

Lenovo Validated Design

for SUSE OpenStack Cloud

A cost-effective solution for building a private cloud to enable infrastructure as a service

A Highly Available OpenStack Architecture

Direct OpenStack cloud implementations can be daunting, with hundreds of configuration options and dozens of packages. Such an implementation requires integrating the computing platform, Linux operating system, network switching, storage subsystem and all-important hypervisors into an end-to-end solution. This can exceed the in-house IT skill set for many companies. For these organizations, a pre-tested, optimized OpenStack cloud solution is needed.

The Lenovo Validated Design for SUSE OpenStack Cloud enables you to quickly set up and deploy your private infrastructure as a service platform with optimized configurations for hardware, software, networking and storage. To help you simplify your infrastructure and virtualization management, Lenovo offers a reference architecture for tailored interoperability with OpenStack environments. The reference architecture is validated with SUSE OpenStack and provides a thoroughly tested architecture that combines the benefits of leading-edge technologies with mature, enterprise-ready features.

The Lenovo hardware platform provides an ideal infrastructure solution for cloud deployments. Available on Lenovo x86 based ThinkSystem SR650 and ThinkSystem SR630 Rack Servers, these platforms provide the full range of features and functions that are necessary to meet the needs of a wide range of businesses, from small businesses all the way up to large enterprises. With its utilization of industry standards for systems management on these servers, Lenovo enables seamless integration into OpenStack cloud management tools.

The Lenovo Validated Design for SUSE OpenStack Cloud provides the speed, scalability and reliability that cloud service providers and multitenant service providers need for high-performance, high availability, and ease of management. Configurations may also be customized to best suit the workloads running in your environment. To accelerate time to value, Lenovo has service offerings and expertise to deploy this cloud solution and accommodate customization.

This solution for SUSE OpenStack Cloud is a certified OpenStack powered platform which has been validated through testing to provide API compatibility for OpenStack core services. Additional benefits to this solution include heterogeneous hypervisor support for Windows Hyper-V, VMware, Xen, and KVM as well as centralized resource tracking for optimized and automated deployment of services.

Highlights

- This solution delivers a highly available, enterprise-quality private Infrastructure as a Service cloud.
- Service providers operating at scale can leverage the lower licensing costs of an OpenStack infrastructure relative to other cloud solutions.
- Using this solution, enterprises and Service Providers can benefit from regular feature enhancements and performance improvements of OpenStack while working with a supported, enterprise solution.
- The reference architecture provides sizing recommendations, deployment best practices, and validated configurations, to help simplify and reduce risk of a SUSE OpenStack deployment on Lenovo hardware.

Lenovo ThinkSystem SR650, ThinkSystem SR630 servers and Lenovo networking, form the foundation of this SUSE OpenStack Platform 7 cloud solution



Powered by Lenovo Servers and Networking

The Lenovo ThinkSystem SR650 and ThinkSystem SR630 servers serve as the compute/storage nodes for this solution. These 2-socket high performance servers are energy efficient and enable the deployment of large cost effective big data clusters. Both servers feature the latest Intel processors and support industry leading high IOP flash storage options. The 2U ThinkSystem SR650 and 1U ThinkSystem SR630 high capacity servers utilizes high-volume on-board storage, eliminating the need for attached storage to support large clusters.

This SUSE OpenStack Platform 7 based solution also features the Lenovo RackSwitch 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.

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 Validated Design for SUSE OpenStack Cloud, contact your Lenovo Business Partner or visit: www.lenovo.com/systems/solutions

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

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