing solutions also incorporate asset configuration management database (CMDB) functions.

As we see in many other areas of enterprise software, there is a degree of commoditization in the ITSM market resulting in price discounting, especially for older technologies and point solutions. In addition, the call center and remediation functions are inherently people-intensive, making them less prone to automation and more difficult to scale. In response, a number of newer entrants are taking market share by offering subscription-based cloud products that are easier to deploy and use than traditional on premise products. This trend is best epitomized by ServiceNow, which over the last four years has more than quintupled revenue and currently trades at an Enterprise Value of more than 10x trailing 12-month revenue of $1.4 billion.

To further differentiate, many ITSM vendors, including ServiceNow and smaller vendors such as Auconet and ManageEngine, are expanding their addressable market outside of IT to support administrative activities in many areas of the enterprise, including finance, HR, customer service and marketing. For vendors, expanding the use cases and number of users within an enterprise provides an opportunity to generate incremental revenue within the installed base, and also increases switching costs and renewal rates. (ServiceNow renewals currently run at 97%[6]).

## Process and Incident Automation

This is one area of ITSM that has traditionally been difficult to automate and is now starting to witness more innovation, in large part driven by urgency associated with high profile security breaches. Automating everyday processes in the IT Department, however, also reduces cost, shortens the time needed to resolve issues and ultimately creates a more efficient workforce. In the quest for efficient service delivery, most organizations seek to leverage the knowledge accumulated from experience in dealing with various situations to standardize processes. But in the case of incidents that can cause serious damage, such as major network outages and security breaches, the impact of deploying automated solutions can make a very big difference to enterprise well-being, both financially and reputationally. As mentioned in some of our recent reports on IT Security, the high cost of security incidents is shedding more light on how companies manage response to incidents from a host of constituents, including auditors, regulators and insurers of cybersecurity risk.

Some of the specific challenges to effective incident response include:

- Sifting through large volumes of log data to determine which incidents are real and demand priority action
- Maintaining a relevant knowledge base and preventing information from becoming stale and unused
- Developing standard rules-based workflows when serious incidents do occur and time is a factor in remediation

Access to SIEM, CRM and CMDB systems has helped to address the first two challenges. Many SIEM platforms have refined abilities to parse myriad data and to detect and prioritize serious anomalies. Integration with CMDBs also gives incident response teams ready access to relevant information about the state of IT assets.

The harder part comes in automating more human-dependent processes. Resolve Systems, for example, incorporates Human-Guided Automation, in which individual steps are parsed according to their ability to be automated. Those that are able to be automated can be handled by less trained personnel while more complex tasks, involving analysis or policy creation, are escalated to more trained experts. The orchestration of individual steps and division of labor mean that personnel are being utilized most efficiently, resolution time is shortened and results are optimized.

While there are a number of newer companies which have come to market in the last 2-3 years offering automated incident response products, there have been relatively few M&A transactions as of yet. One

---

[6] ServiceNow 10Q, Sept. 30, 2016

notable exception, covered in more detail later in this report, was FireEye's acquisition of CSG International carve-out Invotas in February 2016.

**Data Management and Analytics**

A critical element, as well as an additional dimension of differentiation, for many vendors is in providing data management, reporting and analytics capabilities on top of core functionality. Providing a means to collect relevant data, report on key performance metrics and benchmark them against strategic business objectives provides an important feedback loop and layer of visibility into the relative success of operational activities.

Many of the companies in this report provide embedded data management, analytics and reporting capabilities or alternatively offer separate modules that are sold in conjunction with their core products. More and more, these functions are becoming table stakes for any company seeking to compete in IT automation. For this reason, most technology vendors tend to come from one of the other areas mentioned above, and add analytics to complement their core offerings, rather than the other way around.

There are a few exceptions, however, in which data is the primary driver rather than the byproduct. For example, Blazent's core platform focuses on CMDB data quality through the management and federation of data in large scale, complex environments in order to provide a master data record across the distributed enterprise. Switzerland-based Nexthink combines endpoint data and user feedback to better manage end-user experience and productivity. Sumerian uses IT operations data to drive predictive analytics for capacity planning and performance management purposes. In the emerging world of artificial intelligence, we may be closer than we think to a fully automated model in which real time data is used to optimize IT operations with little or no human intervention.

# M&A Trends

### Introduction

*FIGURE 1*

| Year | Deal Volume | Total Disclosed Deals | Total Deal Value (Disclosed Deals) | Average Deal Value (Disclosed Deals) | Median Deal (Disclosed Deals) |
|------|-------------|-----------------------|-------------------------------------|---------------------------------------|-------------------------------|
| 2016 | 38 | 18 | $ 5,087 | $ 283 | $ 130 |
| 2015 | 50 | 16 | $ 14,251 | $ 890 | $ 100 |
| 2014 | 45 | 23 | $ 10,198 | $ 443 | $ 50 |
| 2013 | 38 | 15 | $ 2,574 | $ 172 | $ 128 |

M&A in the IT Automation sector has seen a steady increase in deal volume and value since 2013, with a notable peak in 2015. At first glance, it seems that 2016 lagged behind 2015 in terms of total transaction value for disclosed deals, but when considered without two multi-billion dollar transactions 2016 outpaced 2015 by roughly $1.9 billion. Accounting for approximately 80% of 2015's total disclosed transaction value, Carlyle Group's acquisition of Veritas for $7 billion and Silver Lake and Thoma Bravo's acquisition of SolarWinds for $5 billion largely drove the total deal value in 2015. Although this report covers through the end of 2016, it is worth noting that the IT Automation sector has already seen a multi-billion dollar deal in 2017: Cisco's announced acquisition of AppDynamics.

In Figure 2, the aggregate of acquisitions over the $1 billion threshold are shown for each year. As previously mentioned, average deal value spiked in 2015, close to $900 million, however, without the Veritas (~$7 billion) and SolarWinds (~$5 billion) acquisitions, the average deal value falls to approximately $210 million. Similarly, removing the Riverbed, Compuware and The Attachmate Group acquisitions in 2014, the average deal value falls to approximately $85 million from $443 million.
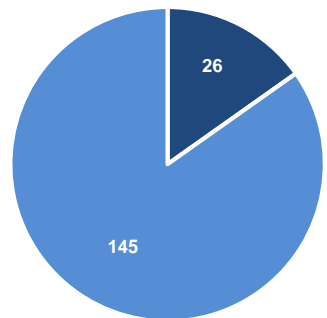
*FIGURE 2*

**Total Deal Volume & Value**
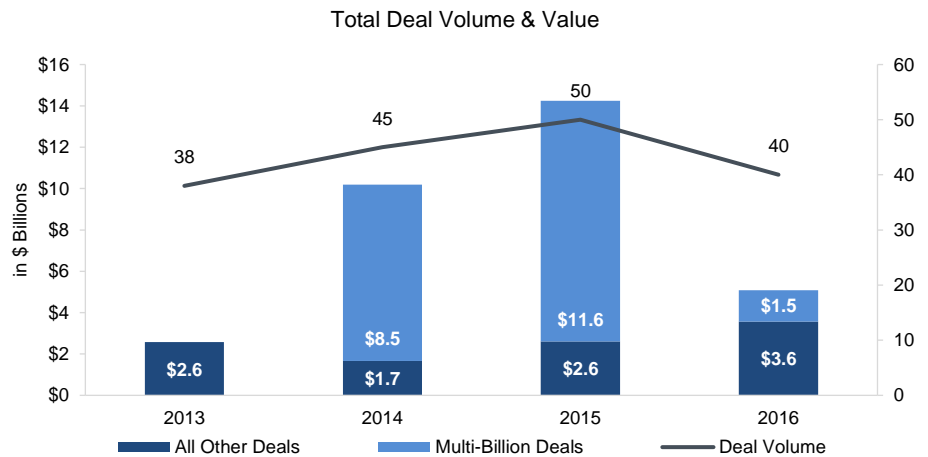


Private equity has led the consolidation of larger incumbents and disruptive technology firms including several take private transactions. As seen in Figures 3 and 4, while financial buyers represent approximately 15% of the number of deals executed since 2013, their transaction value accounts for approximately 68% of disclosed dollars spent. For example, shortly after its acquisition of Compuware, Thoma Bravo spun off Dynatrace from Compuware and merged it with one of its portfolio companies, Keynote. This gave Thoma Bravo access to an increasingly competitive, end to end platform within the Application Performance Management sector. Representing a majority of the deals eclipsing the $1 billion transaction value mark, acquisitions of Infoblox, SolarWinds, Riverbed, and Vertitas have all been completed by private equity. Within Infrastructure Management, Thoma Bravo's acquisition of Riverbed and Compuware aggregated $6.2 billion with a robust average revenue multiple of 3.1x. Similarly, in Process and Incident Management, Thoma Bravo's acquisition of Veritas Technologies totaled 7 billion at a revenue multiple of 2.8x. Despite being involved in fewer transactions, private equity has outspent strategic buyers in the IT Automation sector over the last few years.

*FIGURE 3*

**Deal Volume by Buyer Type**



■ Financial Buyers  ■ Strategic Buyers

*FIGURE 4*

**Disclosed Deal Value ($ Billions) by Buyer Type**
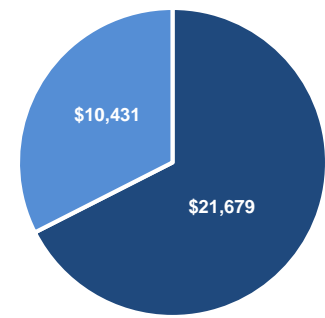


■ Financial Buyers  ■ Strategic Buyers

Strategic buyers have shown to be less hesistant to acquire at higher multiples, in part due to the desire for inorganic growth and the need for advanced technology, but also due to their ability to apply synergies, making transactions more affordable from their perspective. Acquisitions of Tail-f by Cisco Systems (10.3x), Nolio Ltd by CA Technologies (14.0x), Confer Technologies by Carbon Black (17.0x) and most recently Resilient by IBM (14.5x) are examples of transactions closed with multiples in excess of 10.0x trailing twelve month revenue. Although there are exceptions, (such as Cisco acquiring AppDynamics), strategics have tended to acquire smaller, higher growth companies to bolster their technology platform or footprint.

*FIGURE 5*



In $ Millions

| Year | Financial Buyers | Strategic Buyers |
|------|------------------|------------------|
| 2013 | $399 | $2,175 |
| 2014 | $6,691 | $3,507 |
| 2015 | $12,340 | $1,911 |
| 2016 | $2,249 | $2,838 |

■ Financial Buyers  ■ Strategic Buyers
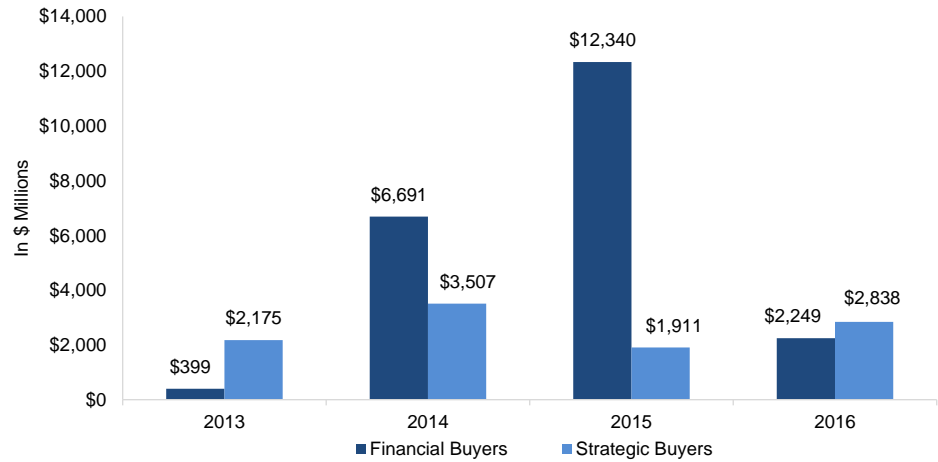
Among the IT Automation sub-sectors, Infrastructure Management and Process & Incident Management have had the most activity since 2013, accounting for 38% and 29% of all transactions respectively. In dollars, these sub-sectors accounted for 57% and 17%, respectively. The deal value in Infrastructure Management was driven by the biggest deals of the period including SolarWinds, Riverbed and The Attachmate Group. The most recent multi-billion dollar acquisition of Appdynamics by Cisco also fits into this sub-sector. For some of the sub-sectors deal volume and value seem to be correlated, while others, most notably Process and Incident Managemnt and DevOps show less correlation between the variables. Representing 29% and 19% of deal volume, Process and Incident Management and DevOps only accounts for 17% and 10% of the total deal value, respectively.

*FIGURE 6*

### 2013 - 2016 Deal Volume Split



Data Management and Analytics 14%
DevOps 19%
Process and Incident Management 29%
Infrastructure Management 38%

*FIGURE 7*

### 2013 - 2016 Deal Value Split
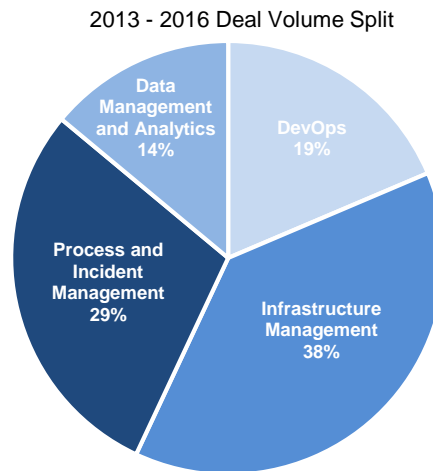


Data Management and Analytics 16%
DevOps 10%
Process and Incident Management 17%
Infrastructure Management 57%
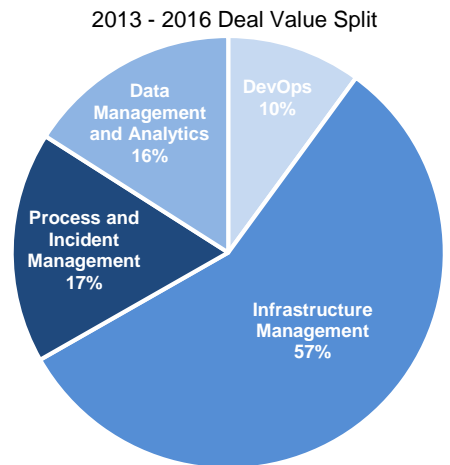
## Notable Transactions

### Strategic buyers

*AppDynamics to Cisco Systems (NasdaqGS:CSCO) – announced January 2017*

Cisco Systems reached an agreement to acquire AppDynamics for $3.7 billion in cash and equity awards, just days before its scheduled IPO. Continuing its recent spending focus on IoT and application management capabilities, Cisco paid a robust 17.9x revenue multiple, pre-empting AppDynamics' $190 million IPO. This major acquisition in the IT Automation space underscores the strategic importance of performance management to companies such as Cisco and also shows Cisco's continued emphasis on becoming a more software-centric and recurring revenue focused company.

*Automic Holding GmbH to CA Technologies (NasdaqGS:CA) – January 2017*

CA Technologies acquired Automic Holdings GmbH, a leader in automation software, for roughly $637 million representing a 5.1x revenue multiple. CA will add new cloud-enabled automation and orchestration capabilities across its portfolio while also increasing its reach in the European market. These capabilities will give existing and prospective customers flexibility between on-premise, hybrid and cloud environments. Integrating real-time analytics within the cloud platform, customers will now benefit from increased business agility from solutions that move from IT-centric task automation to business-centric intelligent automation and orchestration.

*Serena Software to MicroFocus (LSE:MCRO)  for $540 million - March 2016*

Serena Software changed hands for the third time in the last ten years with its sale to MicroFocus. Serena was taken private in 2006 by Silver Lake at a $1.2 billion valuation (4.7x revenue). Eight years later, HGGC acquired the business for $450 million (2.5x revenue). After owning the company for two years, they sold it to MicroFocus for $540 million (3.3x revenue). Later in the year, MicroFocus went on to announce the acquisition of HP's enterprise software business for $8.7 billion, further evidence of the viability of consolidation strategies for larger incumbent vendors.

*Invotas International Corp. (fka: CSG) to FireEye (NasdaqGS:FEYE)  for $28.2 million - February 2016*

Invotas International Corporation completed an acquisition by FireEye, leader in cyber security, for $28.2 million. Although smaller in size, this acquisition is particularly interesting as it implies that incident response automation is becoming increasingly strategic to the cybersecurity market. As we mentioned in our most recent IT security report, we believe that incident management is an area where we will see increased investment and M&A activity in coming years. With the Invotas acquisition, FireEye is positioned to lead the market in offering an end to end solution including detection, threat intelligence and incident response management.

*Emulex (NYSE:ELX) to Avago (NasdaqGS:AVGO) for $606 million - February 2015*

Avago announced the acquisition of storage networking technology company Emulex for approximately $606 million on Feb 25, 2015. Emulex achieved a lower-than-average multiple due to financial struggles in previous years, including having to shut down an engineering facility coupled with company-wide layoffs. Strategically, Avago expects that Emulex's connectivity business will complement its offerings and boost its strategy to support next-generation server and storage architecture. The announcement has been widely accepted (+25.3% for Emulex and +12.7% for Avago during the month following the announcement) and Avago anticipates the transaction to quickly boost earnings.

*Attachmate to MicroFocus (LSE:MCRO) for $2.3 billion - September 2014*

In September 2014 UK-based Micro Focus agreed to merge with The Attachmate Group, a provider of enterprise infrastructure software in the areas of endpoint management, legacy modernization and identity and access management, for $2.3 billion and a 2.5x revenue multiple. While the core infrastructure software products of both companies are broader than IT security, securing applications and data have become stronger corporate initiatives. Attachmate itself was the result of the combination of several companies, including Novell in 2011 and NetIQ in 2006, both of which had a strong presence in infrastructure performance management.

**Financial buyers**

*InfoBlox to Vista Equity Partners for $1.5 billion - September 2016*

In September 2016, software private equity firm Vista Equity Partners announced it had completed a definitive agreement to acquire Infoblox. The infrastructure management company was acquired at a price of $26.50 per share representing a 33% premium over its 60-day average price and a total value of $1.5 billion (3.5x revenue). Infoblox has been subject to two recent hostile buyout attempts by Thoma Bravo in May and activist investor Starboard Value in April 2016. After rallying stockholders to fend off the buyouts, Vista Equity reached agreement to acquire the company. Vista Equity has a strong track record in creating value for its portfolio companies using operational best practices to improve performance and profitability. The deal closed on November 4th, 2016.

*SolarWinds to Silver Lake and Thoma Bravo for $4.5 billion - October 2015*

SolarWinds agreed to a take private transaction with Thoma Bravo and Silver Lake valued at $4.5 billion, multiples of 9.2x and 29.6x trailing twelve-month revenue and EBITDA, respectively. A leading provider of IT Infrastructure Management software, SolarWinds plans to continue its mission of developing powerful and affordable technology to the IT and DevOps community. The $60.10 share price represented a 43.5% premium over the previous day trading price.

*Veritas Technologies to The Carlyle Group for $7.4 Billion - August 2015*

The Carlyle Group (NASDAQ: CG), announced its acquisition of Veritas from Symantec Corp (NASDAQ: SYMC) for $7.4 billion. Veritas provides businesses with software and services to help to balance data and application management complexities across all cloud environments. Symantec acquired Veritas in 2005 for $13.5 billion and after owning it for 10 years, looked to spin it off in order to focus on its core security business.

*HelpSystems to HIG Capital for $700 million - August 2015*

One of the leading providers of process and incident management, HelpSystems entered an agreement with HIG Capital for a $700 million sale representing a 4.8x revenue multiple. The Florida-based private equity firm, with $19 billion in AUM, has already acquired several technology-oriented business and plan to use this expertise to grow HelpSystems through acquisitions and global expansion. This deal was closed in October 2015.

*Compuware to Thoma Bravo for $2.4 billion - September 2014*

Thoma Bravo acquired Compuware, a leader in application performance monitoring and mainframe solutions for $2.5 billion representing $10.92 per share and a 2.9x revenue multiple. An active shareholder, Elliot Management also prepared a competitive offer but ultimately Compuware found Thoma Bravo's expertise in technology and software appealing to continue their strategic focus on mainframe and application performance management. The transaction value represented a 17% market premium over the previous day trading price.

## Private Placement Trends

**Introduction**
*FIGURE 8*

| Year | Deal Volume | Total Deal Value (Disclosed deals) | Average Deal Value (Disclosed deals) | Median Deal Value (Disclosed deals) |
|------|-------------|-------------------------------------|---------------------------------------|--------------------------------------|
| **2016** | 40 | $ 602.0 | $ 16.7 | $ 6.0 |
| **2015** | 44 | $ 750.9 | $ 18.3 | $ 5.6 |
| **2014** | 47 | $ 634.1 | $ 14.1 | $ 7.5 |
| **2013** | 36 | $ 339.2 | $ 10.0 | $ 5.0 |

The overall pace of private placements in the IT Automation sector is flattening following a highly active 2014, from 47 placements in 2014 to 40 in 2016. However, the average deal size has increased to the $17-18 million range over the last two years.

*FIGURE 9*

### Deal Volume



*FIGURE 10*

### Average Deal Value (Of disclosed deals)
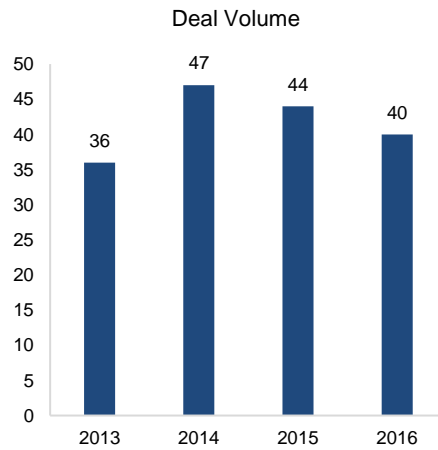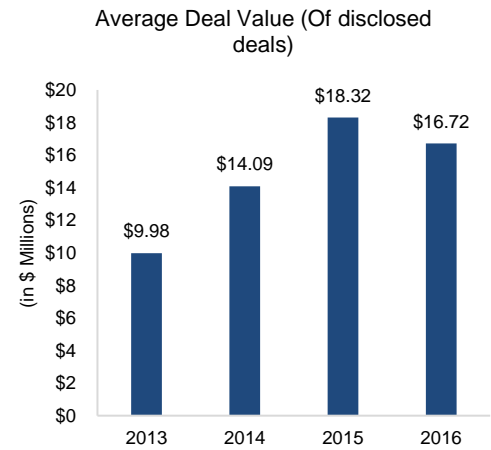


*FIGURE 11*

### Total Deal Value: Sector Breakup

Infrastructure Management companies are proving to be the most active, accounting for 40% of the deal volume and dollar value. Nutanix (NasdaqGS: NTNX) and LogicMonitor were notably a few high-profile deals in the space, generating over $130 million in financings. The Process and Incident Management sector has seen steady deal volume and relatively stable average value per transaction, down to $17.2 million in 2016 against $17.9 million in 2015. However, overall the sector's deal volume has remained relatively flat for the last two years.

Strategic and private equity investors are looking for the breakthrough which will address a new market or disrupt an old one. In this context, it is not surprising to see a huge number of early stage venture capital transactions compared to mid and late stage (which includes PE, Growth, Debt and PIPE).

**Notable Transactions**

*LogicMonitor, $130 million from Providence Equity Partners LLC – June 2016*

Disruptive IT infrastructure monitoring SaaS platform for on premise, cloud, and hybrid data center, LogicMonitor received a major investment from Providence Equity's Growth fund. LogicMonitor plans to utilize this investment for global expansion, specifically in the Asia region, as well as for continued product development.

*Cylance, $100 million from Insight Venture Partners; Draper Fisher Jurvetson; KKR & Co. L.P. (NYSE:KKR); The Blackstone Group L.P. (NYSE:BX); Khosla Ventures – June 2016*

Artificial Intelligence predictive threat management vendor Cylance raised this Series D funding at a valuation of $1 billion, on the back of a remarkable 1000% year-on-year bookings growth. After successfully showing company-wide growth from previous rounds, the Series D funding is thought to immediately target Cylance's ability to expand its market presence and will help Cylance further establish itself as the standout leader in the next-generation endpoint security market.

*Chef, $40 million from Battery Ventures; Draper Fisher Jurvetson; Millenium Technology Value Partners; Hewlett Packard Ventures – September 2015*

Chef's Series E funding valued the company at $319 million. Chef's growth has rapidly increased and with the company's expansion into international markets, such as Germany and Asia. The new funding will be used to extend the company's leadership in the DevOps market by accelerating product development and growing its operations in China, where it has seen a huge adoption rate.

*Delphix, $75 million from Lightspeed Venture Partners; Credit Suisse Asset Management, LLC; Fidelity Management & Research Company – July 2015*

Delphix Corp. raised $75 million of Series D funding from lead investor Fidelity Investments, putting the company's post-money valuation above $1 billion. The additional capital will enable Delphix to quickly scale sales, marketing and operations across global geographies and maintain its leadership in Data as a Service (DaaS). A new disruptive and transformative market, Data as a Service accelerates application releases and cloud migrations, while reducing IT costs. In addition, the investment will allow the company to aggressively invest in cloud, analytics, and data security technologies to drive more value for customers on its platform.

*Tanium, $52 million from Andreessen Horowitz LLC – March 2015*

After a 2014 record year for Tanium, the security and systems management company raised another $52 million from its early investor Andreessen Horowitz. This subsequent investment in Tanium is a follow-up to Andreessen Horowitz's initial financing of $90 million in May 2014 and constitutes one of its largest investments to-date. Tanium reported significant growth in total billing and number of clients in 2014 and the latest round will help further accelerate growth and support market demand for Tanium's security and systems management solutions.

*Nutanix (NasdaqGS:NTNX), $102 million from Battery Ventures; Lightspeed Venture Partners; Morgan Stanley Private Equity; Khosla Ventures – December 2013*

Nutanix raised $101 million in a series D round adding to a total of $172 million in funding since its debut. Nutanix has been evolving in a rapidly growing market as hardware becomes more of a commodity and the storage, compute and networking gets integrated into single devices. Nutanix is building a web-scale architecture for the masses and providing all-in-on storage boxes that contain the necessary hardware, software and network.

## Financing Trends

The concentration and value of private placement activity provides insight on two major drivers within the IT Automation sector; maturing, profitable companies and a strong foundation of new company formation. For example, in Figure 14, up to 2015, Mid Venture, defined as Series B through E funding, and Late Venture, defined as Series F funding and beyond, have grown in proportion of the overall market. However, in 2016 we see a spike in Early Venture funding, defined as growth through Series A funding, demonstrating a strong market for new market entrants. This balance of funding across all three stages shows that although the market has maturing companies looking for late stage funding, there is a strong foundation of new company formation and their marketability. Recently, companies who have received later stage financings, have been open to the possibility of an IPO. As an example, Nutanix (NasdaqGS:NTNX) received $145.0 million from a consortium of private equity in August of 2014 before formally filing their S-1 registration in December of 2015, ultimately launching their IPO in September of 2016. We'll go more in-depth on this topic in a later section.

*FIGURE 12*

| Series | Total Deal Volume | Total Deal Value | Average Deal Value |
|---|---|---|---|
| **Early Venture** | 80 | $ 361.3 | $ 4.8 |
| **Mid Venture** | 46 | $ 925.6 | $ 20.1 |
| **Late Venture** | 40 | $ 1,034.8 | $ 32.4 |

*FIGURE 13*

| Series | Total Deal Volume | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| **Early Venture** | 80 | 18 | 19 | 20 | 23 |
| **Mid Venture** | 46 | 9 | 14 | 16 | 7 |
| **Late Venture** | 41 | 9 | 14 | 8 | 10 |

*FIGURE 14*
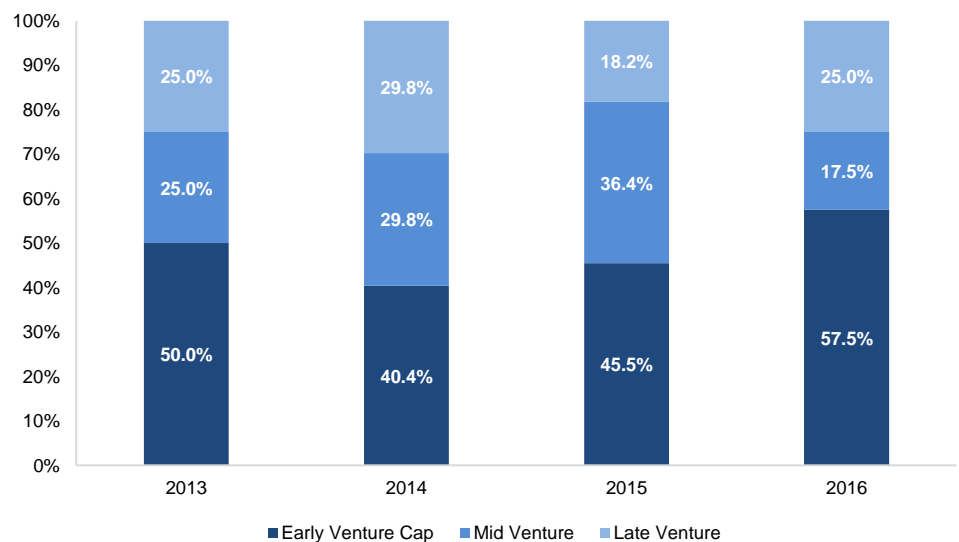
## Public Comps Valuation Trends

*FIGURE 15*



Our pure play IT Automation Index has generally performed in line with the broader S&P 500 and NASDAQ indices over the last two years however, as seen in the chart above, with a significant dip in performance in early 2016. The index has generated a 9.7% total return over the last 25 months, compared to 5.9% and 15.8% return for S&P500 and NASDAQ, respectively. While IT Automation stocks outperformed the broader index for the first 9 months of 2015, subsequent quarters experienced significant declines due to global economic uncertainty, disappointing earnings and revised forecasts. The Index fell 35% between October 2015 and February 2016, (whereas the S&P500 and NASDAQ reported 12.9% and 17.3% positive returns, respectively, during the same period). Since bottoming out in early 2016, the index has rebounded sharply and has outperformed the broader market since then.

In the following analysis, we discuss major drivers of the downturn and its strong rebound in 2016. At the end of 2016, our index saw a slight downturn, while the NASDAQ declined sharper and the S&P500 appreciated at a much higher rate. This could likely be the outcome of the presidential election, causing other sectors within the S&P500 gaining confidence and positive outlooks.

These trends can be analyzed by dividing the performance into three phases:

### Phase 1: January 2015 – October 2015

Encouraging earnings results helped IT Automation companies outperform S&P500 index while mirroring NASDAQ during the first 9 months of 2015. Index leading participants including Splunk, ServiceNow and VMWare enjoyed stable price increases on the back of strong quarterly earnings. In January, ServiceNow reported its Q4 2014 earnings and disclosed a 61% growth in revenue year over year, backed by 97% retention and 38% upsell rates. In April, Micro Focus reiterated its full-year guidance and updated investors on the positive and timely integration of The Attachmate Group (TAG). These positive reports helped drive the IT Automation index to its peak in June 23 at a 12.4% return.

On August 24th, 2015, the economic situation of China worsened and markets started to plunge, a symbolic event called "Black Monday". The event affected every market and lead to double-digit falls in one week across all three indices.

### Phase 2: October 2015 – February 2016

As China's economic condition worsened, negative interest rates in Japan, declining oil prices, and the Greece bailout began to surface, the markets reacted negatively. Following the week after Black Monday, the broader indexes recovered while the IT Automation index remained relatively flat until January 2016. While some sector stocks, such as Red Hat (21.3%) and ServiceNow (27.2%) recovered well during the period, VMWare declined by 29.8% and Splunk remained flat. In comparison, the broader index rose by 10.5% and NASDAQ by 12.4%, showing healthy recovery from the earlier plunge.

However, on the back of further global uncertainty stemming from China's continued difficulties and the oil economic outlook becoming problematic, volatility and risk aversion rose during January and February.

While the overall economic situation worsened, leading index companies like Citrix, Splunk and ServiceNow reported disappointing annual 2015 earnings due to execution issues. ServiceNow revised its outlook for 2016, barely managing analysts' expectations. IT Automation was not the only tech sector affected by this climate, as other companies such as Tableau reported similarly negative earnings and their stock performance decline as a result. This trend worried investors impacting tech indexes. Between December 30th and February 2nd, the IT Automation Index declined by 25.9% while S&P500 and NASDAQ fell by 10.2% and 15.7%, respectively.

*FIGURE 16*



VMWare and Splunk difficulties

*FIGURE 17*



Micro Focus and ServiceNow performances
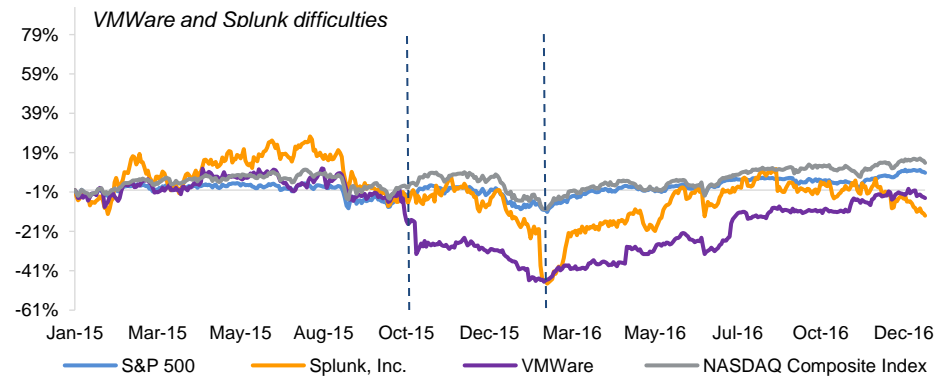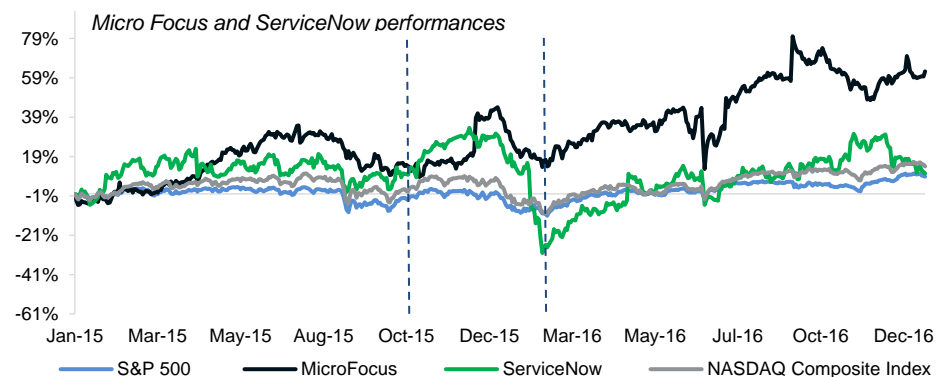
### Phase 3: February 2016 – December 2016

The IT Automation Index started a recovery in February 2016, gaining 49% in 5 months while the S&P500 and NASDAQ gained 17% and 22% respectively. The global economic situation improved as the Chinese stock market recovered and oil prices stabilized. At the same time, several companies started to beat analysts' expectations for earnings. Splunk saw its year on year revenue grow by 50%, causing a 12% rise in its stock price. Several other index companies, including ServiceNow, VMWare, MicroFocus, Atlassian, Gigamon, Netscout, Nutanix and Proofpoint, reported strong year-over-year revenue growth ranging from 6% to 30%, boosting index momentum. This momentum was interrupted only briefly following the Brexit decision in June - leading to temporary decline of 10.8% compared to -6.4% for the NASDAQ and -5.3% for the S&P500.

## Public Company Analysis

Within our index group, there is a strong correlation between growth and valuation, as demonstrated by the Figure 19. Atlassian for example, leads the sector in the ratio of Enterprise Value/LTM revenue, currently trading at over 10.4x, a reflection of its strong growth of over 35%. Furthermore, investors have started to focus more on margin expansion evident by the premium multiples for ServiceNow (9.9x) and Proofpoint (9.1x).

*FIGURE 18*
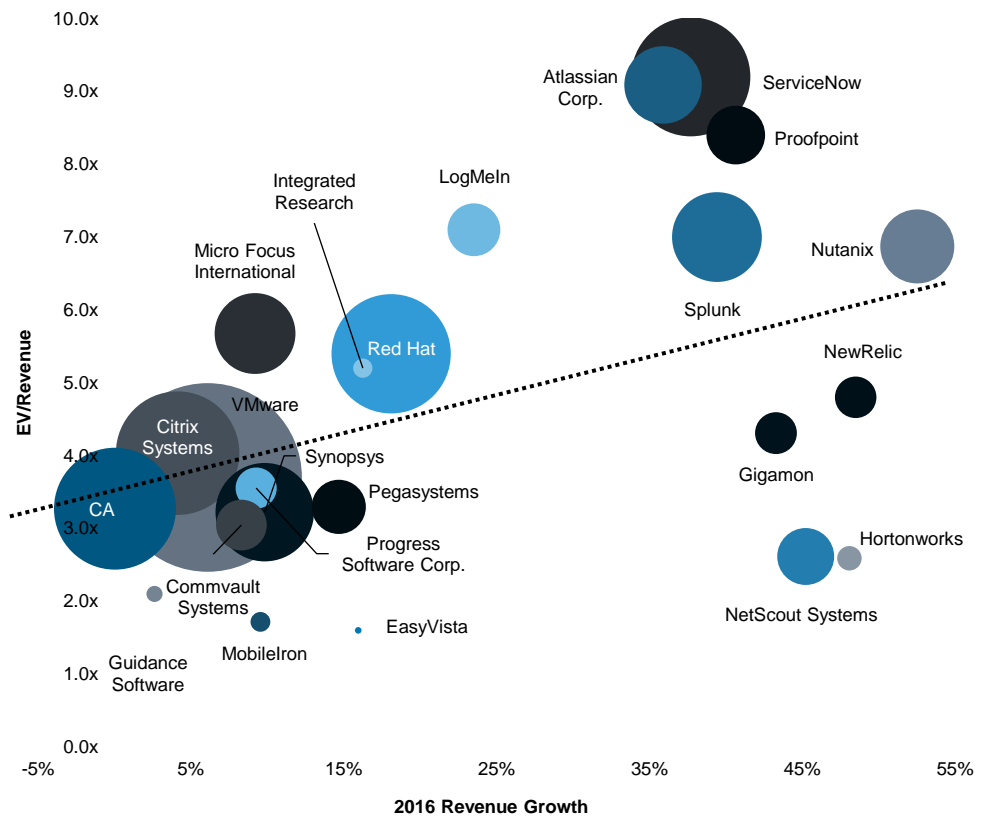


Since January 2014, six of our IT Automation index companies have gone public: MobileIron in June of 2014, Hortonworks and NewRelic in December of 2014, Atlassian in December of 2015 and Nutanix in September of 2016. The most recent, Nutanix, experienced a 131% increase during its first trading day. Nutanix was not alone, as all the other tech IPOs mentioned saw same day prices soar, 48% for New Relic and 65% for Hortonworks. Below are some of the recent IPOs within the IT Automation sector.

*FIGURE 19*

| Company | TEV / Revenue | Date of Listing | IPO Launch Price | Market Cap on Listing ($mm) | 1-Day Appreciation (Depreciation) % | Current Appreciation (Depreciation) % |
|---------|---------------|-----------------|------------------|------------------------------|--------------------------------------|----------------------------------------|
| Nutanix | 7.5x | 9/30/2016 | $ 16.0 | $ 5,079.1 | 131.3% | 79.1% |
| Atlassian Corp. | 10.4x | 12/10/2015 | $ 21.0 | $ 5,797.0 | 32.3% | 29.0% |
| Hortonworks | 2.7x | 12/12/2014 | $ 16.0 | $ 1,097.9 | 64.9% | (43.9%) |
| New Relic | 6.5x | 12/12/2014 | $ 23.0 | $ 1,565.1 | 47.8% | 38.3% |
| MobileIron | 1.8x | 6/12/2014 | $ 9.0 | $ 822.6 | 22.4% | (53.3%) |
| *Median* | *6.5x* | | *$ 16.0* | *$ 1,565.1* | *47.8%* | *29.0%* |

| | Market Cap | Enterprise Value | EV/Revenue | | | Revenue Growth | | EV/EBITDA | | | EBITDA Growth | | EBITDA Margin | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LTM | 2016 | 2017 | 2016 | 2017 | LTM | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 |
| **Application Development** | | | | | | | | | | | | | | |
| Red Hat, Inc. | $13,946 | $13,391 | 5.8x | 5.7x | 5.1x | 18.1% | 12.7% | 33.6x | 22.8x | 19.3x | 61.0% | 18.1% | 25.2% | 26.4% |
| Citrix Systems, Inc. | $11,900 | $11,564 | 3.4x | 3.4x | 4.0x | 4.1% | -15.3% | 10.9x | 9.7x | 11.5x | 39.8% | -15.1% | 34.8% | 34.9% |
| Synopsys, Inc. | $9,782 | $8,870 | 3.7x | 3.6x | 3.4x | 9.8% | 4.5% | 19.9x | 13.5x | 12.4x | 64.4% | 8.8% | 26.5% | 27.5% |
| Atlassian Corporation Plc | $6,214 | $5,418 | 10.2x | 10.3x | 7.7x | 35.9% | 32.9% | NM | 48.8x | 37.9x | 551.0% | 28.9% | 21.1% | 20.4% |
| Micro Focus International plc | $6,447 | $8,092 | 6.1x | 6.0x | 4.9x | 9.4% | 22.1% | 16.2x | 12.7x | 10.9x | 41.1% | 16.9% | 46.9% | 44.9% |
| Pegasystems, Inc. | $2,939 | $2,809 | 3.7x | 3.6x | 3.2x | 14.7% | 11.5% | 31.5x | 22.1x | 19.1x | 44.5% | 16.1% | 16.2% | 16.9% |
| Progress Software Corporation | $1,360 | $1,245 | 3.1x | 3.0x | 3.2x | 9.3% | -5.2% | 11.5x | 8.6x | 9.0x | 98.7% | -4.2% | 35.0% | 35.4% |
| **Average** | | | **5.1x** | **5.1x** | **4.5x** | **14.5%** | **9.0%** | **20.6x** | **19.8x** | **17.1x** | **128.6%** | **9.9%** | **29.4%** | **29.5%** |
| **Application and Network Management** | | | | | | | | | | | | | | |
| VMware, Inc. | $36,494 | $30,009 | 4.2x | 4.0x | 4.0x | 13.9% | 0.2% | 16.0x | 10.7x | 10.7x | 58.4% | 0.0% | 37.2% | 37.1% |
| CA, Inc. | $13,304 | $12,565 | 3.1x | 3.1x | 3.1x | -0.1% | -0.8% | 9.8x | 7.8x | 8.2x | 29.6% | -4.3% | 39.9% | 38.5% |
| NetScout Systems, Inc. | $3,226 | $3,167 | 2.8x | 2.8x | 2.6x | 45.2% | 7.9% | 28.1x | 10.7x | 9.5x | 112.0% | 12.4% | 25.8% | 26.9% |
| Commvault Systems, Inc. | $2,262 | $1,825 | 2.9x | 2.9x | 2.7x | 8.3% | 5.6% | 106.0x | 20.4x | 20.5x | 964.2% | -0.3% | 14.1% | 13.3% |
| Gigamon Inc. | $1,134 | $876 | 2.8x | 2.8x | 2.6x | 39.9% | 10.4% | 23.5x | 11.6x | 13.4x | 340.9% | -13.9% | 24.4% | 19.0% |
| Hortonworks, Inc. | $611 | $528 | 3.1x | 2.9x | 2.2x | 48.0% | 30.0% | NM | NM | NM | 64.4% | 92.9% | -34.4% | -1.9% |
| Nutanix, Inc. | $4,413 | $4,066 | 7.8x | 7.0x | 4.7x | 77.8% | 48.9% | NM | NM | NM | -37.4% | 26.9% | -27.6% | -13.6% |
| MobileIron, Inc. | $387 | $307 | 1.9x | 1.9x | 1.7x | 9.6% | 11.2% | NM | NM | NM | 59.1% | 48.3% | -17.3% | -8.0% |
| Integrated Research Limited | $382 | $375 | 6.0x | 5.8x | 4.7x | 16.2% | 25.1% | 24.0x | 15.1x | 12.1x | 89.2% | 24.6% | 38.6% | 38.5% |
| **Average** | | | **3.6x** | **3.4x** | **2.9x** | **30.3%** | **14.2%** | **36.7x** | **12.2x** | **12.4x** | **198.9%** | **20.2%** | **7.8%** | **13.9%** |
| **Process and Incident Management** | | | | | | | | | | | | | | |
| ServiceNow, Inc. | $15,024 | $14,632 | 10.5x | 10.6x | 8.0x | 37.7% | 32.8% | NM | 56.1x | 36.6x | 346.0% | 53.2% | 18.8% | 21.7% |
| Proofpoint, Inc. | $3,521 | $3,491 | 9.3x | 9.4x | 7.1x | 40.7% | 31.8% | NM | 97.3x | 65.8x | 164.6% | 47.9% | 9.6% | 10.8% |
| LogMeIn, Inc. | $5,391 | $5,211 | 16.1x | 15.5x | 13.5x | 23.5% | 15.2% | 130.4x | 58.4x | 50.8x | 157.0% | 15.1% | 26.6% | 26.6% |
| Guidance Software, Inc. | $223 | $215 | 2.0x | 2.0x | 1.9x | 2.6% | 4.7% | NM | 216.6x | 18.5x | 113.0% | 1070.2% | 0.9% | 10.1% |
| Easyvista S.A. | $48 | $48 | 2.0x | 1.9x | 1.7x | 15.9% | 10.2% | NM | NM | 158.4x | 72.9% | 142.9% | -2.8% | 1.1% |
| **Average** | | | **8.0x** | **7.9x** | **6.4x** | **24.1%** | **18.9%** | **130.4x** | **107.1x** | **66.0x** | **170.7%** | **265.8%** | **10.6%** | **14.1%** |
| **Analytics** | | | | | | | | | | | | | | |
| Splunk Inc. | $8,165 | $7,226 | 8.4x | 7.8x | 6.1x | 39.4% | 27.0% | NM | 89.3x | 57.3x | 130.3% | 55.9% | 8.7% | 10.7% |
| New Relic, Inc. | $1,927 | $1,730 | 7.8x | 7.2x | 5.6x | 48.6% | 28.6% | NM | NM | 460.6x | 67.2% | 121.7% | -7.2% | 1.2% |
| **Average** | | | **8.1x** | **7.5x** | **5.8x** | **44.0%** | **27.8%** | | **89.3x** | **258.9x** | **98.7%** | **88.8%** | **0.7%** | **5.9%** |

## Infrastructure Performance Management

| | | |
|---|---|---|
| **Absolute Performance** | Broomfield, CO, USA | |
| absolute-performance.com | Scott Shafer, CEO | |

Proactive Infrastructure Solutions, Application Support and Monitoring Services

| | | |
|---|---|---|
| **Apica** | Stockholm, Sweden | |
| apicasystems.com | Sven Hammar, CEO | |

Testing and Monitoring Platform

| | | |
|---|---|---|
| **AppEnsure** | San Jose, CA, USA | |
| appensure.com | Colin L.M Macnab, CEO | |

Application Operational Intelligence & Automation

| | | |
|---|---|---|
| **AppNeta** | Boston, MA, USA | |
| appneta.com | Matt Stevens, CEO | |

Cross-Functional Application Performance Monitoring

| | | |
|---|---|---|
| **Appnomic** | Karnataka, India | |
| appnomic.com | D Padmanabhan, CEO | |

Remote Infrastructure Management for IT Process Automation

| | | |
|---|---|---|
| **Apteligent** | San Francisco, CA, USA | |
| apteligent.com | Dave Robbins, CEO | |

Application Performance Management and Monitoring

| | | |
|---|---|---|
| **Arcturus Tech** | Leesburg, VA, USA | |
| acturustech.com | Deepak Batra, CEO | |

Proactive Application Management Software

| | | |
|---|---|---|
| **Aternity** | Westborough, MA, USA | |
| aternity.com | Trevor Matz, CEO | |

Multi-Device self-Monitoring Platform

| | | |
|---|---|---|
| **Catchpoint** | New York, NY, USA | |
| catchpoint.com | Mehdi Daoudi, CEO | |

Digital Performance Analytics

| | | |
|---|---|---|
| **Cedexis** | Portland, OR, USA | |
| cedexis.com | Scott Grout, CEO | |

Cloud-based Web Traffic Optimization

| | | |
|---|---|---|
| **Centerity** | Raanana, Israel | |
| centerity.com | Roi Keren, CEO | |

Database, Application Network and Infrastructure Performance Monitoring

| | | |
|---|---|---|
| **Centina Systems** | Plano, TX, USA | |
| centinasystems.com | Anand Gonuguntla, CEO | |

Service Quality Management for Communications Services Providers

| | | |
|---|---|---|
| **CloudLinux** | Arcadia, CA, USA | |
| cloudlinux.com | Igor Seletskiy, CEO | |

Operating System optimization for Hosting Service Providers

| | | |
|---|---|---|
| **Correlsense** | Cambridge, MA, USA | |
| correlsense.com | Lanir Shacham, CEO | |

Enterprise Application Performance Management

| | | |
|---|---|---|
| **Corvil** | Dublin, Ireland | |
| corvil.com | Donal Byrne, CEO | |

Big Data Analytics for Machine Communication

| | | |
|---|---|---|
| **Efficient IP** | Colombes, France | |
| efficientip.com | David Williamson, CEO | |

Management Framework and Network Configurations Software

| | | |
|---|---|---|
| eG Innovation | Iselin, NJ, USA | |
| eginnovation.com | Srinivas Ramanathan, CEO | |

Automation in Performance Management

| | | |
|---|---|---|
| Entuity | Malborough, MA, USA | |
| entuity.com | Ira Gerard, CFO and Interim CEO | |

Performance Management and Root Cause Analysis

| | | |
|---|---|---|
| Genie Networks | Taipei, Taiwan | |
| genie-networks.com | Patricia H. Roberts, CEO | |

Network Behavior Analysis and Network Management

| | | |
|---|---|---|
| Groundwork | Grand Rapids, MI, USA | |
| gwos.com | Dave lilly, CEO | |

Cloud Unified Network Monitoring and Operations Analytics

| | | |
|---|---|---|
| Heroix | Braintree, MA, USA | |
| heroix.com | Howard Reisman, CEO | |

Multiplatform Application Performance and Network Monitoring

| | | |
|---|---|---|
| Inetco Systems | Burnaby, BC, Canada | |
| Inetco.com | Bijan Sanii, CEO | |

Real-Time Transaction Monitoring and Analytics Software

| | | |
|---|---|---|
| InfoSim | Austin, TX, USA | |
| infosim.net | Dr Stefan Koehler, CEO | |

Automated Service Fulfillment and Service Assurance Solutions

| | | |
|---|---|---|
| Ipswitch | Lexington, MA, USA | |
| ipswitch.com | Joe Krivickas, CEO | |

Unified Infrastructure and Application Monitoring Software

| | | |
|---|---|---|
| ITRS | London, UK | |
| itrsgroup.com | Guy Warren, CEO | |

Real-Time Big Data Analytics for the Finance Industry

| | | |
|---|---|---|
| JenniferSoft | Burlingame, CA, USA | |
| jennifersoft.com | Andy lee, CEO | |

System Performance Monitoring

| | | |
|---|---|---|
| Kemp Tech. | New York, NY, USA | |
| kemptechnologies.com | Ray Downes, CEo | |

Web Infrastructure Optimization and Network Management

| | | |
|---|---|---|
| Knoa | New York, NY, USA | |
| knoa.com | Brian Berns, CEO | |

Enterprise Platform Optimization

| | | |
|---|---|---|
| LogicMonitor | Santa Barbara, CA, USA | |
| logicmonitor.com | Kevin McGibben, CEO | |

Automated IT Performance Monitoring Platform

| | | |
|---|---|---|
| Monolith Software | Frisco, TX, USA | |
| assurenow.net | Bill Cannon, CEO | |

Infrastructure Management and IT Tools Consolidation

| | | |
|---|---|---|
| Nastel Tech | Melville, NY, USA | |
| nastel.com | David Mavashev, CEO | |

Cloud Application Performance Management

| | | |
|---|---|---|
| NetBrain Tech. | Burlington, MA, USA | |
| netbraintech.com | Lingping Gao, CEO | |

Map-Driven Network Automation Solution

| | | |
|---|---|---|
| NetDialog | Utrecht, Netherlands | |
| netdialog-int.com | Holaf Hasker, CEO | |

Application Performance Monitoring and Networked Application Visibility

| | | |
|---|---|---|
| Netuitive | Reston, VA, USA | |
| netuitive.com | Bob Farzami, CEO | |

IT Performance Automatization and Monitoring Software

| | | |
|---|---|---|
| Niksun | Princeton, NJ, USA | |
| niksun.com | Dr. Parag Pruthi, CEO | |
| Real-Time and Cyber Security and Network Monitoring Solutions | | |

| | | |
|---|---|---|
| Optier | New York, NY, USA | |
| optier.com | Mark Thompson, CEO | |
| Real-Time Analytics Solution and Application Performance Management | | |

| | | |
|---|---|---|
| Paessler | Nuremberg, Germany | |
| paessler.com | Dirk Paessler, CEO | |
| Easy-to-Use IT Monitoring Software | | |

| | | |
|---|---|---|
| Paremus | London, UK | |
| paremus.com | Richard Nicholson, CEO | |
| OSGI-Based Private-Cloud Runtime | | |

| | | |
|---|---|---|
| PathSolutions | Santa Clara, CA, USA | |
| pathsolutions.com | Mohammed Kateeb, CEO | |
| Network Performance Monitoring Software | | |

| | | |
|---|---|---|
| Procera Networks | Fremont, CA, USA | |
| proceranetworks.com | Lyndon Cantor, CEO | |
| Network Traffic Management and Monitoring | | |

| | | |
|---|---|---|
| Savvius | Walnut Creek, CA, USA | |
| savvius.com | Larry Zulch, CEO | |
| Network Security Monitoring and Application Performance | | |

| | | |
|---|---|---|
| ScienceLogic | Reston, VA, USA | |
| sciencelogic.com | David Link, CEO | |
| Hybrid IT Monitoring Platform | | |

| | | |
|---|---|---|
| ServicePilot | Miami, FL, USA | |
| servicepilot.com | Bertrand Mahe, CEO | |
| All-in-One Network performance Application Software | | |

| | | |
|---|---|---|
| SevOne | Newark, NE, USA | |
| sevone.com | Jack Sweeney, CEO | |
| Digital Infrastructure Management Platform | | |

| | | |
|---|---|---|
| Solana Networks | Ottawa, Ontario, Canada | |
| solananetworks.com | Nabil Seddigh, President | |
| Software Products and Solutions for IP and Switched Networks | | |

| | | |
|---|---|---|
| Statseeker | Dan Diego, CA, USA | |
| statseeker.com | Frank Williams, CEO | |
| Seamless Network Performance Monitoring Technology | | |

| | | |
|---|---|---|
| Sumo Logic | Redwood City, CA, USA | |
| sumologic.com | Ramin Sayar, CEO | |
| Real-Time Intelligence and Machine Data Analytics | | |

| | | |
|---|---|---|
| ThousandEyes | San Francisco, CA, USA | |
| thousandeyes.com | Mohit Lad, CEO | |
| Network Intelligence Platform | | |

| | | |
|---|---|---|
| Turbonomic | Boston, MA, USA | |
| turbonomic.com | Benjamin Nye, CEO | |
| Automated Decision Engine and Platform | | |

| | | |
|---|---|---|
| Uplogix | Austin, TX, USA | |
| uplogix.com | Lisa Frankovitch, CEO | |
| Application Performance Monitoring and Network Application Visibility | | |

| | | |
|---|---|---|
| Veeam | Columbus, OH, USA | |
| veeam.com | William Largent, CEO | |
| IT Management Support Software | | |

| | | |
|---|---|---|
| Virtual Instruments | San Jose, CA, USA | |
| virtualinstruments.com | Philippe Vincent, CEO | |
| Application-Centric Infrastructure Performance Management | | |

| Zabbix | Riga, Latvia | Zenoss | Austin, TX, USA |
|---|---|---|---|
| zabbix.com | Alexei Vladishev, CEO | zenoss.com | Greg Stock, CEO |
| Open-source Monitoring Solution | | Hybrid IT Monitoring and Risk Insights | |

## IT Asset Management & IT Service Management (ITAM/ITSM)

| AppZero | Ottawa, ON, Canada | Aranda Software | Aventura, FL, USA |
|---|---|---|---|
| appzero.com | Greg O'Connor, CEO | arandasoft.com | Alberto Lederman, President |
| Cloud Onboarding and Data Center Consolidation | | IT Infrastructure Management Software | |

| Aria Networks | Wiltshire, UK | Auconet | San Francisco, CA, USA |
|---|---|---|---|
| aria-networks.com | Steve Newton, CEO | auconet.com | Frank Winter, CEO |
| Optimized Software-Controlled Networks | | Business Infrastructure Control Solutions | |

| Automation Anywhere | San Jose, CA, USA | Axios Systems | Edinburg, UK |
|---|---|---|---|
| automationanywhere.com | Mihir Shukla, CEO | axiossystems.com | Tasos Symeonides, CEO |
| Robotic Process Automation Technology | | IT Service Management Solutions | |

| BDNA | Mountain View, CA, USA | BluePrism | Le Willows, UK |
|---|---|---|---|
| bdna.com | Constantin Delivanis, CEO | blueprism.com | Alastair Bathgate, CEO |
| Software and Hardware Content Repository | | Robotic Process Automation Software | |

| CF Engine | Palo Alto, CA, USA | Cherwell | Colorado Springs, CO, USA |
|---|---|---|---|
| cfengine.com | Adrian Hall, CEO | cherwell.com | Craig Harper, CEO |
| IT Cloud Automation | | IT Asset Management and IT Service Management | |

| CIRBA | Richmond Hill, Canada | Cloudgenix | San Jose, CA, USA |
|---|---|---|---|
| cirba.com | Gerry Smith, CEO | Cloudgenix.com | Kumar Ramachandran, CEO |
| Infrastructure Control for Software | | Developer of software-defined wide area network technologies | |

| DF Labs | Milan, Italy | EasyVista | New York, NY, USA |
|---|---|---|---|
| dflabs.com | Dario Forte, CEO | easyvista.com | Sylvain Gauthier, CEO |
| Advanced Data Breach, Incident and Investigation Management Platform | | Service Automatization and Service Management Platform | |

| Efecte | Espoo, Finland | Embotics | Ottawa, Ontario, Canada |
|---|---|---|---|
| efecte.com | Sakari Suhonen, CEO | embotics.com | Michael L. Torto, CEO |
| Enterprise Services, Self-Service and Identity Management Solutions | | IT Organizations Cloud Automation | |

| | | | |
|---|---|---|---|
| **EXILANT** | Exilant Tech. | 🏠 | Karnataka, India |
| | exilant.com | 👤 | Vasudeva Rao |

Application, Infrastructure and Product Lifecycle Management

| | | | |
|---|---|---|---|
| **FLEXERA** | Flexera Software | 🏠 | Itasca, IL, USA |
| | flexerasoftware.com | 👤 | Jim Rayan, CEO |

Software Licensing, Compliance, Security and Installation Solutions

| | | | |
|---|---|---|---|
| **freshservice** | Freshservice | 🏠 | San Bruno, CA, USA |
| | freshservice.com | 👤 | Firish Mathrubootham, CEO |

Cloud-based IT Service Desk and Service Management Solution

| | | | |
|---|---|---|---|
| **GFI** | GFI Software | 🏠 | Durham, NC, USA |
| | gfi.com | 👤 | Scott Brighton, CEO |

Business Network Management and Security

| | | | |
|---|---|---|---|
| **HEATsoftware** | Heat Software | 🏠 | Milpitas, CA, USA |
| | heatsoftware.com | 👤 | John Ferron, CEO |

Cloud Service Management and unified Endpoint Management Software Solutions

| | | | |
|---|---|---|---|
| **HORNBILL** | Hornbill | 🏠 | Ruislip, UK |
| | hornbill.com | 👤 | Gerry Sweeney, CEO |

Cloud-Based Business Collaboration Technology

| | | | |
|---|---|---|---|
| **INCONTINUUM** | inContinuum | 🏠 | Amsterdam, Netherlands |
| | incontinuum.com | 👤 | Michael George, CEO |

End-to-End Automation of Cloud Managed Services

| | | | |
|---|---|---|---|
| **Interlink Software** | Interlink Software | 🏠 | Cheshire, UK |
| | interlinksoftware.com | 👤 | Lloyd Hopkins, CEO |

IT Service Management and Visualization, IT Operations Management

| | | | |
|---|---|---|---|
| **ITinvolve** | ITInvolve | 🏠 | Houston, TX, USA |
| | itinvolve.com | 👤 | Logan Wray, CEO |

Cross-Team Workplaces for Development and Infrastructure Projects

| | | | |
|---|---|---|---|
| **Kaseya** | Kaseya | 🏠 | Waltham, MA, USA |
| | kaseya.com | 👤 | Fred Voccola, CEO |

IT Management Solutions for Managed Service Providers

| | | | |
|---|---|---|---|
| **leanIX** | LeanIX | 🏠 | Germany |
| | Leanix.net | 👤 | Andre Christ, CEO |

Information hub for IT Architecture

| | | | |
|---|---|---|---|
| **ManageEngine** | ManageEngine | 🏠 | Pleasanton, CA, USA |
| | manageengine.com | 👤 | Sridhar Vembu, CEO |

IT Management Support

| | | | |
|---|---|---|---|
| **MATRIX42** | Matrix42 | 🏠 | Frankfurt, Germany |
| | matrix42.com | 👤 | Oliver Bendig, CEO |

Workspace Management Software

| | | | |
|---|---|---|---|
| **MOOG** | Moogsoft | 🏠 | San Francisco, CA, USA |
| | moogsoft.com | 👤 | Phil Tee, CEO |

IT Incident Management Solutions

| | | | |
|---|---|---|---|
| **netwrix** | Netwrix | 🏠 | Irvine, CA, USA |
| | netwrix.com | 👤 | Michael Fimin, CEO |

Governance Platform for On-Premises, Hybrid and Cloud IT Environments

| | | | |
|---|---|---|---|
| **NILEX** | Nilex AB | 🏠 | Helsingborg, Sweden |
| | nilex.se | 👤 | Kjell-Ake Nilsson, CEO |

Web-Based Solution for Service Management

| | | | |
|---|---|---|---|
| **OTRS** Open Technology Real Services | OTRS | 🏠 | Oberursel, Germany |
| | otrs.com | 👤 | André Mindermann, CEO |

Creator and source code owner of OTRS

| | | | |
|---|---|---|---|
| **Parallels** Optimized Computing | Parallels | 🏠 | Seattle, WA, USA |
| | parallels.com | 👤 | Birger Steen, CEO |

Cross-Platform IT Solutions

| | Proactivanet | 🏠 Asturias, Spain | | Provance Tech. | 🏠 Gatineau, QC, Canada |
|---|---|---|---|---|---|
| | proactivanet.com | 👤 Manuel Vazquez, CM | | provance.com | 👤 Gilles Lalonde, CEO |
| IT Service, Equipment and Incident Management Software | | | Process Management for Microsoft System Center | | |

| | Resolve Systems | 🏠 Irvine, CA, USA | | Tallac | 🏠 Rocklin, CA, USA |
|---|---|---|---|---|---|
| | resolvesystems.com | 👤 Martin Savitt, CEO | | Tallac.com | 👤 William Johnson, President |
| Enterprise Security and IT Incident Response Automation Platform | | | Device Cloud Management | | |

## DevOps

| | Agile Craft | 🏠 Austin, TX, USA | | Applitools | 🏠 San Francisco, CA, USA |
|---|---|---|---|---|---|
| | agilecraft.com | 👤 Steve Elliott, CEO | | applitools.com | 👤 Gil Sever, CEO |
| All-in-One Agile Software Development Platform | | | Visual Testing Solutions | | |

| | Autonomic | 🏠 Danville, CA, USA | | BlazeMeter | 🏠 Palo Alto, CA, USA |
|---|---|---|---|---|---|
| | autonomic-software.com | 👤 Tony Gigliotti, CEO | | blazemeter.com | 👤 Alon Girmonsky, CEO |
| End-Point and Security Management Solutions | | | Open-Source based Performance Testing Platform | | |

| | BonitaSoft | 🏠 Grenoble, France | | Chef Software | 🏠 Seattle, WA, USA |
|---|---|---|---|---|---|
| | Bonitasoft.com | 👤 Miguel Valdes-Faura, CEO | | chef.io | 👤 Barry Crist, CEO |
| Process-based application development | | | IT Infrastructure and Application Automation | | |

| | CircleCI | 🏠 San Francisco, CA, USA | | Circonus | 🏠 Fulton, MD, USA |
|---|---|---|---|---|---|
| | Circleci.com | 👤 Jim Rose, CEO | | circonus.com | 👤 Theo Schlossnagle, CEO |
| Build, Test and Deploy Process Automatization | | | Monitoring and Analytics Platform | | |

| | Clarive | 🏠 Madrid, Spain | | Cloud66 | 🏠 London, UK |
|---|---|---|---|---|---|
| | clarive.com | 👤 Rodrigo Gonzales, CEO | | cloud66.com | 👤 Khash Sajadi, CEO |
| DevOps and Application Lifecycle Management | | | End-to-End Infrastructure Management Service | | |

| | Cloudbees | 🏠 San Jose, CA, USA | | Collabnet | 🏠 San Francisco, CA, USA |
|---|---|---|---|---|---|
| | cloudbees.com | 👤 Sacha Labourey, CEO | | collab.net | 👤 Flint Brenton, CEO |
| Continuous Delivery Solutions | | | Application Lifecycle Management and Development Tools | | |

| | DBMaestro | 🏠 Houston, TX, USA | | Electric Cloud | 🏠 San Jose, CA, USA |
|---|---|---|---|---|---|
| | dbmaestro.com | 👤 Yariv Tabac, CEO | | electric-cloud.com | 👤 Steve Brodie, CEO |
| DevOps for Database Solutions | | | Accelerated and Automated Software Delivery | | |

| | | |
|---|---|---|
| Experitest | Netanya, Israel | |
| experitest.com | Tal Barmeir, CEO | |

Quality Assurance Tools for Mobile DevOps

| | | |
|---|---|---|
| Flexera Software | Itasca, IL, USA | |
| flexerasoftware.com | Jim Rayan, CEO | |

Software Licensing, Compliance, Security and Installation Solutions

| | | |
|---|---|---|
| FrogLogic | Hamburg, Germany | |
| froglogic.com | Reginald Stadlbauer, CEO | |

Automated Testing Tools

| | | |
|---|---|---|
| Gatling | Cachan, France | |
| gatling.io | Stephane Landelle, CEO | |

Load Testing Tool

| | | |
|---|---|---|
| Ipswitch | Lexington, MA, USA | |
| ipswitch.com | Joe Krivickas, CEO | |

Unified Infrastructure and Application Monitoring Software

| | | |
|---|---|---|
| JFrog | Netanya, Israel | |
| jfrog.com | Shlomi Ben Haim, CEO | |

Universal Distribution Platform

| | | |
|---|---|---|
| Kovair | San Ramon, CA, USA | |
| kovair.com | Bipin Shah, CEO | |

Integrated Application Lifecycle Management

| | | |
|---|---|---|
| LeftShift | Gilbert, AZ, USA | |
| leftshift.com | David Silverstone, CEO | |

Automation of IT Delivery Solutions

| | | |
|---|---|---|
| Mendix | Boston, MA, USA | |
| mendix.com | Derek Roos, CEO | |

Application Development Platform

| | | |
|---|---|---|
| Mobile Labs | Atlanta, GA, USA | |
| mobilelabsinc.com | Don Addington, CEO | |

Enterprise-Grade Testing Tools for Mobile Apps

| | | |
|---|---|---|
| Neotys | Gemenos, France | |
| neotys.com | Thibaud Bussiere, President | |

Continuous Performance Validation for Web and Mobile Applications

| | | |
|---|---|---|
| Parasoft | Monrovia, CA, USA | |
| parasoft.com | Elizabeth Kolawa, CEO | |

Continuous Testing and Service Virtualization

| | | |
|---|---|---|
| Perforce | Alameda, CA, USA | |
| perforce.com | Janet Dryer, CEO | |

Software Version Management and Source Code Control

| | | |
|---|---|---|
| Ranorex | Graz, Autria | |
| ranorex.com | Jeno Herget, CEO | |

Software Testing Solutions for Companies and Educational Institutions

| | | |
|---|---|---|
| Sahi Pro | Bangalore, India | |
| sahipro.com | V. Narayan Raman, CEO | |

Web Automation Testing Tool

| | | |
|---|---|---|
| Shippable | Seattle, WA, USA | |
| shippable.com | Avi Cavale, CEO | |

Continuous Integration/Deployment to GitHub and BitBucket

| | | |
|---|---|---|
| Skytap | Seattle, WA, USA | |
| skytap.com | Thor Culverhouse, CEO | |

Cloud and DevOps Strategies for Application Modernization

| | | |
|---|---|---|
| Tasktop Tech. | Vancouver, BC, Canada | |
| tasktop.com | Mik Kersten, CEO | |

Application lifecycle Management Integration Technology

| | TestPlant | London, UK |
|---|---|---|
| | testplant.com | George Mackintosh, CEO |

Software Design, Development, Test and Management

| | Thoughtworks | Chicago, IL, USA |
|---|---|---|
| | Thoughtworks.com | Roy Singham, CEO |

Software Testing and Continuous Delivery

| | T-Plan | Shoreham-by-sea, UK |
|---|---|---|
| | t-plan.com | Charlie Wheeler, Director |

Test Management Tools

| | Tricentis | Vienna, Austria |
|---|---|---|
| | tricentis.com | Sandeep Johri, CEO |

Agile Market Software Testing Tools for Enterprise

| | Turnkey Solutions | Lakewood, CO, USA |
|---|---|---|
| | turnkeysolutions.com | Daniel Gannon, CEO |

Data-Driven Scriptless Test Automation Platform

| | Userzoom | San Jose, CA, USA |
|---|---|---|
| | userzoom.com | Alfonso de la Nuez, CEO |

Online Web-Based Solutions

| | VersionOne | Alpharetta, GA, USA |
|---|---|---|
| | versionone.com | Robert Holler, CEO |

Scaling Management for Enterprises

| | Worksoft | Addison, TX, USA |
|---|---|---|
| | worksoft.com | Jim Kent, CEO |

Intelligent Automation Software

| | Xebia Labs | Boston, MA, USA |
|---|---|---|
| | xebialabs.com | Derek Langone, CEO |

Continuous Delivery and DevOps Software

| | Xoreax | Tel-Aviv, Israel |
|---|---|---|
| | incredibuild.com | Eyal Maor, CEO |

Software Acceleration Technology

| | ZeroTurnaround | Tartu, Estonia |
|---|---|---|
| | zeroturnaround.com | Jevgeni Kabanov, CEO |

Development and Operations Management with JAVA

## Analytics

| | Blazent | Livonia, MI, USA |
|---|---|---|
| | blazent.com | Charlie Piper, CEO |

IT Data Intelligence and Analytics

| | Nexthink | Vaud, Switzerland |
|---|---|---|
| | nexthink.com | Pedro Bados, CEO |

Endpoint and User IT Analytics for Security, ISM and Transformation

| | Sumerian | Edinburg, UK |
|---|---|---|
| | sumerian.com | David Stevens, CEO |

IT Operational Analytics

| | TeamQuest | Clearlake, IA, USA |
|---|---|---|
| | teamquest.com | Paul Hesser, CEO |

Service Quality Management for Communication Services Providers

**Drake Star Partners is a global investment banking firm serving the technology, media and communications sectors (TMC) with offices in New York, London, Paris, Munich, Los Angeles, Berlin, Amsterdam, Geneva and Tokyo. The firm focuses on M&A and corporate finance for its clients worldwide.**

**New York**
950 Third Avenue, 20th Floor
New York NY 10022
Tel: +1 212 508 7100
Fax: +1 212 508 7102

**London**
42 Brook Street
London W1K 5DB
Tel: +44 20 3178 7063
Fax: +44 20 7900 2329

**Paris**
25 Boulevard Malesherbes
75008 Paris
Tel: +33 1 58 18 39 00
Fax: +33 1 53 43 09 76

**Munich**
Theatinerstraße 42
80333 Munich
Tel: +49 89 14 9026 525
Fax: +49 89 1490 265 13

**Los Angeles**
1100 Glendon Ave., Suite 905
Los Angeles CA 90024
Tel: +1 310 696 4001
Fax: +1 310 696 4007

**Berlin**
Friedrichstraße 171
10117 Berlin
Tel: +49 30 30 366 2856

**Amsterdam**
Museumplein 5C
1071 DJ Amsterdam
Tel: +31 20 792 0006

**Geneva**
Rue du Cendrier 17
1202 Geneva
Tel: +41 22 518 07 79
Fax: +41 22 839 72 49

**Tokyo**
Yanaka 3-13-18
Taito-ku, Tokyo 110-0001
Tel: +81 80 3450 1217

**For Information:**

James Turino
Managing Partner, Drake Star Partners
james.turino@drakestar.com
212.508.7108

www.drakestar.com