ScienceLogic

Taming Hybrid Cloud Complexity: One Platform for Monitoring Your IT Universe

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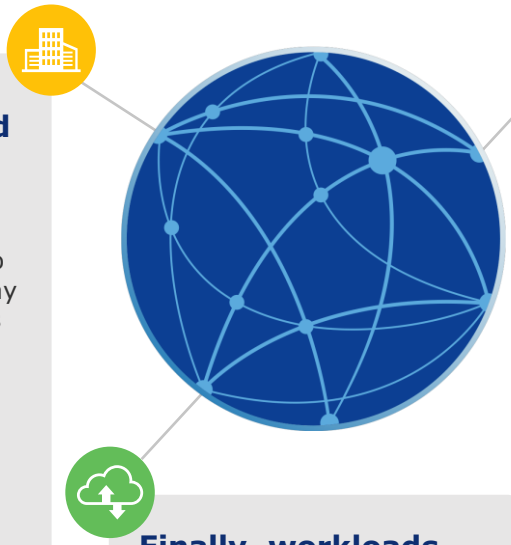
Executive Summary

The transition to the cloud continues unabated, and so does the dramatic proliferation in operational complexity. Unfortunately, the legacy monitoring tools in use are only compounding this complexity. This white paper examines how today's hybrid cloud infrastructures pose unprecedented challenges and require modern management approaches. It then offers a close look at the ScienceLogic SL1 platform and reveals its differentiated advantages.

The Hybrid Cloud Conundrum: Proliferating IT Complexity

For years, there's been a lot written about "the move to the cloud," which implies a singular event—a singular migration to a singular entity. It sounds so simple. And yet, the 'simple' act of moving to the cloud stands in stark contrast to the reality IT operations teams are contending with today:



On-premises infrastructure is, and will remain, critical

Gartner predicts that by 2025, 80% of organizations will have moved entirely into cloud environments and away from traditional on-premises infrastructure[2]. This means for the vast majority of organizations, on-premises infrastructures will continue to be supported during the transition period of five or more years. Further, for many enterprises, whether due to security, regulatory, or other considerations, there will be some services and workloads that never move to a public cloud.

A vast array of cloud vendors and approaches are being adopted

Rather than adopting a single cloud service from a single provider, 93% of organizations are employing a multi-cloud approach[1]. For pretty much every enterprise, there won't be a single cloud, but a diverse ecosystem composed of private clouds and a range of public cloud services and models, including IaaS, PaaS, and SaaS.

Finally, workloads aren't even moving in a single direction

One study found 27% of organizations have already moved workloads from a cloud environment back to on-premises, or plan to[3].

The result is that, far from seeing increased simplicity, the level of complexity IT teams contend with is unprecedented today, and it only moves in one direction: up. Hybrid cloud environments continue to grow more diverse, distributed, and dynamic. Teams have to manage a workload-intensive mix of legacy and modern applications and infrastructure. For the teams tasked with monitoring and managing service levels, these complex environments are fueling massive increases in the volume, variety, and velocity of data to be managed.

[1] Flexera, 2020 State of the Cloud Report, 2020.
[2] Gartner, Gartner Identifies the Top 10 Trends Impacting Infrastructure and Operations for 2019, 2018.
[3] InfoWorld, The 2020 IDG Cloud Computing Survey, 2020.

The Challenge: Legacy Approaches Stifling Visibility, Efficiency, Agility

As you try to respond to spiraling complexity, you're being stifled by outdated tools and operational processes. Today, too many teams are stuck relying on a vast number of disparate monitoring tools from different vendors, or loosely integrated product suites.

> "We commonly hear from organizations that face a number of important challenges because they are juggling too many tools that collect and analyze only a subset of relevant operations data."
>
> –451 Research[4]

These tools only provide visibility into specific technologies or domains, such as cloud instances, storage systems, network equipment, and so on. As a result, you lack unified, consistent, contextualized visibility of the complex, interdependent hybrid-cloud ecosystems that your business services rely upon. Further, these disjointed toolsets exacerbate the operational complexity you are contending with, imposing significant administration overhead, cumbersome integrations, inefficient reporting, inconsistent workflows, and more.

These legacy monitoring approaches haven't kept pace with these new hybrid cloud infrastructure realities, leaving you struggling with a range of challenges:

Poor customer experience

Root cause analysis and incident resolution are time consuming and error prone, resulting in significant downtime, missed SLAs, suboptimal service levels, inferior customer experiences, and in many cases, lost revenue.

Spiraling costs

Swivel chair management requires you to work with several different interfaces, databases, and supporting infrastructures. Inconsistent processes, difficult integrations, and time-consuming workflows leave you saddled with mounting costs.

Inflexibility

It takes too long to adopt new technologies and is difficult to leverage advancements in automation and machine learning. These constraints stifle operational agility, which stifles the agility of the digital business.

[4] 451 Research, IT monitoring meltdown: Just 11% of decision-makers are satisfied with their monitoring tools, 2020.

CMDBs Can't Keep Pace with Constant Change
Given the constant change in IT, organizations spend up to 60 hours per week reconciling data from multiple sources to keep CMDBs current. Even after all the time spent, CMDBs are still not timely or accurate. In fact, according to Gartner, 75% of CMDB implementations fail due to inaccurate data.

Manual Ticketing: Time Consuming and Time Wasting
Manually creating a ticket can take 20-30 minutes, and up to 90 minutes to route to the right team. Further, a recent DEJ report shows that 82% of IT service desk tickets are not actionable.

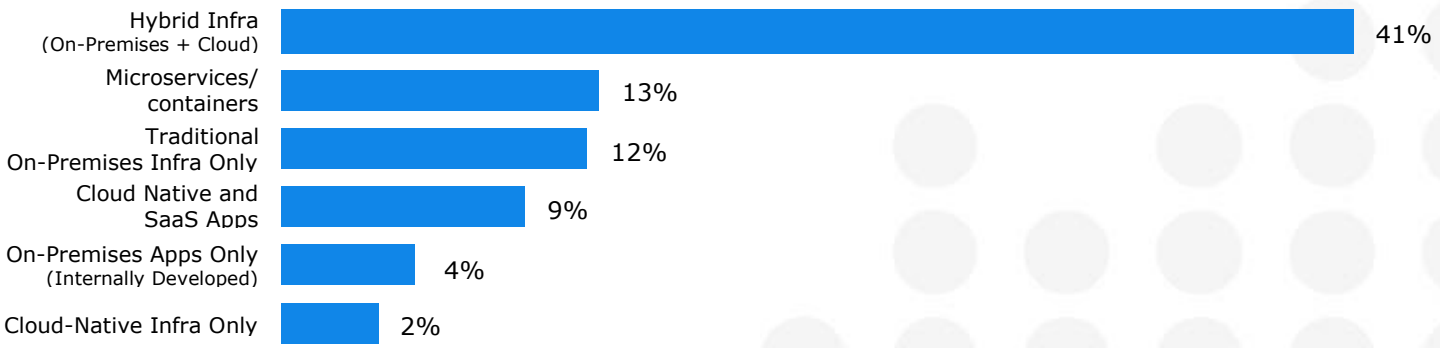
Siloed Monitoring Impacts Operational Resiliency
Organizations are operating with too many siloed monitoring tools—many points tools that can do one thing well. This creates visibility gaps across hybrid cloud environments and finding the root cause of an issue is much more difficult. According to a Forrester survey, "The State of IT Operations Management," 33% of companies are using 20 or more tools.

Teams Lack Infrastructure to Business Service Insights
Too often, IT teams are surprised by service impacting issues—and left scrambling to address incidents after the fact. Without a clear understanding of how infrastructure impacts business services, user experience can suffer. According to Gartner, root-cause identification typically accounts for 70% of the time it takes to restore a service to normal operation.

The Requirement: One Modern Platform to Monitor Your IT Universe

To contend with hybrid cloud complexity, and better meet key business objectives, top teams are moving beyond legacy monitoring tools and adopting a modern platform approach that enables automated operations or artificial intelligence for IT operations (AIOps).

According to a recent Gartner report, when it comes to priorities for IT monitoring investments, hybrid infrastructure monitoring is by far the dominant focus, with 41% of respondents citing these environments, more than the next three categories combined[5].



[5] Gartner, Cool Vendors in Performance Analysis, 2020.

By leveraging the following capabilities via a single, comprehensive platform—you can break free of the obstacles and inefficiencies posed by point tools and loosely integrated product suites with:

Complete Service Visibility

Establish a unified service view across the entire hybrid cloud universe—data center, public cloud (SaaS, IaaS, PaaS), and private cloud. This service visibility is vital to prioritize work based on business impact.

Actionable Insights

Harness the power of machine learning to gain actionable insights from hybrid infrastructure data, empowering staff to take proactive and preventive actions.

IT Workflow Automation

Capitalize on actionable insights to automate routine operational tasks, such as collecting diagnostic data, exchanging real-time operational data between systems and platforms, managing configuration items, executing ticketing and remediation workflows, and more.

By working with a single, unified platform, you can achieve dramatic improvements in speed and agility. You can more easily adapt to changing technological and business requirements, accelerate response to issues and opportunities, and swiftly support new services that fuel revenue growth.

The Solution: A Secure, Scalable Platform That Powers Automated Operations

Rather than having to rely on a loosely integrated suite of products, with the ScienceLogic SL1 platform (see Figure 1) you can take a unified approach to hybrid cloud monitoring and establish a secure foundation for intelligent, automated operations.

DISA

ScienceLogic SL1 is the first end-to-end IT infrastructure monitoring solution named on the U.S. Department of Defense Information Network Approved Products List (DoDIN APL).

How Forrester Defines an IT Operations Platform

"The solution consists of an integrated code base using a common data lake. Functionality isn't contained in separate modules that need installation to be usable, as in a suite-of-products approach."

–Forrester[6]

[6] Forrester, The Forrester Wave: Artificial Intelligence for IT Operations, Q4 2020, 2020.

SL1 gathers data across environments to establish a real-time operational data lake. The solution analyzes and acts on this data at "cloud scale." The platform's modern, scalable microservices-based architecture supports the high-volume, transaction-intensive environments of the most demanding enterprises and service providers. For one customer, SL1 monitors over 500,000 devices and ingests more than 50 million metrics in less than five minutes.

SL1 sets the stage for fundamental IT and business transformation that enables breakthrough agility, speed, and growth. These advantages are enabled through the platform's three core capabilities: see, contextualize, and act.

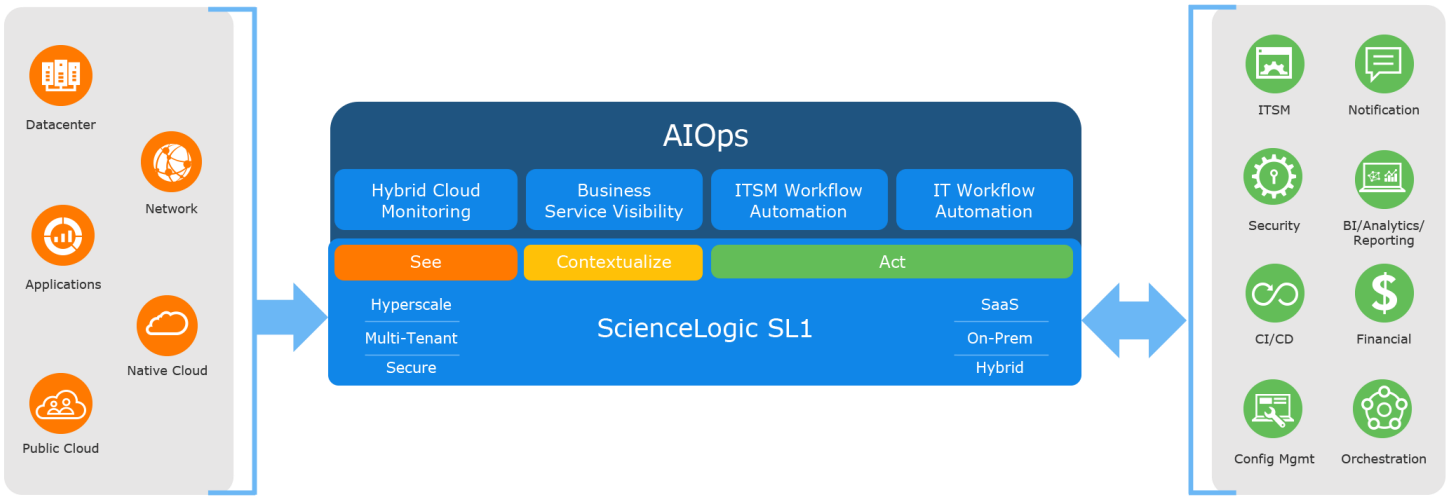


Figure 1: ScienceLogic's SL1 platform establishes the critical foundation for ML-driven automated operations (AIOps).

See: Build A Real-time Operational Data Lake

SL1 uses a variety of techniques (such as SNMP, API, SSH, Syslog, agent, and agentless) to discover devices. For each discovered device, it then collects performance data, configuration details, relationships, logs, and metadata. SL1 takes this data from different sources and fuses it into an operational data lake—doing whatever is required to make the data clean and actionable. The solution aligns, merges, aggregates, dedupes, and normalizes data.

With more than 500 pre-built integrations, spanning over 100 vendors and thousands of device types, ScienceLogic supports the most commonly deployed technologies, including:

- On-premises, private, and public cloud infrastructures
- Physical, virtual, software-defined, and microservices-based environments
- Network, computing, storage, converged infrastructure, containers, and applications
- Unified communications, voice, and video
- Environmental systems, such as heating, air conditioning, and power distribution
- IoT sensors

Once the data lake is established, you can build your own queries and generate individual reports, group reports, and unified dashboard views (see Figure 2) to gain actionable insights.

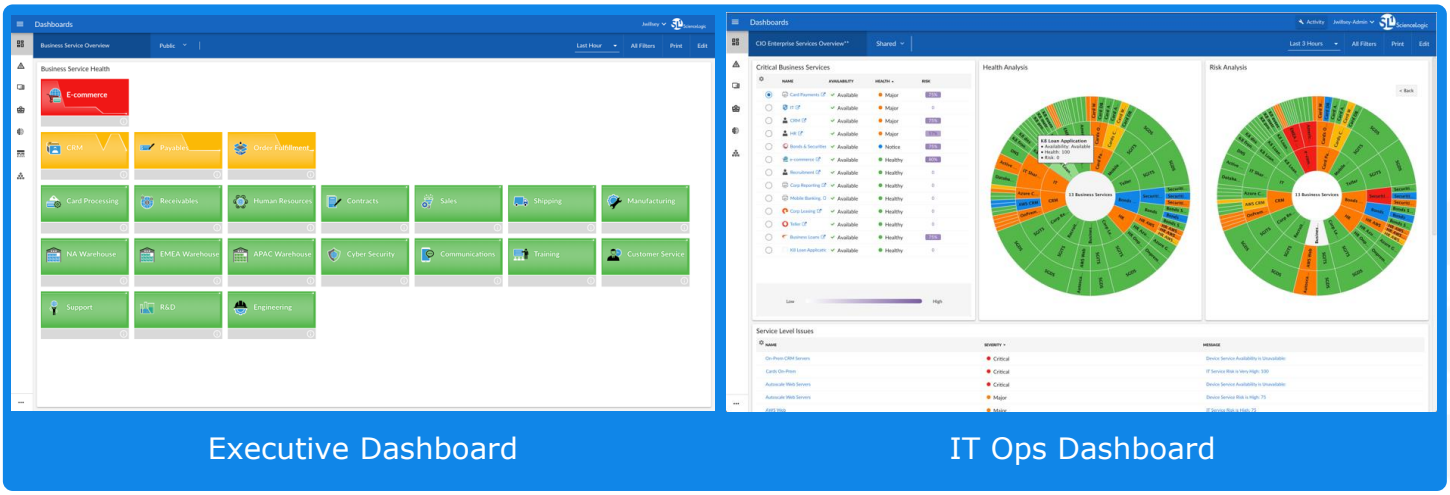


Figure 2: SL1 enables you to consolidate your toolsets and establish a single operational foundation for your entire hybrid cloud landscape.

Contextualize: Gain Actionable Service Insights

Once data is captured and prepared, the SL1 platform gives you the flexibility to visualize the health, availability, and risk of your business services. With the platform, you can align your unique hybrid cloud infrastructure to your organization's specific business operations and objectives. For example, you can model your environment by line of business, business service or function, technology domain, application, geography, and much more (see Figure 3).

SL1 then applies a rich set of analytical techniques to those services. The solution employs machine learning to detect weird or anomalous service behavior (anomalies) and correlate those anomalies and common events within a service context. With these capabilities, the solution cuts through the noise to quickly establish the root cause of an issue. Because the solution can sift through massive volumes of data, it enables your team to keep in front of constantly changing environments. With the solution, you can:

- Rapidly identify service-impacting issues when they occur
- Uncover likely root causes in a few mouse clicks
- Detect anomalies and alert operators that a service-degrading event is likely to occur
- Recommend best practice triage and remediation actions

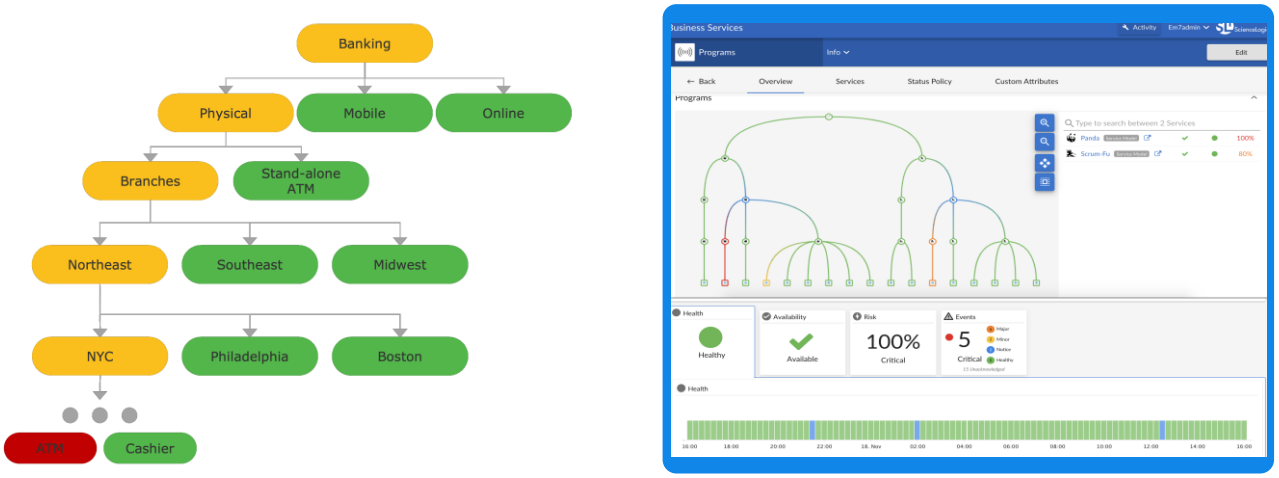


Figure 3: By shifting from device-to service-centric monitoring, you can prioritize work based on business impact.

Act: Automate IT Workflows

With SL1, you can harness rich, contextualized intelligence to power multi-directional workflows at scale for both proactive and responsive actions. With the platform, you can:

- **Keep your CMDB up-to-date and accurate.** Leverage a real-time data lake to automate a wide range of ITSM workflows. By keeping your CMDB up to date, you can automate ticketing, route to the right team the first time, solve problems faster, and improve the customer experience.
- **Automate ticketing and routing.** Eliminate time-consuming, manual activities to avoid costly service impact and downtime. Industry averages indicate manual ticket creation and routing routinely takes more than 60 minutes. Plus, time is money: According to the Digital Enterprise Journal, the average revenue lost per month due to application slowdowns is $634,000[7].
- **Automate troubleshooting and remediation steps.** Automate entire workflows, such as the steps required to remotely login to a device, gather diagnostics, and diagnose or remediate a problem. When an event occurs, SL1 can automatically capture diagnostic data to enrich both events and incidents, enabling faster root cause analysis and improved MTTR (see Figure 4). The platform offers an extensive library of pre-built automation actions, featuring more than 350 triage best practices and 185 remediation actions.

You can share intelligence from SL1 with other platforms and systems in the management ecosystem, including CMDBs, service management platforms, provisioning and orchestration systems, billing systems, and more.

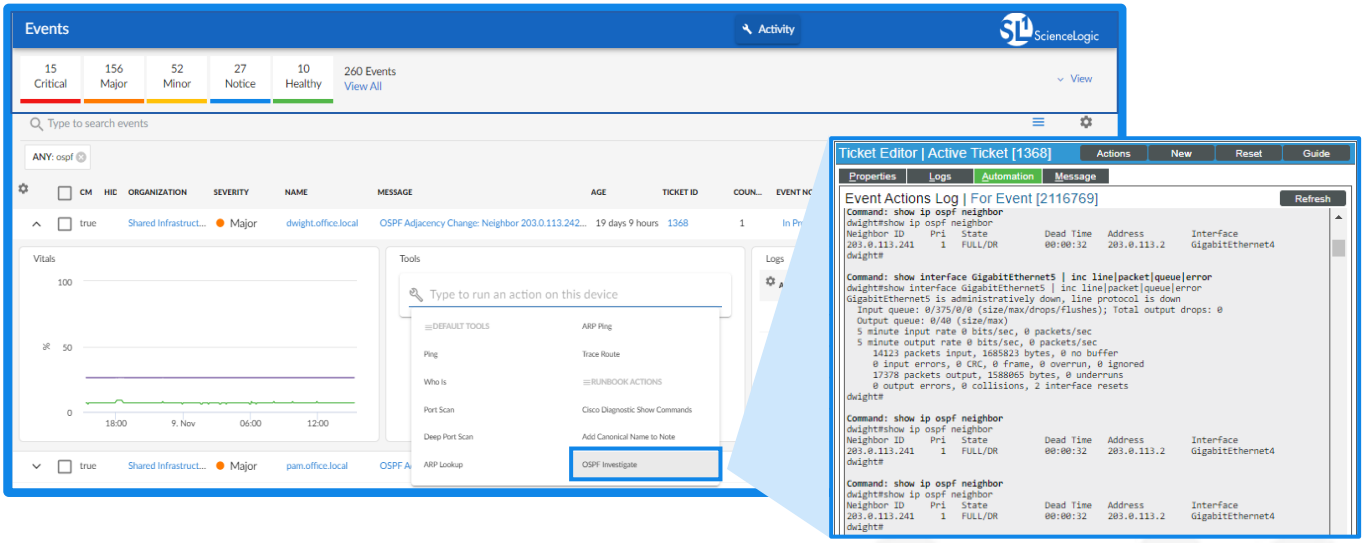


Figure 4: Boost ITOps efficiency and agility with automated ticketing, triage, and remediation workflows, all powered by the SL1 operational data lake.

[7] Gartner, Cool Vendors in Performance Analysis, 2020.

Use Cases: Achieve Better Business Outcomes with SL1

With SL1, you can fuse all your monitoring data together in a single platform, then apply analytics and automation to that data. With these capabilities, you can achieve a number of business outcomes:

- **Eliminate hybrid cloud visibility gaps while consolidating tools.** SL1 streamlines your management toolset, filling in monitoring gaps and reducing costs. At the same time, the solution enables you to establish full service visibility and ensure users experience optimal performance.
- **Onboard new technologies and customers with speed and agility.** By tying tools together and automating data flows between them, SL1 speeds provisioning workflows and quote-to-cash processes.
- **Achieve CMDB accuracy with real-time synchronization of monitored environments.** SL1 tracks and synchronizes frequently changing hybrid cloud infrastructure data with your CMDB, which enables you to ensure your CMDB is always current so you can automate more ITSM processes.
- **Avoid service outages with service visibility.** SL1 automatically maps infrastructure and application relationships and dependencies, while enabling you to model business services. With full-stack service visibility, you can proactively assess service impact and quickly isolate the root cause of service-impacting issues.
- **Reduce noise and diagnose root cause faster to lower MTTR.** SL1 employs machine learning to correlate both events and anomalies within a service context, so your teams can avoid event and anomaly storms, accelerate root cause analysis, and recommend actions.
- **Automate ticketing, routing, troubleshooting, and remediation to lower MTTD/MTTR.** SL1 automates routine and advanced operational activities from creating, populating, routing, and updating ticket status to enriching tickets with event diagnostic data for faster troubleshooting and automating steps to resolve issues.
- **Automate operational data exchange for performance insights.** SL1 promotes a unified management ecosystem and proactive response, enabling data integration between service desks and CMDBs, orchestration platforms, finance systems, BI tools, and more.

How You Can Benefit

When you employ the SL1 platform, good things happen.

NYC DOITT
Information Technology & Telecommunications

40%

Lower MTTR with business service visibility across IaaS, PaaS, and SaaS. **100% visibility** across 11 different clouds.

QTS

80%

Increased revenue based on better visibility into end-client resources.

Softcat

> 90%

Faster onboarding of customers and technology—processes that used to take weeks with legacy tools now happen in minutes or hours.

AppCentrix
Enterprise Intelligence

98%

Fewer critical incidents by shifting from device-centric to business service visibility.

How MSPs Can Help

By moving to a modern platform like SL1, your teams can solve the hybrid cloud challenges you face today, while establishing a clear pathway to automated operations and AIOps. If your internal teams lack the bandwidth or expertise to make this transition quickly and smoothly, managed service providers (MSPs) can offer invaluable assistance.

MSPs can provide the expertise and services that help your teams streamline and maximize the results you receive from your monitoring investments.

In addition, you can work with MSPs that are leveraging the SL1 platform to offer hybrid cloud infrastructure monitoring as a service. Through this service, your teams can partly or fully offload ongoing monitoring and management efforts. To learn more, be sure to visit the ScienceLogic MSP page.

Conclusion

To contend with the unprecedented volume, velocity, and variety of data associated with your hybrid cloud infrastructures, your IT teams need to move away from legacy tools and processes and take a new approach. With the ScienceLogic SL1 platform, your teams can work with a single, unified AIOps platform—and move away from disjointed point tools and product suites. The platform delivers all the capabilities required to manage your complex, transitory, and dynamic hybrid cloud infrastructures. With the platform, your teams will be able to see, contextualize, and act with ultimate speed and efficiency.

About ScienceLogic

ScienceLogic enables companies to digitally transform themselves by removing the difficulty of managing complex, distributed IT services. Our IT infrastructure monitoring and AIOps platform (SL1) provides modern IT operations with actionable insights to predict and resolve problems faster in a digital, ephemeral world. The SL1 platform sees everything across cloud and distributed architectures, contextualizes data through relationship mapping, and acts on this insight through integration and automation. SL1 solves the challenges and complexities of today and provides the flexibility to face the IT monitoring and management needs of tomorrow. Trusted by thousands of organizations, ScienceLogic's technology was designed for the rigorous security requirements of United States Department of Defense, proven for scale by the world's largest service providers, and optimized for the needs of large enterprises.