

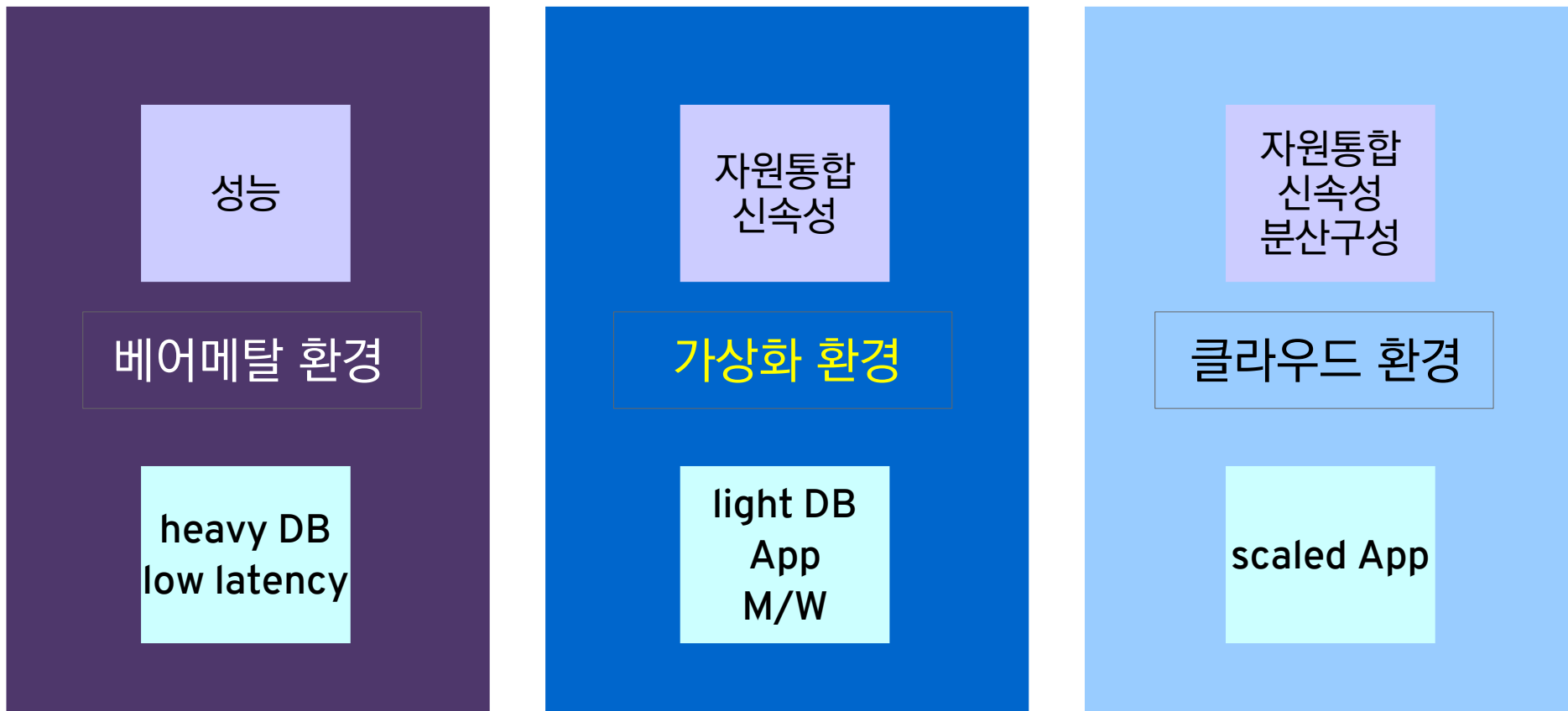


RED HAT®
ENTERPRISE LINUX®
OPENSTACK® PLATFORM
OPEN CLOUD INFRASTRUCTURE BUILT
ON RED HAT TECHNOLOGIES

Sr. Solution Architect
Won Young Choi
wchoi@redhat.com

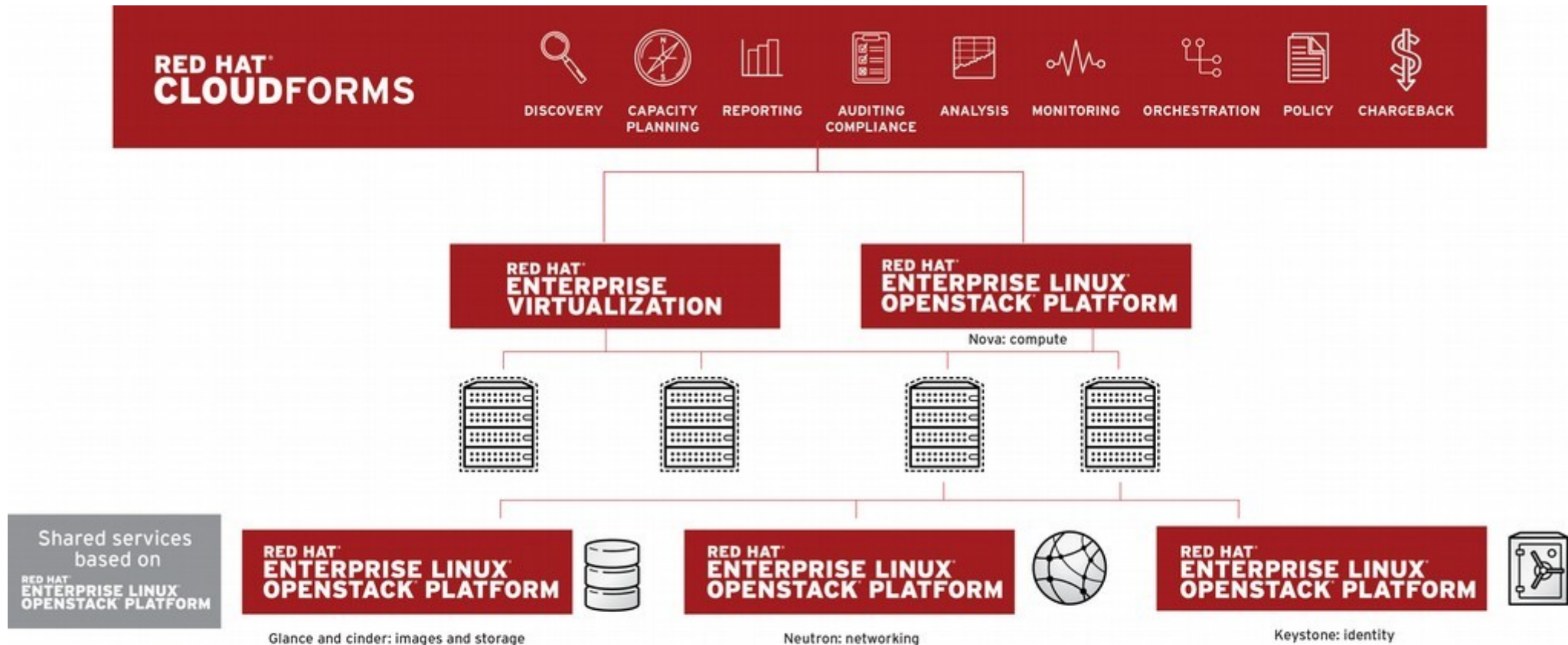
IT 인프라의 배치

하이브리드 관리



RED HAT CLOUD INFRASTRUCTURE

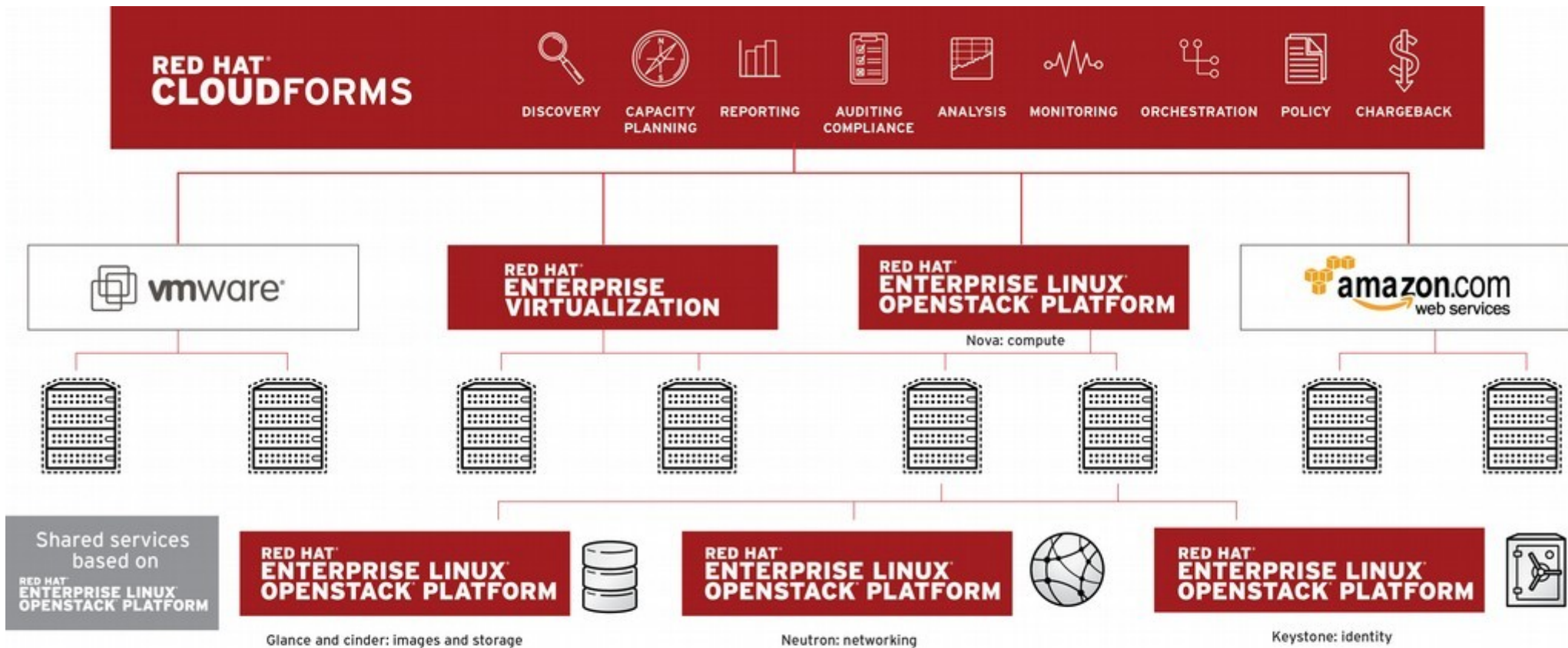
DELIVERING AN OPEN PRIVATE CLOUD



CL0048

CREATE AN OPEN HYBRID CLOUD

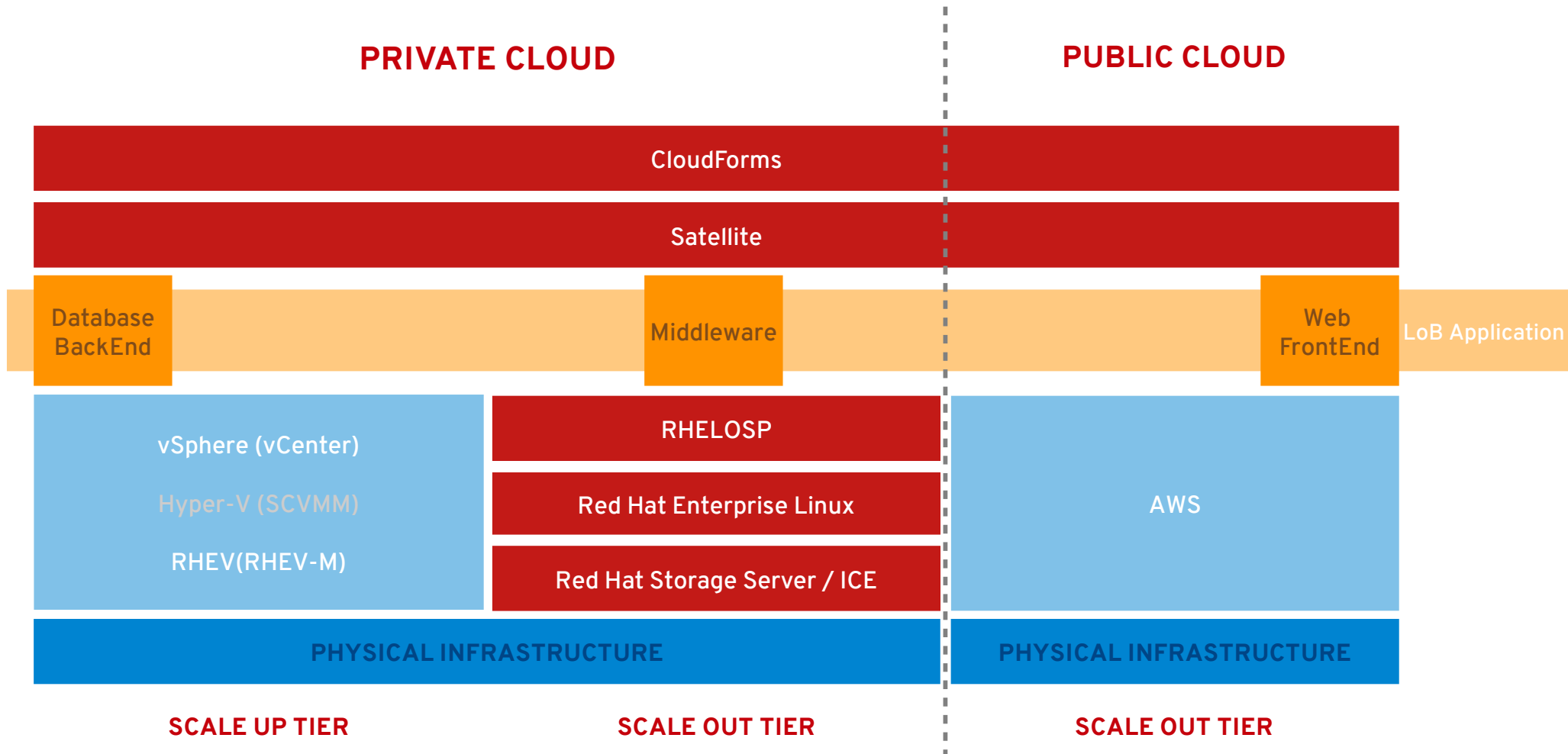
CLOUDFORMS ADDS HETEROGENEOUS CAPACITY



CL0046

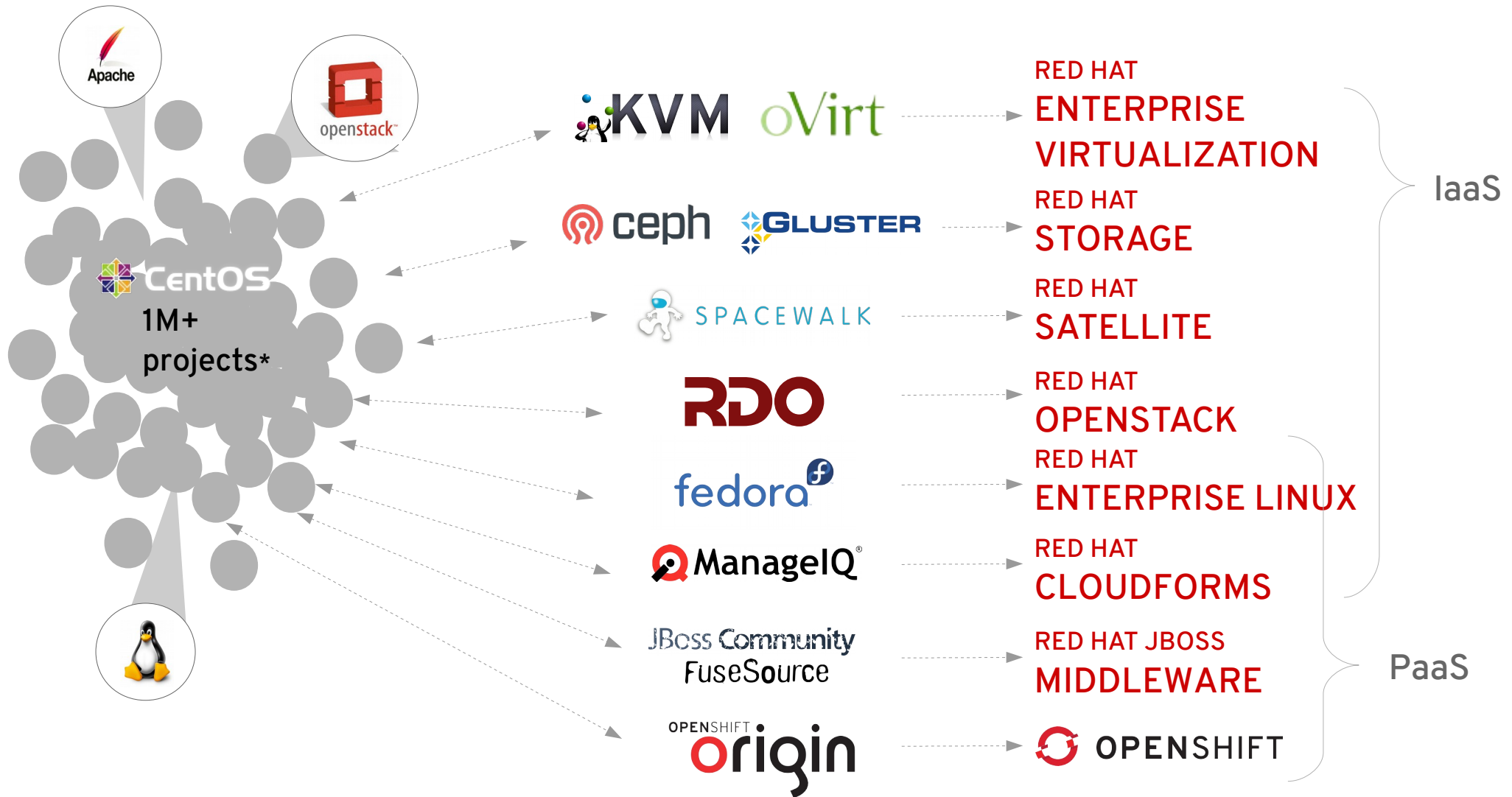
INFRASTRUCTURE-AS-A-SERVICE

Foundation for the Open Hybrid Cloud



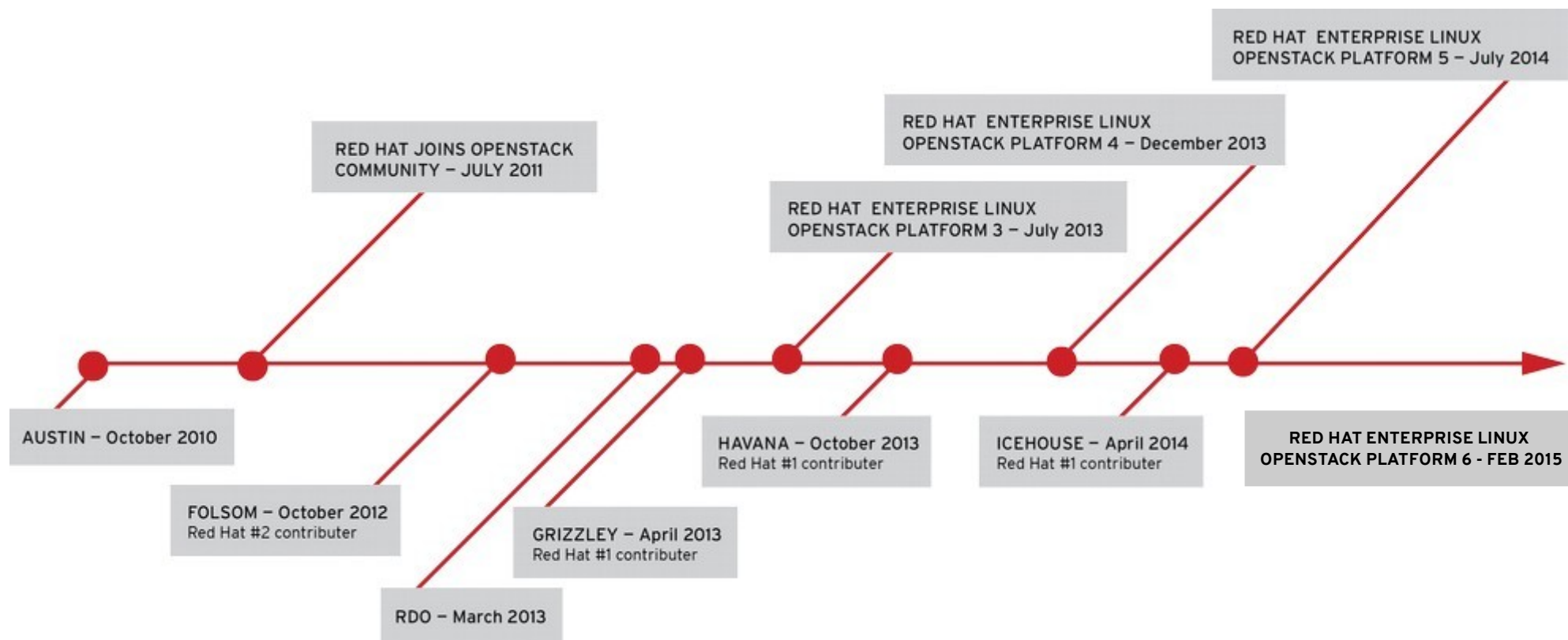
오픈 혁신을 통한 레드햇의 오픈소스 선도 기술

- Upstream 커뮤니티 혁신 -> 자유 프로젝트에 통합 -> 제품화



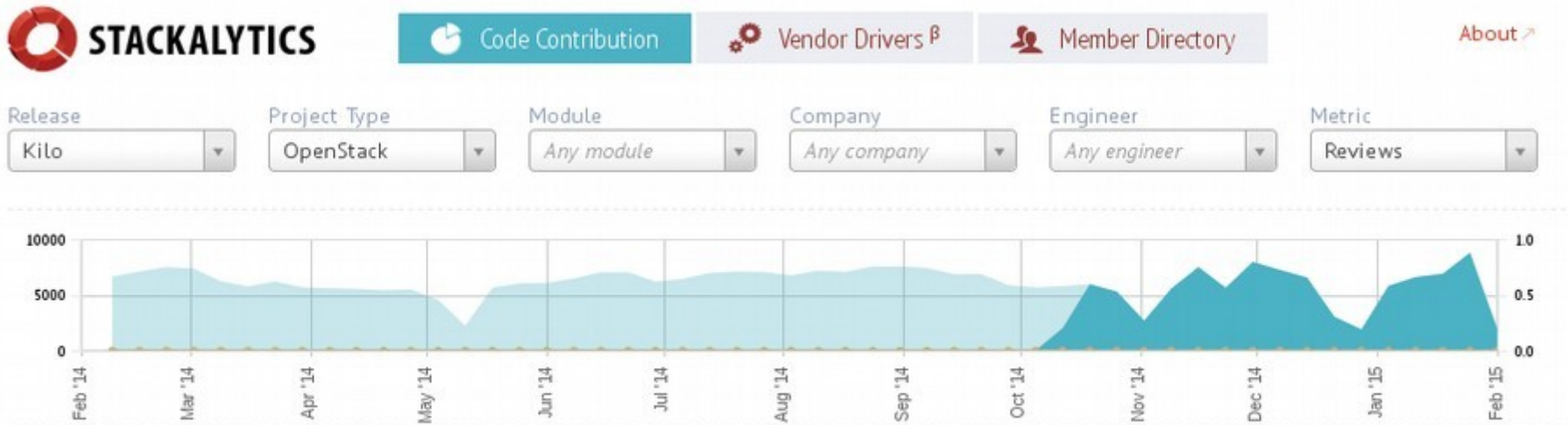
* www.blackducksoftware.com/oss-logistics/choose

RED HAT CONTRIBUTION TIMELINE

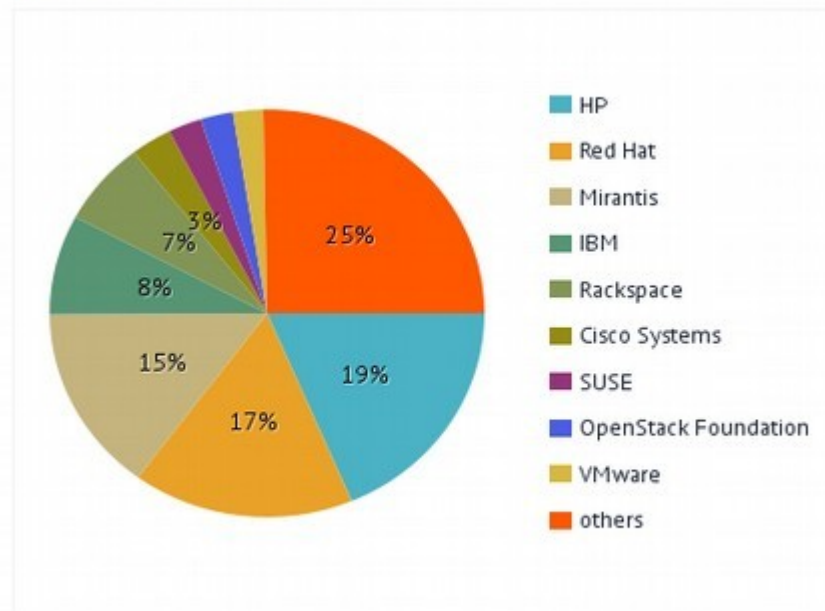


OPST 0011

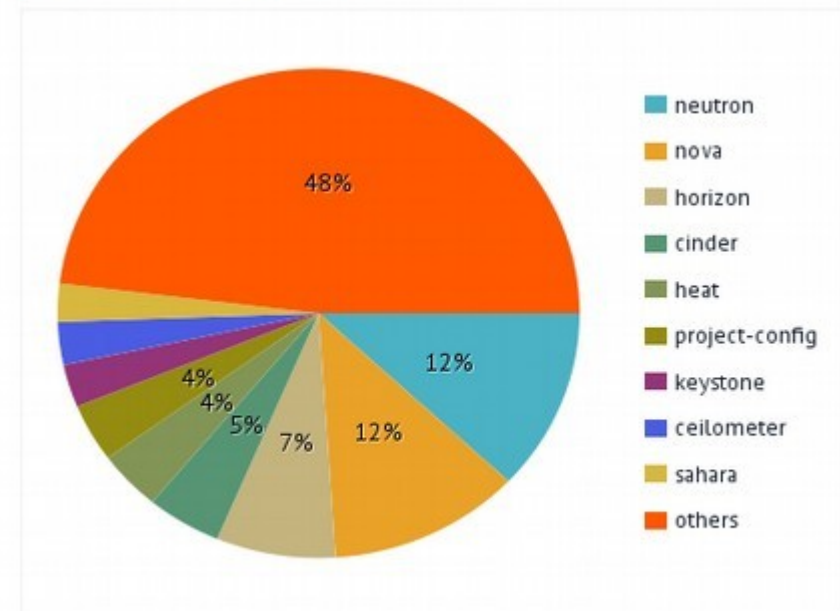
특정 벤더 종속이 없는 오픈소스 (stackalytics.com)



Contribution by companies

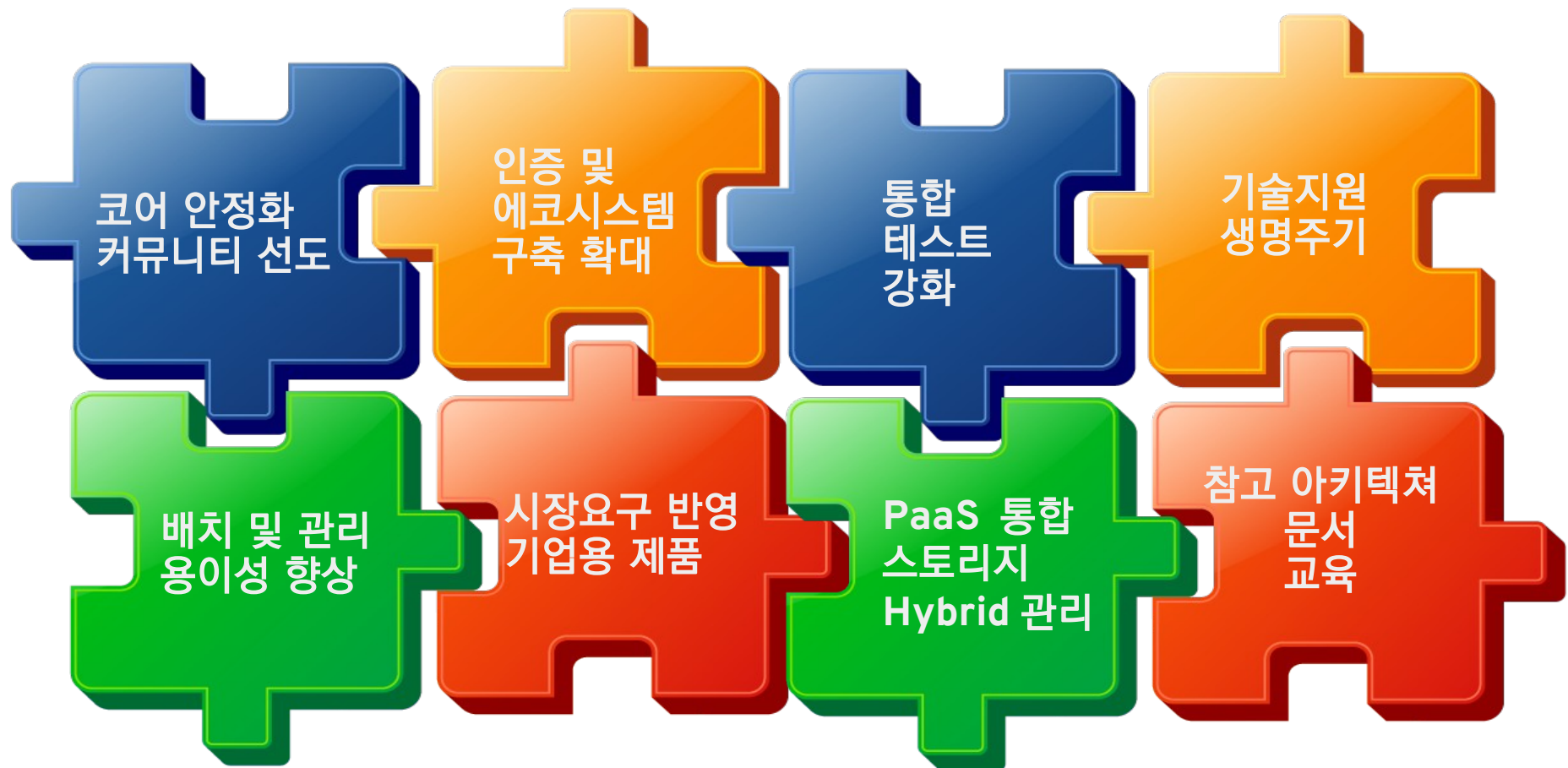


Contribution by modules



Red Hat OpenStack Approach

- RHEL 은 오픈소스 상용 제안에 있어 에코시스템의 가치를 보여주는 좋은 사례
- RHEL 과 같은 에코시스템을 OpenStack 에서도 구축



OpenStack 과 RHEL 을 통합



RED HAT[®]
ENTERPRISE LINUX[™]
OPENSTACK[™] PLATFORM

최신의 upstream
OpenStack source code

최신의 upstream
OpenStack
RPMs

기업용으로 강화된
RHEL 에 최적화 및 통합된
Red Hat OpenStack
technology

최신의
Community Linux

CentOS

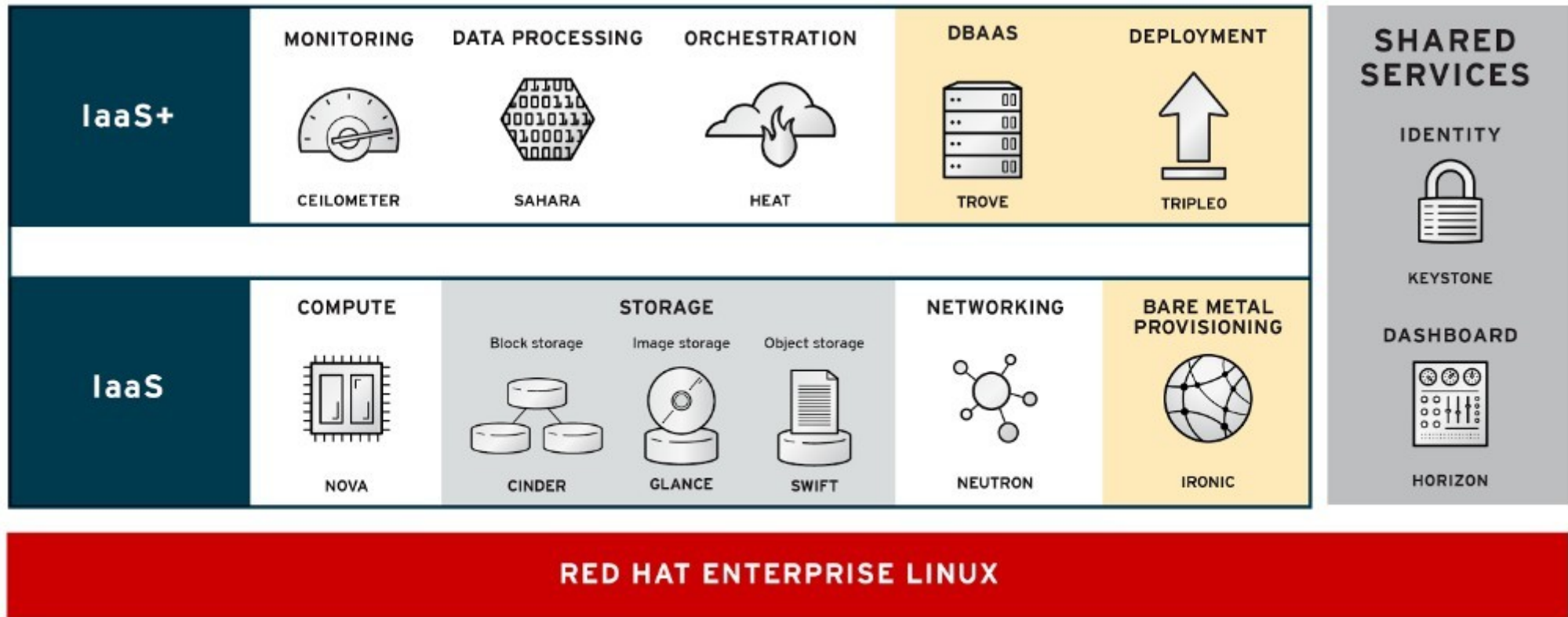
No certifications
Community support
6 개월 lifecycle

No certifications
Community support
6 개월 lifecycle

Red Hat Support
Red Hat ecosystem
certifications
3 년 lifecycle

RED HAT ENTERPRISE LINUX OPENSTACK PLATFORM 6

RED HAT ENTERPRISE LINUX 에 최적화되고 통합



 = Tech preview

RHELOSP 6 하이라이트

- Juno 기반
- 3 년 Life-Cycle
- Full graphical installer
- RHEL7

• Tech Previews

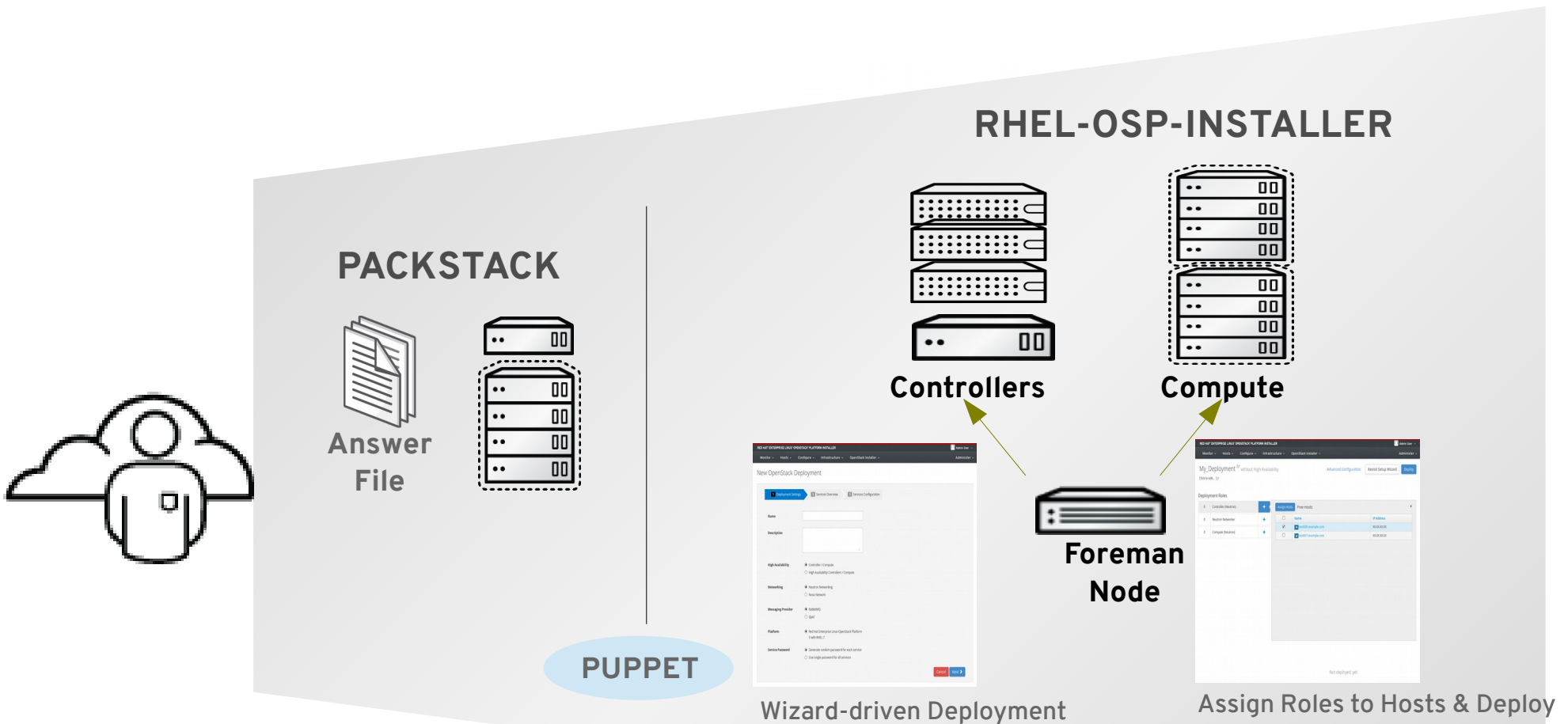
- TripleO
- Ironic
- Distributed Virtual Routing
- Database as a service(Trove)

• Major features

- IPv6 support
- SR-IOV neutron plugin
- Node evacuation scheduling
- Cinder volume replication
- Multi backend keystone
- VRRP based I3 HA
- Sahara data processing
- cinder volume to glance image
- cinder QoS in horizon

Feature	RHEL OSP 5	RHEL OSP 6
ML2 plugin	Supported	Supported
Open vSwitch driver	Supported	Supported
Linux bridge driver	Supported	Supported
L2 Population	Supported	Supported
OVS ARP Responder	Supported	Supported
LBaaS	Supported	Supported
SR-IOV	Not Supported	Supported
IPv6 networking	Not Supported	Supported
L3 HA (VRRP)	Not Supported	Supported
Distributed Virtual Routing (DVR)	Not Supported	Technology Preview
<u>OpenDaylight</u> driver	Technology Preview	Technology Preview
FWaaS	Technology Preview	Technology Preview
VPNaaS	Technology Preview	Technology Preview

RHEL OpenStack Platform 의 배치도구 선택



- 매뉴얼 설치 및 설정
- **Packstack**: 기본 배치 및 PoC
- **RHEL-OSP-Installer**: 웹기반의 마법사기반 배치 도구, 베어메탈 서버에 RHEL 프로비전 및 OpenStack 배치, 컨트롤러 서비스의 HA 배치

PACKSTACK

- PoC, 개발환경 , 테스트등의 오픈스택 배치
- 기본적으로 non HA 구성
- 준비사항
 - allinone 구성 시 1 대 , controller, network, compute, storage 등 용도별
 - NTP 서버 정보
 - 사용할 오픈스택 컴포넌트 결정
 - RHELOSP 서브스크립션 또는 reposync 된 로컬 리포지토리

```
# yum install openstack-packstack
```

```
# packstack --gen-answer-file=poc.ans; vi poc.ans
```

```
# packstack --answer-file=poc.ans
```

```
[general]

# Path to a Public key to install on servers. If a usable key has not
# been installed on the remote servers the user will be prompted for a
# password and this key will be installed so the password will not be
# required again
CONFIG_SSH_KEY=/root/.ssh/id_rsa.pub

# Set a default password everywhere. The default password will be
# overridden by whatever password is set for each individual service or
# user.
CONFIG_DEFAULT_PASSWORD=RHEL0SP6

# Set to 'y' if you would like Packstack to install MariaDB
CONFIG_MARIADB_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack Image
# Service (Glance)
CONFIG_GLANCE_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack Block
# Storage (Cinder)
CONFIG_CINDER_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack Compute
# (Nova)
CONFIG_NOVA_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack
# Networking (Neutron). Otherwise Nova Network will be used.
CONFIG_NEUTRON_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack
# Dashboard (Horizon)
CONFIG_HORIZON_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack Object
# Storage (Swift)
CONFIG_SWIFT_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack
# Metering (Ceilometer)
CONFIG_CEILOMETER_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack
# Orchestration (Heat)
CONFIG_HEAT_INSTALL=y

# Set to 'y' if you would like Packstack to install OpenStack
# Clustering (Sahara)
CONFIG_SAHARA_INSTALL=n

# Set to 'y' if you would like Packstack to install OpenStack
# Database (Trove)
CONFIG_TROVE_INSTALL=n

# Set to 'y' if you would like Packstack to install OpenStack Bare
# Metal (Ironic)
CONFIG_IRONIC_INSTALL=n

# Set to 'y' if you would like Packstack to install the OpenStack
# Client packages. An admin "rc" file will also be installed
CONFIG_CLIENT_INSTALL=y

# Comma separated list of NTP servers. Leave plain if Packstack
# should not install ntpd on instances.
CONFIG_NTP_SERVERS=

# Set to 'y' if you would like Packstack to install Nagios to monitor
# OpenStack hosts
CONFIG_NAGIOS_INSTALL=y

# Comma separated list of servers to be excluded from installation in
# case you are running Packstack the second time with the same answer
# file and don't want Packstack to touch these servers. Leave plain if
# you don't need to exclude any server.
EXCLUDE_SERVERS=

# Set to 'y' if you want to run OpenStack services in debug mode.
# Otherwise set to 'n'.
CONFIG_DEBUG_MODE=n

# The IP address of the server on which to install OpenStack services
# specific to controller role such as API servers, Horizon, etc.
CONFIG_CONTROLLER_HOST=192.168.0.11

# The list of IP addresses of the server on which to install the Nova
# compute service
CONFIG_COMPUTE_HOSTS=192.168.0.11

# The list of IP addresses of the server on which to install the
# network service such as Nova network or Neutron
CONFIG_NETWORK_HOSTS=192.168.0.11

# Set to 'y' if you want to use VMware vCenter as hypervisor and
# storage. Otherwise set to 'n'.
CONFIG_VMWARE_BACKEND=n

# Set to 'y' if you want to use unsupported parameters. This should
# be used only if you know what you are doing. Issues caused by using
# unsupported options won't be fixed before next major release.
CONFIG_UNSUPPORTED=n

# The IP address of the VMware vCenter server
CONFIG_VCENTER_HOST=

# The username to authenticate to VMware vCenter server
CONFIG_VCENTER_USER=

# The password to authenticate to VMware vCenter server
CONFIG_VCENTER_PASSWORD=

# The name of the vCenter cluster
CONFIG_VCENTER_CLUSTER_NAME=

# (Unsupported!) The IP address of the server on which to install
# OpenStack services specific to storage servers such as Glance and
# Cinder.
CONFIG_STORAGE_HOST=192.168.0.11

# (Unsupported!) The IP address of the server on which to install
# OpenStack services specific to Sahara
CONFIG_SAHARA_HOST=192.168.0.11

# To subscribe each server to EPEL enter "y"
CONFIG_USE_EPEL=n
```



```

# address of DB server to use if MariaDB installation was not selected
CONFIG_MARIADB_HOST=192.168.0.11

# Username for the MariaDB admin user
CONFIG_MARIADB_USER=root

# Password for the MariaDB admin user
CONFIG_MARIADB_PW=bdfcb926855948c9

# The password to use for the Keystone to access DB
CONFIG_KEYSTONE_DB_PW=4bc939f86ac040df

# Region name
CONFIG_KEYSTONE_REGION=RegionOne

# The token to use for the Keystone service api
CONFIG_KEYSTONE_ADMIN_TOKEN=62112bf5d21441dd9f6a0f47040561fc

# The password to use for the Keystone admin user
CONFIG_KEYSTONE_ADMIN_PW=b97277dc7046495cd

# The password to use for the Keystone demo user
CONFIG_KEYSTONE_DEMO_PW=29770adf803c4ba8

# Kestone token format. Use either UUID or PKI
CONFIG_KEYSTONE_TOKEN_FORMAT=UUID

# Name of service to use to run keystone (keystone or httpd)
CONFIG_KEYSTONE_SERVICE_NAME=keystone

# The password to use for the Glance to access DB
CONFIG_GLANCE_DB_PW=8f66cf7a147946d5

# The password to use for the Glance to authenticate with Keystone
CONFIG_GLANCE_KS_PW=08d86558a3e54ce8

# Glance storage backend controls how Glance stores disk images.
# Supported values: file, swift. Note that Swift installation have to
# be enabled to have swift backend working. Otherwise Packstack will
# fallback to 'file'.
CONFIG_GLANCE_BACKEND=file

# The password to use for the Cinder to access DB
CONFIG_CINDER_DB_PW=a598e2edfdc143c8

# The password to use for the Cinder to authenticate with Keystone
CONFIG_CINDER_KS_PW=009b10c8ca18480c

# The Cinder backend to use, valid options are: lvm, gluster, nfs,
# netapp
CONFIG_CINDER_BACKEND=lvm

# Create Cinder's volumes group. This should only be done for testir
# on a proof-of-concept installation of Cinder. This will create a
# file-backed volume group and is not suitable for production usage
CONFIG_CINDER_VOLUMES_CREATE=y

# Cinder's volumes group size. Note that actual volume size will be
# extended with 3% more space for VG metadata.
CONFIG_CINDER_VOLUMES_SIZE=20G

# A single or comma separated list of gluster volume shares to mount
# eg: ip-address:/vol-name, domain:/vol-name
CONFIG_CINDER_GLUSTER_MOUNTS=

```

```

# Set to 'y' if you would like Packstack to install Neutron LBaaS
CONFIG_LBAAS_INSTALL=n

# Set to 'y' if you would like Packstack to install Neutron L3
# Metering agent
CONFIG_NEUTRON_METERING_AGENT_INSTALL=n

# Whether to configure neutron Firewall as a Service
CONFIG_NEUTRON_FWAAS=n

# A comma separated list of network type driver entrypoints to be
# loaded from the neutron.ml2.type_drivers namespace.
CONFIG_NEUTRON_ML2_TYPE_DRIVERS=vxlan

# A comma separated ordered list of network_types to allocate as
# tenant networks. The value 'local' is only useful for single-box
# testing but provides no connectivity between hosts.
CONFIG_NEUTRON_ML2_TENANT_NETWORK_TYPES=vxlan

# A comma separated ordered list of networking mechanism driver
# entrypoints to be loaded from the neutron.ml2.mechanism_drivers
# namespace.
CONFIG_NEUTRON_ML2_MECHANISM_DRIVERS=openvswitch

# A comma separated list of physical network names with which flat
# networks can be created. Use * to allow flat networks with arbitrary
# physical network names.
CONFIG_NEUTRON_ML2_FLAT_NETWORKS=*

# A comma separated list of <physical_network>:<vlan_min>:<vlan_max>
# or <physical_network> specifying physical network names usable for
# VLAN provider and tenant networks, as well as ranges of VLAN tags on
# each available for allocation to tenant networks.
CONFIG_NEUTRON_ML2_VLAN_RANGES=

# A comma separated list of <tun_min>:<tun_max> tuples enumerating
# ranges of GRE tunnel IDs that are available for tenant network

# The interface for the OVS tunnel. Packstack will override the IP
# address used for tunnels on this hypervisor to the IP found on the
# specified interface. (eg. eth1)
CONFIG_NEUTRON_OVS_TUNNEL_IF=

# VXLAN UDP port
CONFIG_NEUTRON_OVS_VXLAN_UDP_PORT=4789

# To set up Horizon communication over https set this to 'y'
CONFIG_HORIZON_SSL=n

# PEM encoded certificate to be used for ssl on the https server,
# leave blank if one should be generated, this certificate should not
# require a passphrase
CONFIG_SSL_CERT=

# SSL keyfile corresponding to the certificate if one was entered
CONFIG_SSL_KEY=

CONFIG_NEUTRON_OVS_BRIDGE_MAPPINGS=

```

RHEL-OSP-INSTALLER : foreman 기반 배치 도구

New OpenStack Deployment

1 Deployment Settings

2 Network Configuration

3 Services Overview

4 Services Configuration

Name *

PoC

Description

Networking *

☒ Neutron Networking

☐ Nova Network

Messaging Provider *

☒ RabbitMQ

☐ Qpid

Platform *

☒ Red Hat Enterprise Linux OpenStack Platform 6 on RHEL 7

Service Password *

☒ Generate random password for each service

☐ Use single password for all services

Custom repos

If you need to add custom repositories on provisioned hosts you can specify base urls here, one per line. These repositories will have highest priority (50)

Cancel

Next >

RHEL-OSP-INSTALLER (계속)

1 Deployment Settings 2 Network Configuration

Available Network Traffic Types

Tenant

Subnets

Storage-clustering - 192.168.12.0/22

Storage Clustering

Storage - 192.168.8.0/22

Storage

Tenant - 192.168.4.0/22

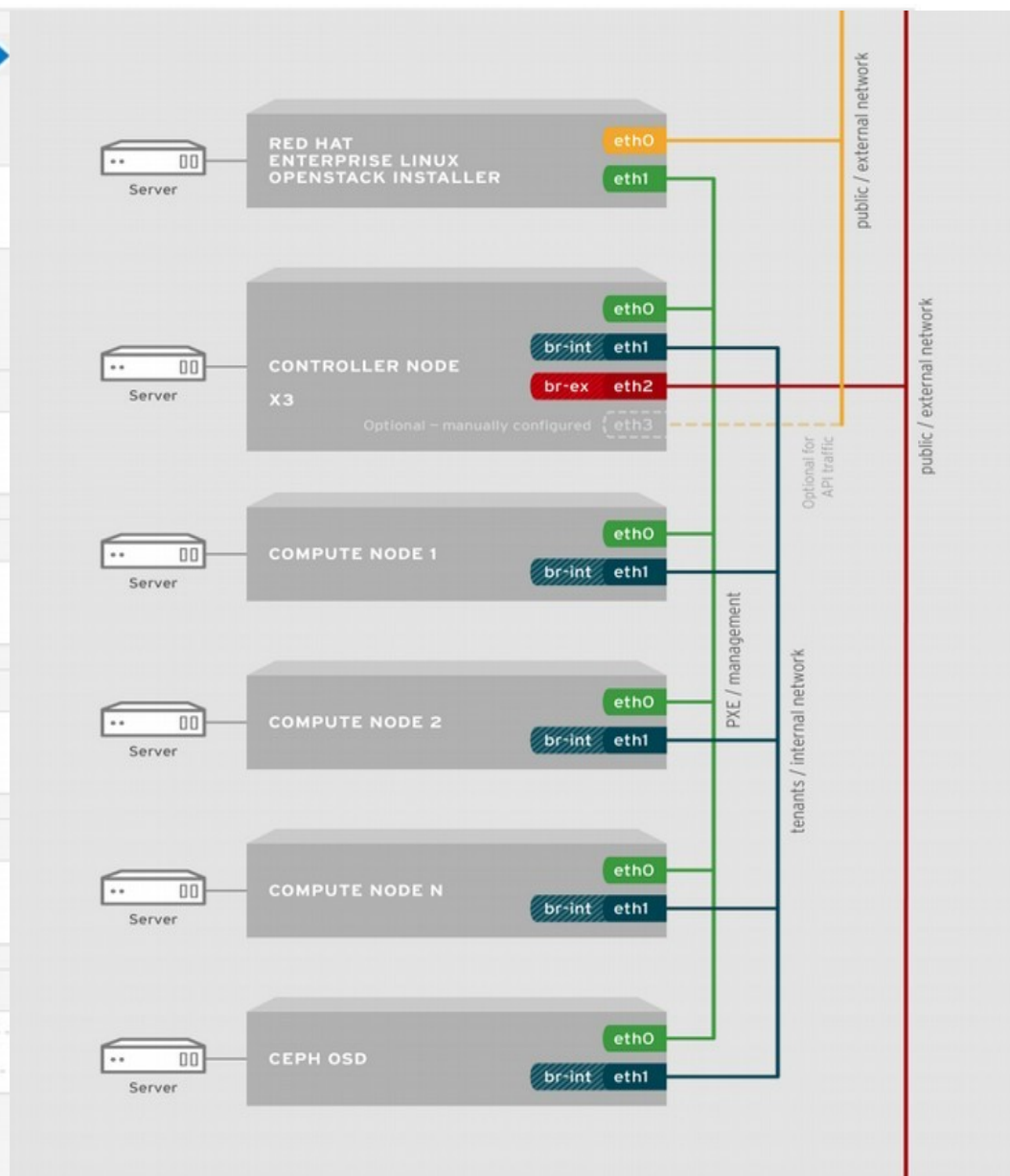
External - 61.250.21.0/24

External

default - 192.168.0.0/22

Provisioning/PXE Management Cluster Management Admin API Public API

Back Cancel



RHEL-OSP-INSTALLER (계속)

1 Deployment Settings

2 Network Configuration

3 Services Overview

4 Services Configuration

Deployment Roles & Available Services

Controllers / Compute - Neutron Networking

Controller	Compute
<ul style="list-style-type: none">• Horizon• Keystone• Glance• Cinder• Neutron• Database with Galera• Messaging• Pacemaker Cluster• HAProxy Load Balancer	<ul style="list-style-type: none">• Nova-Compute• Open vSwitch Agent

Cancel

◀ Back

Next ▶

RHEL-OSP-INSTALLER (계속)

1 Deployment Settings

2 Network Configuration

3 Services Overview

4 Services Configuration

Services

Neutron

Glance

Cinder

Neutron Service Configuration

Core Plugin Type *

☒ ML2 Core Plugin

ML2 Mechanism Drivers

☒ Open vSwitch

Tenant Network Type *

☒ VXLAN Segmentation

☐ GRE Segmentation

☐ VLAN Segmentation

☒ L2 Population

☐ Cisco Nexus

☐ N1KV Core Plugin

Tenant Network Device MTU

(Optional) Only set this if changing the default

Back

Cancel

Submit

RHEL-OSP-INSTALLER (계속)

1 Deployment Settings > 2 Network Configuration > 3 Services Overview > 4 Services Configuration

Services

- Neutron
- Glance**
- Cinder

Glance Service Configuration

Choose Driver Backend *

☐ Local File

☒ NFS

Network Path (<server>:<local path>)

☐ Ceph

◀ Back Cancel Submit

RHEL-OSP-INSTALLER (계속)

1 Deployment Settings

2 Network Configuration

3 Services Overview

4 Services Configuration

Services

Neutron

Glance

Cinder

Cinder Service Configuration

Choose Driver Backend

☒ NFS

NFS URI: (<server>:<local path>)

☐ LVM

☒ Ceph

☒ EqualLogic

Server #1

SAN IP Addr: *

SAN Login: *

SAN Password: *

Pool: *

Group: *

Add Another Server

Back

Cancel

Submit

RHEL-OSP-INSTALLER (계속)

RHELOSP6

DeployRevisit Setup Wizard

OverviewHostsAdvanced Configuration

Click to edit..

Deployment Roles

0	Controller	+
0	Compute (Neutron)	+
0	Generic RHEL 7	+
0	Ceph Storage Node (OSD)	+

All Details

VIP list

cellometer_admin_vip:	192.168.3.13
cellometer_private_vip:	192.168.3.14
cellometer_public_vip:	192.168.3.15
cinder_admin_vip:	192.168.3.16
cinder_private_vip:	192.168.3.17
cinder_public_vip:	192.168.3.18
db_vip:	192.168.3.19
glance_admin_vip:	192.168.3.20
glance_private_vip:	192.168.3.21
glance_public_vip:	192.168.3.22
heat_admin_vip:	192.168.3.23
heat_private_vip:	192.168.3.24
heat_public_vip:	192.168.3.25
heat_cfn_admin_vip:	192.168.3.26
heat_cfn_private_vip:	192.168.3.27
heat_cfn_public_vip:	192.168.3.28
horizon_admin_vip:	192.168.3.29
horizon_private_vip:	192.168.3.30
horizon_public_vip:	192.168.3.31
keystone_admin_vip:	192.168.3.32

RHEL-OSP-INSTALLER (계속)

Overview

Hosts

Advanced Configuration

Import

Export

Edit

Services

Controller

Keystone

Load Balancer

Memcached

qpid

Glance

Nova

Heat

Cinder

Swift

Horizon

Galera

Mysql

Ceilometer

Neutron

Neutron-compute

Generic RHEL 7

Ceph Storage (OSD) (node)

Controller Service Configuration

Fence Ipmilan address

<%= @host.bmc_nic.ip if @host.bmc_nic && @host.bmc_nic.fencing_enabled? %>

evaluates to:

Fence Ipmilan expose lanplus

<%= @host.bmc_nic.expose_lanplus? if @host.bmc_nic && @host.bmc_nic.fencing_enabled? %>

evaluates to:

Fence Ipmilan hostlist

Fence Ipmilan host to address

[]

Fence Ipmilan interval

60s

Fence Ipmilan lanplus options

<%= @host.bmc_nic.attrs["fence_ipmilan_lanplus_options"] if @host.bmc_nic && @host.bmc_nic.fen

evaluates to:

Fence Ipmilan password

<%= @host.bmc_nic.password if @host.bmc_nic && @host.bmc_nic.fencing_enabled? %>

evaluates to:

Fence Ipmilan username

<%= @host.bmc_nic.username if @host.bmc_nic && @host.bmc_nic.fencing_enabled? %>

evaluates to:

Fence xvm key file password

Fence xvm manage key file

false

Fence xvm port

foreman discovery image

```
[ 0]
```



```
[ 0] This is Foreman Discovery 0.5.9999-
[ 0] Some interesting facts about this s
[ 0] hardwareisa: x86_64
[ 0] hardwaremodel: x86_64
[ 0] ipaddress: 192.168.122.5
[ 0] ipaddress_eth0: 192.168.122.5
[ 0] ipaddress_lo: 127.0.0.1
[ 0] macaddress: 52:54:00:D3:84:72
[ 0] macaddress_eth0: 52:54:00:D3:84:72
[ 0] manufacturer: Red Hat
[ 0] memorytotal: 868.63 MB
[ 0] productname: KVM
[ 0] Logs from discovery services now fo
[ 0] Discovered by SERVER:xx.xx.xx.}
[ 0] Registering host with Foreman (http
```

RED HAT® ENTERPRISE LINUX® OPENSTACK® PLATFORM INSTALLER

Admin User

Monitor

Hosts

Configure

Infrastructure

OpenStack Installer

Administer

Discovered host: mac123456789012

Provision

Refresh facts

Delete

Facts discovered on this host

Fact	Value
architecture	x86_64
discovery_bootif	00:1A:4A:AE:A6:01
discovery_version	0.5.9999
domain	sampledomain
facterversion	1.6.6
fqdn	myhost.sampledomain
hardwareisa	x86_64

Red Hat Horizon OpenStack Dashboard

RED HAT® ENTERPRISE LINUX OPENSTACK PLATFORM Project Admin Identity Red Hat Access Help admin

System Overview Resource Usage **Hypervisors** Host Aggregates Instances

All Hypervisors

Hypervisor Summary

VCPU Usage
Used 13 of 840

Memory Usage
Used 320 of 1024

Hypervisor **Compute Host**

Compute Host

Host	Zone	Status	State	Updated At	Actions
compute03.topenstack.com	nova	enabled	down	4 minutes	Evacuate Host
compute11.topenstack.com	nova	enabled	up	0 minutes	
compute18.topenstack.com	nova	enabled	up	0 minutes	

Evacuate Host

Current Host *
compute03.topenstack.com

Target Host *
compute01.topenstack.com

☐ Shared Storage

Description:
Evacuate the servers from the selected down host to an active target host.

Cancel Evacuate Host

Red Hat Access 통합

The screenshot shows the Red Hat OpenStack Dashboard interface. At the top, there's a navigation bar with 'RED HAT OPENSTACK DASHBOARD', 'Project', 'Admin', 'Settings', 'Red Hat Access', 'Help', and a user profile 'admin'. Below this is a secondary bar with 'Actions Panel', 'Search', 'Log', and 'Support'. The main content area is titled 'Search' and shows a search bar with 'neutron' entered. To the right of the search bar, it says 'Logged into the Red Hat Customer Portal as Won Young Choi | Log out'. Below the search bar, there's a 'Recommendations' section with several links, including 'Host Groups In Foreman?'. To the right of the recommendations, there's a detailed view of the search results, including an 'Environment' section (Red Hat Enterprise Linux OpenStack Platform 4.0, Foreman installation), an 'Issue' section (I am trying to install openstack Environment using foreman. I want only four nodes : Deployment foreman server, Controller, Compute and Storage. But I am confuse about the host groups which you mentioned in the foreman GUI: Controller(neutron), Compute(neutron), Controller(nova network), Compute(nova network), Neutron Network. As per my understanding , each group should have separate node. So, My Questions are : 1. Difference between Controller(neutron) & Controller(nova network) host group? 2. Difference between Compute(neutron) & Compute(nova network) host group? 3. In what conditions, we have to use neutron network host group? 4. Can we use only controller(neutron) and compute(neutron) without neutron network host group. will that work? 5. If 4th point works then where will neutron services run, do we have to define externally?), and a 'Resolution' section.

RED HAT OPENSTACK DASHBOARD Project Admin Settings Red Hat Access Help admin

Actions Panel Search Log Support

Search

Logged into the Red Hat Customer Portal as Won Young Choi | [Log out](#)

neutron Search

Recommendations

- starting neutron-server failed with keystone-signing error in server.log
- neutron-openvswitch-agent fails to start
- Unable to start neutron-server during new installation setup
- Misconfigured tenant network causes neutron-dhcp-agent to continuously restart
- Is Neutron VPNaaS (VPN as a Service) a supported component?
- Host Groups In Foreman?**
- How do I update mac address associated with a port using neutron cli?

Environment

Red Hat Enterprise Linux OpenStack Platform 4.0
Foreman installation

Issue

I am trying to install openstack Environment using foreman. I want only four nodes : Deployment foreman server, Controller, Compute and Storage.

But I am confuse about the host groups which you mentioned in the foreman GUI: Controller(neutron), Compute(neutron), Controller(nova network), Compute(nova network), Neutron Network. As per my understanding , each group should have separate node.

So, My Questions are :

1. Difference between Controller(neutron) & Controller(nova network) host group?
2. Difference between Compute(neutron) & Compute(nova network) host group?
3. In what conditions, we have to use neutron network host group?
4. Can we use only controller(neutron) and compute(neutron) without neutron network host group. will that work?
5. If 4th point works then where will neutron services run, do we have to define externally?

Resolution

RHEL OpenStack Platform 매뉴얼

Select your version

5 4 3 2

Scroll to category

Release Notes

Upgrading

Getting Started


Configuring the Cloud


Reference


Release Notes

Release and Technical Notes

[Red Hat Enterprise Linux OpenStack Platform 5 - Top New Features](#)
Important new features for this release.

[Release Notes for RHEL7.0 and RHEL6.5 Release](#) 
Release details for Red Hat Enterprise Linux OpenStack Platform 5

[Technical Notes for RHEL7.0 Release](#) 
Technical Notes for Red Hat Enterprise Linux OpenStack Platform and supporting packages.

[Technical Notes for RHEL6.5 Release](#) 
Technical Notes for Red Hat Enterprise Linux OpenStack Platform and supporting packages.

Upgrading

Upgrading your OpenStack environment

[Overview of Upgrading to Red Hat Enterprise Linux OpenStack Platform 5](#)
Comprehensive overview of available methods for upgrading to Red Hat Enterprise Linux OpenStack Platform 5.

[Upgrading OpenStack by Updating All Services Simultaneously](#)
Instructions for simultaneously upgrading all OpenStack services.

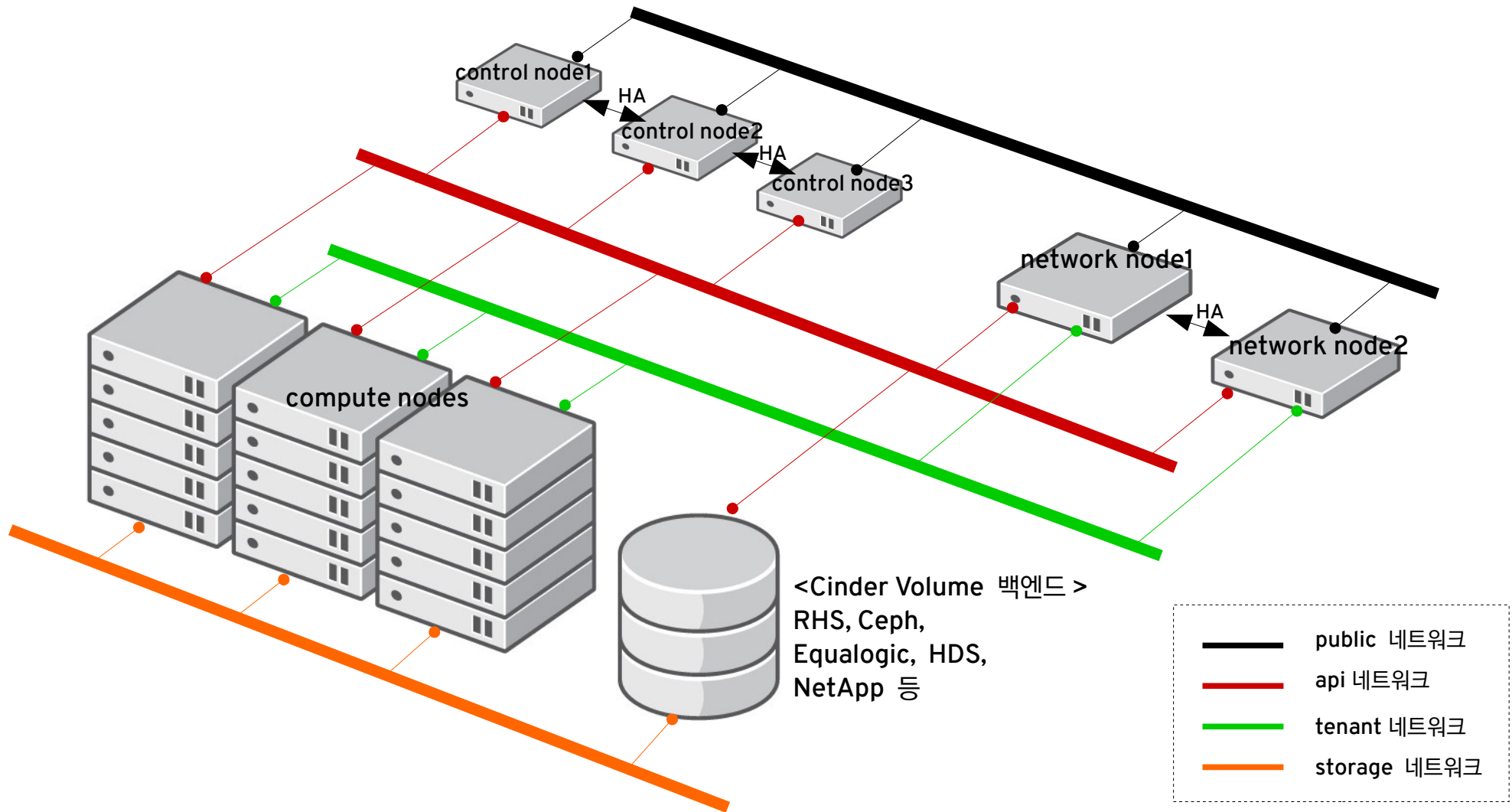
[Upgrading OpenStack by Updating Each Service Individually](#)
Upgrade instructions that use stated outages to specific services.

[Upgrading OpenStack by Updating Each Service Individually, with Live Compute](#)
Upgrade instructions that offer minimal downtime (allowing v4 compute nodes to run in parallel with v5 compute nodes).

- 관리자 가이드
- 설정 레퍼런스 가이드
- 업그레이드
- 엔드유저 가이드
- 시작 가이드
- 설치 및 설정 가이드
- 릴리즈 및 기술 노트

https://access.redhat.com/site/documentation/en-US/Red_Hat_Enterprise_Linux_OpenStack_Platform/

일반적인 RHEL-OSP 아키텍처 구성도

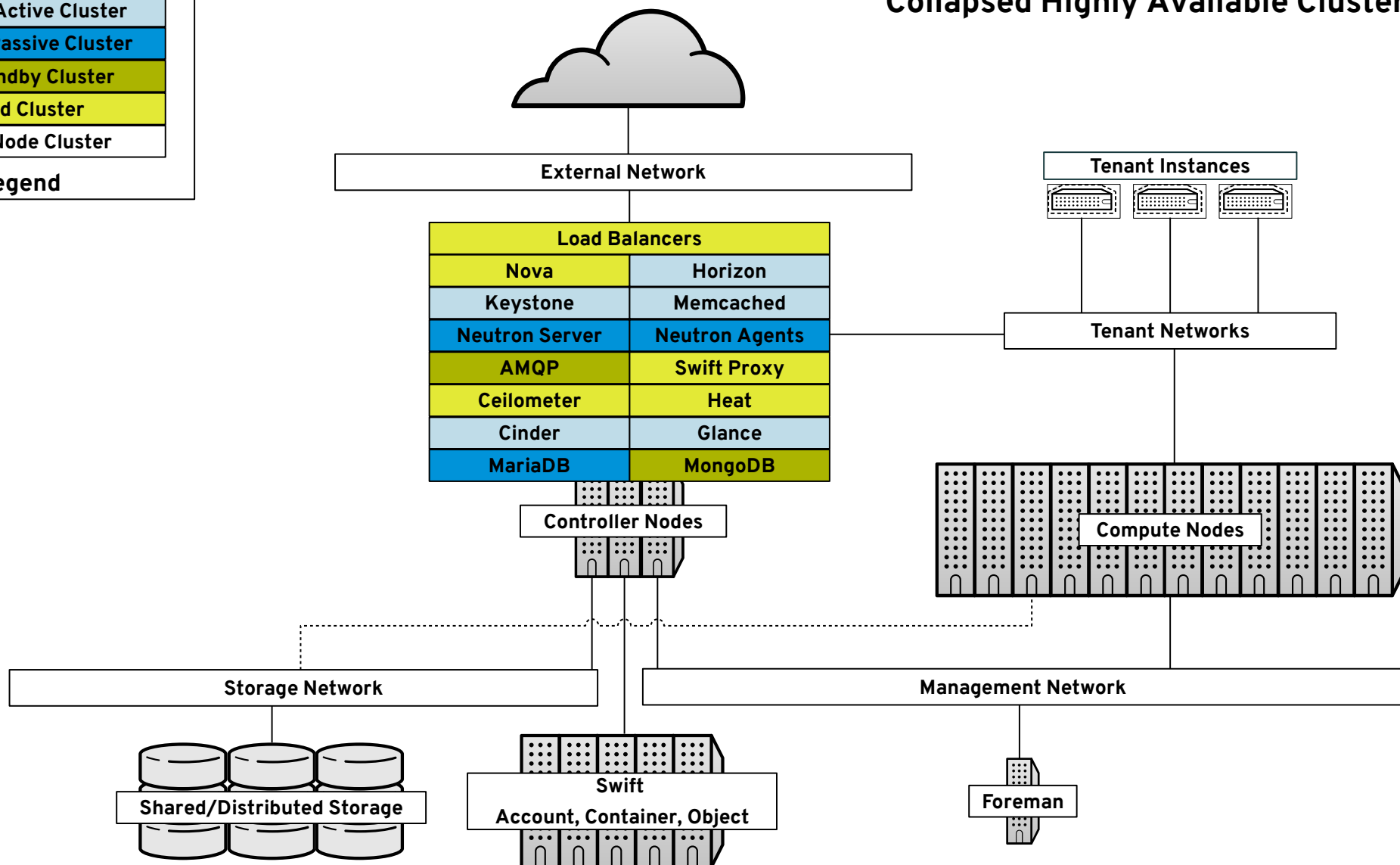


컨트롤러 노드에 모든 컴포넌트 HA 구성 배치

Collapsed Highly Available Clusters

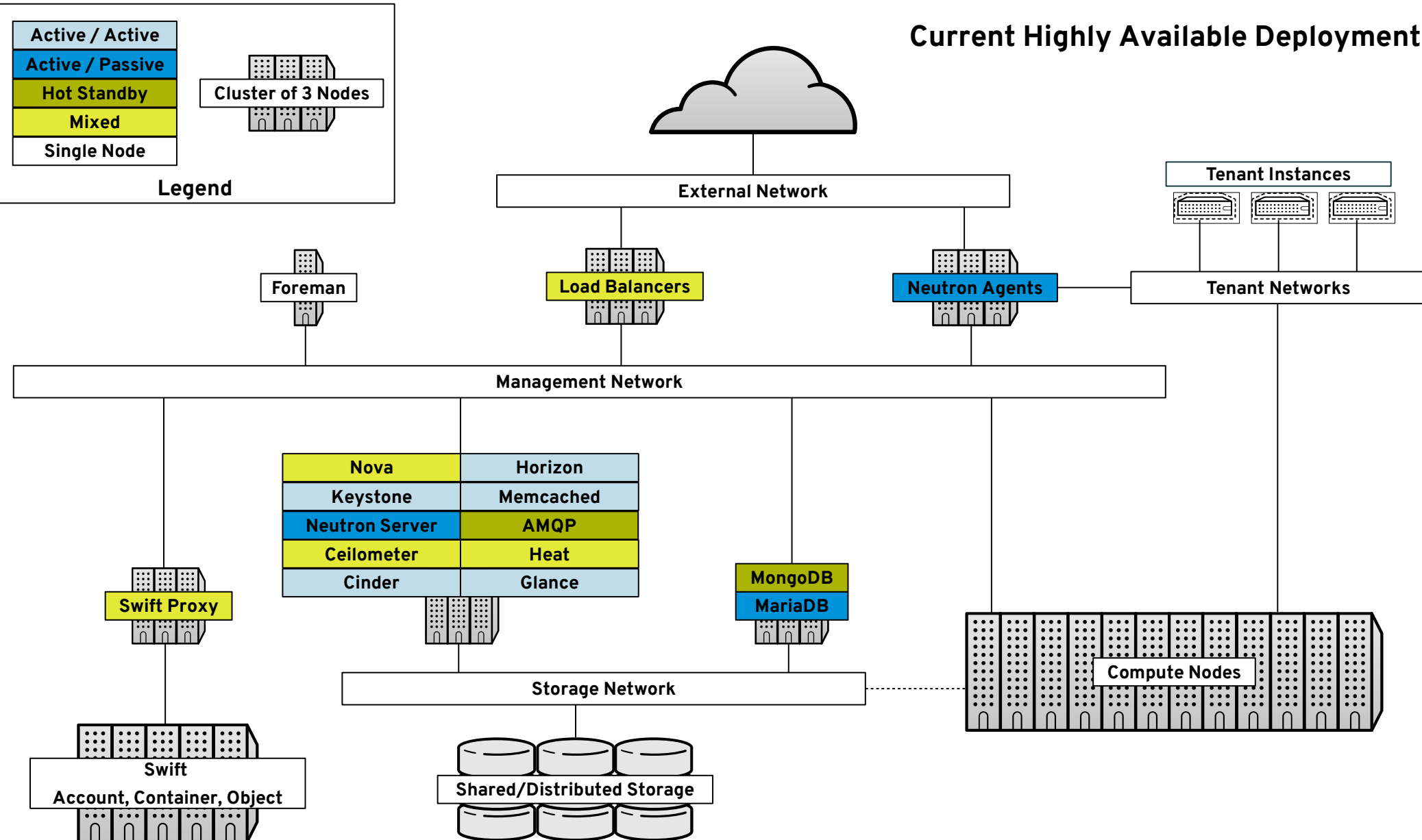
Active / Active Cluster
Active / Passive Cluster
Hot Standby Cluster
Mixed Cluster
Single Node Cluster

Legend



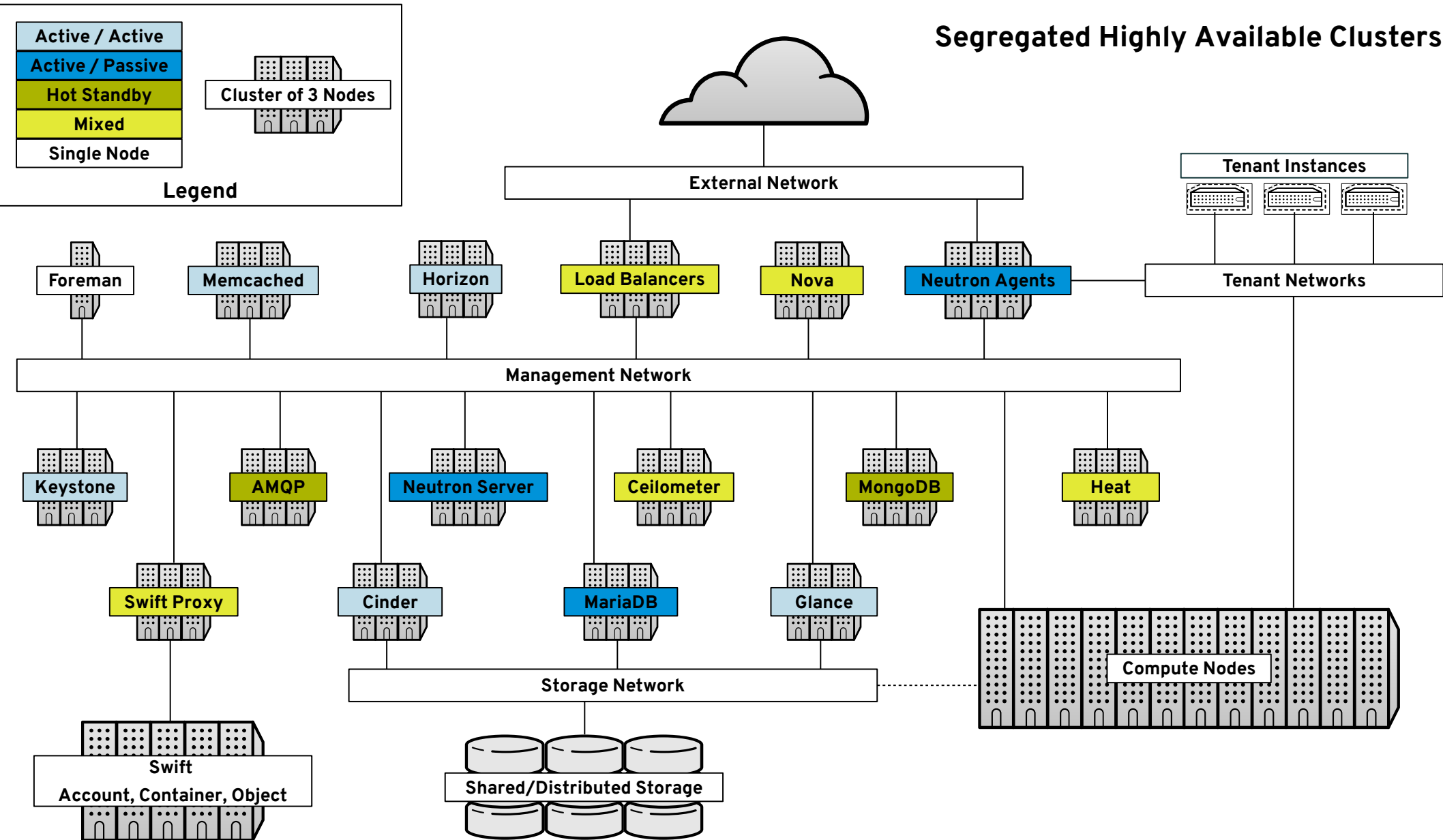
현재의 일반적인 HA 구성안

Current Highly Available Deployment



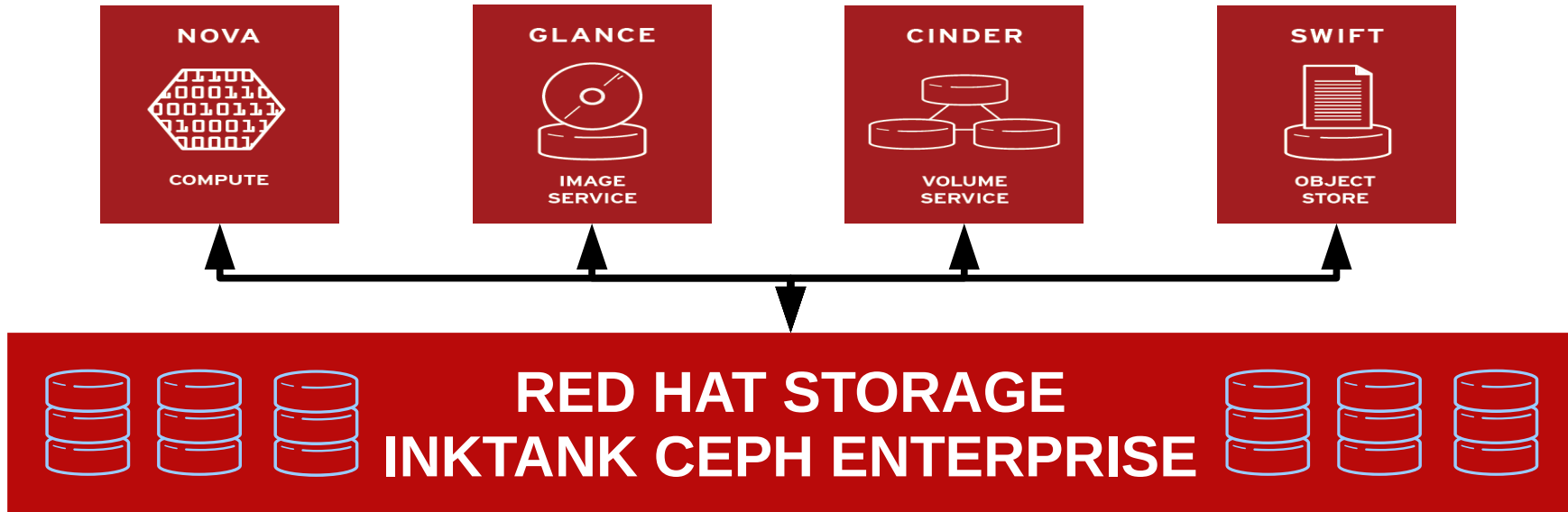
컴포넌트별 분산 HA 배치

Segregated Highly Available Clusters



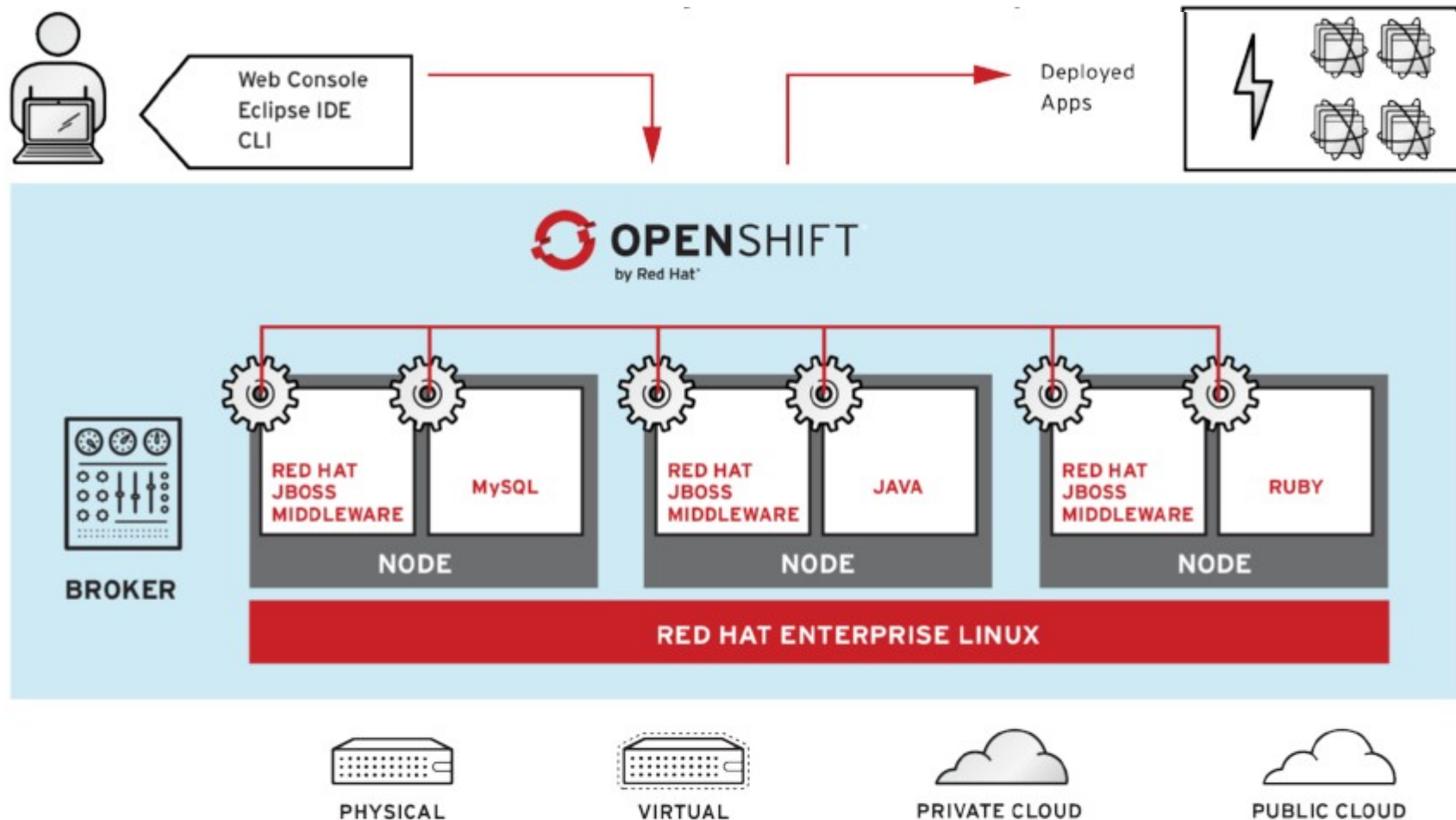
RHEL-OSP & RED HAT STORAGE & ICE

레드햇으로부터 제공되는 소프트웨어 정의 스토리지 스택



- OpenStack 스토리지 인터페이스를 지원하는 기업용 분산형 스토리지 플랫폼
- Peta byte 스케일의 대규모의 확장성, 탄력성과 고가용성 제공
- 광범위한 레퍼런스로 입증된 기업용 스토리지 플랫폼
- Red Hat 이 개발하고 지원하는 인프라스트럭처 스택
- RHEL-OSP 의 스토리지 Add-on

OPENSIFT ENTERPRISE PAAS SOLUTION



- Increase resource utilization beyond virtualization
- Automated provisioning of applications

- Standardize containers
- Automatic scaling

- Heat 를 통해 OpenStack 에 openshift 자동 배치: <https://wiki.openstack.org/wiki/Heat/Running-openshift>

RED HAT ENTERPRISE LINUX OPENSTACK PLATFORM

HYPERVISOR SUPPORT



Red Hat Enterprise Virtualization Hypervisor

**Red Hat Enterprise Linux KVM*

- Lightweight / small footprint
 - Less overhead
 - Smaller attack surface
- Cost effective
- Closer to operating system DNA
- Provides massive scale-out capabilities



VMware vSphere

**vCenter Driver*

- Co-exist with existing infrastructure assets
- Provides a seamless path to future migration to OpenStack
- Uses NSX¹ plugin for Neutron

¹NSX is only supported in production environments, per VMware's support requirements

**ESXi driver not supported*

GUEST SUPPORT



- Red Hat Enterprise Linux 3
- Red Hat Enterprise Linux 4
- Red Hat Enterprise Linux 5
- Red Hat Enterprise Linux 6
- Red Hat Enterprise Linux 7

**32 and 64 bit for all versions*



- SUSE Linux Enterprise Server 10
- SUSE Linux Enterprise Server 11

**32 and 64 bit for all versions*



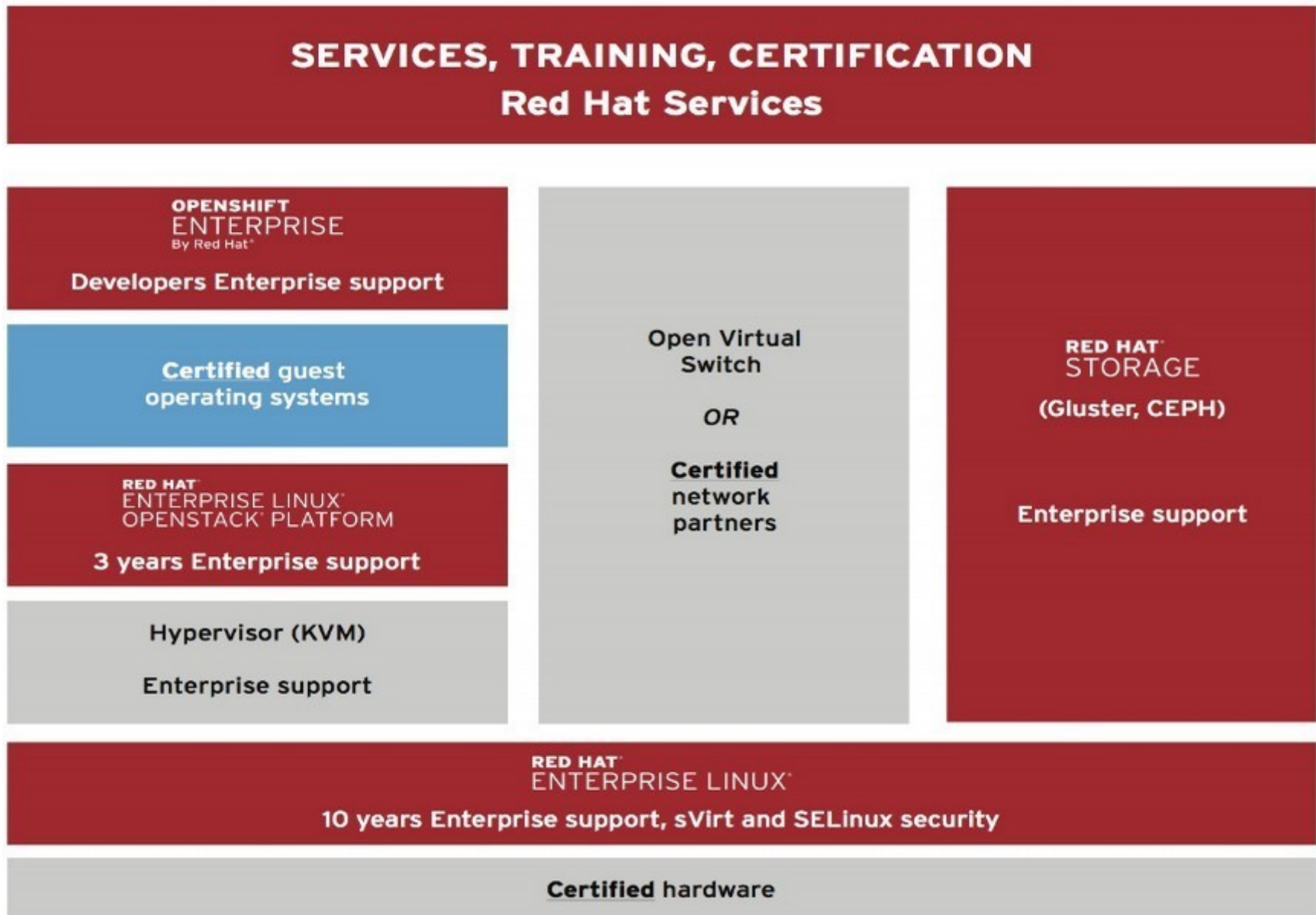
- Windows XP SP3+¹
- Windows 7³
- Windows 8³
- Microsoft SVVP Certified
- Windows Server 2003 SP2+³
- Windows Server 2008³
- Windows Server 2008 R2²
- Windows Server 2012²

¹ 32 bit only

² 64 bit only

³ 32 and 64 bit

왜 레드햇을 선택할까요 ?



RED HAT 의 오픈스택을 체험할 수 있는 4 가지 방법

90-DAY EVALUATION

1

**RED HAT®
ENTERPRISE LINUX®
OPENSTACK® PLATFORM**

redhat.com/openstack/evaluation

4



openstack.redhat.com

제품지원 서브스크립션 구매

2

**RED HAT®
ENTERPRISE LINUX®
OPENSTACK® PLATFORM**

3

**RED HAT®
CLOUD INFRASTRUCTURE**

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THANK YOU