Lumen®Managed Services Anyw her e

Capabilities and expertise to accelerate your digital transformation

9/2020



What if you could...

Simplify your Hybrid IT environment

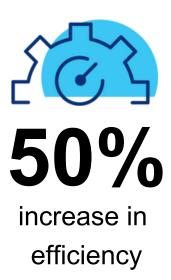
Speed application delivery

Save money



Achieve benefits like these

Examples of benefits achieved by companies using managed cloud services









Especially when 75%

oforganizations navigate the cloud journeyon theirown... and many fail. Don't go it alone.



There are IT and business challenges



Speed to market

Governance

Compliance

Cost control

Expertise gaps

Security

Disaster Recovery

Shadow IT

Cloud sprawl

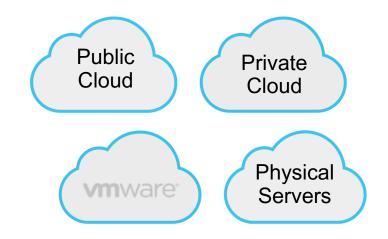




But, there's a better way

Managed Services Anywhere

People, processes and automation to manage applications and workloads across virtually any hosted infrastructure to enable you to:



Simplify governance

Speed app delivery

Save money





Provider
Subscription
Global team
Technical manager
Managed platform

All-in-one

• • • • • • •

Buildautomation

Application connectivity

Monitoring

Scaling policies

Workload deployments

Patch management

Incident management

Disaster Recovery



How does Managed Services Anywhere work?

Your environments are defined, workload instances are discovered or modeled, ITIL-compliant steady-state assurance is baselined

Globally-consistent, ITIL-Based, IT Service Management practices for operational assurance and business alignment

- Full transparency via Cloud Application Manager (CAM)
- •Highly efficient problem and incident management via automation tooling

Continual operational improvement with a suite of tools, powered by Cloud Application Manager

- •Watcher: for monitoring and predictive analytics
- Actor: for process automation
- •Jumper: for auditable remote access and change control
- SafeHaven: for Security and Disaster Recovery Readiness

Customizable with Advanced Managed Services

- Design and architecture assistance
- · Security guidance
- Adaptive help desk options





Digital marketing center of excellence for cloud

A multinational food, snack and beverage corporationcut costs by 30% by migrating workloads to Microsoft Azure and another public cloud across multiple data centers.

The Lumen solution:

Managed Services Anywhere on Cloud Application Manager was chosen to help lift and shift current website properties into new data centers on a tight timeline.

Results:

The moveto a cloud-based solution enabled the migration of workloads over another public cloud and Azure and regions to:

- •Cut monthly spend by 30%
- Scaled site to 900x normal load to meet high peak traffic including
- earnings calls and ads aired during world's largest football game
 Reduced hardware maintenance lifecycles and capital costs





Design and deploy scalable cloud enabled platforms

A leading global provider of advanced delivery technologies and development solutions for drugs, biologics and consumer health products needed to design and deploy a scalable, cloud-enabled platform across multiple locations and environments.

The Lumen solution:

Managed Services Anywhere on Cloud Application Manager was chosen to monitor the Azure environment and facilitate the technology and security requirements.

Results:

AscalableAzure architecture and support to drive growth.

- Reallocated resources
- Increased app delivery
- Reduced costs





Transformed IT delivery for global telecom

A leading global communications provider needed to automate the delivery of network workloads across premise, network and cloud to drive network function virtualization across multiple multiple business lines.

The Lumen solution:

Modelingworkloadsin Cloud Application Manager and deep integration with a cloud-compatible Universal CPE framework.

"Working with the Cloud Application Manager framework was a game- changer. It enabled us to abstract away legacy systems and focus on automating business functions." —Matt Holway, Product Manager

Results:

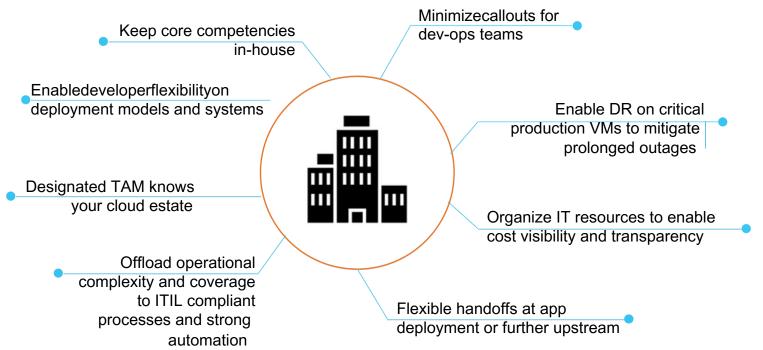
Equivalence between IT and Network workloads, with a common delivery model for NFV workloads across

- Customer premise locations
- Near-edge deployment pods on the network backbone
- · Cloud provider partners



Tailored for your business

Change the management mix-in and out -virtually anytime, anywhere







Technical Account Manager



Your trusted expert

- Rigorous, formal education and CAM platform training
- Gains deep knowledge of your IT estate
- Extensive external and internal certifications and training
- Single-point of contact across all platforms





Your Technical Account Manager

- David monitors and tracks your business like it's his own
- David has completed the CTL Cloud Professional Certification Program which includes deep, detailed, training on CAM tooling and has achieved one (or more) public cloud certification

He makes recommendations with precision and

- authority based on training and experience
- His mission is to maximize IT investments for you and he's done it before



Simplify, speed, save

Lumen®Cloud Application Manager can



Simplifygovernance and management with full visibility



Speedapp delivery through modeling and automation



Savemoney and efficiency through analytics and recommendation engine



Lumen Hybrid Cloud Management Platform given 10/10for business impact

"Lumen's Cloud Application Manager platform stands out among the competition for its comprehensive capabilities and integration of the company's "managed anywhere" services, which enables customers to access managed service support in a cloud-like consumption model."







The journey to the cloud

capabilities and expertise to enable

Rapid integration, migration, and deployment of new and legacy apps and workloads

Simple, flexible

terms and feestructure -month to month – zero commitment

Management and optimization ofnew and existingapps



The transformation on the cloud

capabilitiesandexpertisetoenable

Transformation
acceleration withworkflow
automation and flexible
handoffs

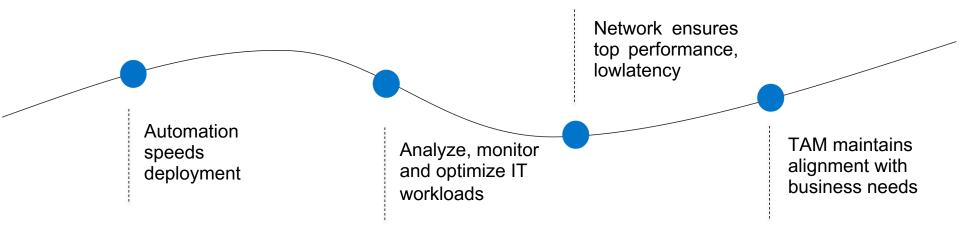
Simplified governance across clouds,appsand workloads

Optimization patterns to better align cloud spending with usage



Providing a consistent experience

across your IT platforms





Lumen helps you accelerate digital transformation







100+ certifications



The Managed Services Anywhere difference

- Manage a range of physical servers, private cloud, and public clouds via one platform and leverage ITIL certified support processes and strong automation capabilities
- Enables customers to BYOC (bring-your-own-cloud)—yourchoicetomaintainyourexistingvendor relationships or leverage Lumen buying power
- Comprehensive optimization of IT consumptionacross multiple environments
- Built in Disaster Recovery Readiness features included with Cloud Application Manager and Managed Services Anywhere
- Designated Technical Account Manager with formal certification training, multiple cloud certifications, and demonstrated skills across cloud platforms
- Manage many third-party applications without a separate services agreement
- No large, long term, financial commitment required to leverage the service



Trusted connections

450,000 global route miles of fiber

114 billion NetFlow records collected per day

Customerslocated in 60+countries

170,000+on-net buildings



Thank you



Additional content



Solving the most common pain-points with cloudenabled digital transformation

Consistent experience across physical servers, private cloud, and public cloud environments

Compliant deployment of cloud workloads

Optimize traditional business apps ("mode 1") migrated to the cloud

Streamline cloud-native applications with a managed delivery pipeline

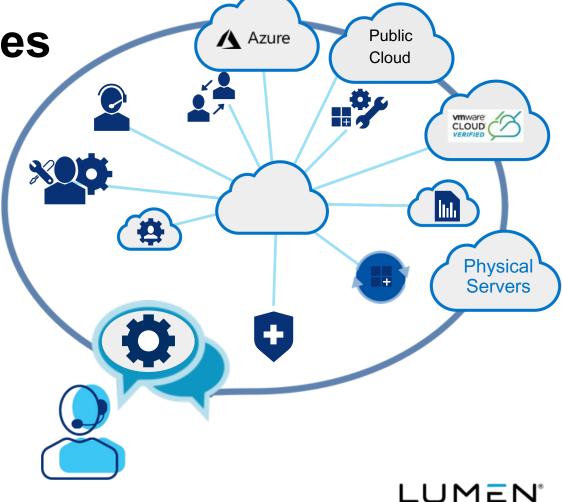
Protect critical VMs with Disaster Recovery Readiness features built into Cloud Application Manager





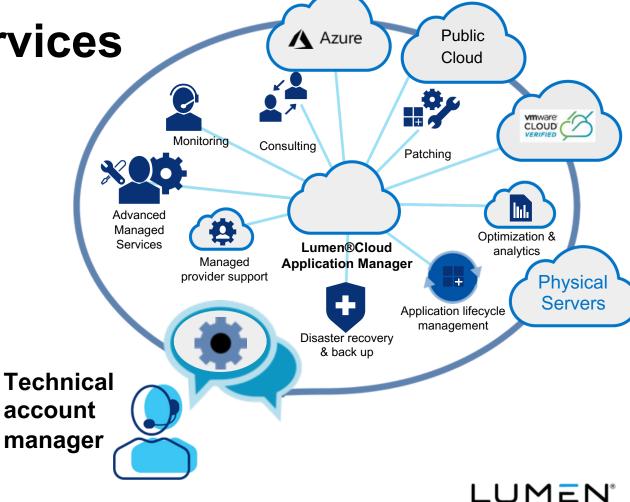


Service provider
Service Subscription
Global Service Team
Technical Account
Manager
Managed Platform



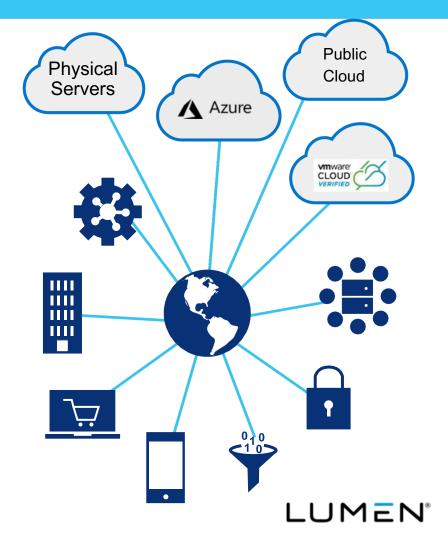
Tools, processes and people to manage applications and workloads across virtually any hosted infrastructure.

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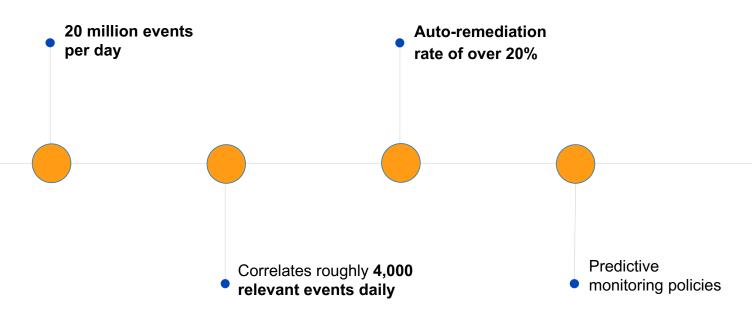
- Includes a full range of management activities and technologies
- Build automation
- Application connectivity
- Monitoring
- Scaling policies

- Workload deployments
- Disaster Recovery
 Readiness
- Patch management
- Incident management
- Ongoing support



MSA automation

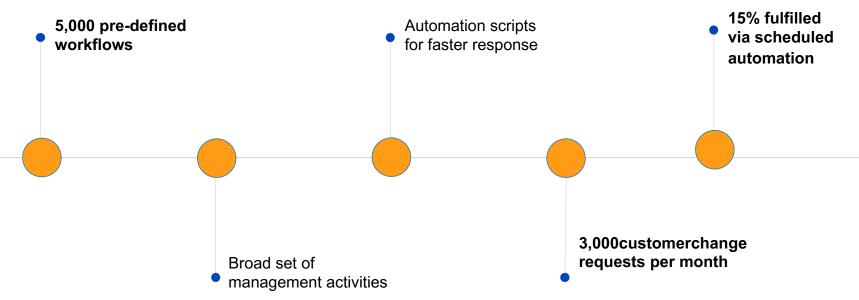
Continuously evolving automation capabilities mirror new cloud execution venues for enterprise applications





Automated workflows

Incident tickets are automatically routed to the proper subject-matter experts and our customers are alerted via email, text unified communications or e-bonded ticketing systems





Business threat –shadow IT



Shadow IT now investments can exceed 40% of the formal IT spend.1



The average enterprise uses 1,935 cloud services, with fewer than 50 of them known to IT.2



Of the more than 20,000 cloud services in use, only 8.1% meet the strict data security and privacy requirements of enterprises.2



21% of organizations experienced cyber events due to a non-sanctioned IT resource.1

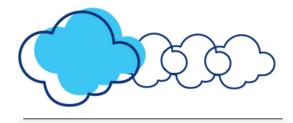
Source:



¹ Gartner, Unsanctioned Business Unit IT Cloud Adoption Will Increase Financial Liabilities, 2016 -link to report

² McAfee CloudAdoption andRisk Report, 2019

Business threat – cloud sprawl



42% of organizations now have a multi-cloud deployment in place.1



"Most organizations do not have any sort of unified system in place for monitoring, managing, or securing their cloud applications and infrastructures"2



Business threat –downtime



Leading analysts put the average cost of downtime between \$84K to over \$300K per hour.1



46% of companies don't have a backup and disaster recovery plan in place.2



Almost 40% of small businesses permanently close their doors following a natural disaster.³

Sources:

- 1 -IDC, Gartner
- 2 -Riverbed IT Management
- 3 Federal Emergency Management Agency



Lumen - a range of cloud support options

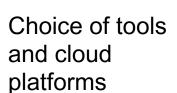
Service	Cloud Application Manager (CAM) Automation Framework		Advanced Managed Services	Custom Services via
	Platform Advisory Support (PAS)	Managed Services Anywhere (MSA)	(AMS)	Statement of Work (SOW)
Focus	intro [→] advise [→] support	build → deploy → operate	align [→] design [→] govern	consult → customize → evolve
General Activities:	 create CAM control hierarchy (org, cost centers, users, workspaces, etc.) introduce self-service use of CAM platform designated Technical Account Manager (TAM) technical advisory guidance on CAM & compatible clouds technical support for CAM and clouds w/provider escalation no hands-on activities 	 includes all PAS activities hands-on activities for fully managed tech build cloud, OS, & app configs deploy workloads and applications operate applications 24x7 hands-on activities w/many partially automated by CAM 	 advanced activities beyond MSA for managed environments & technology align cloud activities to client goals design standard deployments and governance of change, problems growing set of objective focused add-on packages of activities for a fixed price 	 cloud ready assessments of existing application estates consulting activities for integrated IT solutions (ex: IoT, Big Data, SAP, etc.) custom activities beyond PAS, MSA, & AMS 24x7 management of cloud technologies outside of those fully managed in MSA evolve IT estates with cloud design and transition services for large migrations



Maintain developer choice of tools

Providing handoff from a broad choice of dev tools and CI/CD pipeline practices







Jenkins X workflows Ansible deployments



Flexible pipeline handoffs



24/7 operations team



Business value

Simplify management of applications and workloads across hybrid cloud estates without sacrificing control

Drive efficiency and cost savings across entire cloud and application estate

Augment internal IT expertise
 with Lumen® Advanced
 Managed Services and IT
 Consulting experts

Heightened protection with Disaster Recovery Readiness

Single pane-of-glass transparency for improved governance, cost control and capacity utilization

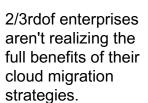
Standardize application stack deployment based on your policies and environment

Innovate faster by aligning your development, operations, and finance organization throughoneplatform



The reality







1/3 achieved outcomes in key areas: Cost (34%), speed (36%), business enablement (35%), and service levels (34%).



Two of the top barriers: Legacy infrastructure (43%); and lack of cloud skills (42%).



Why use managed cloud services? The majority cited "access to the right skills" as thetopbenefit.



The Lumen difference

Rigorous education and training | Unprecedented expertise



Gold Cloud Platform Gold Datacenter Gold Application Development Gold Data Analytics Gold Cloud Productivity

- Microsoft Gold level Partnerfor
 - · Cloud Platform Cloud Productivity
 - · Data Analytics Data Platform Small
 - · and Mid-Market
 - Cloud Solutions
 - Lumen has 70 MCPs and over 200 employees that received workshop certificates and/or MCSA, MCSE, and MCSD certifications

