

Building a Managed Public Cloud Service

Based on the ScienceLogic Hybrid IT Monitoring Platform

Version 3.0

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Executive Summary

The global market for massive-scale public cloud services is growing at over 61%, projected to reach \$122B in 2020, from \$19B in 2016, according to Structure Research. Separately the Managed Service opportunity around public cloud IaaS services is estimated by 451 Group to exceed \$43B in 2018, with a CAGR of 25%.

MSPs can capture a piece of this opportunity with a variety of approaches and we believe MSPs should enter this market immediately in order to participate and learn, while building expertise and market share. Those MSPs who pioneer with Managed Cloud services will see significant growth while establishing a strong competitive moat around their managed public cloud offerings. In particular, those MSPs who offer solutions around managed multi-cloud and/or Hybrid cloud offerings will establish the highest levels of differentiation. This is because managed public cloud services - especially those based on single-cloud solutions (Managed AWS or Managed Azure) alone - while differentiated today, will experience the earliest commoditization.

In order to establish a managed service portfolio that can stretch to include multi-cloud and hybrid offerings, MSPs will need to refresh their operational tools with new platforms that can not only successfully monitor and manage the new generation cloud services but which can also serve as monetization platforms, upon which they can build compelling managed cloud service offerings. The ScienceLogic Hybrid IT Monitoring platform is the established market leader in this space, demonstrably suited to helping MSPs build managed services of all descriptions, and including deep visibility of a broad cross-section of IT technologies and devices, including deep visibility into multiple public cloud services.

This document describes a Managed Public cloud service – including the specific service deliverables and the value proposition that MSPs can deliver to their enterprise customers. Subsequent documents will cover the extension of Managed Cloud into Managed multi-cloud and hybrid options.

Benefits of a Managed Public Cloud Service for the MSP

The Managed Public Cloud opportunity is one that traditional MSPs and those transitioning from a hosting-centric business model cannot afford to ignore. By investing now to develop a position in this market, MSPs can learn while participating in a major technology shift that will persist for a decade or more. MSPs entering this market now can reap the following benefits:

- Gain early market share in managed cloud services – a major long term growth opportunity
- Establish a deep competitive moat in terms of customer base and expertise
- Build institutional knowledge of cloud technologies and services know-how
- Get help, incentives and strengthen relationships with mainstream cloud providers such as AWS and Microsoft
- Establish long-term, 'sticky' recurring revenue streams
- Drive towards 'Trusted Advisor' status with key customers

Enterprise Value Proposition for a Managed Public Cloud Service

The value of a managed public cloud service for the Enterprise customer is as follows:

- Get to the cloud sooner - accelerate the benefits of agility, flexibility and potential cost savings
- Mitigate the perceived risks of moving to the cloud – staff ramp-up time, lack of cloud technology know-how, and lost management visibility
- Reduce the level of administrative effort required for managing cloud-based IT assets
- Eliminate the need to build or upgrade in-house dedicated management infrastructure (such as ticketing, monitoring, troubleshooting, etc.)
- Free up staff for more strategic projects
- Avoid skills gaps around the specific cloud technologies and vendor features
- Establish a relationship with a trusted advisor who can add significant value beyond supply of cloud services

This is in addition to the traditional value of a managed service for the enterprise, namely:

- Flexibility to start or stop the managed service quickly when business needs change
- Predictable cost structure under an Opex model
- Significantly reduced capital cost
- Avoid or plug skills shortages and/or resource gaps
- Rapid time to value compared to implementing internal projects
- 24x7x365 coverage
- Accountability of a single entity responsible for cloud infrastructure management

Managed Public Cloud Service Overview

The Managed Public Cloud service delivers significant value by solving a variety of significant problems for the enterprise customer, in several deployment scenarios:

- Managed Public Cloud
- Managed Multi-Cloud
- Managed Hybrid IT

This document describes a Managed Public Cloud service. Other documents in this series will address the specifics of Managed Multi-Cloud and Managed Hybrid IT services.

The Managed Public Cloud service is structured as a 3-tiered service offering. MSPs may choose to offer some of these parameters in two tiers instead of three but the 3-tiered model is offered and described here.

The typical MSP's managed cloud service portfolio includes a range of management services in addition to the initial resale of cloud services from the cloud IaaS provider, including:

- Design of cloud-centric IT architecture
- Assessment of existing on-premise virtual/physical IT workloads as potential migration candidates
- Consulting services to determine/recommend which workloads can or should be migrated according to customer preferences and strategy, and a set of established criteria for workload migration
- Migration services to conduct the migration of on-premise workloads to the managed cloud service.
- Run/Operate service to manage the customer's cloud infrastructure on a continuing basis
- Cloud security consulting and implementation services
- Billing verification and cost optimization services

This document concentrates on the managed Run/Operate services that MSPs deliver around the cloud-based IaaS/PaaS IT components, based around the ScienceLogic Hybrid IT monitoring platform. MSPs will likely choose to offer either a menu of services such as these, in line items, or otherwise bundle them as part of a broader services offering that may extend to cover other technologies or into a more comprehensive IT outsourcing offering. This document focuses primarily on the 'point service' approach but this type of point service can of course be included or bundled within a broader service offering for those MSPs choosing to approach the market that way.

Tiered Service Overview

Our model defines a three-tiered Managed Service offering which can be summarized in the following table – the later sections in this document define the service deliverables in greater detail.

This service assumes that the MSP provides monitoring and management services to respond to problems proactively on behalf of the customer. For an unmanaged customer, the MSP has the option of hosting the monitoring system for the customer to use on a daily basis (see Bronze option below)

Managed Service Feature	Bronze	Silver	Gold
MSP is responsible for acting on events and resolving problems	Optional	X	X
Discover all elements in user account and monitor activity	X	X	X
Monitor Service Availability in all geographic regions	X	X	X
Archive Regional Performance History		X	X
Monitor all Virtual Private Clouds and Security Groups	X	X	X
Monitor Cloud IT Element Availability	X	X	X
• Compute	X	X	X
• Storage	X	X	X
• Network	X	X	X
Live event views via hosted ScienceLogic platform	X	X	X
Availability dashboard via Customer portal	X	X	X
Monitor Cloud IT Element Performance		X	X
• Compute		X	X
• Storage		X	X
• Network		X	X
Performance dashboard via Customer portal		X	X
Live Customized dashboards		X	X
Live Cloud Dependency Mapping		X	X
Discover and monitor Windows OS		X	X
• Windows Services		X	X
• Windows Processes		X	X
Discover and Monitor Cloud-based Business Applications			X
• IIS			X
• DNS			X
• Exchange			X

• SQL			X
• Active Directory			X
• SharePoint			X
• Lync (Skype for Business)			X

Detailed Service Description & Service Tiers

The service model described here is a three-tiered, graduated set of service deliverables that span the requirements and budget needs of a broad range of customers, from the more price sensitive to the premium-level customer. We have used Bronze, Silver, Gold as the default nomenclature for these service tier descriptions. MSP marketing teams will of course create their own tier designations and naming.

Bronze Tier

At the Bronze level the Managed Cloud service focuses primarily on discovering the presence and monitoring the availability of IT service elements – primarily compute, network and storage elements at the most basic level. Some public cloud services offer a richer portfolio of cloud-based services beyond compute, network and storage – for example AWS has over 700 services – and the ScienceLogic platform monitors those most commonly used.

Beyond simple availability monitoring for compute, network and storage elements, the service also alerts the user on initiation, availability, or configuration status changes to cloud-based devices or services. Performance-related alerting and performance metrics are covered at the Silver and Gold levels.

The service deliverables at the Bronze level can be summarized as follows:

Service Deliverable	Bronze Service	Comments
Cloud Service Account Discovery	X	
Discover all geographic zones/regions	X	
Compute Resource Discovery	X	
Storage Resource Discovery	X	
Network Resource Discovery	X	
VPC and Security Group Discovery	X	
Monitor Compute Resource Availability	X	
Monitor Storage Resource Availability	X	
Monitor Network Resource Availability	X	
Map relationships between all elements	X	Mapping is continuous in real time
Display dashboard showing cloud account mapping and relationships	X	
Alert on all availability losses, new/deleted instances and VPC/Security Group changes	X	

Silver Tier

At the Silver level the Managed Cloud service focuses on the performance of cloud-based IaaS/PaaS components. By monitoring performance parameters over time, customer facing dashboards can be created quickly and easily to provide real-time customer visibility into a wide range of performance parameters. The recommended detailed set of parameters is covered in Section X.

In addition to Bronze, the Silver level service deliverables are as follows:

Service Deliverable	Silver Service	Comments
Includes all Bronze Service Tier deliverables – PLUS:		
Monitor Compute Resource Performance – CPU, RAM, Disk utilization, etc.	X	For further detail see Appendix X
Monitor Storage Resource Performance – capacity utilization (GB/TB) etc.	X	For further detail see Appendix X
Monitor Network Resource Performance – Packets In/Out per account/per region	X	For further detail see Appendix X
Alert customer on performance threshold events via dashboard event list and to customer email/pager as required.	X	Pager/email alerting is also supported and is a common option for a monitor-only service
Discover and Monitor Windows OS Availability	X	
Monitor Windows OS Services and Process Availability	X	
Live Customer-facing Dashboards for selected availability and performance parameters – per region and across regions/zones	X	
- Service Availability by region	X	
- Top N Compute resources by % CPU, Disk, RAM	X	
- Top N Storage resources by % capacity	X	
- Top N VPCs for activity	X	
- Billing summary – current month	X	AWS only
Additional parameters on request – subject to availability via cloud SP API	Optional	Optional for additional AWS services such as Glacier, ELB, Route 53, etc.
Threshold alerts on auto-scale groups	Optional	AWS only

Gold Tier

At the Gold level the Managed Cloud service focuses on a number of value-added parameters that the MSP can introduce to generate premium revenue streams. For example, instead of focusing on raw EC2 monitoring, Windows or Linux OS details can be tracked. Alert streams can be generated. New capabilities that help customers with compliance, or load balancing or Cloud Auto-scaling can be introduced, over and above the traditional metrics such as CPU, disk, and memory utilization levels for cloud-based IaaS/PaaS components.

In addition to the Silver tier of service, the Gold level service deliverables are as follows:

Service Deliverable	Gold Service	Comments
Includes all Bronze and Silver Service Tier deliverables – PLUS:		
Map relationships between all IaaS infrastructure elements in dashboards	X	
Custom Dashboard options	X	Custom pricing applies for special dashboard requests
Discover and Monitor Cloud-based Linux OS instances	X	
Discover and Monitor Cloud-based Microsoft PaaS Applications	X	Availability and performance metrics as appropriate to each application
• IIS	X	
• DNS	X	
• Exchange	X	
• SQL	X	
• Active Directory	X	
• SharePoint	X	
• Lync (Skype for Business)	X	
Map relationships between all PaaS elements and underlying IaaS elements	X	

What Else Is Possible?

Within the scope of a managed cloud service there are multiple additional service components that can be included, beyond pure monitoring of compute, network and storage elements. In fact, the service description we have created in this guide already expands beyond the simple IT element monitoring, to include important coverage of Virtual Private Cloud conditions and Security Group changes.

Several additional ideas are covered here and we will continue to add to these over time.

Managing the Customer - Beyond Compute, Network, and Storage

A variety of capabilities within the ScienceLogic monitoring platform provide enhanced visibility into AWS or Azure behavior. These enable some powerful new features that can be incorporated into a Managed Cloud service to make it especially sticky and attractive to potential customers while differentiating the MSP offering against competitors.

Managed AWS Service:

Alerting

The alerting function within AWS is based on an RSS feed subscription (Journal service) that sends alerts to the customer upon various conditions. This approach is a little haphazard and often sends spurious alerts in high volume, which eventually results in the customer chasing phantom problems, or worse still turning off the alerts altogether. With the ScienceLogic platform, MSPs can consume and correlate these alerts from the customer's account and create notifications to the customer only upon genuine fault conditions – either notifying the customer or taking action - according to the service terms.

Auto-Scaling

The ScienceLogic platform can monitor AWS Auto-scaling functions and provide alerts when compute elements are added or subtracted from an auto-scale group. This ensures auto-scale rules are tuned correctly to help customers optimize the use of extra compute instances to avoid outages due to overload conditions, while ensuring that budgets are not exceeded and resources are correctly deactivated when not needed.

- ELB? EMR? – what do we monitor?
- Billing check for cost control

Managed AWS and Managed Azure Services:

MSPs can use ScienceLogic to monitor and alert on changes to virtual private clouds (VPCs/VNETs). This ensures any new device placement or removal does not go unnoticed, or that devices are not placed in the wrong VPCs/VNETs.

In the same way, MSPs can monitor and alert on changes to Security Groups and ensure correct placement of new assets within their correct Security Groups.

Managed Multi-Cloud Services

Many MSPs utilize a range of tools to monitor various technologies. In the case of a multi-cloud service this approach is very limiting and does not assure a consistent service experience for the customer since operational processes may differ and any customer-facing data is not synchronized. By adopting ScienceLogic as a single unified monitoring platform, operations teams can develop a unified set of workflows for all cloud services while customers can enjoy a single, consistent user interface with time-synchronized performance and availability data.

Cloud-Agnostic or Cross-Cloud Monitoring

This capability enables an MSP to build cross-cloud monitoring of groups of cloud resources, without regard to the underlying choice of cloud. For example, by using ScienceLogic multi-cloud coverage with tagging and grouping capability, an MSP could create dashboard views showing their Top N most utilized virtual machines, or storage elements, regardless of their underlying cloud vendor. This saves considerable time and effort, compared to looking at multiple cloud management systems and comparing data manually or extracting data from multiple clouds for offline analysis.

AWS vs Azure - Feature Parity

It is ScienceLogic's goal to ensure we provide very similar monitoring coverage for AWS, Azure and other cloud services. While this requires considerable engineering investment on our part, it will not always be possible to achieve complete parity, since in many cases the support for new service features in the cloud providers' APIs is not always complete or up to date. ScienceLogic relies upon the richness and maturity of these APIs in order to monitor all aspects of public cloud services.

Microsoft has two APIs that are relevant for Azure monitoring – the original API (Azure Portal) known as 'Classic' and the new Azure Resource Manager API (ARM). ARM is clearly the Azure API of choice for the future. ScienceLogic supports the ARM API with the same monitoring capability as we provide in the Classic version. Future investment will concentrate on ARM while support for the Classic API will continue until Microsoft retires it.

In both cases, AWS and Azure, the MSP will achieve the deepest visibility into the cloud service when placing a collector inside the cloud. ScienceLogic has collectors that operate on AWS EC2 and Azure virtual machine instances, helping MSPs provide visibility beyond that derived from the APIs alone, such as OS and application level views in addition to traditional VM compute statistics such as CPU, RAM and disk usage, or storage utilization levels.

Additional MSP Services

A variety of additional services are frequently added by MSPs as they build out their Managed Public Cloud services portfolio. These typically include combinations of the following, either added as discrete services or as bundled options under a top-level umbrella service offering:

- Cloud Architecture design
- Cloud Security review or consulting
- Cloud Assessment service**
- Cloud Migration service
- Cloud Cost Management

**Note - this is the subject of a related whitepaper by ScienceLogic. For a copy please contact your sales representative.

Financial Case for ScienceLogic

For an MSP, adoption of the ScienceLogic Monitoring platform at the core of the Managed Public Cloud service is based on several components. All of these elements are brought together for discussion and analysis in our whitepaper (Reference) and ROI Model spreadsheet (contact your ScienceLogic sales representative).

The financial parameters include:

Trouble Ticket Handling Expense

Compared to using legacy monitoring systems, MSPs using ScienceLogic typically achieve significant improvements in MTTR and trouble-ticket cycle time, as well as an overall reduction in ticket volumes. This is due to the system's cross-domain visibility, event correlation to reduce false positives, and the levels of automation seen in the platform. As a result, the time expended by Tier 1 and escalated operations teams is reduced, resulting in the ability to handle ticket loads with optimum staffing levels.

IT Tools Consolidation

MSPs introducing ScienceLogic can often replace between 5-7 point tools. In many cases the replacement cost is significantly lower than the ongoing maintenance or subscription cost of the retired software tools, resulting in immediate savings.

IT Operations Automation

Run-book automation within the ScienceLogic platform enables significant savings in labor, improved workflows, a reduction in manual errors and an overall improvement in service quality.

Staffing and Administration

ScienceLogic has a reputation for very low administrative cost – especially the level of staff required to run the monitoring platform – which is typically less than one FTE. Because of its single code base, the ScienceLogic platform is not divided into modules from different development teams or from acquisitions. As a result, upgrades are very simple and straight forward, without the need for individual module upgrades or professional services assistance. In addition, the time required for system commissioning and subsequent integrations is also reduced. Broad device support in over 1700 PowerPacks also results in a very low Professional Services load since a large number of devices can be supported out of the box, with pre-built monitoring policies and device definitions.

New Revenue Stream Creation

The ScienceLogic MSP JumpStart program helps MSPs create new revenue streams for advanced managed services quickly and easily. By working with MSP CTO staff or product management organizations, ScienceLogic helps them define, deploy, market and sell new services quickly and easily, ensuring the ability of MSPs to monetize the platform.

Customer Churn Reduction

This is also achieved by virtue of MTTR reduction and the highly intuitive and innovative dashboards that can be exposed to customers quickly and easily by the MSP, creating more customer 'stickiness' with advanced service visibility.

Net Promoter Score (NPS) Improvement

With reduced MTTR and customer churn, MSPs are likely to experience improvement in their overall NPS – resulting in revenue growth as a direct consequence of improved service levels.

For a more complete financial analysis of a particular MSP's procurement of ScienceLogic, or for ROI modeling or system sizing, please contact your ScienceLogic sales representative.

Licensing the ScienceLogic Platform

Licensing for the ScienceLogic platform is very simple. There are no software modules to buy or to license separately. There are also no per-seat or per-customer charges and no limits on the number of metrics that can be collected from a single device. MSPs can adopt one of two licensing models – either Tiered or Blended – and licensing is typically on a subscription basis rather than the traditional perpetual model.

All functionality is included in the single license and there are no separate version compatibility issues to deal with since all functions reside within a single code base. This also makes upgrades easier and simplifies the process of integration with other OSS systems and tools.

OSS Integration Considerations - Ticketing & other apps

There are multiple considerations when introducing a new monitoring platform into an MSP's back-office infrastructure. ScienceLogic can assist in this process during the initial deployment of the platform. This section is not intended to be exhaustive in this area – please refer to several additional reference documents available to customers via our customer portal.

Two of the most common back-office suites that ScienceLogic integrates with are ticketing systems (especially ServiceNow) and application performance monitoring systems – especially AppDynamics, Dynatrace and New Relic.

ServiceNow - Ticketing overview

By integrating ScienceLogic with ServiceNow, MSPs can achieve significant workflow benefits and cost reductions over other monitoring systems:

1. Depth of discovery
2. Event correlation – reduce false positives
3. Single point of integration – speeds deployment and upgrades
4. Adds breadth of coverage to ServiceNow – AWS, Azure + SDN, HCI, etc.

The ScienceLogic integration with ServiceNow enables advanced incident automation, accurate and automated incident routing to the right operations groups, and CMDB enrichment with accurate, real-time data, configuration and relationship information. This can be expanded to include advanced automated diagnostics for data center compute, OS and networking technologies.

Marketing Support and Go-to-Market planning

ScienceLogic is willing to work directly with MSP marketing and sales teams to help with planning a go to market strategy for the managed public cloud service. ScienceLogic can also help to create or can review MSP marketing materials to ensure a compelling expression of the value of the service and to ensure differentiation in the marketplace.

Appendix X includes sample text for marketing collateral including datasheets and/or web pages.

To enable effective selling in the field it is critical that sales teams understand the value and can communicate it clearly. Please contact ScienceLogic to discuss sales enablement materials and planning. The company may be able to participate in joint marketing campaigns to help promote managed services based on our platform.

Appendix A – AWS Services Monitored

The ScienceLogic platform discovers and monitors an extensive set of AWS services and their associated metrics. include the following:

In addition to discovering AWS Regions and Availability Zones, the following specific AWS services are discovered and monitored for configuration, availability and performance:

- Auto-Scale group
- Billing Performance
- CloudFront
- CloudTrail
- CloudWatch
- Custom Metrics
- Dynamo (DDB)
- DirectConnect
- Elastic Block Storage (EBS)
- Elastic Compute Cloud (EC2)
- ElastiCache Cluster
- ElastiCache Redis
- Elastic Load Balancing (ELB)
- Elastic Map Reduce (EMR)
- Glacier
- OpsWorks
- Relational Database Service (RDS)
- Redshift
- Route 53
- S3
- Security Groups
- Simple Notification Service (SNS)
- Simple Queue Service (SQS)
- Storage Gateway
- Virtual Private Cloud (VPC)

Appendix B – Microsoft Azure Services Monitored

The ScienceLogic platform discovers and monitors a full range of Microsoft Azure cloud infrastructure services and their associated metrics.

In addition to discovering all Azure regions, the following specific Azure services are discovered and monitored for configuration, availability and performance:

- Azure Component Count
- Azure Active Directory
- Azure Compute
- Data and Storage
- Azure Locations
- Azure Networking Service
- Azure Security and Identity
- Azure Service Bus
- Azure SQL database
- Azure Storage account
- Azure Storage container
- Azure Storage Queue and Tables
- Azure Traffic Manager
- Azure Virtual Machine
- Azure Virtual Network

Correct for ScienceLogic version 7.8