Cloud Platform for IaaS

An Open Source Software based, turn-key solution for Private Cloud

"Cloud Platform for IaaS" supports new applications and equipment consolidation to maximize efficiency, reduce TCO.
NEC with its unique capabilities, provides complete IT infrastructure stack, including networks, servers and storage with open standard cloud manner. Also, we provide single window for all kinds of IT support services.

Three points of Cloud Platform for IaaS

Operation

Dashboard for Integrated Operation

5 simple step for implement of virtual machine

Software

OSS based Software-defined Infrastructure

OpenStack — Nova Glance Keystone Cinder Neutron Heat
Ceph — Software Defined Storage

Hardware

Highly Reliable Platform

Modular appliance for dynamic scalability
Pre-designed configuration
Express 5800 Servers

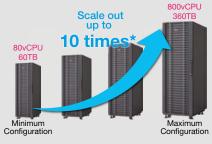### Quick deployment & Easy expansion

• Quick deployment
Pre-designed and pre-validated configuration which can be deployed quickly results in reduced TCO.

• Easy expansion*
Scale-out can be made by adding Compute and Storage node without stopping active Virtual Machine.

Benefits
• Assure business opportunity
• Maximize return of investment
• Minimize system management cost

Scale out up to 10 times*

800vCPU 360TB

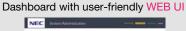80vCPU 60TB

Minimum Configuration

Maximum Configuration

*Only for the Enterprise model

Integrated operation

Dashboard provides integrated operation both for system resource management and for IaaS self service by user-friendly manner.

• System resource view
Dashboard with user-friendly WEB UI

• VM creation view
Quick and easy VM creation with 5 step navigation

Portable OSS based ECO systems

OSS based software defined servers and storages provide portability among standard clouds.

• OpenStack is the global de facto standard software defined computer for cloud.

• Ceph is the software defined storage connectable for OpenStack.

OpenStack — Nova Glance Keystone Cinder Neutron Heat

Ceph — Software Defined Storage

Configuration Examples

The Enterprise model is a powerful and highly efficient private cloud infrastructure for those who want to have system growth up to a substantial scale, and high availability to ensure business continuity.

The Light model is a compact private cloud infrastructure for those who want to minimize the investment cost.

Model		Enterprise	Light *1
Server Node	Master Controller	3 nodes	1 node
	Compute Node	2 - 20 nodes	1 node
	Storage Node	3 - 18 nodes	1 node
System Size	vCPU	80 - 800 vCPU	40 vCPU
	Memory	320 - 3200 GB	160 GB
	Storage	60 - 360 TB *2	30 TB *2
	Number of VMs	80 - 800 *3	40 *3

*1: Unable to scale up from the Light model to the Enterprise model
*2: Logical data size with data redundancy
*3: In case of VM with 1vCPU and 4GB memory

Specification Per Node

	Master Controller (Management Server)	Compute Node (Computing Resource)	Storage Node (Storage Resource)
Server Compute	Express5800/R120g -1M		Express5800/R120g -2E
	CPU: 2x Xeon E5-2680 v4 (14c/2.4GHz) **Memory:** 128GB DDR4-2400 **Storage:** 2x SDD [200GB SATA-SSD (RAID1)]	**CPU:** 2x Xeon E5-2680 v4 (14c/2.4GHz) **Memory:** 256GB DDR4-2400 **Storage:** 2x SSD [200GB SATA-SSD (RAID1)]	**CPU:** 2x Xeon E5-2630 v4 (10c/2.2GHz) **Memory:** 128GB DDR4-2400 **Storage:** 2x HDD [1TB SATA-HDD (RAID1)] 10x HDD [6TB SATA-HDD] 2x SSD [200GB SATA-SSD]
Network Port	4x 10GBase-T 4x 10/100/1000Base-T		4x 10GBase-T 2x 10/100/1000Base-T
Host OS	Red Hat Enterprise Linux 7 (KVM Hypervisor)		
OSS Platform	Red Hat Enterprise Linux OpenStack Platform 7 (Kilo) • Compute (Nova) • Image service (Glance) • Identity (Keystone) • Block Storage (Cinder) • Networking (Neutron) • Orchestration (Heat)	Red Hat Enterprise Linux OpenStack Platform 7 (Kilo) • Compute (Nova) • Networking (Neutron)	Red Hat Ceph Storage 1.3 (Hammer) • RBD(RADOS Block Device)
Monitoring	1) VM resources 2) Physical node resources 3) Alive monitoring between VM resources and Physical node resources		
Switch	**10G Switch:** 2x Cisco Nexus 3064-32T or 2x Cisco Nexus 3064-T **1G Switch:** 1x Cisco Catalyst 2960X-48TS-LL		

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