

Smarter technology for all

Storage Playbook

FY23 Q3

Lenovo

Storage Industry Trends

Emerging 2022 Storage Trends in the Channel According to CRN:

The Market Finally Gets It: It's The Software There is an increased awareness of the value of software versus hardware in storage. Businesses are investing in software-defined storage as well as software-based storage appliances that can be run on-premises or in public or hybrid clouds to manage the same data in the same way wherever it is stored

Living on the Edge The edge, particularly with the adoption of IoT, has become a key part of the storage infrastructure as increasing amounts of data are captured by devices that can be mounted anywhere, with that data then typically sent to a centralized location for processing into valuable information that can be used for analysis or making decisions. However, sending huge amounts of data in tiny slices can result in bandwidth issues or problems with assembling it into useful data. The industry will see more data increasingly remaining at the edge as compute capabilities will migrate toward the data rather than vice versa. A lot of the data collected is ephemeral in nature: recorded, prepped for analysis and discarded in real time as it is of no further value. Given bandwidth constraints, it makes more sense in many cases to process the data where it is collected and just send the results.

Ransomware Technology will be Key Expect anti-ransomware technology to become a prominent must-have feature in 2022 and beyond. AI will play a big role in protecting data against ransomware as it can be used to scan for known and unknown attack vectors in real time.

AI and Machine Learning Businesses are looking for areas where they can automate storage and data management processes. Expect storage systems to increasingly take proactive, automated actions. Automation in storage systems will also increasingly be used for more mundane tasks such as ingesting, organizing, provisioning and managing data, a move that will allow the human administrators to focus on more company mission-critical tasks.

5G Will Simplify, Complicate Data With 5G networks, wireless bandwidth will increase significantly compared with legacy networks. That will make it easier to move increased amounts of data at higher speeds, which will mean easier backup and recovery, faster access, quicker movement of large data sets for analysis and so on, particularly between on-premises infrastructures, clouds, and the edge. 5G networks might eventually take some of the bandwidth pressures away. However, with the expected increase in data stored, processed, migrated and managed by businesses and consumers, that extra bandwidth could be swallowed up, leaving users back at square one.

Additional Information:

<https://www.crn.com/slide-shows/storage/8-emerging-data-storage-trends-to-watch-in-2022/9>



Business Challenges Around Storage



IT departments are struggling to support their ever-changing customer business needs using traditional storage.

- Inability to move data from public to private cloud while maintaining control
- Unable to respond quickly to business changes and data growth
- Scaling can be disruptive, limited and not uniform, creating silos and disruptions
- Reduced IT budgets and staff, but need to implement more projects to support the businesses

Fast Facts

- Over the next three years, more data will be created than over the past 30 years
- By 2025, 85% of infrastructure strategies will integrate on-premises, co-location, cloud, and edge delivery options
- Global cost of malware will grow to 10.5 TRILLION USD by 2025

Digital transformation requires enterprise solutions for emerging applications

Internet of Things



30B

Smart devices by 2025, collecting, analyzing and sharing data

Security Everywhere

Edge → Core → Cloud



70%

Enterprises moving from big data to small and wide data by 2025

Performance Edge & Core

Cloud-Native & Hybrid

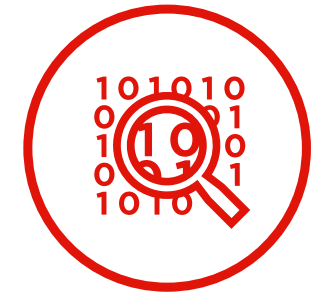


\$832B

Estimated Revenue for Cloud Computing WW by 2025

Data Flexibility Edge-Core-Cloud

Big Data & AI



180ZB

Volume of data/information created and consumed worldwide by 2025

Data InterOP

Data Drives Business Value



19x

Data driven companies are 19 times more likely to be profitable



23x

Data driven companies are 23 times more likely to acquire new customers



6x

Data driven companies are 6 times more likely to retain customers



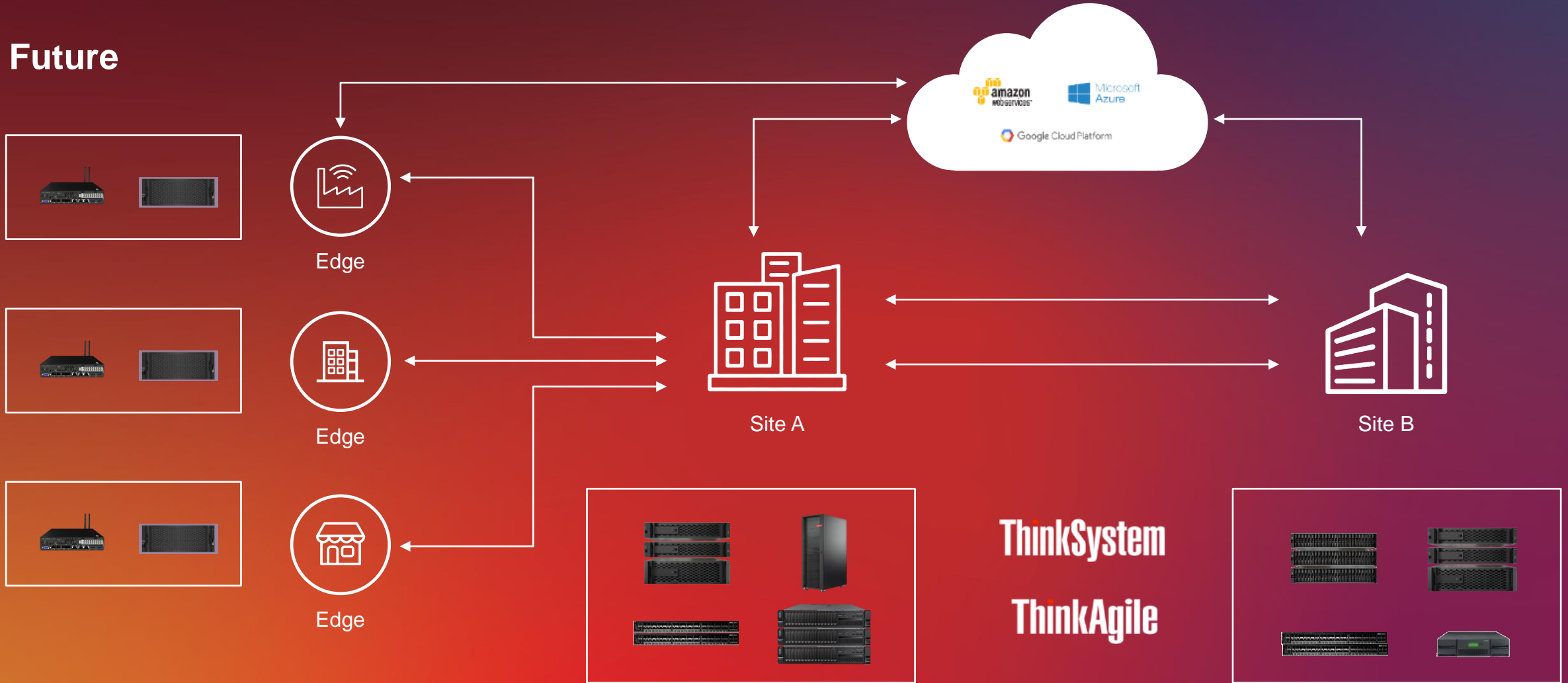
8%↑

Businesses that use Big Data increase their profit by 8% and a 10% reduction in cost

Today: Data Management Isn't Limited To The Data Center

A data driven business requires data management everywhere, integrated with hybrid cloud

Future



Lenovo Storage Enabling Data Intelligence for a Digital Transformation

2021

22% Total Storage Growth

48% DM Series Growth

3500 New customers

#11 Market Share

2016 - 2017:

- Storage entry reselling IBM Storage
- Launched DSS: Lenovo HPC SDS
- Launched ThinkSystem Storage

#9 Market Share

2018-2019:

- NetApp OEM partnership
- Launched JV in China
- Launch DM and DE Storage Solutions

#8 Market Share

2020-2021:

- Cloud Solutions
- Experienced GTM sales team
- TruScale Infinite Storage
- ThinkSystem DXN MagnaScale - PRC SDS – China only
- DM Series All-SAN
- Think System Intelligent Monitoring

Product Overview

DE

DM

Workstation Storage

Lenovo + Veeam Solutions



Lenovo Portfolio: Differentiated Value

Solution Partners



Solutions

Hybrid Cloud
AI/Analytics

Backup/Recovery
HPC

Virtualization
Database

ERP
Media

TruScale (as a Service)

Traditional Storage

ThinkSystem



DE Series



DM Series



Storage Networking



Tape Solutions

Integrated Compute & Storage

ThinkAgile



HX



VX



MX/SXM

Software Defined Storage

ThinkSystem



DSS



D Series



DXN MagnaScale
China only

Lenovo Cloud



Services and Support

Design | Implementation | Support

Lenovo Edge to Enterprise Cloud Data Management



**NAS/SAN/Unified
DM Series**



**SAN Storage
DE Series**



**Hyperconverged
HX, VX, MX**

aws
 **Google Cloud**
 **Microsoft Azure**
SOFTLAYER[®]
Hybrid Cloud
Cloud Volumes
FabricPool
Cloud Manager



Tape/Archive



**HPC Scale out
DSS Solutions**



Disk Expansion



**Networking
DB Series - FC**

 **COMVAULT[®]** 
**IBM Cloud
Object Storage**
 **veeam**
**IBM
Spectrum
Scale**

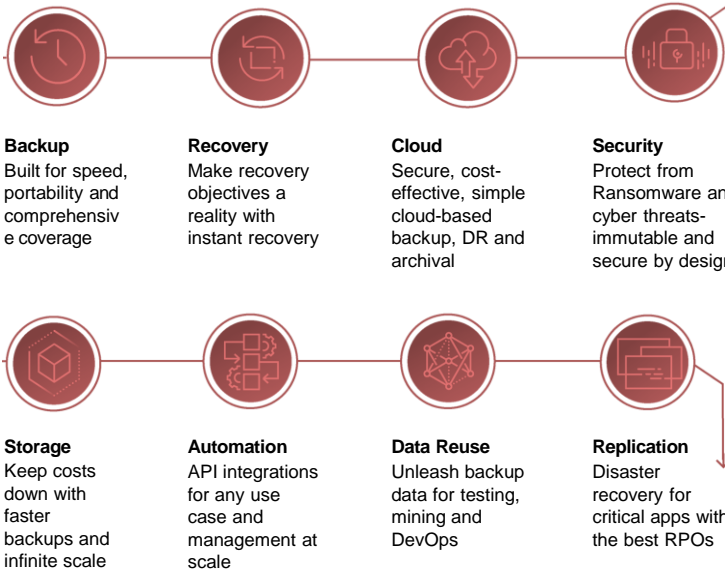
**Backup/
Management**

Lenovo + Veeam Key Solutions

Back up and Recovery Solutions

Modern Backup and Recovery Delivers Outcomes

Own, control, backup and recover all your data anywhere in the hybrid cloud. Lenovo + Veeam ensures bulletproof ransomware protection, accelerates your move to the hybrid cloud while reducing cost and complexity.



Veeam Backup for Office 365

24/7/Office365 Availability

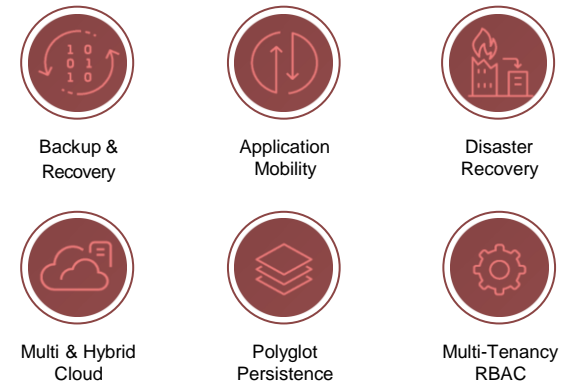
Keep Microsoft 365 data available, accessible, and secure with the joint Lenovo and Veeam backup and recovery solution for Office 365. Used across hybrid and multi-cloud environments to mitigate risks of data loss and downtime, and ensuring data compliance, while reducing costs.

Why Backup for Microsoft 365



Kasten by Veeam

Kubernetes Backup and Restore, Disaster Recovery, and Mobility Made Easy



Built for Kubernetes

Purpose-built for Kubernetes using cloud-native architectural principles.

End-to-End Security

Support for RBAC, OIDC, Token Auth, IAM, and industry-standard encryption.

Ease of Use

State-of-the-art management interface; cloud-native API, easy install, extensible.

Rich Ecosystem

Extensive support across the entire application stack. Select the best tools or infrastructure.

Lenovo Data Center Backup & Recovery

ThinkSystem + Veeam Ransomware Solutions

- Ransomware attacks were Up 62% in 2020
- 70% of victims were forced to pay the attackers to get back data
- 75% of victims were running active endpoint protection... and still got hit

\$23,780*

List \$54,946
56% Discount

\$40,972*

List \$97,951
58% Discount

\$51,199*

List \$121,776
58% Discount

Promotion: 5% Off All Hardware 15% Off Veeam Software

ThinkServer SR630

- Intel Xeon Silver 4214
- 16Gb RAM
- 2x 10GbE Ports

DE2000H

- 12 x 8TB = **96TB RAW**
- 8x 1/10GbE iSCSI
- Grow to 1.8PB

Veeam Solution

- Veeam 3 Year Universal Backup and Replication Enterprise Edition
- 1x License (10x Hosts)

1600 LEAP Points



ThinkServer SR630

- Intel Xeon Silver 4214
- 16Gb RAM
- 2x 10GbE Ports

DE4000H

- 40 x 8TB = **320TB RAW**
- 8x 1/10GbE iSCSI
- Grow to 3PB

Veeam Solution

- Veeam 3 Year Universal Backup and Replication Enterprise Edition
- 1x License (10x Hosts)

1600 LEAP Points



ThinkServer SR630

- Intel Xeon Silver 4214
- 16Gb RAM
- 2x 10GbE Ports

DE6000H

- 60 x 8TB = **480TB RAW**
- 8x 10/25GbE iSCSI
- Grow to 4.3PB

Veeam Solution

- Veeam 3 Year Universal Backup and Replication Enterprise Edition
- 1x License (10x Hosts)

1600 LEAP Points



Any CTO Configuration of DE and SR630/SR650 is Eligible for this Promo

Lenovo Enterprise SR630 Rack Server Industry Leading Reliability

- Supports 1 or 2 Intel XEON Gen 2/3 Scalable processor
- M.2 SSD for OS (Windows 2019 Server)
- Provides many features to simplify serviceability and increase system uptime
- Multiple #1 [World Record Benchmarks](#)

Lenovo Enterprise DE Storage System High Performance Scalable Storage

- DE platform is based on field-proven architecture that delivers 99.9999% availability with redundant components (controllers, PSU's, fans)
- Advanced data protection – Simplified RAID management
- Complete set of free management tools

Veeam Backup and Replication Software Secure Backup is the Best Defense

- Scalable to protect environments of any size
- Scalable to hit recovery time objectives including instant recovery options
- Software defined solution that will work in most environments

*For more information, please reference the "GTM Playbook"

*Pricing is estimated end street pricing after promotions applied. Contact your Lenovo Partner for an official pricing quote

Lenovo

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Product Overview



TRANSFORM YOUR IT TO GAIN VALUE IN A DATA DRIVE WORLD

- Every customer **needs** to get value out of their data
- Properly managing your data will allow value to be maximized

The Storage Industry Is Changing In Ways That Can Improve Your Business & Create New Opportunities

Move to Flash: Flash prices are dropping, and all Tier 1 storage is moving to Flash

Cloud: Ability to tier data to the cloud to increase capacity & address data flexibility

DE Series Provides:

- High-performance Block storage which gives fast access to data and rapid response from applications.
- A wide range of drive, chassis, & connectivity options, allowing a large amount of flexibility
- Features to protect and secure customer data

DM Series Provides:

- High-performing Mid-range Storage: Scale up to 480 2.5" or 3.5" drives to satisfy growing needs for storage capacity and performance.
- Support for latest NVMe Technology: Acceleration of read-centric workloads with the high-speed, low latency onboard NVMe SSD caching
- Comprehensive Storage Features: Includes quality of service, compression, deduplication, encryption, disk-based backup, quick data recovery, and asynchronous mirroring

DE Overview



Sets The Standard For Price / Performance Efficiency

- With the DE Series, customers benefit by deploying performance optimized block storage for a variety of workloads.

Key Benefits

- Price / Performance leader delivers affordable performance optimized storage
- Wide range of drives, shelf options & connectivity types provides flexibility
- Ensure data security with encrypted drives as well as data replication, including to the Cloud



Accelerate

The DE Series delivers high-performance Block storage which benefits customers needing fast access to their data and rapid response from their applications.



Optimize

The DE Series provides a wide range of drive, chassis & connectivity options to tailor a solution to your customer's needs. This flexibility allows customers to optimize their block storage environments by using the right combination of options for their current business requirements



Protect

Customers rely on Lenovo to protect their most critical business asset their data. The DE Series provides multiple features to ensure their data is protected and secure.

DM Overview



Drive innovation & responsiveness with ThinkSystem DM Series

- With the DM Series, customers can integrate next-generation data storage technologies such as flash & cloud

Key Benefits

- Scale and move workloads across cloud deployments in minutes
- Increase performance with flash optimization
- Integrated data protection
- Application integration with VMWare and other popular workloads
- Global management of data from flash to disk to cloud for lifecycle management



Accelerate

- The DM Series enables customers to deploy All-Flash SAN environments which minimizes latency and increases overall performance, resulting in faster running, performance optimized applications
- Accelerate your data with All Flash efficiencies & NVMe over Fabric



Optimize

- ONTAP gives you a common set of features across deployment architectures, which simplifies complex tasks so your IT staff can be more productive and focus on addressing business priorities.
- Optimize Data Management across flash, disk & cloud



Protect

- Protection of a customer's data is critical to their business - both from the perspective of ensuring that data is not stolen, as well as the ability to quickly recover data if a disruption occurs.
- Protect your Data with highly reliable systems and Snapshots and other replication technologies

Lenovo External Enterprise Storage Data Platforms

ThinkSystem DM SERIES

Lenovo Scalable NAS/SAN/Unified

- ONTAP Data Management OS
- AFA and Hybrid
- Anti-Ransomware
- Unified multi-protocol file and block
- Cloud Tiering



Protocols: FC, FCoE, iSCSI, SAS, NVMe/TCP, NVMe-oF, CIFS/SMB, NFS, S3

Hybrid-Cloud
Enabled

Powerful data
management

Superior all-flash
performance

**Key
Workloads/ Use
Cases**

- Transactional databases and analytics
- Virtualization and VDI
- Unstructured datasets
- Edge consolidation

ThinkSystem DE SERIES

Lenovo Performance Block

- AFA and Hybrid Block
- Asynch & Synch Replication
- Price Performance leadership
- Ease of use



Protocols: FC, iSCSI, SAS

Simple scale-up
architecture

High
performance

Resource
efficient

**Key
Workloads/ Use
Cases**

- Database / Analytics
- Backup and archive
- HPC / AI
- Video Surveillance

ThinkSystem Storage Conversation Card



Elevator Pitch

Transform your IT to gain value in a data driven world

- Data growth mandates a digital transformation. It's estimated that there will be 30 billion smart devices connected to the internet by 2025 - all collecting, analyzing or sharing data. The challenge will be how to manage data to maximize the value. You will need simplified management, fast and efficient data storage, and straightforward execution. Data management is no longer just limited to the data center, it is integrated on premises and within hybrid clouds.
- Lenovo offers several storage options to help with data collection and data management. This includes data protection:
 - Data encryption - Protect your data on-premises, in flight, and in the cloud with both hardware and software-level encryption capabilities
 - Data replication - Synchronous replication for rapid, transparent application failover, and asynchronous replication for granular

Fast Facts

- Lenovo is the price/performance leader in the industry
- The Lenovo DE Series of storage arrays is based upon a hardware and software architecture that has been deployed for many years, and has proven to deliver up to 99.9999% availability
- Lenovo ThinkSystem servers consistently achieve the lowest down time
- Lenovo is the fastest growing All Flash vendor
- Lenovo is the 1st to market with End to End NVMe-oF
- Lenovo is the Fastest growing WW storage vendor



Customer Type

DE Series

- High-performance databases
- Web and security applications
- Data analytics
- Video Surveillance
- Backup and Disaster Recovery
- Technical Computing
- Big Data Analytics

DM Series

- Enterprise Applications
- Consolidation and Virtualization
- Hybrid Cloud
- Virtualization
- Artificial Intelligence and Big Data Analytics
- OLTP
- DevOps



Why Lenovo

"What appealed to us most was the inherent **flexibility** of Lenovo ThinkSystem servers. Compared to other vendors, Lenovo offers greater **scalability and value**. We were confident that the Lenovo solution would ensure consistently reliable performance across our multi-cloud infrastructure. We were also very impressed with Lenovo's storage offering. Not only does the ThinkSystem DM7100F all-flash array deliver top performance, it's also simple to scale and easy to administer." – DETASAD CEO & President

DE Series Provides:

- High-performance Block storage which gives fast access to data and rapid response from applications.
- A wide range of drive, chassis, and connectivity options, allowing a large amount of flexibility
- Features to protect and secure customer data

DM Series Provides:

- The DM Series offers a superior unified data management suite providing the capability to manage Block, File and Object data
- Support for latest NVMe Technology: Acceleration of read-centric workloads with the high-speed, low-latency onboard NVMe SSD caching
- Comprehensive Storage Features: Includes quality of service, compression, deduplication, encryption, disk-based backup, quick data recovery, and asynchronous mirroring

Lenovo Smart Data Management

- Efficient – Unique solutions to manage the growing diversity and quantity of data (Versatile, flexible, simple)
- End-to-end – Lenovo solutions and managed support ensures expert consistent support across the world (remote deployment, data migration, premiere support)
- Secure – secure data management with Lenovo solutions



Discovery Questions/Door Openers

DE Series

- Do you have databases which require high performance? → [Offers high performance ideal for big data, technical computing or OTP databases.](#)
- You have a HCI based environment today, how are you backing up your clusters? → [Snapshots on a HCI cluster won't sufficiently protect your data- DE Series storage arrays for external backup & archive provides an extra layer of protection](#)
- Do you have large data-lakes that contain large amounts of meta-data? → [Range of options available so can use the higher-performance & capacity arrays for main data, and a smaller DE system for meta-data storage.](#)
- How are you addressing your general backup & archive environment today? → [Lenovo has partnered with leading software vendors \(ex:Veeam\) to deliver optimized solutions using the DE Series of hybrid arrays for reliable, cost-effective backup.](#)

DM Series

- Does your organization have the ability to meet changing business requirement? → [delivers a data management solution that provides the agility, scale, protection and operating efficiency](#)
- Can you respond quickly to business changes on premises or in the cloud? → [provides a foundation that seamlessly connects different data management environments across disparate clouds into a cohesive, integrated whole](#)
- Is any of your environment virtualized? If so, how much and what is virtualized? → [Data efficiency technologies for de-duplication, compression & Snapshots are perfect complements to virtualized workloads, reducing the amount of physical storage required to store VMs and VDI instances](#)
- What cloud providers do you use now, or plan to use in the future? → [Allows tiering to the Cloud with multiple popular Cloud vendors such as Amazon & Microsoft, as well as tiering to private clouds and facilitates data mobility between data centers](#)

Lenovo

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*For more information, please reference the "How to Sell Playbook"

WorkStation & Storage Unified Solution Conversation Card



Elevator Pitch

Deliver the Right Data, to the Right People, at the Right Time

Successful companies have adapted to changing business climates by using business processes that promote accessibility, mobility, and collaboration.

Fast Facts

- The WorkStation & Storage Solution uses the ThinkSystem DM5100F which has been awarded by CRN as storage Product of the Year
- WorkStations & Storage are the nucleus of ALL industry projects
- Cross Industry Tangible Benefits:
 - **Accelerate your apps:** Leading performance and superior data insights with All Flash Arrays. Leveraging Block, File and Object.
 - **Mobility:** Build a data pipeline from the edge, to the core data center, to cloud. For structured and unstructured data.
 - **Protect:** Protect and secure data across any environment against human errors, ransomware and outages
 - **Optimize:** Reduce costs and control data growth. Simple but complete execution



Customer Type

- All WorkStation Users

Workstation & Storage Use Cases

- Maintains consistent high efficiency and resiliency for compute-intensive workloads to prevent loss of work.
- Application-aware backups and clone management for automated error-free data restores.
- Maintains consistent high performance and capacity supporting compute-intensive workloads while using less raw disk capacity to lower TCO.
- Delivers seamless scalability of both performance and capacity, while supporting a broad range of file and application workloads to react to new demands.



Why Lenovo

Fast

- Storage can provide extreme low latencies and super-charged performance powered by end-to-end NVMe
- Thoughtfully designed hardware for workstation allows for unparalleled performance, usability, and reliability.

Versatile:

- Enterprise-grade unified data management across SAN, NAS, Object and across the hybrid cloud without silos
- Mobile and Tower workstations for any users for every workloads

Simple

- 10-minute setup, from power-up to serving application data
- Modular designed of our workstation desktops makes changes a breeze.

Secure

- Best-in-class integrated data protection autonomous Ransomware Protection
- Thinkshield provide flexible security to protect the workforce of the future



Discovery Questions/Door Openers

What to Listen for

- Need for unified data management
- Need for increased performance, usability, and reliability
- Desire for simple set up process

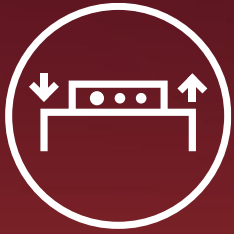
Discovery Questions

- **Are your Workstation users lost work hours because of poor performance?** Lenovo Storage solutions you can maintain consistent high performance and resiliency for compute-intensive workloads
- **What would happen if one of your co-workers deleted a directory?** Lenovo Storage Solutions offer application-aware backups and clone management; providing automated error-free data restores
- **Does your company need the flexibility to react to new demands from the business within minutes?** Lenovo's Unified Storage Solutions simplify the task of managing growth and complexity by delivering seamless scalability of both performance and capacity, while supporting a broad range of file and application workloads
- **Is your company wanting to lower TCO?** With Lenovo storage solutions you can maintain consistent high performance and capacity supporting the most compute-intensive workloads while using less raw disk capacity

Lenovo 360



ISG Backup & Recovery Conversation Card



Elevator Pitch

You need Backup and Recovery from Lenovo. The enterprise-class Backup and Recovery solution leverages the best mix of industry-leading servers and software to provide intelligent, cost-effective data protection with flexible, cloud-based remote recovery.

This innovative, software-defined solution brings together the best features of Lenovo ThinkSystem servers, Quest® QoreStor® software, and Veeam Backup & Replication software to help you trim costs, reduce your storage footprint, and enjoy peace of mind with secure storage and recovery that can be accessed anytime, anywhere. Plus, the optional “pay as you grow” structure keeps pace with your goals, so you always have access to seamless data storage and protection at exactly the scale you need.

Common Questions From End User Customers:

I manage our backup environment across both physical servers and VMs, can I do this with Lenovo?

Lenovo offers solutions that allow an organization to manage a backup environment for both virtualized and physical servers. These solutions support all the major hypervisors and allow both block and granular backup capabilities.

I have gigantic backup and archive repositories that I'm worried about migrating over to a new solution?

Lenovo professional services provides support for helping architect and deploy your data center solutions. These teams along with our software technology partners' teams provide assurance for a smooth transition to your new backup & recovery solution.

How do I reduce my costs associated with my backup and recovery environment?

Lenovo backup and recovery solutions utilize scalable and flexible storage configurations with ThinkSystem DE and DM-series storage arrays along with highly efficient backup software partners that manage both compression and deduplication processes to minimize storing duplicated data and thus reducing disk costs.

How can we ensure the solution will be easy to maintain and manage?

Lenovo partners with cutting edge technology software to provide a simple route to highly capable data backup & recovery environments. Our integration with NetApp's OnTap storage systems and the aforementioned software allow simple and effective management both on-premise and in the cloud.



Customer Type

SMBs, mid-range to large enterprises

All sizes and verticals:

- **Financial services organizations** both big and small must adhere to strict regulatory compliance mandates for data backup and archive.
- **Government and education organizations** are targets for security threats; backup solutions can act as a shield from being held ransom.
- **Organizations** with huge VM farms can be provided scalable and simple backup solutions with Lenovo ThinkSystem storage and best-of-breed software.



Why Lenovo

- Increasingly stringent Industry-wide requirements for data availability
 - Critical for business continuity, financial requirements, and government (regulatory) requirements
- Data Backup and Recovery solutions are intrinsic to any end-to-end data center solution
 - Needed to meet service level agreements (SLAs) and help mitigate the effects of security threats and effectively recovery from disasters
- Reduce costs:
 - Costs associated with data downtime/ data availability
 - Greater efficiency with management and orchestration costs of data backup & recovery
- Promote business agility
 - Deploy both workloads and data protection policies across multiple environments; from the on-premise data center to the hybrid and public cloud
- Non-disruptive backup
 - Backup your critical workload data more efficiently and without disruption to the primary workload.
 - Recover your data at greater speed and specificity to ensure improved Recovery Time Objectives (RTO) and Recovery Point Objectives (RPO). Whether recovering entire VMs to individual emails, Lenovo helps you maintain business continuity.
- Lenovo has heavily invested in world-class storage technology and partnered with key data backup and recovery software partners to provide cutting-edge solutions for the data management environment.
- Lenovo's proven track-record of customer satisfaction and reliability extends to our software solutions; maximizing organizational security, simplifying your IT environment, and reducing the costs associated with your backup and recovery workloads.
- Lenovo provides data backup and recovery solutions that span any data center environment; fully on-premise, hybrid cloud, and public cloud capable. Our suite of software solutions and exceptional Lenovo Professional Services teams are able to architect any backup workload for any environment at any service level agreement.



Discovery Questions/Door Openers

- How much time are you spending managing data protection and application availability
- What projects could you focus on if managing your backup environment was more efficient?
- Do you have a single way to ensure that business workloads and data is protected both on-premise and in the public cloud?
- When was your last restore, how long did it take, and what was the business impact?
- What infrastructure are you backing up; physical servers, VMs, cloud, a mix of everything
- Do you need a highly scalable solution, how are you planning to scale your backup environment for growth?
- What percentage of your data center is dedicated to your backup environment?
- How do you test new software/ firmware patches before deploying them into your DC environment?

What to listen for:

- Need to modernize due to exponential data growth, straining legacy backup & recovery infrastructure
- Rising prominence of sophisticated cyber-security threats require more agile data backup capabilities
- Increasing compliance and regulatory requirements necessitate sharpened data retention policies
- Desire to utilize data in archives and repositories to drive business initiatives

Hybrid Cloud Conversation Card



Elevator Pitch

A Perfect Mix of Security and Accessibility

Managing, accessing, and protecting key information is vital to businesses success. Lenovo's Hybrid Cloud Enablement allows customers to retain on-site infrastructure while giving them access to a public cloud

Fast Facts

Lack of experience with the cloud makes businesses hesitate to be early adopters of revolutionary tech and restricts them from improving where they can.

- **Benefits of Lenovo Hybrid Cloud:**
 - Reduce frustration/time to implementation with installation by skilled Lenovo technicians
 - Limit workflow disruption
 - Keep any existing on-site infrastructure
 - Expand capabilities of data management and sharing
 - Provide private cloud security for sensitive data
 - Provide public cloud accessibility for data management
 - Drive bottom-line savings
 - Avoid costly updates with scalable, future-proofed infrastructure



Customer Type

Hybrid Cloud Enablement is a solution applicable for most, if not all, industries. It is most important to engage with members of organizations that have an interest in improving and enhancing their IT capabilities.

- **Target Personas:**
 - Tech Experts: IT Administrators, Managers, Developers
 - Business Leaders: CXO, CIO, IT Directors
 - Key Players: IT, Security, Data Analysts



Why Lenovo

Companies are evolving and need solutions that evolve with them. Lenovo Hybrid Cloud gives businesses what they're looking for; improved processes, reduced costs, efficiency, and data visibility. Hybrid Cloud also allows IT departments to seamlessly integrate new tools and features, ensuring clients are never falling behind the competition when it comes to technological innovation

Lenovo Hybrid Cloud provides...

- **Easy Implementation**
 - Skilled Lenovo experts will ensure integration is fast, painless, and optimized
 - Keep all on-site infrastructure, experience little interruption in workflow
- **Accessibility and Security**
 - Hybrid Cloud leverages the benefits of both public and private clouds
 - State of the art security for private clouds, and unrivaled speed and ease of use for public clouds
 - Data Processing made easy, protect what's most important and utilize scalable public clouds for data management
- **Cost Savings**
 - Leverage data to ensure business is operating as efficiently as possible
 - Future-proofed infrastructure saves on costly updates



Discovery Questions/Door Openers

What to listen for:

- Business/company will likely be growing over next few years
- Need for flexible and adaptable technology
- Customer is facing challenges with current cloud usage such as expensive maintenance, and disjointed/confusing management processes
- Plan for recovery in case of major setbacks or disaster

Discovery Questions:

- **What is your current level of experience with the cloud?** Our Hybrid Cloud Enablement makes life easy, allowing you to integrate the Hybrid Cloud technology with your existing IT infrastructure. This reduces the amount of interference you experience while the Hybrid Cloud is being set up, and keeps your information secure and readily accessible, should you need it.
- **What are some major obstacles you experience when attempting to interface with your current cloud technology?** Lenovo Hybrid Cloud Enablement isn't just an installation process, it comes with the backing of the full Lenovo team, including optimization and ongoing support. If there comes a time that you need help with your Hybrid Cloud, Lenovo experts are close at hand with detailed experience to help you back on track
- **Do you plan on expanding or growing your business substantially over the coming years? Is your IT network and cloud technology capable of supporting this growth?** Lenovo Hybrid Cloud Enablement is built to support businesses of every size and is tailored to suit your needs now and in the future. With scalable tech built in, you can rest assured that no matter how big you get, the Hybrid Cloud will meet your data management needs.

VDI Hosted Desktop Conversation Card



Elevator Pitch

The Workplace of the Future is "Anywhere"

VDI Hosted Desktops from Lenovo is a new solution for a new era, where work is not defined by time or place, but by productivity and effectiveness. Don't just support your remote workers—give them the tools they need to excel. Security and accessibility shouldn't stop at the office door. Remote workers need peace of mind and flexibility to handle important tasks without security concerns. VDI Hosted Desktop makes it easy to provide this critical safety net to all employees, regardless of their location.

Fast Facts

- Lenovo's breadth of available converged appliances and cloud-based automation allow VDI to be implemented in just a few hours, as opposed to the weeks-long implementation typically offered.
- VPN's do not provide many of the benefits of VDI. They are vulnerable to security breaches, lack control of user data, and require updates and patches to be implemented individually at the end point, rather than offering a centralized system.



Customer Type

- **Target Industries:** Banking, Education, Healthcare, Manufacturing, Call Centers, Government, IT Providers, Retail
- **Target Buyers:** IT Directors, Virtual/Cloud Admin, CIO/CTO, Infrastructure VP, CMO, Sales/Marketing VP
- **Scalable VDI solutions for companies of all sizes**
 - Midrange to Large Enterprises (500+ seats) – tend to have hyperconverged solutions
 - SMB (under 500 seats) – Tend to have 2-5 servers for VDI



Why Lenovo

While the software for most VDI solutions is similar, what separates Lenovo from the rest of the pack is the hardware. Lenovo is #1 in x86 server reliability 8 years in a row now, and Lenovo servers hold 309 world-record performance benchmarks as of April 1st, 2022. Lenovo's xClarity systems management is tightly integrated with VMware vCenter, enabling single pane of glass management.

Lenovo VDI Hosted Desktop Solution Provides...

Simplicity and Scalability

- Software, firmware, and security updates are released to all users through centralized management.
- Quickly enable employee desktops as business grows.

Productivity and Flexibility

- Lack of downtime ensures workers remain productive no matter their location.
- Ability to operate on multiple devices allows businesses to stay competitive and drive top line.

Security and Compliance

- Reliable, secure access regardless of location and device.
- Centralized system ensures the protection of sensitive information and intellectual property



Discovery Questions/Door Openers

• What to Listen for:

- Remote workers
- Need to release software, firmware, and security updates to all users through centralized management.
- Employees need to operate on multiple devices
- Need for reliable, secure data access regardless of location
- Data Security




• Conversation Starters

- **Are you able to support remote workers and contractors through the pandemic? Were they able to leverage corporate and personal devices with secure access to corporate resources?** VDI Hosted Desktop allows your employees to securely access all company resources regardless of their location. By mitigating these security risks, you ensure employees stay productive and reduce overall downtime, making you more competitive in the long run.
- **Do you struggle to deliver and manage applications for end users?** VDI Hosted Desktop allows you to manage software and firmware updates from a central system. Updates and bug fixes can be pushed out to all devices simultaneously, saving time and money.
- **Is your current strategy for managing, patching, and delivering Windows and Linux resources competing for staff and budget resources with other critical IT priorities?** VDI can save your IT department from the headache of individually applying bug fixes and patches to devices. Security and software updates can be applied en masse, allowing the IT department to focus on more pressing matters.

Customer Trends Case Studies/ Testimonials



Customer Target Workloads

 Lead with offerings
  Ideal for some use cases
  Unique requirements

Applications	DM Series AFA	DM Series Hybrid	DE Series AFA	DE Series Hybrid
Database				
Virtual Desktop (VDI)				
ERP / CRM				
Virtualization - VMWare & Hyper-V				
Analytics				
E-mail				
HPC				
Video Streaming				
Digital Video Production				
Web				
Backup				
Archive				
NAS / File Services				

Customer Story

St. John's University

Industry: Education

Storage Purchased: ThinkSystem DE Series

Background: St. John's University has 4 New York City Campuses with more than 21,000 students enrolled. The University also has facilities in Rome, Italy, Paris, and France.

Business Need: With each surveillance camera generating 1 TB of data per month, pressure on the underlying storage infrastructure was growing all the time. Previously, St. John's University used a RAID setup to store video data on hard drives distributed across 14 servers, configured as an active-passive VMware cluster.

- In the past, our storage environment was a many-headed monster. We had a limited amount of disk space to work with, and as the years went by, we began approaching capacity. Whenever we added new cameras as part of campus improvement programs, finding space to store the footage became more and more difficult.”
-

Solution Summary: As part of a wider infrastructure refresh, St. John's University seized the opportunity to deploy a dedicated storage system to support public safety operations. The University selected a Lenovo ThinkSystem DE4000H Hybrid Storage Array.

Business Benefits: The university now has a lot of headroom for growth. It used to take up to an hour to load stored data into the surveillance application - Now officers can access the data in just a few minutes. Similarly, indexing video footage used to take several days- Now it only takes 24 hours.

[Link to St. Johns Customer Story \(ThinkSystem DE Series\)](#)

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Customer Story

Les Portes JPR Inc.

Industry: Manufacturing

Storage Purchased: ThinkSystem DE Series

Background: In business since 1978, JPR has become a reference in manufacturing, distribution, installation and repair of garage and specialized doors for residential, commercial or industrial applications.

Business Need: JPR's IT goal for 2019 was to implement a new ERP system for the company and settled on MS Dynamics. This new ERP would allow them to share single management system across a number of departments. Unfortunately, their IT infrastructure would not allow this since they had older, disparate and low performance systems that needed replacing. Also, older/incompatible versions of software meant that they didn't have a complete DR+Backup solution.

Solution Summary: JPR purchased 3 x hypervisor servers, an all-flash storage array and a 10Gb networking backbone. They also purchased a large back server. Using a cluster of three servers enabled them, for the first time, to take advantage of high availability features and balance their workload dynamically to avoid bottlenecks. By employing an all-flash storage array, all workloads, especially the highly transactional databases, saw drastic increases in performance. The 10GB network allowed for much faster connectivity to the core of the datacenter. The larger backup server allowed for more recovery points, as well as longer retention periods.

Business Benefits: First, the solution allowed for the consolidation of business systems. JPR can now have a holistic view of their manufacturing systems, and more easily detect inefficiencies. Secondly, less time is now spent retrieving information and generating reports – this increases customer satisfaction. Third, the customer is now much less at risk of data loss or downtime.

[Link to Les Portes JPR Inc. \(ThinkSystem DE Series\)](#)



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Customer Story

Petroleum Geo Services

Industry: Energy and Utilities

Storage Purchased: ThinkSystem DM Series

Background: Founded in 1991, PGS provides seismic images and 3D data describing the subsurface beneath the ocean floor that oil companies rely on to find oil and gas reserves worldwide. Using the latest technology, PGS provides a world-class Multi-Client library, seismic acquisition, processing and imaging services.

Business Need: PCPC recently received a purchase order from Petroleum Geo Services (PGS) in Houston for a 16-user PCPC Remote Visualization platform. The PCPC Remote Visualization platform met the following needs for PGS: Business continuity (Hurricane Harvey), mobile workforce (COVID-19) and seismic data security (Viz in the Cloud). The end user experience was delivered to the user's Lenovo P1 laptop. It was a smooth transition to self-quarantining at home for the PGS interpretation workforce. The company expects many more opportunities to continue to come their way.

Solution Summary: The solution include Lenovo SR630 servers with NVIDIA T4 GPUS and Lenovo networking along with NVIDIA vDWS software, Red Hat Linux & Virtualization, Mechdyne TGX and Leostream Connection Broker. This is all glued together by PCPC services and support for 3-years. On the client side, the opportunity netted 12 netted new Lenovo P1 Gen 2 laptops and docks. Lenovo also sold PGS external storage (Lenovo DM5000F- all flash array) and a data backup and recovery system (Lenovo SR530+Tape Lib + Lenovo-SKU'd Veeam). The solution is also very sticky. All future add-ons, data center and client, will need to be certified for the solution.

Business Benefits: Remote worker capabilities with same or better performance. Managed service delivery partnered with PCPC

[Link to Petroleum Geo Services \(ThinkSystem DM Series\)](#)

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Customer Testimonials

Efficient Solutions

José Martins

Vice President, European Sales and Operations, Jolera Inc

“There were a number of reasons why we selected Lenovo to deliver our new infrastructure platform. Lenovo was one of the few vendors we evaluated who could deliver everything we were looking for in a single contract: including compute, storage and cybersecurity solutions. One of our first achievements was boosting the deduplication ratio of our storage solution from 3:1 to 4:1, simply by using the built-in tools in ThinkSystem.”



Edge-Core-Cloud

Felix Thomas Wass

CEO & President, DETASAD

What appealed to us most was the inherent flexibility of Lenovo ThinkSystem servers. Compared to other vendors, Lenovo offers greater scalability and value. We were confident that the Lenovo solution would ensure consistently reliable performance across our multi-cloud infrastructure.

We were also very impressed with Lenovo's storage offering. Not only does the ThinkSystem DM7000F all-flash array deliver top performance, it's also simple to scale and easy to administer.



Performance

Alexandru Dionian

Director of IT Division, Libra Internet Bank

In the past, we'd see performance levels in terms of response time of around 10-15ms on our old SAN system. With the Lenovo ThinkSystem DE6000F arrays, we are now seeing performance levels usually less than 10ms, which means our customer facing banking applications are running up to 1.5 times faster. Ultimately, this helps to ensure a responsive, high-quality experience for customers.



Services

Resources

Contacts



Premier Support Conversation Card



Elevator Pitch

Advanced Engineers. End-to-End Case Management. Faster, First-time Resolution

- As IT budgets contract, you need to reduce complexity and operational costs and find ways to increase efficiency from your in-house IT support teams, Lenovo Premier support can help by managing your routine support tasks, freeing up your IT staff to focus on strategic efforts that move the organization forward. We can boost your end users' productivity and limit their downtime with direct access to elite Lenovo engineers who provide unscripted, advanced hardware and software support. Lenovo Technical Account Management teams also provide end-to-end case management for faster, hassle-free case resolution.

Fast Facts

- 91% of premier support customers indicate they would purchase again
- 88% of customers indicate they would recommend premiere support to a peer
- 67% of businesses report they lack the time to address PC issues adequately



Customer Type

- **CIOs:** need reliability, protection, and support for their Lenovo PCs. If something goes wrong, they need to be back up and running fast. Lenovo Premier Support provides VIP treatment with faster first-time resolutions, parts prioritization, onsite delivery, and access to Technical Account Managers.
- **IT Directors:** don't want their valuable help desk team members tied up on support calls. They can free up time for more strategic tasks by offloading 1st- and/or 2nd-level IT support to the Lenovo Premier Support team.
- **Help Desk Technicians:** need the direct access to advanced engineers provided by Lenovo Premier Support. With less time wasted on standard support call queues, they can jump right into problem-solving mode and get employees back to work fast.
- We understand that all workloads are not created equal, and we make the decision-making process simple, with services for every stage of your customers' journey and pre-defined scopes to meet requirements.



Why Lenovo

- Hassle-free, advanced technical support available 24x7x365
- Comprehensive hardware and original equipment manufacturer software support
- Simplified end-to-end case management with a single point of contact
- Proactive relationship and escalation management with Technical Account Managers
- VIP service with labor and parts prioritization
- Comprehensive suite of reporting to help identify trends and proactively address issues
- Easy reference to Premier Support contact centers worldwide with optional asse tags
- Customized dashboards for your Lenovo assets and warranty and service delivery information with the Lenovo Service Connect portal



Discovery Questions/Door Openers

What to listen for:

Facing growing complexity, increased maintenance costs, increased workload/resource constraints, multiple vendors, and increasing end-user demands. Seeking VIP support, direct access & improved visibility, consistency, and commitment & accountability, spending too much time on employee support calls, do not have time to wait on parts and labor

Discovery Questions:

- How are you supporting your Lenovo Data Center products? Where are you leveraging an IT service provider to help maintain complex environments?
- Does your IT infrastructure support and enhance your core business strategy? How are you ensuring your IT staff has time to focus on innovation?
- Do you value direct technician-to-technician access when contacting your service provider with a problem?
- What percentage of your IT budget spend goes towards ongoing maintenance and support?
- Is your IT team feeling stretched thin in this do-more-with-less world?
- What applications/workloads will be residing on this equipment? What is the availability expectations of those applications/workloads?
- For this equipment, walk me through your expectations of resources you would want available to you during and incident.
- How might Lenovo's multiple technical support contact methods (phone, chat, online portals, and other channels) benefit your business, giving you a peace of mind?
- Walk me through how your maintenance window policy that allows you to apply patches, updates, and upgrades. What are your expectations from Lenovo to support you in that effort?



Services Conversation Card

Product Overview – brief blurb and video link

1. [Link to Why Lenovo Premier Support Video](#)
2. [Link to Why Lenovo Services Pitch](#)
3. [Link to Lenovo Premier Support Brochure](#)
4. [Link to End-to-End Services Guide for Channel Sellers \(Internal Partner Use Only\)](#)

Case studies

1. [Link to Customer Stories: Lenovo Data Center Services](#)



Contacts

Leonard Accardi – ISG WW Storage Sales

Mark Clayton – ISG Storage Architect

Dan Beins – ISG Storage Architect

Mike McDermott – WW Product Manager – ISG Storage (DM Series)

Ben Blomberg – ISG Product Marketing Manager

Ryan Scherrer – Channel Account Manager – Storage

Alexander Kranz – WW Storage Product Manager



Additional Resources

External Links

- [Link to Back up and Recovery Solutions Guide](#)
- [Link to Storage Data Management](#)

Internal Only Links

- [Link to Storage Portfolio June 2022 Broad V1](#)
- [Link to Storage Overview NA Channel Coffee Chat](#)

