

HPE HELION CLOUDSYSTEM 9.0

HPE Helion CloudSystem Foundation





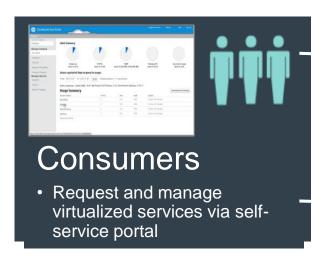
CloudSystem Foundation – Key Use Cases

- Automate dev/test CICD on OpenStack technology compatible infrastructure
- Accelerate cloud-native application dev/test with Helion Development Platform (HDP) on CloudSystem Foundation (CSF)
- Build out a managed object storage service for production use
- Easily deploy an enterprise-grade OpenStack technology-based cloud for IT and line-of-business (LOB)
 uses
- Run multiple hypervisors (e.g. ESX plus KVM) in one OpenStack region

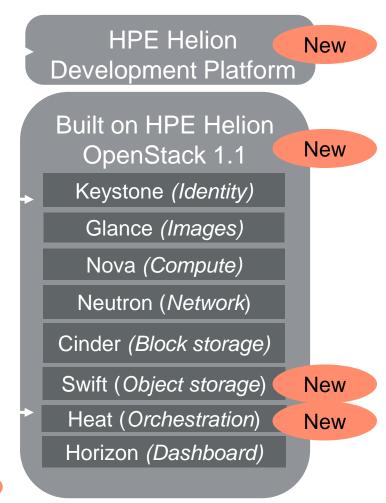




HELION CLOUDSYSTEM FOUNDATION 9.0







- Delivered as virtual appliances on VMware or Red Hat – now with 3 node HA cluster
- Enhanced Networking: support of DVR and VXLAN
- Support of Hyper-V compute nodes (in addition to VMware ESX and Red Hat KVM)
- Support of availability zones and host aggregates for easy separation of logical groups
- Support of 3rd party servers (in addition to 3rd party storage and networking)





Helion CloudSystem Foundation 9.0 Compute Hypervisors (ESX, KVM AND HYPER-V)

ESX – New features

No separate vCenter proxy appliance

Auto-import, then activate ESX clusters

Security groups now supported

 Via HPE Helion OpenStack OVSvApp service VM on ESX hosts

Same, converged solution for Helion CloudSystem and Helion OpenStack

Hyper-V – new in Helion CloudSystem 9.0

Support OpenStack technology community solution

Direct to Hyper-V, no SC VMM

Nova and Glance support based on VHD/VHDx image types

Support for Hyper-V clusters based on Cluster Shared Volumes (CSV)

- Compute nodes are individual Hyper-V hosts, but nova-compute will support Hyper-V VM migration and will detect VM failover performed by Hyper-V
- All hosts in cluster must be activated into CloudSystem – tracked by CloudSystem



HPE Helion

HELION CLOUDSYSTEM 9.0 FOUNDATION STORAGE FEATURES

Block Storage

- 3PAR FC and ISCSI boot and data support
- RH KVM and HyperV

New: HPE VSA support in Helion CloudSystem 9.0

- Customers use Cinder with existing VSA/LHN solutions
- VSA manually installed separately from CloudSystem

Object Storage

- New: scale out physical Swift
 Object Storage
- Swift installed on physical servers based on Helion OpenStack 2.0 installer

	Boot	Data
3PAR FC		KVM
3PAR ISCSI	KVM and HyperV	KVM and Hyper V
VSA ISCSI	KVM and HyperV	KVM and HyperV





HELION CLOUDSYSTEM 9 FOUNDATION – Support for SWIFT OBJECT STORAGE

Optionally deployed on separate dedicated management servers after the basic CloudSystem deployment is complete

In CloudSystem Foundation 9.0, Swift can scale up to 500 TB - 1 PB of usable storage capacity

Deployment can start small and add more capacity as storage requirement grows

Installed using the Swift-deployer CLI from the CloudSystem management appliance

PXE boot and cobbler deploy Swift proxy and object nodes

Manage the Swift cluster using the Swift-deployer CLI from the CloudSystem management appliance

- Activate Swift cluster
- Expand Swift cluster, edit Swift service configuration
- Install updates, backup operation data

All external Swift requests are https enabled with SSL termination at CAN IP

 Keystone on the CloudSystem Cloud Controller used for all user authentication and authorization





HPE HELION CLOUDSYSTEM 9.0 FOUNDATION NETWORKING FEATURES

Neutron L2-L3 new features

VLAN on KVM, ESX, New Hyper-V

New: VXLAN on KVM and ESX

- VLAN or VXLAN chosen in First Time
 Setup install screens for entire region
- New: DVR with VXLAN on KVM. DVR requires external network on compute nodes

Open Vswitch on KVM, Standard Juno virtual switch on Hyper-V, HP OVSvApp on ESX (see next slide)

Quick reference table

	KVM	ESX	Hyper-V
VLAN	Yes	Yes	Yes
VXLAN no DVR	Yes	Yes	No
VXLAN with DVR	Yes	No	No





HELION CLOUDSYSTEM 9.0 FOUNDATION NETWORKING FEATURES

Neutron L2-L3 on ESX

- ESX Change VMware Distributed Virtual Switch (DVS) only, VMware Enterprise Plus license required
- New ESX default: Helion OpenStack OVSvApp on every ESX host
 - -VM on each ESX host
 - -Auto-deployed when ESX cluster is activated or expanded
 - Security Groups support with some exceptions
- New OVSvApp features: NIC teaming, automated deployment, integrated patching, improved OVS 2.3.1, and more







THANK YOU



