

## Thematic Profile: Cloud Monitoring Applications

**The Industry:** Cloud Monitoring – Monitoring and Analytics for Development, Operations, and Business in the Cloud Era. Sub-Segments: Application Performance Monitoring (APM), Log Management Software, and Infrastructure Monitoring.

**The Players:** *Application Performance & Infrastructure Monitoring:* Datadog (DDOG), DynaTrace (DT), New Relic (NEWR), AppDynamics (CSCO), SolarWinds (SWI), Broadcom (AVGO); *Log Management:* Splunk (SPLK), Elastic N.V (ESTC)., Rapid-7 (RPD), Nagios, Stackify, SmartBear. Cloud providers like Google (GOOG), Amazon Web (AMZN) and Microsoft (MSFT) also compete with native solutions.



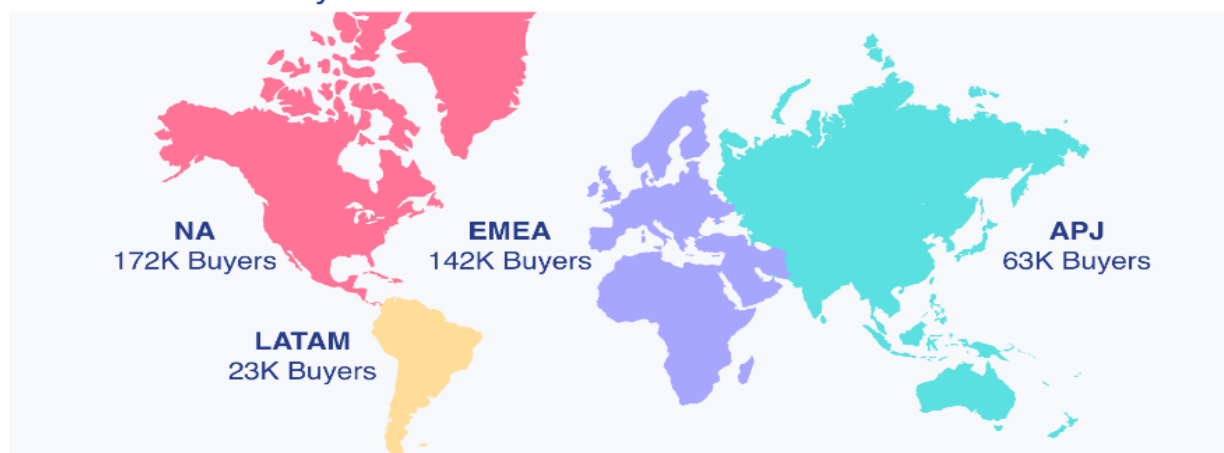
**The Market:** IT Operations Management (ITOM) estimated at \$37B in 2023– There has been consolidation in the industry with Cisco acquiring AppDynamics, Splunk acquiring SignalFx and Omnitron, and New Relic acquiring IOpipe and SignifAi. The market is shifting from on-premise deployment in large organizations to on-cloud, due to the changing application usage, increasing awareness among smaller enterprises, and the demand for cost-effective systems.



## Application Performance Monitoring (APM)

Total Addressable Market 2020

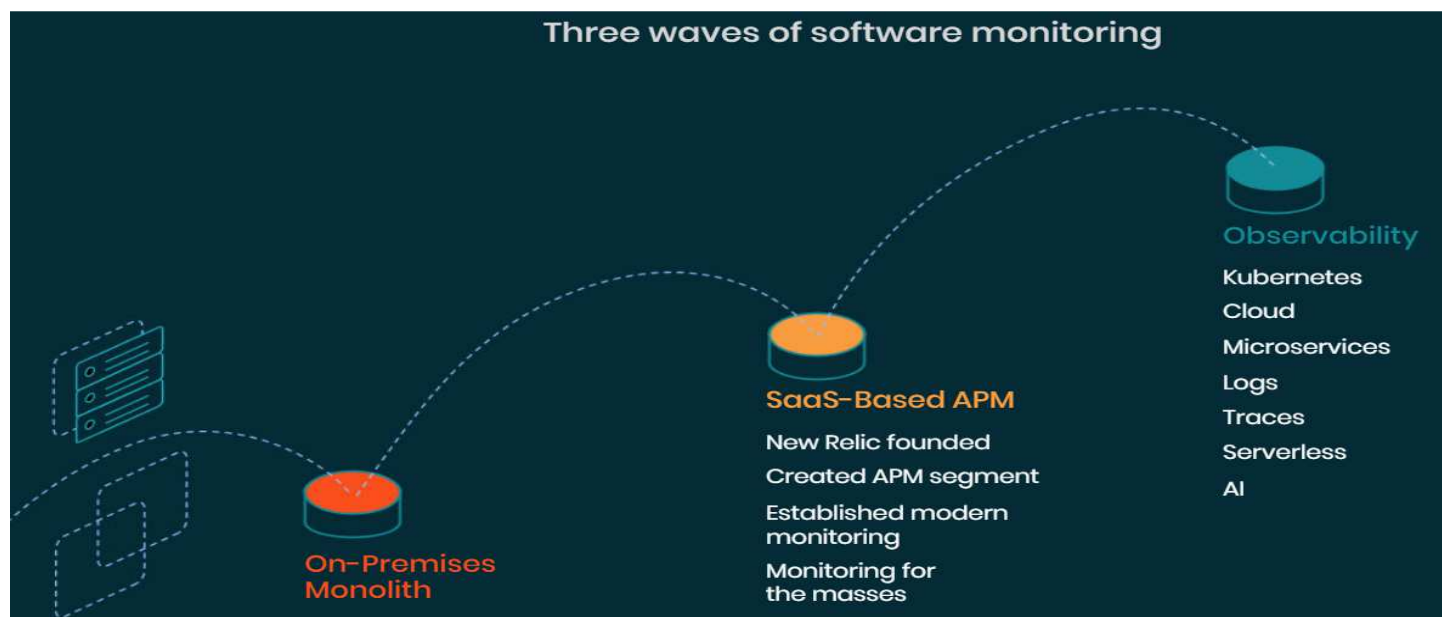
### 403K Buyers Worldwide



Source: Intricate Data Platform, Dec 2019

INTRICATELY

**Background:** Monitoring software is at the foundation of an organization's IT stack. Without monitoring, organizations are blind to factors that impact performance, reliability, scalability and availability of systems in which they have invested large amounts of resources. Once installed, monitoring becomes integral to an organization's performance and deeply embedded into business and operational workflows. Companies across all industries are heavily investing to digitally transform their businesses and enhance the experience of their customers. At the same time, companies are significantly growing their investments to monitor this digital transformation. According to Gartner, enterprises will quadruple their use of APM due to increasingly digitalized business processes from 2018 through 2021 to reach 20% of all business applications. Software is increasingly embedded throughout the enterprise, managing business critical systems, such as payments processing, inventory and supply chain management, logistics, and many other front- and back-office operations.



There is a seismic shift from static on-premise IT architectures to distributed, dynamic multi-cloud and hybrid cloud architectures with ephemeral technologies such as containers, microservices and serverless

architectures becoming increasingly common. According to Gartner, as the cloud becomes increasingly mainstream from 2018 to 2022, it will influence greater portions of enterprise IT decisions, with more than \$1 trillion in enterprise IT spend at stake in 2019. As companies migrate to the cloud and their underlying infrastructure changes, so does the monitoring of this infrastructure. According to Gartner, only 5% of applications were monitored as of 2018. The number of SaaS platforms and open source tools available to IT organizations has exploded. The scale of computing resources required in the cloud has increased exponentially and is often called upon in quick, sometimes unpredictable, bursts of expanded computing capacity. The rate of change of application development in the cloud has increased dramatically. These challenges have made it extremely difficult to gain visibility and insight into application and infrastructure performance and legacy monitoring tools have struggled to adapt.

According to Gartner, the global IT operations software market in 2019 is estimated to be \$29 billion and is expected to grow at a compound annual growth rate of 6.7% to \$37.5 billion in 2023. The Global Application Performance Management (APM) Market is projected to grow at a CAGR of 12% from 2019 to 2025, a sub-segment. The infrastructure monitoring market is estimated to grow from USD 1.48 Billion in 2018 to USD 3.38 Billion by 2023, at a CAGR of 17.93% between 2018 and 2023. Global Log Management Market is expected to grow from USD 1.9 billion in 2020 to USD 3.7 billion by 2025, at a CAGR of 14.1% during the forecast period. The primary factors driving the log management market are the increasing need to secure IT infrastructures from advanced cyberattacks, such as, zero-day attacks, ransomwares, and malwares. Developing and operating software has become more difficult than ever due to the cloud transformation, application complexity, user experience expectations and increased frequency of software releases. Traditional monitoring solutions were developed in an era in which applications were monolithic, updated infrequently, and run in static data center environments. These monitoring solutions, including application performance monitoring, or APM, infrastructure monitoring, incident and alert management, and user experience monitoring, are difficult to deploy, narrow in scope, and were designed to operate in a simpler, siloed environment. Environments have become dynamic. Applications are no longer monolithic and are fragmented into dozens to potentially thousands of microservices, written in multiple software languages. These enterprise cloud environments sprawl from traditional backend applications run on relational databases and mainframes to modern IaaS platforms run on Amazon Web Services, or AWS, Microsoft Azure, or Azure, and Google Cloud Platform. All these factors result in an environment that is web-scale, extremely complex, and dynamic at all layers of the new computing stack.

#### Component Breakdown:

Tickers	Company	Mkt. Cap	EV to EBITDA	EV to Sales (LTM)	EV to FCF (LTM)	EBITDA CAGR	Revenue CAGR	EBITDA Margins	Adjusted EBIT Margins	3 Year ROIC	FCF Yield	FCF Margins	Debt to EBITDA	R&D % of Sales	Asset Turnover Ratio
<b>DDOG</b>	Datadog, Inc.	25,927	914.6x	59.3x	1,205.0x	56%	56%	(3.31%)	(1.48%)		0.08%	0.22%	0.0x	30.71%	0.6x
<b>DT</b>	Dynatrace Inc	11,740	86.2x	22.1x	(73.7x)		22%	25.57%	23.81%	2.41	(1.36%)	(29.88%)	5.5x	21.85%	0.3x
<b>ESTC</b>	Elastic N.V.	7,513	(107.8x)	16.9x	(198.6x)	60%	36%	(17.02%)	(17.67%)		(0.50%)	(8.33%)	0.0x	38.66%	0.7x
<b>NEWR</b>	New Relic Inc	4,175	38.3x	6.3x	133.3x		17%	16.53%	4.17%	(3.04)	0.75%	4.76%	4.2x	24.71%	0.5x
<b>SPLK</b>	SPLUNK INC	29,729	114.1x	12.5x	(75.3x)	4%	19%	15.44%	14.21%	17.90	(1.33%)	(16.59%)	4.6x	26.25%	0.5x
<b>SWI</b>	SolarWinds Corp	5,801	16.3x	7.8x	25.7x	2%	10%	48.66%	46.78%	(1.56)	3.90%	29.69%	4.2x	11.83%	0.2x

**Datadog (DDOG)** has emerged as a top performer in 2020 with it posting very strong revenue growth numbers but also now carrying a very demanding valuation of 33X FY21 EV/Sales. The software company provides cloud monitoring applications which provides analytics across a company's servers, databases, tools, and services. The dashboard offers a view of alerts and visualizations as well as full-text search for events and discussion

tools. DDOG integrates with a number of other cloud packages out of the box so enterprise IT teams can work without interruption. They cover AWS, Azure, OpenShift, and OpenStack. They see a massive opportunity to provide insight into cloud infrastructure. DDOG differentiates from peers: 1) they are built for modern cloud environments including multi-cloud or hybrid environments. This helps opens them up to wider vendor acceptance; 2) their data platform is fully integrated with metrics, traces, and logs which allows for better correlation analysis. They also utilize machine learning for quicker and better results; 3) they're scalable with more than 10T events a data under observation. DDOG sees growth drivers going forward from further market penetration, new production adoption by existing base, and expanding Internationally. DDOG is targeting a major opportunity driven by key secular tailwinds with a unified observability platform. DDOG charges per usage and per volume so price charged is commensurate with the size of the customers' infrastructure which can vary over time. DDOG commented recently at the JP Morgan Tech Conference its big new product is security which is a large opportunity to add to its suite.

**Dynatrace (DT)** is a software intelligence company providing application performance management (APM), artificial intelligence for operations (AIOps), cloud infrastructure monitoring, and digital experience management (DEM), designed for information technology departments and digital business owners. Dynatrace's full-stack solution has the breadth and depth to not only show the experience of a user as they access applications but also with pinpoint precision diagnose problems down to a single line of code. Dynatrace's platform allows its customers to modernize and automate IT operations, develop and release highquality software faster, and improve user experiences for better business outcomes. As enterprises shift to cloud, undergo DX, and adopt Kubernetes, IT architectures are becoming more complex and distributed. As such, IT depts. need tools that monitor across the entire tech stack. Gartner estimates enterprise usage of application monitoring will 4x by 2021. DT also offers very strong revenue growth and a less demand valuation of 19X FY21 EV/Sales. However, DT, unlike DDOG, carries debt and has a weaker FCF profile.

**Elastic NV (ESTC)** focuses on data visualization, search and analytics across various sources and formats. They operate within a massive \$45B TAM which taps into some mega-themes in tech like IoT, cloud, and AI/machine learning. ESTC has seen momentum posting back-to-back quarters of 50%+ billings growth. Elastic makes the power of search—the ability to instantly find relevant information and insights from large amounts of data—available for a diverse set of applications and use cases. When you hail a ride home from work with Uber, Elastic helps power the systems that locate nearby riders and drivers. When you shop online at Walgreens, Elastic helps power finding the right products to add to your cart. When you look for a partner on Tinder, Elastic helps power the algorithms that guide you to a match. Multiple trends are driving increased demand for search technology across an expanding array of applications, as well as improving the capabilities of search technology and the value that it is able to generate. These trends include users demanding more applications, the increasing complexity in enterprise IT, the growing need for data-driven insights, and the increasing supply of data. Based on IDC's sizing of the market for search systems, content analytics, and cognitive/AI software platforms, this represented a total addressable market of \$3 billion in 2012. Since then, ESTC estimates that its total addressable market has grown to \$45 billion in 2018 based on the sum of four market segments. Search, content analytics, and cognitive/AI software is estimated to be an \$8B market in 2018; IT Operations Management at \$9B market in 2018; Big Data and Analytics a \$23B market in 2018, and Security Analytics a \$5B market in 2018. All of these markets are seeing significant growth. ESTC valuation is cheaper than many peers at 13.4X FY21 EV/Sales while offering rapid growth, no debt, and a large 38% R&D as a % of Sales ratio. It is one of the more compelling value for growth names in the group.

**New Relic (NEWR)** trades at the most depressed valuation of the group at 5.7X FY21 EV/Sales and unlike many peers is profitable, but concerns linger around its slowed revenue growth as competing products seem to be

gaining more momentum. The New Relic One Platform collects and correlates various types of critical telemetry data such as application performance management data, logs, metrics, events and trace data, providing customers with the visibility needed to troubleshoot and analyze their applications and infrastructure. New Relic One offers prebuilt dashboards and visualizations as well as the ability to search across data types, create customized dashboards and build applications that can be shared and customized by other users.

**Splunk (SPLK)** is not a pure-play on the cloud monitoring theme, but its acquisition of SignalFX positioned it among the leaders despite it having a core focus in data analytics. SPLK is a leader in cyber infrastructure tools (namely data/log analytics) offering both on-premise and cloud-based versions of its core product as well as premium add-on solutions covering a growing list of niche use cases. It has been making strategic acquisitions to expand its platform while also transitioning to the cloud model. SPLK has been benefitting from the strong growth in usage and consumption of data from its customers. Its Data-to-Everything platform enables users to investigate, monitor, analyze and act on data regardless of format or source. Data is produced by nearly every software application and electronic device across an organization and contains a real-time record of various activities, such as business transactions, customer and user behavior, and security threats. Splunk has partnerships with mega tech companies like Google, AWS, and Cisco. SPLK is valued quite attractively at 12X FY21 EV/Sales while delivering impressive growth and margins.

**SolarWinds (SWI)** does not have the same kind of revenue growth as peers and its software feels inferior to its many peers. At 6.7X FY21 EV/Sales and revenue growth seen accelerating in 2021 while also being profitable, it does have some appeal on valuation. Its products give organizations worldwide, regardless of type, size or IT infrastructure complexity, the power to monitor and manage the performance of their IT environments, whether on-premise, in the cloud, or in hybrid models. Organizations across industries are using technology and software to drive business success and competitive differentiation. As the landscape for IT infrastructure and software deployment worldwide rapidly changes to meet businesses' evolving needs, the performance, speed, availability and security of IT has become critical to business strategy. SWI has one of the broadest software portfolios for hybrid IT management across the industry, adding 16 products over the last three years. As a result, it addresses large and growing markets across IT operations, security, and backup & storage management. In aggregate, International Data Corporation, or IDC, estimates that global software revenue for these markets will grow at a compound annual growth rate of 6.0% to approximately \$60.0 billion in 2022 (from the approximately \$47.6 billion estimated by IDC in 2018). SWI believes this market sizing underestimates the size of the market opportunity beyond the enterprise and mid-market. It sees an annual recurring revenue market opportunity across its markets of more than \$75B.

**Sources:** Datadog (DDOG) S-1; Dynatrace (DT) S-1; Gartner; Splunk (SPLK) 10K