

SUSE® OpenStack Cloud and Fujitsu Integrated System PRIMEFLEX

How to Achieve Control, Flexibility, and Speed-to-Market for Your Business

Modern enterprises have never needed to be more agile. With data volumes exploding, speed-to-market increasing, and flexibility a requirement, businesses must be able to respond quickly and easily to new demands while controlling and reducing costs. To tackle these challenges, many organizations are turning to a private cloud solution.

SUSE is the leading private cloud solution for enterprise businesses and SUSE OpenStack Cloud, an open source cloud operating system, provides organizations with the ideal platform for increased innovation.

SUSE® OpenStack Cloud is an optimal solution for any organization looking to set up its own private IaaS cloud within its data center. This includes everything from verticals with stringent compliance requirements such as healthcare or financial services, to companies focused on innovation that not only need quick and easy access to new resources, but an environment that protects intellectual property.

Organizations choose SUSE OpenStack Cloud for its world class support, limited downtime and because it gives them more control over their data. They also benefit from the increased flexibility and speed to market that a self-service cloud and IaaS is able to provide.

In addition, a self-service portal for enterprises or service-providers is included with FUJITSU Software Enterprise Service

Catalog Manager. This portal allows the automated deployment of the IaaS, PaaS or SaaS service running on the OpenStack platform or in conjunction with other (cloud-) services.

This document will outline how FUJITSU Integrated System PRIMEFLEX for OpenStack is powered by SUSE OpenStack Cloud and FUJITSU Server PRIMERGY running a SUSE Linux Enterprise Server operating system.

Benefits of SUSE OpenStack Cloud

- *Feature rich and future-proof, removing both the risks of vendor lock-in and the high costs associated with proprietary cloud solutions*
- *Delivers enterprise-ready technology for building Infrastructure-as-a-Service (IaaS) private clouds*
- *Provides access to automated pools of IT resources to efficiently develop and run applications and workloads within a data center*

The Integrated System: What You Need to Implement SUSE OpenStack Cloud as an Integrated System

It's important to note that there is a wide range of configuration options available, with no single architecture that is right for a SUSE OpenStack cloud deployment. This is because it can be used for a number of different purposes, each with its own particular requirements and architectural peculiarities.

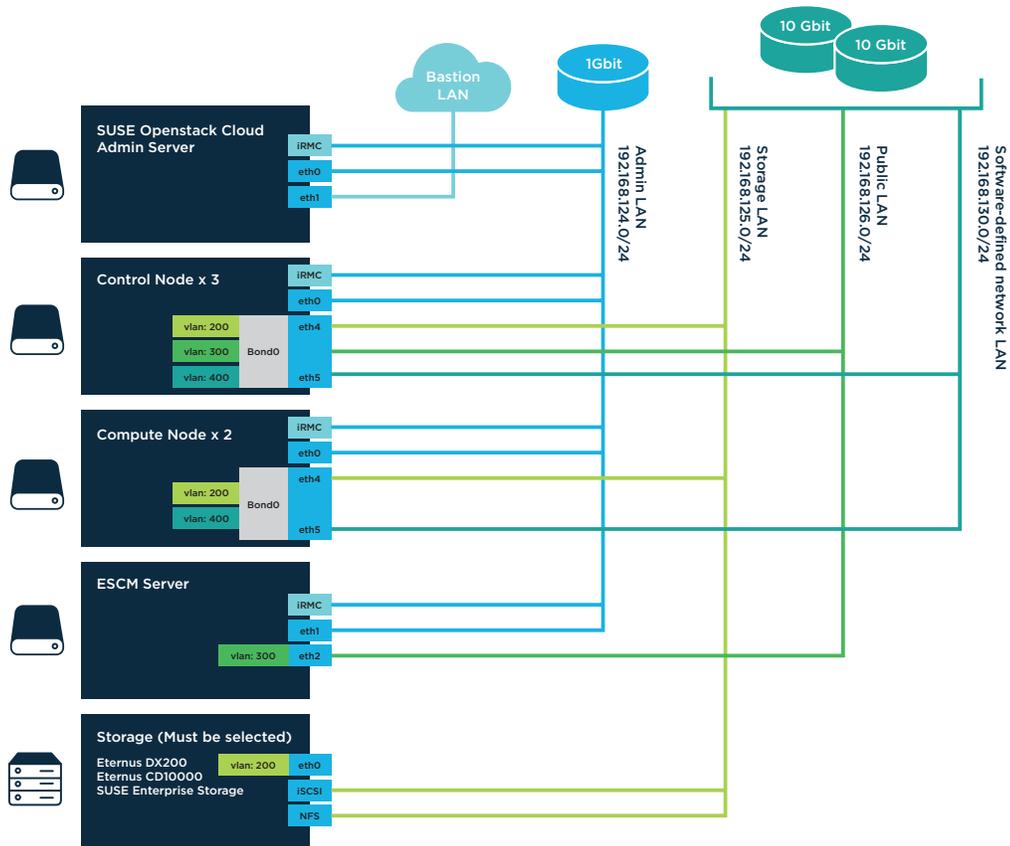
This document outlines the implementation of SUSE OpenStack Cloud using the same PRIMERGY Server model for different functions, including AdminServer, OpenStack Control Node, and OpenStack Compute Nodes: the PRIMERGY RX2530 M2. This one as well as the other options are included in FUJITSU Integrated System PRIMEFLEX for OpenStack.

From a storage solution standpoint, one of the following Fujitsu Enterprise Storage systems is used:

- *Traditional Block Storage: Fujitsu ETERNUS DX200*
- *Hyper-scale storage: ETERNUS CD10000*
- *Hyper-converged: Embedded Disk storage in the servers and SUSE Enterprise Storage™*

For network infrastructure, the Brocade VDX 6740 or SRX 526R1 10 Gb switches, and the Brocade ICX6450 or SR-X 324T2 1 Gbit switches are used:

- *Brocade VDX 6740*
- *Brocade ICX 6450*



Functional Test

To guarantee the proper function of the deployed OpenStack environment, Fujitsu creates a Basic Test Scenario to cover all basic OpenStack services, like Nova (Compute Service), Neutron (Network Service), Cinder (Volume Service) and Glance (Image Service). Other basic OpenStack services like Keystone (Identity Service), RabbitMQ (Messaging Service), and PostgreSQL (Database Service) will work in the background and will be used when the other services are working.

Getting Started: How to Evaluate What You Need

Because there are a variety of configuration options available, it's important to figure out which one would work best for your scenario. Here are four options to consider around implementing your SUSE OpenStack cloud in combination with Fujitsu PRIMERGY.

Option 1: The Single Box

This option is a fully virtualized ready-to-run OpenStack environment:

- 1x physical node
- 2x compute nodes VM
- 1x control node VM
- 1x admin node VM
- Internal storage

Option 2: The Basic System

This option provides the smallest hardware footprint, including dedicated nodes:

- 2x compute nodes
- 1x control node
- 1x admin node
- 1x 10G switch
- 1x 1G switch
- Optional external storage
- Optional ESCM server

Option 3: The Jump Start Package

This option is the smallest footprint that allows for a technical migration path to a customized production environment:

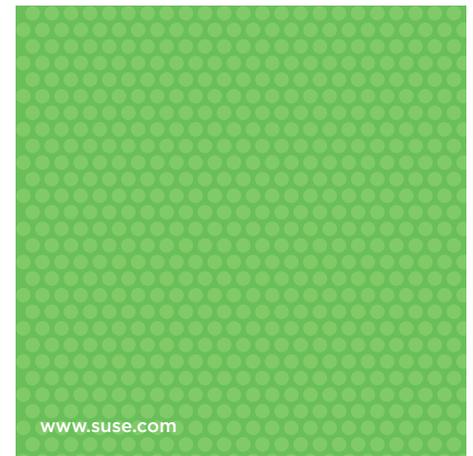
- 3x compute nodes
- 3x control nodes
- 1x admin node
- 2x 10G switches
- 1x 1G switch
- Optional external storage
- Optional ESCM server

Option 4: The Customized Package

This option is individually sized to serve specific production requirements:

- 3+ compute nodes
- 3x control nodes
- 1x admin node
- 2x 10G switches
- 1x 1G switch
- Optional external storage
- Optional ESCM server

To learn more about to deploy SUSE OpenStack Cloud on Fujitsu PRIMERGY, contact us at: fujitsuteam@suse.com



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