

# Lenovo Cloud Validated Design

for VMware Software Defined Data Center

**Simplify Private and Hybrid Cloud Deployments with SDDC and vCloud Suite**

Lenovo™

## Enabling Businesses to Focus on business

Virtualized speed and scalability are vital to meeting ever changing business needs and maintaining an edge in the market. VMware SDDC components provide a comprehensive software platform needed to build and run either a private or hybrid cloud infrastructure. This architectural approach delivers virtualized infrastructure services for compute, storage, networking, security, and availability. These services include built-in intelligence and defined policies to automate the on-demand provisioning, placement, configuration and control of applications.

The Lenovo Cloud Validated Design for VMware Software Defined Data Center is a solution with best practice documentation – including requirements, architectural overview, operational model, performance and sizing information, and bill of materials configurations – to jump start businesses to a well-orchestrated private or hybrid data center. Integrating, configuring, and testing end-to-end software and hardware technologies means administrators can spend less time worrying about infrastructure and focus more on enabling innovation.

## A Complete Software Defined Solution

This solution provides all the components needed to build and run a fully virtualized, software-defined, and automated hybrid data center. This approach delivers virtualized infrastructure services with built-in intelligence to automate provisioning, placement, configuration, and control of apps and end-to-end infrastructure based on defined policies. Business can transform their data center infrastructure into an agile and resilient cloud, delivering the features of public cloud within the walls of the enterprise. Combining the VMware SDDC platform with Lenovo ThinkSystem products and services, enables businesses to deploy a leadership cloud solution with the flexibility and VM orchestration that:

- Reduce TCO of hybrid cloud on hyperconverged nodes running VMware vSphere and vSAN
- Simplify and reduce cost of private cloud provisioning with a hyperconverged infrastructure
- Reduce complexity and simplify networking of large cloud deployments using VMware NSX
- Rapidly scale on demand with VMware vRealize cloud management and monitoring
- Improve cloud management running XClarity software and plugins for VMware vCenter and vRealize

### Highlights

- Provides best practice guidance for deploying Lenovo hardware and Lenovo XClarity foundation software with the VMware Software Defined Data Center (SDDC) architecture for an agile hybrid cloud solution with end-to-end deployment and management from familiar panes of glass
- Includes innovative, cloud-optimized data center infrastructure such as Lenovo ThinkSystem servers in a hyperconverged configuration with Lenovo ThinkSystem Ethernet switches
- Enables rapid transformation into a services-oriented data center through an affordable, resilient, and powerful industry-leading cloud solution

Lenovo ThinkSystem SR650, ThinkSystem SR630 & ThinkSystem SD530 servers for high capacity, high performance, and cost effective Cloud solutions

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vmware®



Lenovo ThinkSystem SR650 Server,  
ThinkSystem SR630 Server,  
ThinkSystem SD530 Server and  
Lenovo G8272 Network Switch

## Architectural Overview

At the core of this architecture resides the Lenovo ThinkSystem SR650, ThinkSystem SR630 and ThinkSystem SD530 servers. These rack based servers deliver the performance and stability required for business-critical cloud workloads. Using the latest Intel processors, both servers are extremely flexible, supporting large DDR4 memory arrays. These scalable servers provide high IOPs, low latency, and high storage capacity for cloud workloads through a wide variety of 2.5 and 3.5 inch drive storage options including hot swappable SAS/SATA HDDs, SSDs and NVMe flash adapters.

Eliminating the need for attached SAN or NAS storage, this reference architecture based solution features VMware vSAN storage which uses as few as 8 physical servers to create a cloud infrastructure on a hyperconverged cluster. Within this solution, the VMware vSAN architecture integrates servers, virtual machines and on-node storage resources to greatly simplify the physical host deployment model and provided significant scalability for future growth.

This cloud solution also features the Lenovo ThinkSystem G8272 10Gb Ethernet switches to support the data network. It is an enterprise class Layer 2 and Layer 3 switch that delivers line-rate, high bandwidth switching, filtering, and traffic queuing without delaying data. The ThinkSystem G8272 also supports integration into VMware NSX™ VXLAN based virtual networks.

## 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 Cloud Validated Design for VMware SDDC, contact your Lenovo Business Partner or visit:

[www.lenovo.com/systems/solutions](http://www.lenovo.com/systems/solutions)

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