

Lumen Service Guide

Base Cloud Managed Services

Version: 11/18/2024

This Service Guide (“SG”) sets forth a description of the Base Cloud Managed Services (“Services”) including technical details and additional requirements or terms, if any. This SG is subject to and incorporated into the governing agreement, Solutions and Services Schedule and SSO between the parties, and if an Agreement and Schedule are not executed, Lumen’s standard MSA and Solutions and Services Schedule will govern. The specific details of the Service ordered by the Customer will be set forth on the relevant SSO. Lumen and Customer responsibilities and service description terms are set forth in this SG.

1. Service Description.

1.1 The Base Cloud Managed service is designed to provide management and support for a diverse range of cloud native services running in a Cloud Platform environment. This Service is tailored to manage cloud native services operation, availability and performance. Services are tailored to support the following currently supported Cloud Platforms:

- Microsoft Azure and HCI
- Amazon Web Services (AWS)
- Google Cloud Platform (GCP)
- Lumen Edge Private Cloud (VMWare), may be referred to as Lumen Private Cloud on VMWare Cloud Foundation
- Lumen Edge Bare Metal (EBM)

1.2 Lumen is responsible for the following tasks related to the Services.

- Management of in scope Cloud Platforms in accordance with agreed upon Customer requirements.
- Monitor, alert and respond to service issues.
- Configure Services as agreed upon with Customer.
- The operation and maintenance of Services where the Cloud Platform providers allow such activities (Lumen has no access to non-Lumen Cloud Platforms directly but can act upon Customer’s behalf when troubleshooting); provided that Customer obtains all necessary consents for Lumen to act on Customer’s behalf.
- Support Cloud Platform provider updates by working with the Customer to implement mutually agreed changes.

2. Managed Technologies.

Managed Operating System, Application and Database Technologies	Apache IIS Tomcat	CentOS Red Hat Enterprise Linux Ubuntu Linux	Microsoft Windows Server Microsoft SQL Server MySQL	Oracle Linux SUSE Linux Enterprise Rocky
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Managed AWS Services	EC2 Direct Connect S3 Trusted Advisor ElastiCache Auto Scale RDS (MySQL, Oracle, SQL)	Cloud Formation EBS Cloud Trail Route 53 Organizations Management Tools	VPC Cloud Watch Elastic Load Balancing Cert Manager CloudFront Directory Services
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3. Responsibility Matrix.

This Responsibility Matrix aims to clarify the roles and responsibilities of both Lumen and Customer in the context of Base Cloud Managed services.

Task	Lumen	Customer
Guest Operating System management (as agreed between the parties)		
Deployment & Setup of Servers		
<ul style="list-style-type: none"> Specify the requirements for server configurations. 		✓
<ul style="list-style-type: none"> Validate and approve the configurations post-setup. 		✓
<ul style="list-style-type: none"> Implement operating systems and key software on these servers. 		✓
Server Patch Maintenance (as agreed between the parties)		
<ul style="list-style-type: none"> Schedule and conduct patching tasks for servers. 	✓	
<ul style="list-style-type: none"> Execute scheduled updates. 	✓	
<ul style="list-style-type: none"> Aim for minimal operational disruption during maintenance. 	✓	
<ul style="list-style-type: none"> Approve scheduling and maintenance activities. 		✓
Security Management of Servers (as agreed between the parties)		
<ul style="list-style-type: none"> Implement and maintain requested security protocols. 	✓	
<ul style="list-style-type: none"> Establish and communicate internal security policies. 		✓
<ul style="list-style-type: none"> Report security incidents promptly. 		✓
<ul style="list-style-type: none"> Engage in joint reviews. 		✓
Monitoring & Enhancing Performance (as agreed between the parties)		
<ul style="list-style-type: none"> Continuously monitor the performance of guest operating systems of virtual servers. 	✓	
<ul style="list-style-type: none"> Analyze server logs to identify performance bottlenecks. 	✓	
<ul style="list-style-type: none"> Suggest strategies to enhance server performance. 	✓	
<ul style="list-style-type: none"> Request modifications based on analysis or server changes. 		✓
<ul style="list-style-type: none"> Provide feedback on server performance issues. 		✓
<ul style="list-style-type: none"> Collaborate in performance enhancement initiatives. 		✓
Corporate Data Security and Compliance (as agreed between the parties)		
<ul style="list-style-type: none"> Implement and manage security measures as defined by Customer. 	✓	
<ul style="list-style-type: none"> Manage access controls and encryption. 	✓	
<ul style="list-style-type: none"> Adhere to Customer defined data security policies and compliance requirements. 	✓	
<ul style="list-style-type: none"> Report any security incidents or breaches. 	✓	✓

<ul style="list-style-type: none"> Collaborate in security audits and compliance checks. 	✓	✓
Hypervisor Deployment & Configuration (as agreed between the parties)		
<ul style="list-style-type: none"> Configure hypervisors for managing virtual machines (VMs). 	✓	
<ul style="list-style-type: none"> Set up and optimize virtual networks and storage for VMs. 	✓	
<ul style="list-style-type: none"> Provide specifications and requirements for hypervisor configuration and coordination on network and storage integration for VMs. 		✓
<ul style="list-style-type: none"> Approve and validate hypervisor setups. 		✓
VM Management & Optimization (as agreed by the parties)		
<ul style="list-style-type: none"> Manage the lifecycle of virtual machines, including provisioning, scaling, and decommissioning. 	✓	
<ul style="list-style-type: none"> Optimize VM performance and resource allocation. 	✓	
<ul style="list-style-type: none"> Implement load balancing and scaling. 	✓	
<ul style="list-style-type: none"> Define requirements for VM deployment and scaling. 		✓
<ul style="list-style-type: none"> Provide feedback on VM performance and resource utilization. 		✓
<ul style="list-style-type: none"> Collaborate in VM optimization strategies. 		✓