

Lenovo Client Virtualization Reference Architecture for Citrix XenDesktop

Gain the benefits of client virtualization while maximizing your Lenovo infrastructure

Maximize the Benefits of a Lenovo Infrastructure with Client Virtualization

Today's business and IT leaders know that a client virtualization solution can help their organization meet multiple challenges, including ever-rising IT costs, managing data security and compliance on mobile devices, increased complexity of maintaining remote client devices, and the need for flexibility and global availability of compute resources.

The Lenovo Client Virtualization solution for Citrix XenDesktop helps your organization meet these business requirements by centrally managing the desktop image within the corporate IT environment rather than at the remote worker or office location. With user data, user profiles and application data files on centralized servers, data center security and manageability are extended down to the user resources. Users have anywhere, anytime, secure access to data and applications from any device, including tablets and smartphones.

The combination of Lenovo Client Virtualization (LCV) and Citrix XenDesktop provides a flexible client virtualization solution that helps minimize complexity, improve user productivity and reduce costs.

HIGHLIGHTS

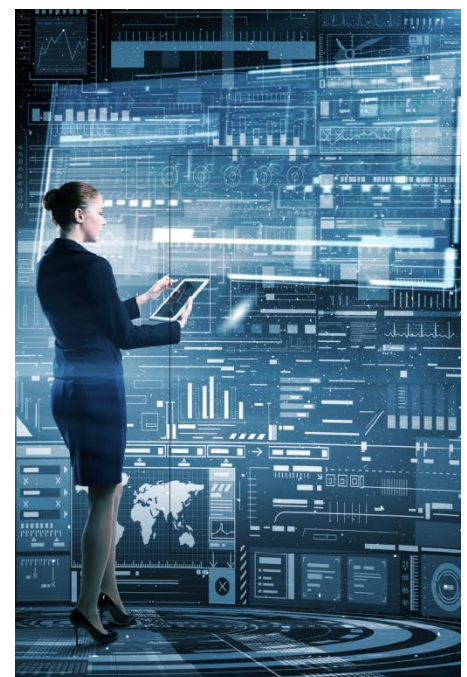
- A complete, validated solution for Citrix XenDesktop
- Complete, end-to-end Lenovo infrastructure offerings
- Powered by proven Lenovo rack servers or Flex System servers
- Detailed reference architecture for quick time to value

A complete, validated solution

Lenovo offers a complete, validated client virtualization solution for Citrix XenDesktop. This solution is continuously updated with the latest-generation Intel Xeon processors, new Citrix vSphere features and leading-edge graphics cards for accelerating applications that require GPUs.

Citrix XenDesktop delivers multiple advantages for organizations implementing LCV, including choice of delivery with support for private cloud and cloud-hosted services, as well as comprehensive image management across combinations of virtual, physical and bring-your-devices (BYOD). Hybrid delivery through Horizon Desktop as a Service (DaaS) provides organizations with choice when it comes to services for end users. Citrix's closed-loop management and optimization for the software defined data center enables organizations to truly extend the power of virtualization from the data center to devices.

- Server: Lenovo Rack Servers and Flex System servers
- Storage: Lenovo SAN-attached, converged storage and hyper-converged storage
- Networking: Lenovo Ethernet networking and Brocade Fibre Channel SAN
- Clients: Lenovo workstations, thin clients, laptops, tablets and mobile devices
- Hypervisors: Citrix XenServer, Hyper-V, VMware ESXi



ARCHITECTURE BRIEF

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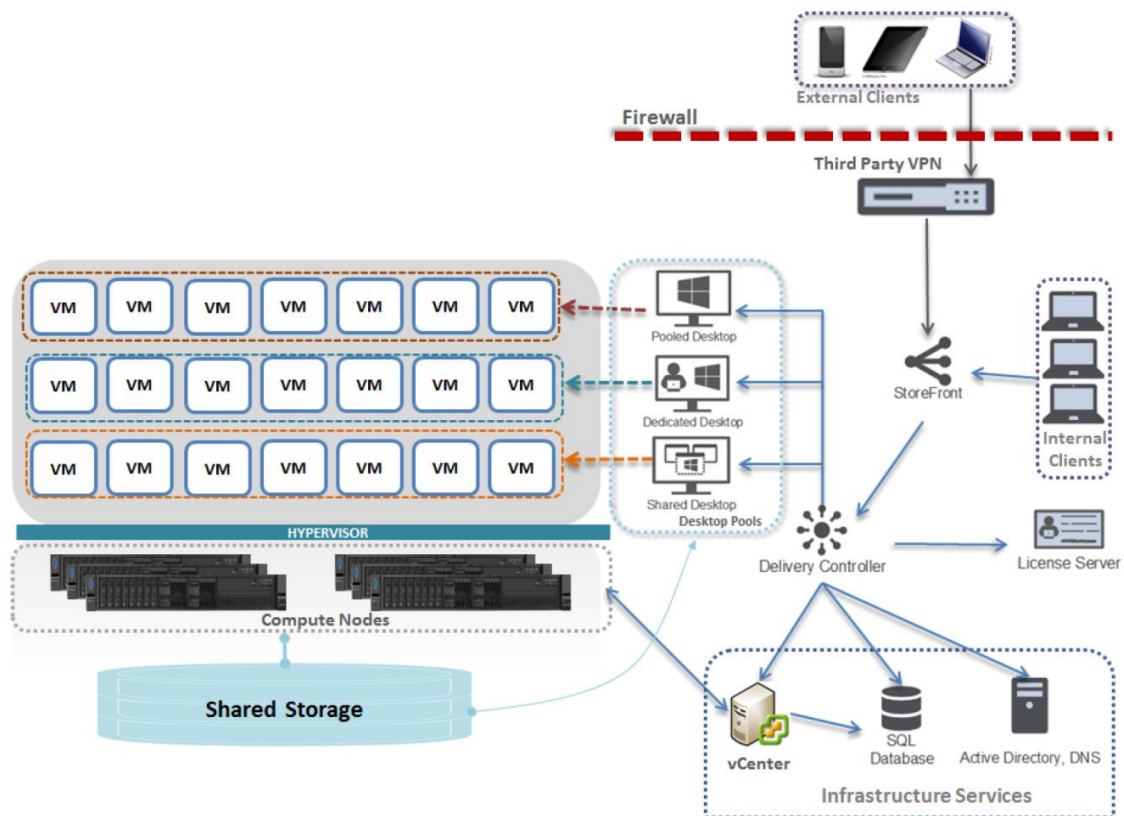
Options for matching the solution to the need

The key to a successful client virtualization deployment depends largely on matching the solution to your organization's workload requirements. Running Citrix XenDesktop on industry-standard x86 servers from Lenovo helps reduce costs and gives you the flexibility to choose configurations. The Lenovo and Citrix reference architecture offers an array of infrastructure choices for general-purpose workloads, accelerated graphics workloads and shared storage deployments.

Powering general-purpose workloads

To fuel workloads for mainstream enterprise users, a powerful and efficient solution is Citrix XenDesktop on a choice of System x3550 M5 and System x3650 M5 Rack Servers and dense Flex System x240 M5 offerings. Lenovo's general-purpose servers offer memory capacity up to 768 GB. They also include an exclusive set of Lenovo server security features and practices that protect data centers from low-level malware attacks, enabling customers to minimize risk and costs to their data centers.

The System x3550 M5 is a compact, versatile 1U two-socket rack server that provides leadership security, efficiency and reliability. Integrated with up to two latest-generation Intel Xeon processors, the x3550 M5 delivers exceptional performance. Storage can include up to 12 drives in a selection of sizes and types.



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With the 2U System x3650 M5 rack server, your organization can run even more workloads, with availability when you need it. The x3650 M5 is integrated with the latest-generation Intel Xeon processors and provides industry-leading, two-socket storage capacity. It can include up to 26 drive bays to optimize diverse workloads. It also supports up to two NVIDIA GRID graphics acceleration cards.

For greater density requirements, Flex System infrastructure features the next generation of blade technology. As a converged system, Flex System offers excellent integration of solution elements, and low latency through the mid-plane for improved performance. The Flex System Enterprise Chassis is the foundation of the Flex System offering, which features 14 compute node bays in a 10 U chassis that delivers high-performance connectivity for integrated compute, storage, network and management resources.

Flex System provides the efficiency you need now along with a growth path for the future. Its flexible design can be fully customized to the specific needs of the computing environment and supports independently scalable IT resource pools. The Flex System x240 M5 compute node delivers maximum performance for a broad set of workloads.

Workload-based infrastructure at a glance

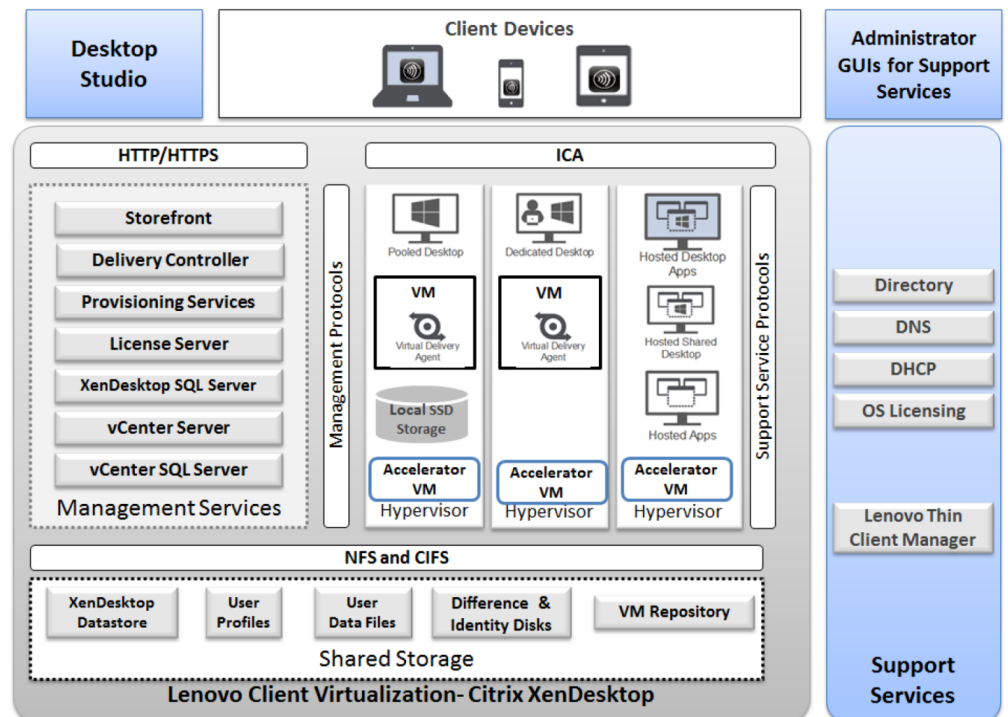
Lenovo enables your organization to optimize infrastructure for any workload.

- General-purpose workloads: Citrix XenDesktop on System x3550 M5 and System x3650 M5 rack servers, and dense Flex System x240 M5 offerings
- V3700 V2 SAN storage system supports up to 240 drives by using up to 9 expansion enclosures
- The Lenovo RackSwitch™ G8124E, and G8272 TOR Gigabit Ethernet switches provide connectivity between compute nodes

Boosting performance of shared storage

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This solution includes support for the Lenovo V3700 V2 storage system which supports up to 240 drives using up to 9 expansion enclosures. Its compact design allows administrators to avoid storage sprawl as the solution scales, even with persistent desktops that normally require large amounts of space.



Solution Component model with Citrix XenDesktop

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Helping to ensure client virtualization project success

Selecting from a wide array of front-end and back-end infrastructure options, you can deploy a solution that meets IT requirements for low cost and manageability, as well as user expectations for speed of logon time, application launch time and overall desktop response. By delivering performance on par or better than traditional PCs, the solution becomes essentially invisible to the user.

Lenovo Client Virtualization for Citrix XenDesktop is designed to help reduce project risk whether you are starting with a single departmental deployment or a implementing a company-wide initiative.

Why Lenovo

Lenovo is a leading provider of x86 servers for the data center. Featuring rack, tower, blade, dense and converged systems, the Lenovo server portfolio provides excellent performance, reliability and security. Lenovo also offers a full range of networking, storage, software, solutions, and comprehensive services supporting business needs throughout the IT lifecycle. With options for planning, deployment, and support, Lenovo offers expertise and services needed to deliver better service-level agreements and generate greater end-user satisfaction.

For More Information

To learn more about the Lenovo Client Virtualization Reference Architecture for Citrix XenDesktop, contact your Lenovo Business Partner or visit:

lenovo.com/systems/solutions.

Reference Architecture: [Lenovo Client Virtualization with Citrix XenDesktop](#)

Reference Architecture: [Lenovo Client Virtualization](#)



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CRN#: VDICTXHV072

04/2017