ISG Provider Lens™

Cloud Native – Container Services

Cloud native Observability Solutions

U.S. 2020

Quadrant Report

A research report comparing provider strengths, challenges and competitive differentiators

Customized report courtesy of:

dynatrace

September 2020

About this Report

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The research and analysis presented in this report includes research from the ISG Provider Lens™ program, ongoing ISG Research programs, interviews with ISG advisors, briefings with services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that ISG believes to be current as of September 2020, for providers who actively participated as well as for providers who did not. ISG recognizes that many mergers and acquisitions have taken place since that time, but those changes are not reflected in this report.

All revenue references are in U.S. dollars ($US) unless noted.

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ISG Provider Lens™

ISG Provider Lens™

ISG Provider Lens™ delivers leading-edge and actionable research studies, reports and consulting services focused on technology and service providers' strengths and weaknesses and how they are positioned relative to their peers in the market. These reports provide influential insights accessed by our large pool of advisors who are actively advising outsourcing deals as well as large numbers of ISG enterprise clients who are potential outsourcers.

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EXECUTIVE SUMMARY

Over the past decade, application development has been transformed by the introduction and adoption of software containers, which allow developers to build applications in a lightweight, isolated, portable environment. This innovation has been augmented by the surge in public cloud computing, which provides companies all over the world with access to massive computing resources that can be quickly provisioned to power applications. At the confluence of these two trends sits cloud native computing: a set of tools and practices designed to take advantage of highly available large-scale compute by leveraging multicontainer applications to drive improved business outcomes through better software.

At the center of this transforming market is the Cloud Native Computing Foundation (CNCF), a Linux Foundation project that supports the creation and maintenance of tools that take advantage of modern infrastructure to create highly performant, highly available multicontainer applications. It began with Google's donation of the Kubernetes container management software and has since grown to encompass 70 projects that form the backbone of the cloud native stack. These are not the only open-source components to the cloud native ecosystem, however — other companies and organizations provide closed-source and open-source software and services that augment or replace pieces of the cloud native architecture besides the CNCF.

While it is possible for enterprises to adopt the open-source versions of cloud native projects and build their own technology platforms atop those capabilities, ISG finds that most businesses would prefer to use commercial distributions that enable important enterprise security, management and observability features. Enterprises are taking a wide range of approaches to addressing this new application development model and incorporating it into their overall approach to technology. Some would prefer to acquire tools, training, and some lightweight services from technology leaders, relying on their own employees to build, integrate and operate the resulting applications. Others seek service providers who can augment their existing application development and operations workforce with experts who will build and operate cloud native platforms and applications on the enterprise's behalf. This report aims to represent the diversity of providers on that spectrum, though most enterprises will find that only a subset of those ISG evaluated will suit their needs based on the degree of hands-on service they require.

Kubernetes adoption requires new skills and mindsets: The greatest challenges enterprises face with the adoption of Kubernetes are human, not technical. In order to take advantage of the new technology, businesses need a skilled workforce that can manage the Kubernetes cluster, create applications that reside inside containers and build systems that handle the myriad technical considerations that come with such a

system. This requires significant training. But on top of that, Kubernetes also necessitates a cultural transformation — the system is built with the assumption of Google's Site Reliability Engineering (SRE) model: There will be one team of people charged with maintaining clusters and their infrastructure, while others develop applications that sit atop it. Enterprises that do not grapple with the cultural and structural changes needed to take advantage of Kubernetes risk missing its benefits.

Machine learning workloads drive innovation for Kubernetes: Several providers are focused on improving how their Kubernetes software and services interact with machine learning workloads. This makes sense, given the rise of AI in the enterprise and its growing importance for business worldwide, and is aided by the creation of open-source tools like Kubeflow, which helps enable AI workloads running on top of Kubernetes.

Streamlined management is critical: The most important thing for cloud native service providers to offer is streamlined management of the components of the stack their services encompass. Enterprises are looking for their partners to reduce the complexity of building applications under this new model, so those vendors that can provide the most streamlined experience will be best able to address that need.

Multiservice mesh becomes the norm: As enterprises create more cloud native applications and increase the complexity of that software, they may find themselves using multiple instances of service mesh software to manage the connections between services. Providers are increasingly focused on supporting this use case, though each approaches the challenge in a slightly different way.

ISG Provider Lens™

Security vendor consolidation reshuffles the market: Major security vendors are looking to expand their offerings to encompass cloud native applications, either by building their own capabilities or by acquiring other companies that have built those capabilities before. ISG sees significant consolidation already, with more acquisitions likely in the future to further reduce the number of players in the market. However, enterprises should not wait to acquire cloud native security services if they are building cloud native applications. The risk to business-critical operations is still significant.

Observability solutions are in flux: Right now, enterprises have a hard time finding observability vendors that can deal with the full complexity of understanding the inner workings of cloud native applications alongside more traditional monolithic applications. Multicontainer applications require significantly greater investment in tooling to understand their performance, and traditional tools and vendors are often not as well equipped to deal with that. At the same time, the current landscape shows that there are very few cloud native observability vendors that can provide a complete picture to enterprises of how their applications are performing. ISG sees most enterprises using cloud native observability solutions in addition to what their existing monitoring capabilities provide, with that balance shifting over the coming years as more enterprises integrate cloud native applications into their mainstream technical estate.

Introduction

Definition

In the past decade, new patterns and technologies have emerged for the development, deployment and operation of modern applications that take advantage of the capabilities available in cloud infrastructure environments. This cloud native approach focuses on building applications that are highly modular, adaptable, fault-tolerant and better capable of delivering value to end users.

In particular, Kubernetes, the open-source container orchestration software originally released by Google, has become the foundation of the stack underpinning these applications. It provides software features that enable easier management of multicontainer applications, including automatic scaling, management of container failures and routing of network traffic.

While Kubernetes solves many problems in application development and operation, it also creates a host of new, complex issues that enterprises need to contend with. Shifting away from monolithic architectures means that monitoring, security and networking become significant challenges. New software and services have emerged to mitigate these issues, but that means enterprises must figure out not only how to adopt Kubernetes, but also how to secure their cloud native applications, how best to use service mesh to manage multicontainer environments and how to monitor those applications and the increasingly complex fabric of connections and logic.

Service mesh helps technology teams manage the communications and connections among different containerized applications within an overall technical estate. Given the hype around this technology, ISG notes that enterprise interest in it far outweighs its current utility for most businesses. Service providers must be able to provide a clear business case and value for implementing service mesh, beyond its current trendiness.

Cloud native security offerings are necessary to protect an attack surface that is considerably different from what enterprises are traditionally used to managing. This added layer of security complexity often requires dedicated software and services. Past incidents have shown that even the most technically capable enterprises can be caught out by their Kubernetes clusters' security needs.

Definition (cont.)

Scope of the Report

The ISG Provider Lens™ study offers the following to IT decision makers:

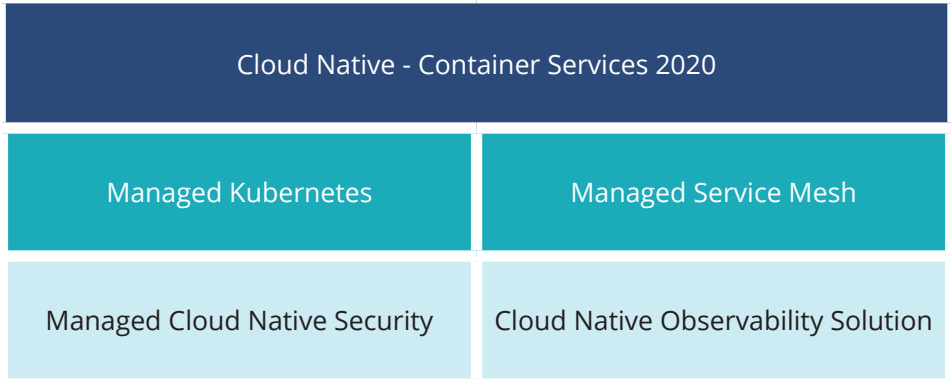
- Transparency on the strengths and weaknesses of relevant providers
- A differentiated positioning of providers by segments
- A view of the global services market with a focus on the U.S.

Our study serves as the basis for important decision-making for positioning, key relationships and go-to-market considerations. ISG advisors and enterprise clients also use information from these reports to evaluate their current vendor relationships and potential new engagements.

Quadrant Research

As part of this ISG Provider Lens™ quadrant study, we are introducing the following four quadrants on Cloud Native - Container Services 2020:

Simplified illustration



Source: ISG 2020

Definition (cont.)

Managed Kubernetes: This category analyzes service and solution providers that offer deployment and operation of Kubernetes, above and beyond what is provided in the upstream open-source project.

Managed Service Mesh: This category is focused on service and solution providers that offer software and services necessary to help enterprises adopt and manage service mesh technology to aid in management of a cloud native application estate.

Managed Cloud Native Security: This category is focused on software and service providers managing security of cloud native applications, either as part of a broader containers-as-a-service offering, or as a standalone add-on to an enterprise's application architecture.

Cloud Native Observability Solutions: This category is focused on software vendors that provide dedicated solutions for observability of cloud native applications. Understanding the behavior of these applications can be far more complex than doing the same for a traditional monolith.

Provider Classifications

The ISG Provider Lens™ quadrants were created using an evaluation matrix containing four segments, where the providers are positioned accordingly.

Leader

The "Leaders" among the vendors/providers have a highly attractive product and service offering and a very strong market and competitive position; they fulfill all requirements for successful market cultivation. They can be regarded as opinion leaders, providing strategic impulses to the market. They also ensure innovative strength and stability.

Product Challenger

The "Product Challengers" offer a product and service portfolio that provides an above-average coverage of corporate requirements, but are not able to provide the same resources and strengths as the Leaders regarding the individual market cultivation categories. Often, this is due to the respective vendor's size or their weak footprint within the respective target segment.

Market Challenger

"Market Challengers" are also very competitive, but there is still significant portfolio potential and they clearly lag behind the Leaders. Often, the Market Challengers are established vendors that are somewhat slow to address new trends, due to their size and company structure, and therefore have some potential to optimize their portfolio and increase their attractiveness.

Contender

"Contenders" are still lacking mature products and services or sufficient depth and breadth of their offering, while also showing some strengths and improvement potentials in their market cultivation efforts. These vendors are often generalists or niche players.

Provider Classifications (cont.)

Each ISG Provider Lens™ quadrant may include a service provider(s) who ISG believes has a strong potential to move into the leader's quadrant.

Rising Star

"Rising Stars" are usually Product Challengers with high future potential. Companies that receive the Rising Star award have a promising portfolio, including the required roadmap and an adequate focus on key market trends and customer requirements. Rising Stars also have excellent management and understanding of the local market. This award is only given to vendors or service providers that have made extreme progress towards their goals within the last 12 months and are on a good way to reach the leader quadrant within the next 12 to 24 months, due to their above-average impact and innovative strength.

Not In

This service provider or vendor was not included in this quadrant as ISG could not obtain enough information to position them. This omission does not imply that the service provider or vendor does not provide this service. In dependence of the market ISG positions providers according to their business sweet spot, which can be the related midmarket or large accounts quadrant.

Cloud Native – Container Services - Quadrant Provider Listing 1 of 3

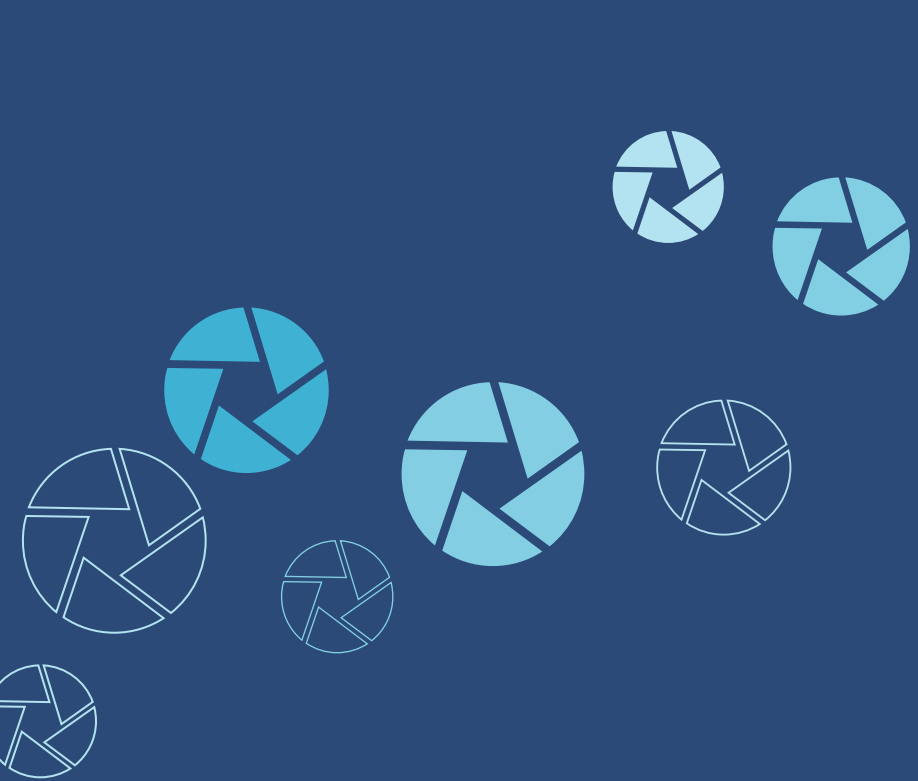
	Managed Kubernetes Services	Managed Service Mesh	Managed Cloud Native Security	Cloud Native Observability Solution
Accenture	Leader	Not In	Leader	Not In
Alcide	Not In	Not In	Contender	Not In
Anchore	Not In	Not In	Contender	Not In
Aqua Security	Not In	Not In	Leader	Not In
Atos	Contender	Not In	Not In	Not In
Buoyant	Not In	Product Challenger	Not In	Not In
Check Point Software	Not In	Not In	Leader	Not In
Chef	Not In	Not In	Market Challenger	Not In
Chronosphere	Not In	Not In	Not In	Contender
Containous	Not In	Product Challenger	Contender	Contender
D2IQ	Rising Star	Not In	Not In	Not In
DXC	Contender	Not In	Not In	Not In
Dynatrace	Not In	Not In	Not In	Leader
Giant Swarm	Product Challenger	Product Challenger	Contender	Not In

Cloud Native – Container Services - Quadrant Provider Listing 2 of 3

	Managed Kubernetes Services	Managed Service Mesh	Managed Cloud Native Security	Cloud Native Observability Solution
Grey Matter	Not In	Contender	Not In	Not In
HashiCorp	Not In	Leader	Not In	Not In
HCL	Leader	Leader	Leader	Not In
IBM	Leader	Leader	Leader	Not In
Kong	Not In	Product Challenger	Not In	Not In
LightStep	Not In	Not In	Not In	Rising Star
Mirantis	Leader	Not In	Not In	Not In
Mphasis	Rising Star	Not In	Contender	Not In
Navitas	Contender	Contender	Contender	Not In
Palo Alto Networks	Not In	Not In	Leader	Not In
Persistent Systems	Contender	Not In	Not In	Not In
Platform9	Product Challenger	Not In	Not In	Not In
Portshift	Not In	Not In	Contender	Not In
Rancher Labs	Product Challenger	Not In	Not In	Not In

Cloud Native – Container Services - Quadrant Provider Listing 3 of 3

	Managed Kubernetes Services	Managed Service Mesh	Managed Cloud Native Security	Cloud Native Observability Solution
Solo.io	Not In	Rising Star	Not In	Not In
Spectro Cloud	Contender	Not In	Not In	Not In
Splunk	Not In	Not In	Not In	Leader
StackRox	Not In	Not In	Product Challenger	Not In
Sumo Logic	Not In	Not In	Not In	Product Challenger
SuSE	Market Challenger	Not In	Not In	Not In
Sysdig	Not In	Not In	Leader	Leader
TechMahindra	Market Challenger	Market Challenger	Not In	Not In
Tigera	Not In	Not In	Product Challenger	Not In
Trend Micro	Not In	Not In	Market Challenger	Not In
UST Global	Product Challenger	Contender	Contender	Not In
VMware	Leader	Leader	Leader	Market Challenger
Wipro	Leader	Not In	Not In	Not In



Cloud Native – Container Services Quadrant

ENTERPRISE CONTEXT

Cloud native Observability Solutions

This report is relevant to enterprises of all sizes in the U.S. that are evaluating cloud native observability vendors.

In this quadrant report, ISG lays out the current market positioning of cloud native observability software vendors in the U.S. and how they interact with key enterprise challenges in the region. These software companies provide specialized services that can help enterprises better understand how their cloud native applications perform and why they behave the way they do. Because of the complexity inherent in multicontainer applications, understanding them requires specialized tools that can help application developers and operators pick apart what is causing a problem in a cloud native environment.

ISG expects this market to see significant upheaval in the next 18 months as some independent software vendors in the space are acquired by larger players. Large vendors will pursue independent players to lend their cloud native observability functionality to legacy application performance management (APM) and monitoring software. However, that likely market shift should not stop enterprises from implementing observability software, since the capabilities it provides are necessary for the success of cloud native applications being built right now.

IT leaders should read this report to better understand the relative strengths and weaknesses of cloud native observability software vendors, as well as how those vendors' approaches to the market can affect management of cloud native applications.

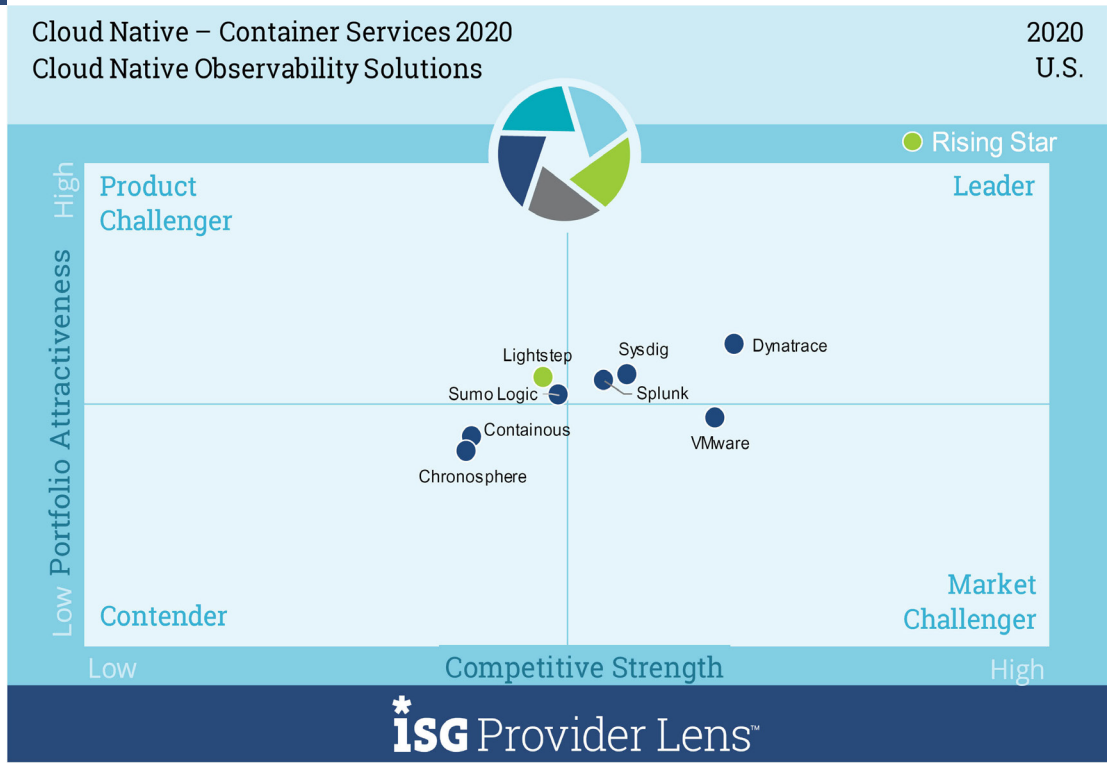
Software development and technology leaders should read this report to understand the positioning of cloud native observability vendors and gain a better understanding of how those vendors' offerings can affect the creation of cloud native software.

Sourcing, procurement and vendor management professionals should read this report to develop a better understanding of the current landscape of cloud native observability vendors in the U.S.

CLOUD NATIVE OBSERVABILITY SOLUTIONS

Definition

This category is focused on software vendors that provide dedicated solutions for observability of cloud native applications. Understanding the behavior of these applications can be far more complex than doing the same for a traditional monolith. Developers and operators must understand not only how each containerized app or service behaves, but also how they communicate with one another. Standard monitoring tools that have not been built with cloud native applications in mind could fail to provide necessary information, so enterprises need to opt for specialized capabilities.



Source: ISG Research 2020

CLOUD NATIVE OBSERVABILITY SOLUTIONS

Eligibility Criteria

- Software that provides novel capabilities to help enterprises understand the inner workings and performance of their cloud native application environments
- Dedicated tooling meant for observability, specifically of multicontainer applications, with support for highly granular microservices architectures and for applications composed of a smaller number of complex services
- Capability to work across multiple infrastructure environments under a hybrid cloud model
- Resources to help enterprises understand and implement this software within their environment.

Observations

Cloud native observability is a critical and emerging component of the overall stack necessary for creating effective distributed systems. Enterprises selecting these systems should look for software that offers a comprehensive view of their application landscape while maximizing use of open-source components for data collection, analysis and visualization. Observability solutions should be able to work well at scale and have robust security and role-based access controls to ensure information remains with authorized users. Enterprises should seek out observability solution vendors that can offer features to help with running cloud native applications in production and under significant load.

Of the 103 companies considered for this study, eight qualified for inclusion in this quadrant. ISG expects more players to develop the capabilities necessary for inclusion in the coming year as enterprise demand drives application monitoring companies to develop mature cloud native observability offerings.

CLOUD NATIVE OBSERVABILITY SOLUTIONS

Observations (cont.)

- **Dynatrace** has a comprehensive platform for observing and understanding cloud native applications, with capabilities that set it apart from the rest of this emerging field.
- **Splunk** acquired SignalFx, a cloud native observability frontrunner, and has integrated that company's offering into its broader enterprise monitoring and observability software. The company's strong penetration in the enterprise market means it has an opportunity to capture business as more companies adopt cloud native development.
- **Sysdig's** unified Secure DevOps Platform appeals to enterprises through its deep functionality, integration with open source and combined focus on application security and observability.
- **Lightstep** is one of the pioneers of cloud native observability and originated the OpenTracing project, a critical component of understanding how distributed systems perform.

DYNATRACE

Overview

Dynatrace is a publicly traded software intelligence company based in Waltham, Massachusetts, U.S. Founded in 2005, the company serves more than 2,400 enterprise customers in over 80 countries in diverse industries such as banking, insurance, retail, manufacturing, travel and software. It is a silver member of the CNCF.

Strengths

Comprehensive Functionality: Dynatrace's software has a comprehensive set of functionalities that can help enterprises better understand the performance of cloud native and legacy applications. The company has invested significantly in providing a single-pane-of-glass experience — to help enterprises go from seeing a problem to understanding where it came from — that connects application workloads, infrastructure, and digital experience in ways that few other offerings can do.

Deep Understanding of Cloud Native Needs: Dynatrace's team clearly understands that enterprises need to get the most out of their cloud native applications and applications in general. This understanding comes from its expertise and is a boon not only to product development but also to enterprises that work with Dynatrace.

Robust Services: Enterprises can harness Dynatrace's Autonomous Cloud Enablement service offerings to accelerate their cloud native transformation. These include microlearning, coaching sessions and expert consulting to help customers adopt best practices and automate their cloud delivery. Given how challenging it is for companies to make the shift to cloud native applications and observability, this degree of professional services can aid them in transforming their application operations approach.

Caution

Dynatrace's recently updated pricing model is straightforward and transparent but can carry a premium compared with alternatives for cost-conscious enterprises.

2020 ISG Provider Lens™ Leader

Dynatrace's comprehensive approach to cloud native observability makes it a clear leader in this critical emerging market.

Methodology

METHODOLOGY

The research study "ISG Provider Lens™ 2020 – Cloud Native – Container Services" analyzes the relevant software vendors/service providers in the U.S. market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology.

The study was divided into the following steps:

1. Definition of Cloud Native – Container Services 2020 market
2. Use of questionnaire-based surveys of service providers/vendor across all trend topics
3. Interactive discussions with service providers/vendors on capabilities & use cases
4. Leverage ISG's internal databases & advisor knowledge & experience (wherever applicable)
5. Detailed analysis & evaluation of services & service documentation based on the facts & figures received from providers & other sources.
6. Use of the following key evaluation criteria:
   - Strategy & vision
   - Innovation
   - Brand awareness and presence in the market
   - Sales and partner landscape
   - Breadth and depth of portfolio of services offered
   - Technology advancements

Authors and Editors

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Blair serves as an ISG enterprise analyst covering topics including artificial intelligence, cloud computing and Agile/DevOps transformation. This year, he is providing enterprise context for ISG Provider Lens reports on the service provider ecosystems around Private/Hybrid Cloud, Public Cloud, Microsoft, SAP and Next-Gen ADM. He provides enterprise IT decision makers with market-leading advice on key technology trends through research notes and personal consultation. Since joining ISG in 2018, Blair has provided clients with insights about how their strategy fits with emerging technology trends that are shaping markets worldwide, and how new technologies can help them drive better business value.

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Director, Principal Analyst

Mr. Aase brings extensive experience in the implementation and research of service integration and management of both IT and business processes. With over 35 years of experience, he is highly skilled at analyzing vendor governance trends and methodologies, identifying inefficiencies in current processes, and advising the industry. Jan Erik has experience on all four sides of the sourcing and vendor governance lifecycle - as a client, an industry analyst, a service provider and an advisor. Now as a research director, principal analyst and global head of ISG Provider Lens™, he is very well positioned to assess and report on the state of the industry and make recommendations for both enterprises and service provider clients.

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