



Hewlett Packard
Enterprise

HPE Morpheus - VM Essentials



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Agenda

Overview and positioning

Requirements

Storage

Networking

VM Migration

Features and Comparisons

Licensing

Demos and Trial License

Resources



HPE VM Essentials Software technical overview

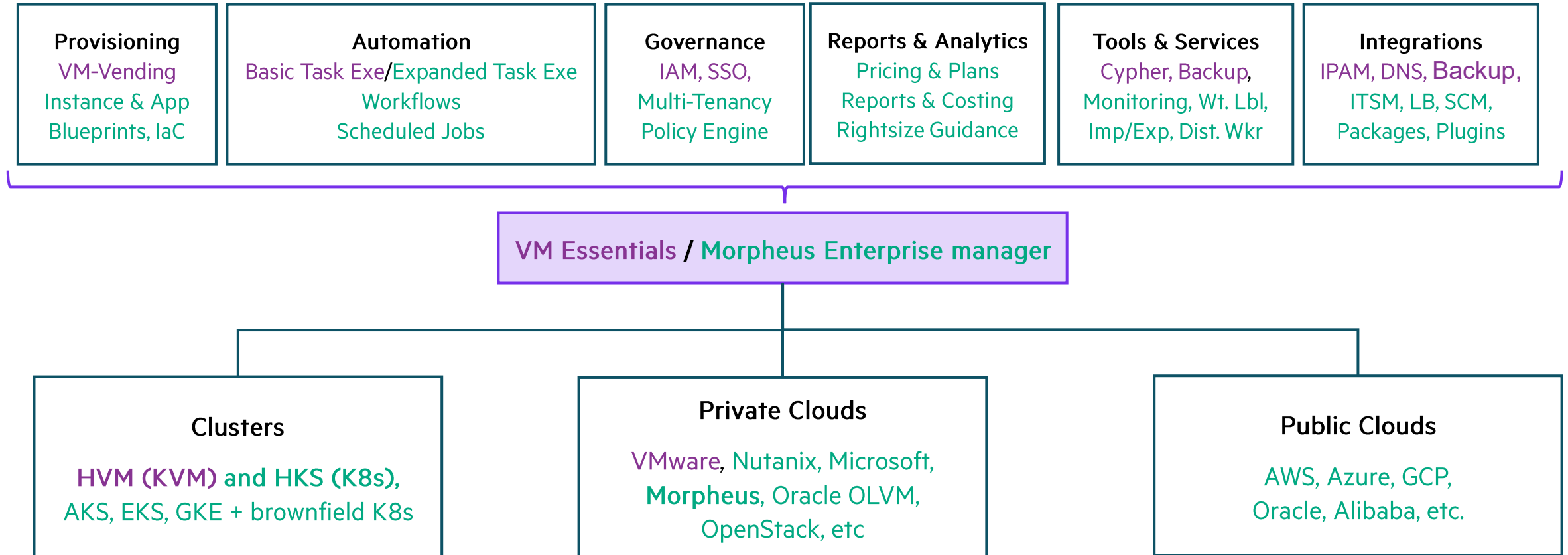


Introducing HPE Morpheus VM Essentials Software

- Reduce costs with HPE VM Essentials integrated hypervisor
- Simplify management across VMware and HPE clusters
- Future-proof IT with flexible consumption & upgrade paths
- Lower risk with enterprise-grade support & ecosystem

Morpheus VM Essentials vs. Enterprise Licensing

Features enabled in VM Essentials vs Morpheus Enterprise



Available in VM Essentials and Morpheus Enterprise
Available in Morpheus Enterprise ONLY

HPE Morpheus Enterprise and VM Essentials Software positioning

HPE Morpheus Enterprise

- Designed for larger enterprise and service provider
- Includes the built-in HVM hypervisor based on KVM
- Includes the built-in Morpheus Kubernetes Service (MKS)
- HVM/MKS compare to vSphere Std/Ent+ & Tanzu
- Also replaces Aria Automation in the VMware VCF stack
- Adds integration to 3P hypervisors, K8s, and public cloud
- Adds policy guardrails, lifecycle automation, & FinOps
- Go from VM Vending to full IaaS/PaaS (ex: DBaaS)

HPE Morpheus VM Essentials

- Feature optimized for basic virtualized environments
- Includes the built-in HVM hypervisor based on KVM
- VM vending for VMware ESX and HVM hypervisor
- Features compare with VMware vSphere Std/Ent+



VMware VCF / Aria

Approximate
equivalency



VMware vSphere
Standard/Enterprise+



HPE Morpheus VM Essentials Software

Unify VMware and HPE hypervisors

Reduce costs with HPE's HVM hypervisor (KVM-based)

External storage support, distributed workload placement, high availability and HVM live migration, integrated data protection, GPU passthrough, and more.

Multi hypervisor management with migration

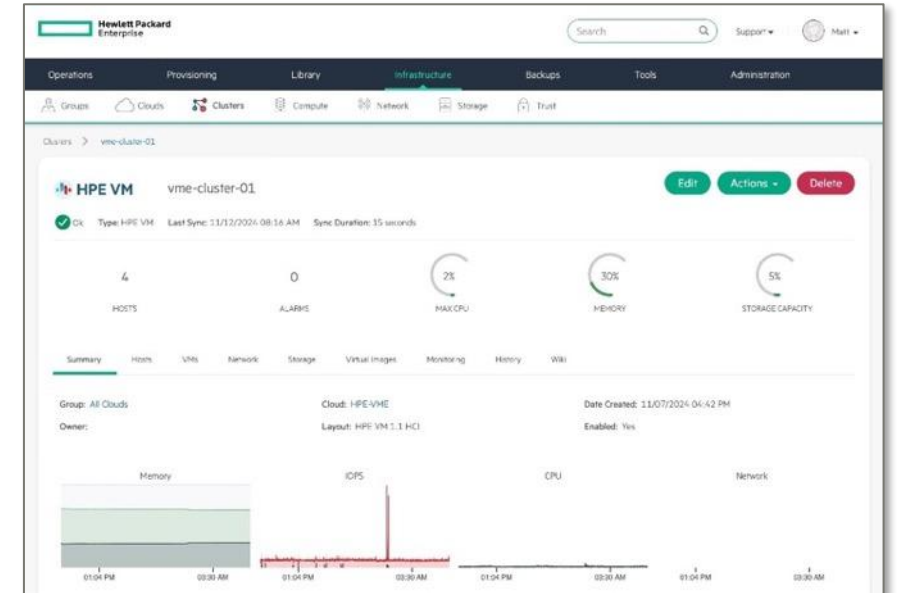
Connect VMware clusters for simple VM-vending into ESXi and HVM from one place. Includes IPAM & DNS integration, task execution, secrets management, and built in ESXi to HVM migration.

Future-proof with flexible consumption paths

Available as standalone software or integrated into HPE Private Cloud, with a path to HPE Morpheus Enterprise for private and public clouds support, K8s support, workflows, governance, and FinOps.

Lower risk with an enterprise-grade support & ecosystem

HPE Morpheus VM Essentials includes HPE's enterprise-class global support. HPE is working with its ecosystem of ISVs to expand HVM hypervisor support for data protection, VDI, database, etc.



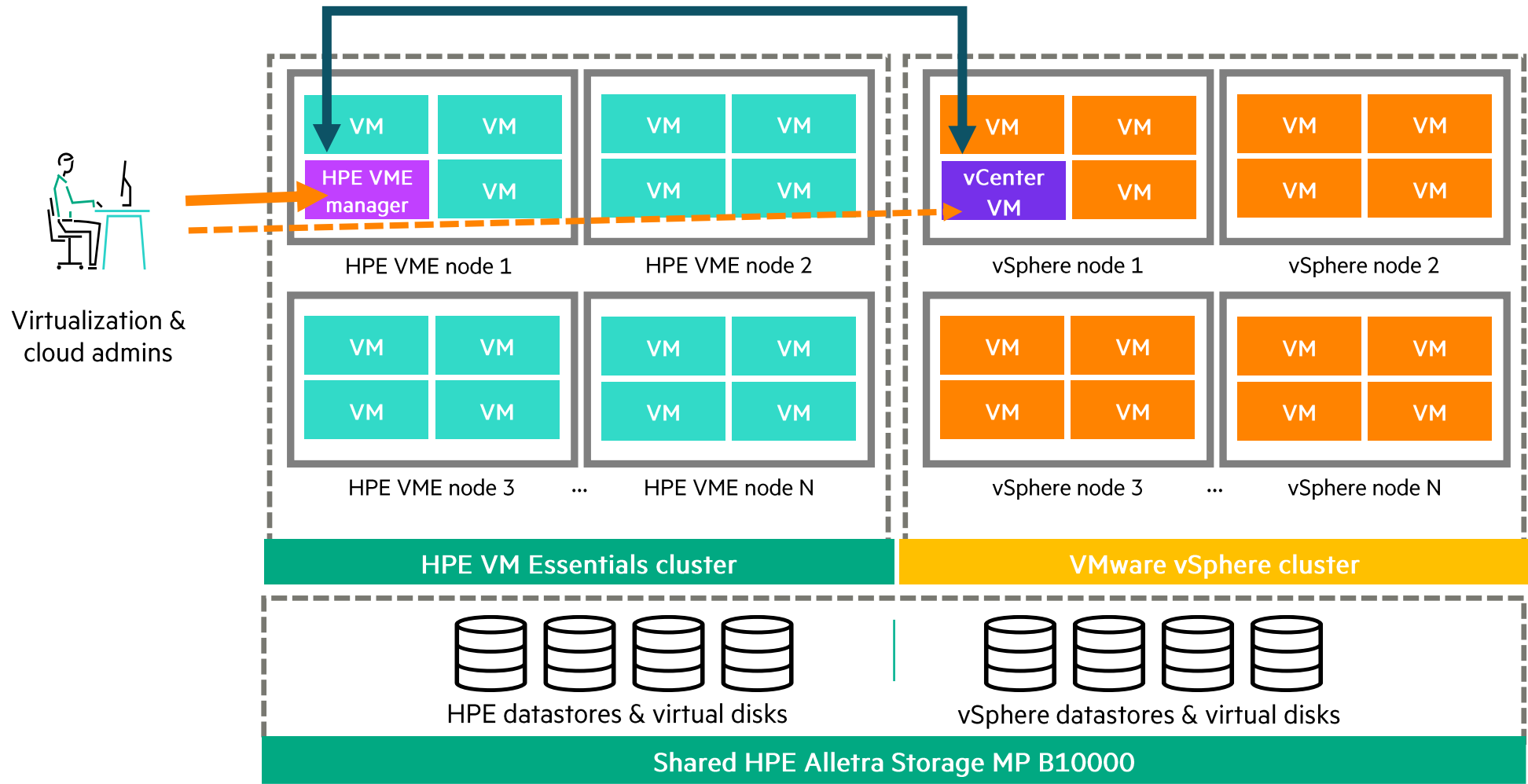
- Licensed per socket, not per core
- Standalone for HPE and 3rd-party HW
- Integrated in HPE Private Cloud offerings
- New: Integrated installer and OS

HPE Morpheus VM Essentials Software – branding / terminology notes

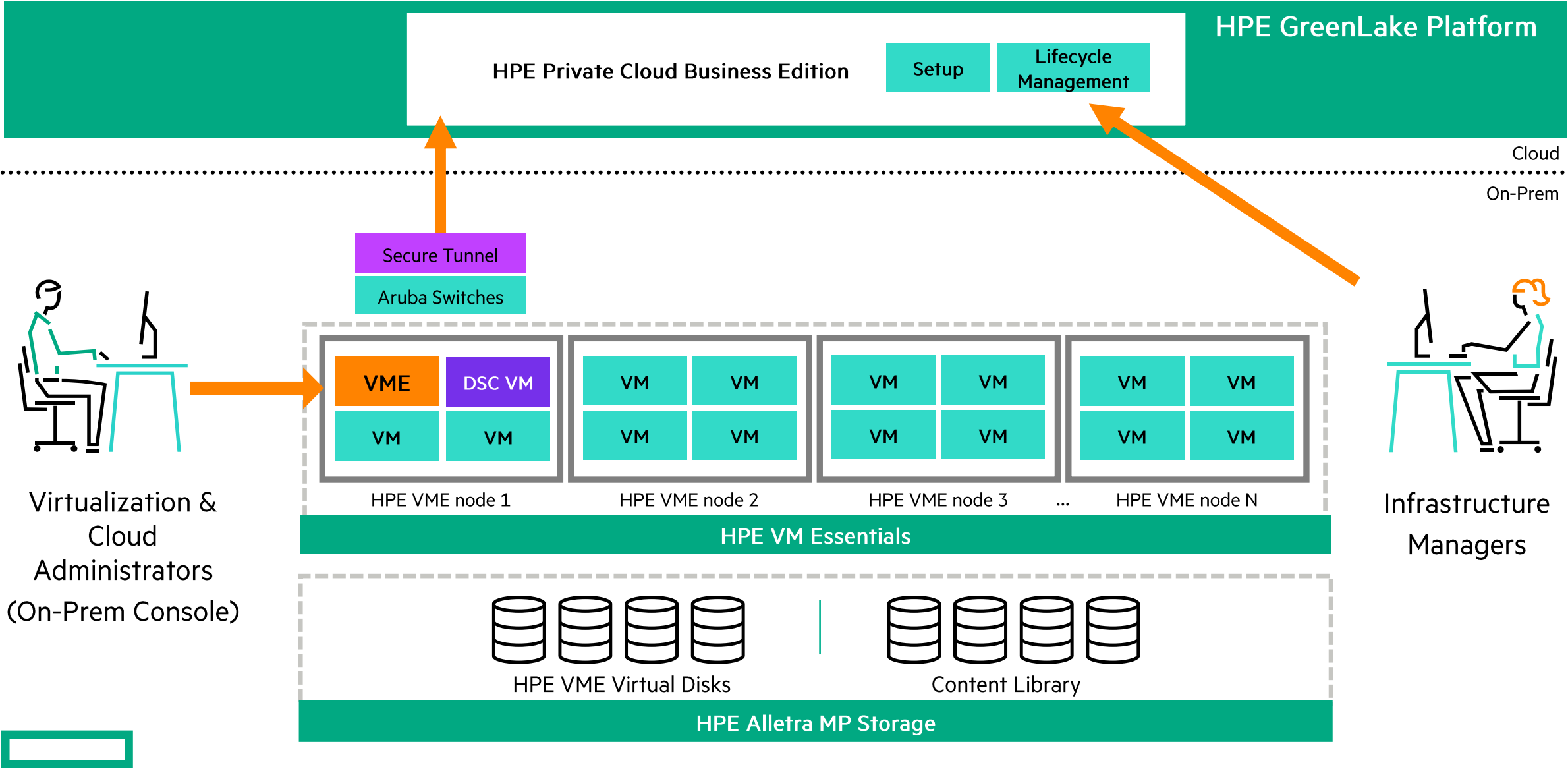
Item	Description	HPE	VMware
Orchestration + Hybrid Cloud + Virtualization	The advanced solution that adds orchestration, governance, finops, in addition to virtualization	HPE Morpheus Enterprise Software	Aria Suite + Tanzu as part of. VMware Cloud Foundation (VCF)*
Virtualization solution	The core solution that provides a platform for running virtual machine workloads	HPE Morpheus VM Essentials Software	VMware vSphere Standard or Enterprise+
Management interface	The software installation that you use for day-to-day activities.	VM Essentials manager or Enterprise manager	vCenter vCenter + Aria + CloudHealth
Virtualization cluster	Group of hypervisor hosts combined as a resource pool	HVM cluster	ESXi cluster <i>aka vSphere cluster</i>
Hypervisor server host	The physical server used to host virtual machines	HVM host	ESXi host
Hypervisor itself	The hypervisor software	HVM hypervisor	ESXi



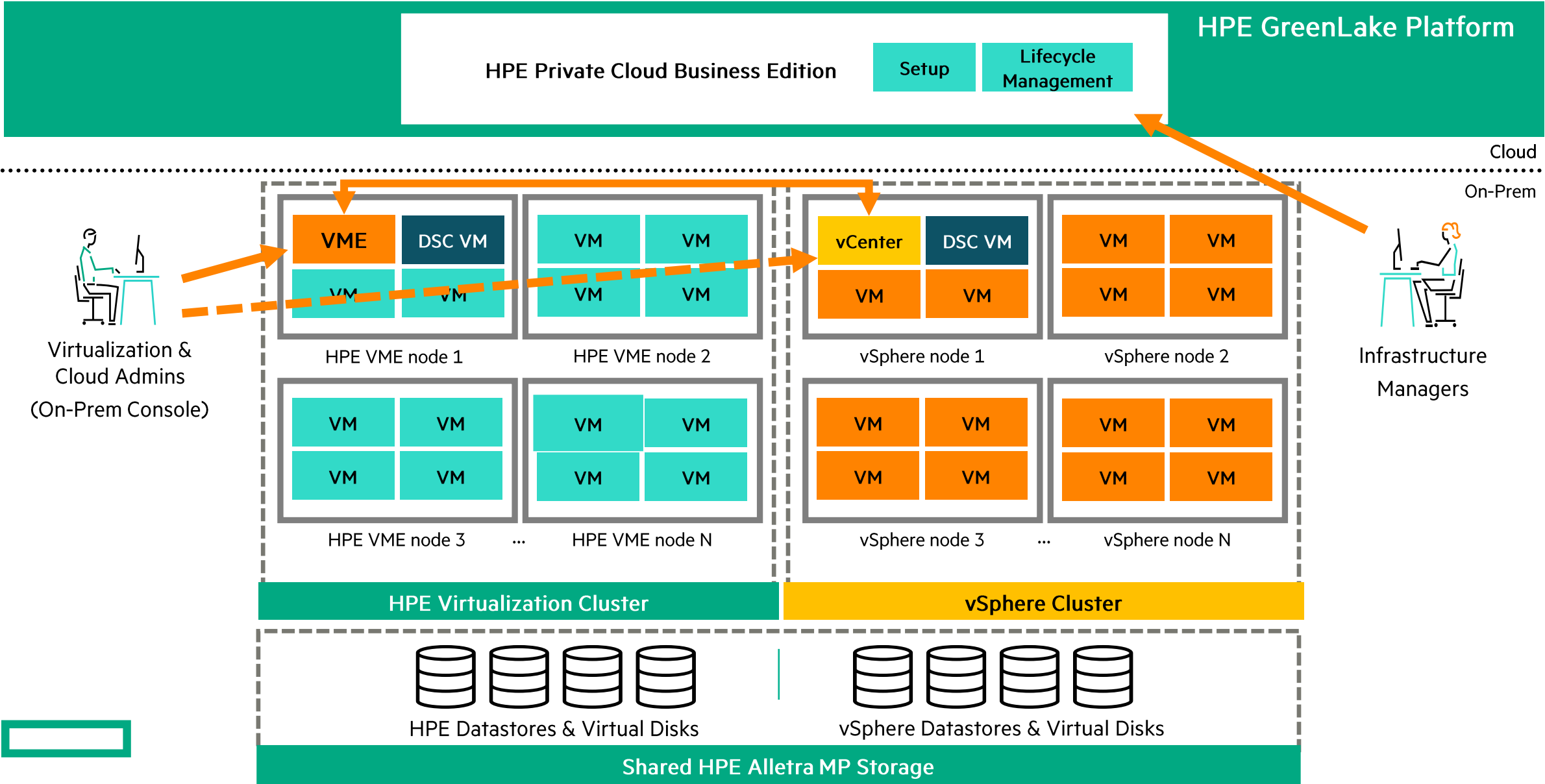
HPE VM Essentials



HPE VM Essentials for HPE Private Cloud

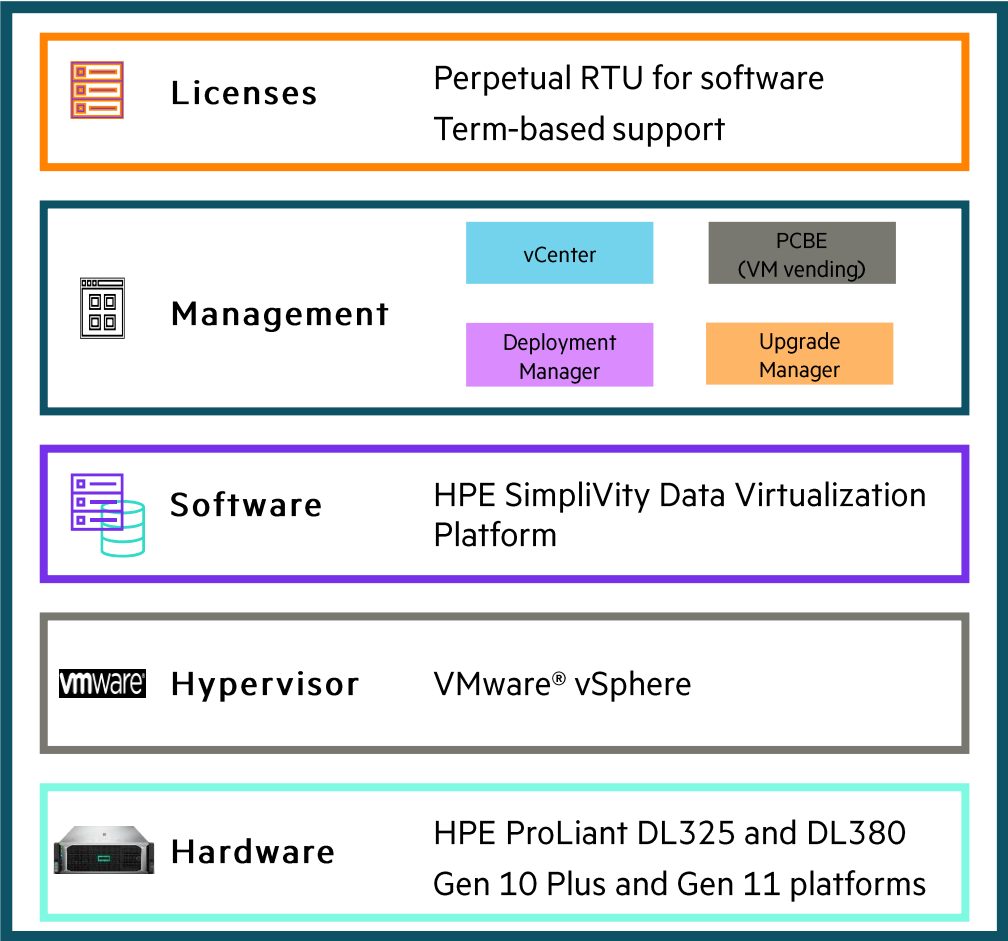


HPE VM Essentials for HPE Private Cloud

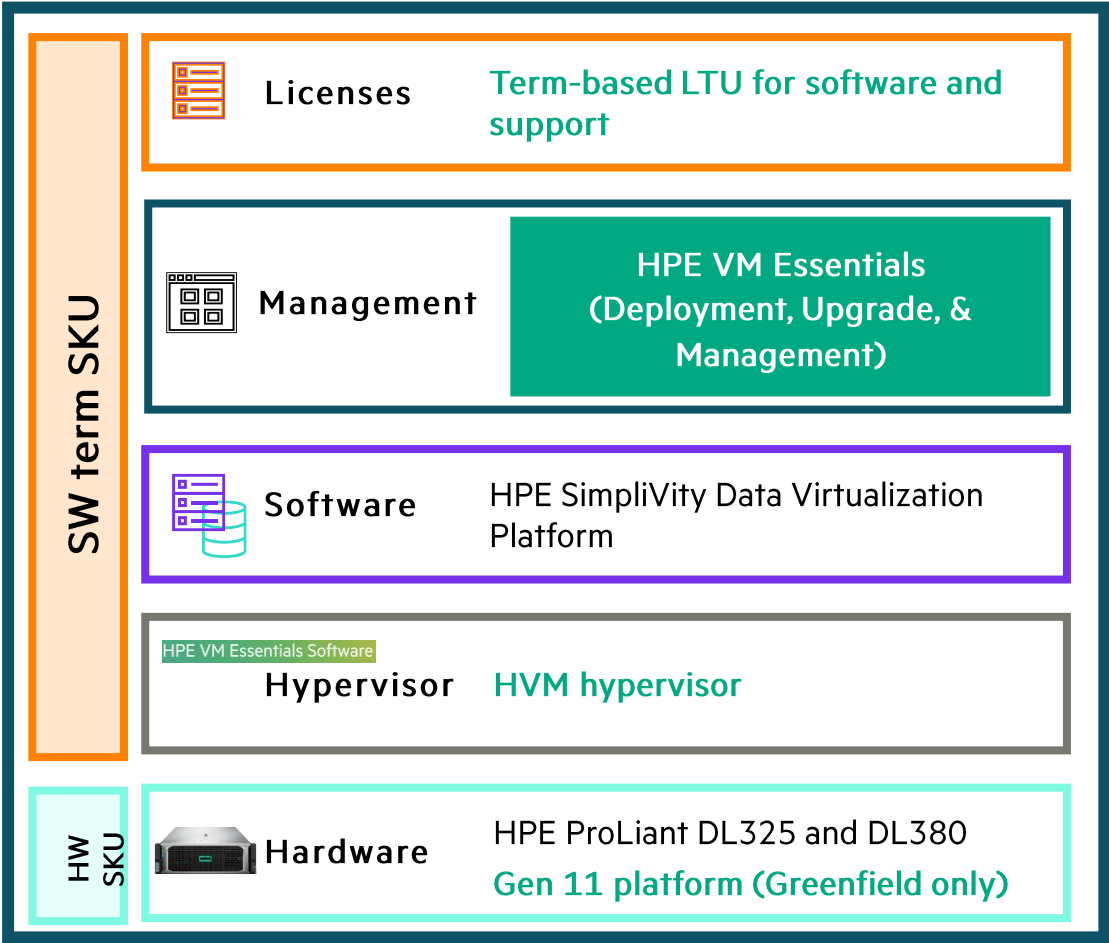


HPE SimpliVity

HPE SimpliVity with VMware



HPE SimpliVity with HPE VM Essentials



Features and Functionalities supported at GA

Feature	HPE SimpliVity with HPE VM Essentials
Deployment [Greenfield Only]	• Deployment via HPE VM Essentials Manager • VME Manager can be deployed in the cluster
HPE SimpliVity datastore	• Data store operations [Create, Edit, and Delete]
Management	• All Management is through the HPE Morpheus VM Essentials Manager
VM lifecycle management	• VM provisioning and lifecycle operations [Create, Edit, Update and Delete]
High availability (HA)	• 2-Node High Availability
Backup & restore [Crash Consistent]	• On-demand & policy-based backups • Local & remote cluster backups • Restore backup to existing or new VM
Cluster	• Add / remove nodes to cluster
Resource balancing	• HPE VM Essentials dynamic workload placement
Arbiter	• Need for 2 nodes only [Linux Based Arbiter]
InfoSight integration	• Supported
Limits	• # of Nodes/Cluster: 1-4



HPE SimpliVity with HPE VM Essentials supported environments

Support platform configs

- Below are the supported configs that will be shipped from factory at GA
- All configs are FTT1 (single-disk resiliency)

Platform	CPU	SSD config
HPE SimpliVity 325 Gen11	4 th Gen AMD Genoa CPUs & 5 th Gen AMD Turin CPUs	4, 6 x 1.92 TB
		4, 6 x 3.84 TB
		4, 6, 8 x 7.68 TB
HPE SimpliVity 380 Gen11	5 th Gen Emerald Rapid CPUs	6, 8 x 1.92 TB
		6, 8 x 3.84 TB
		6, 8 x 7.68 TB

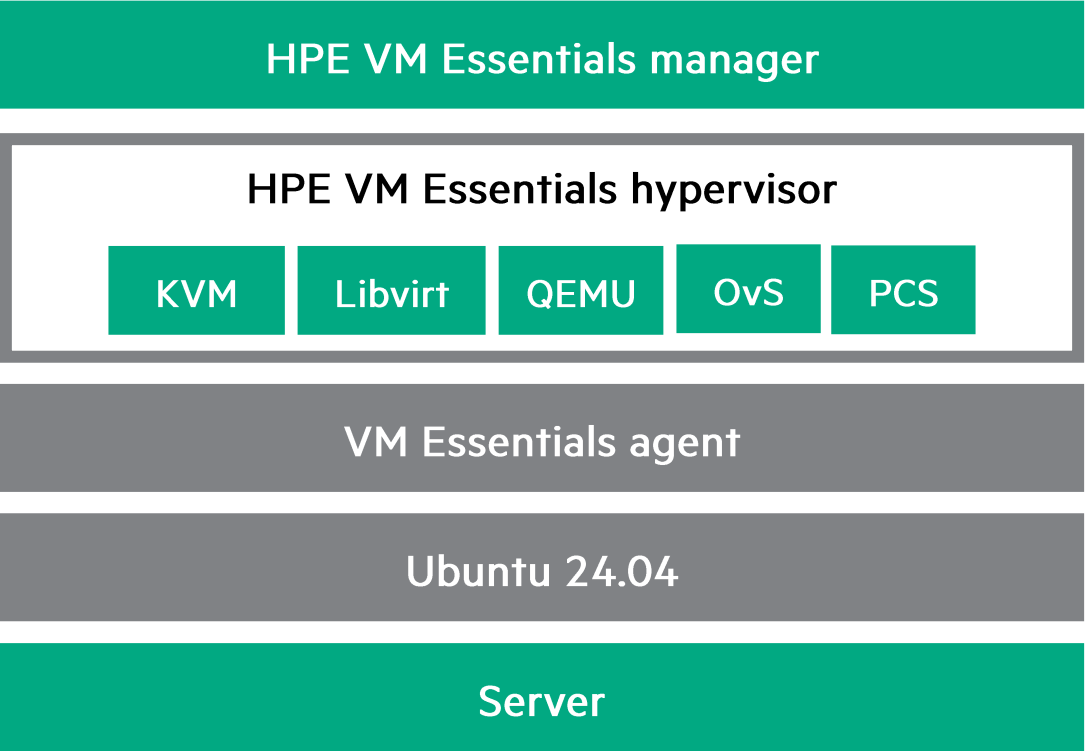
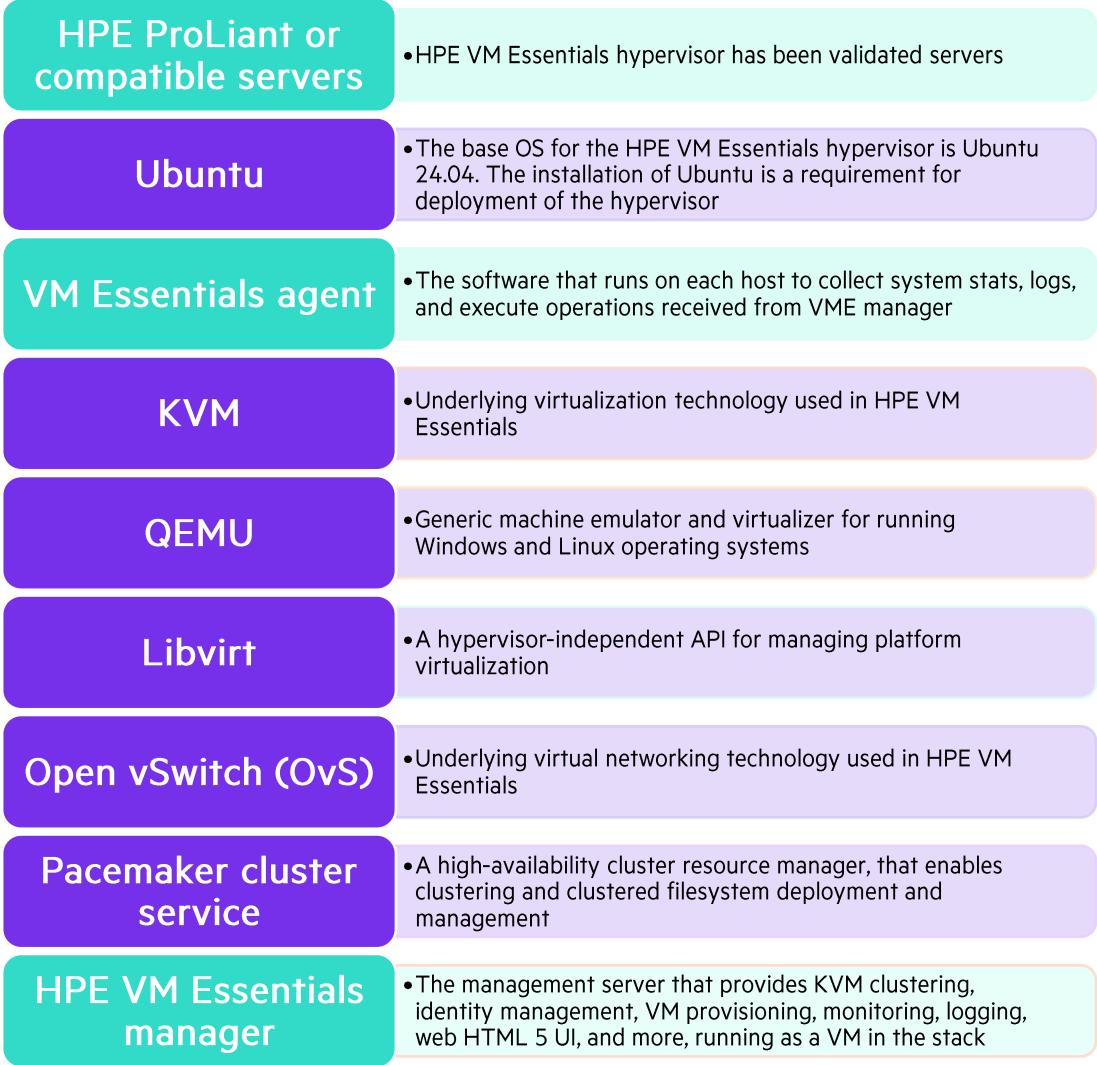
Note 1: FTT2 is NOT supported at the time of HPE SimpliVity with HPE VM Essentials GA



HPE VM Essentials Architecture



Theory of operation - logical architecture

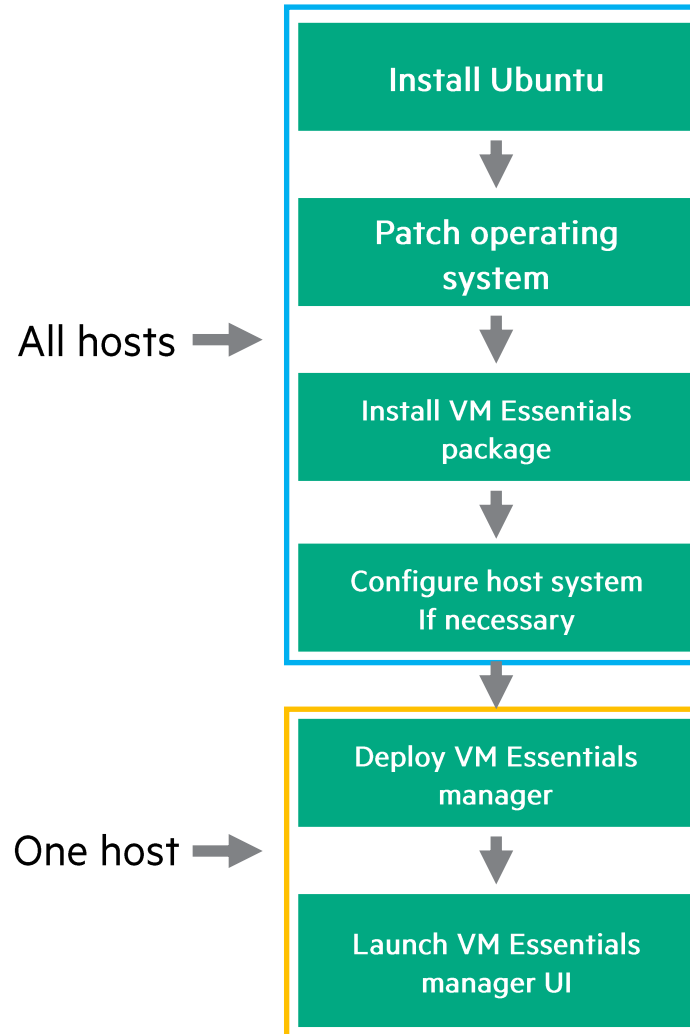


Unified installer ISO

- Unified ISO installer installs the underlying Ubuntu operating system and all necessary HVM components
- For ease of deployment and consistency, it is recommended to configure the bond and other interfaces during the installation wizard
- Ensure the same bond interface name is used on all hosts in a cluster for the management network
- Depending on external storage requirements, such as multipathing, additional host configuration may still be necessary

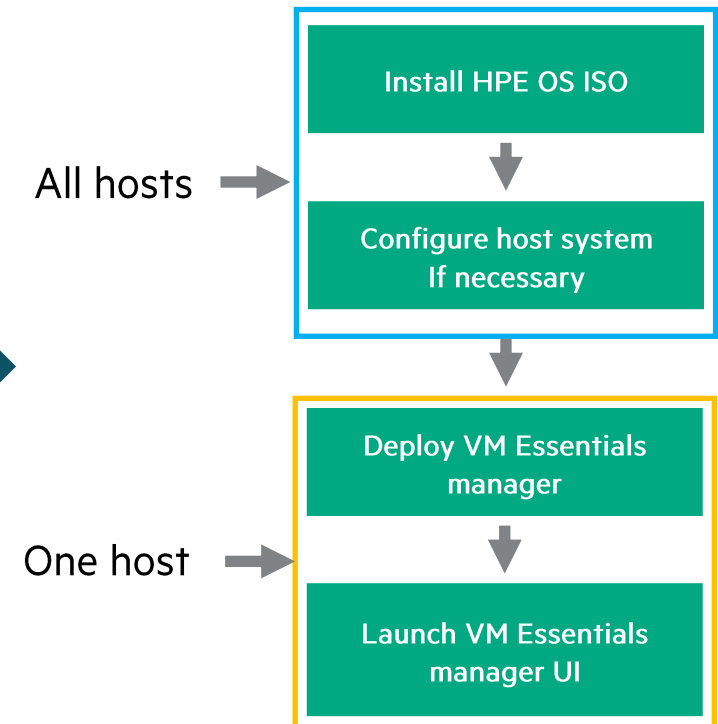
Original Installation Flow

Pre-8.0.8



New Installation Flow

8.0.8+



Theory of operation - logical architecture

- **Manager deployment:**

- VM Essentials manager runs on a single node

- **Local storage deployment:**

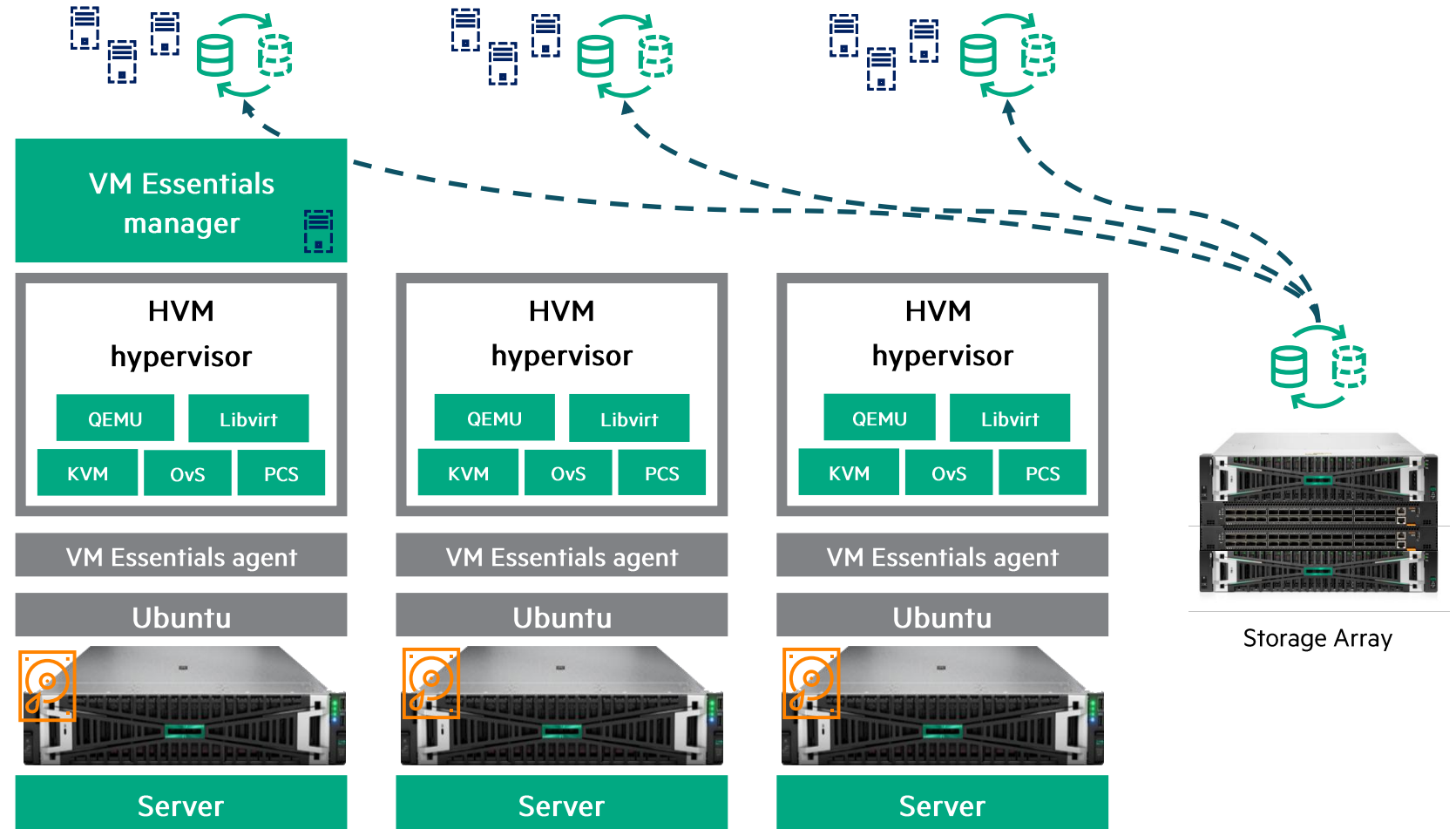
- OS, VM Essentials agent, and VM Essentials hypervisor elements (HVM) operate from local storage

- **VM hosting:**

- VMs can be hosted on:
 - Local datastores
 - Shared datastores

- **Storage types:**

- **Local storage:**
 - Local disk directory pool
- **Shared storage:**
 - Supported via NFS, iSCSI, or FC*
- **Enhanced storage integration:**
 - HPE Alletra Storage Plugin – provisioning and management automation and integration



* Refer to the VM Essentials Configuration Matrix for qualified technologies

Storage



VM Essentials - Storage terms

Storage Tab	Description	Notes
Data Store	Storage that contains VMs	Local directory pool, NFS, iSCSI/FC
Buckets	Object storage that can be used as a backup target, virtual image storage, or archive target	Alibaba, GCP, OpenStack Swift, Rackspace CDN, S3
File Shares	File share based storage that can be used as a backup target, virtual image storage, or archive target	Azure, CIFS, Local Storage (directory on VM Essentials manager), NFSv3
Volumes	Volumes visible to VM Essentials	Local, shared, and virtual
Servers	Storage arrays. Enables additional integration with external storage.	This is where an HPE Alletra MP B10000 array would be added to leverage the plugin
Misc	Description	Notes
Virtual Image Store	The storage that contains VM images and ISOs	Formats: QCOW2, RAW, OVA/OVF/VMDK, ISO
Archives	Secure, shareable storage for hosting files. Files can be public or private and manually or programmatically shareable.	Generated shared links set to expiration time



Storage overview

- Datastores are storage for virtual machines and optionally also virtual images (ISOs, QCOW2, VMDK, etc.)
- There are 3 type of datastores supported for hosting VMs and images:
 - Directory Pool:
 - Comprised of local storage on each server
 - The same directory path must exist on each node
 - NFS:
 - GFS2:
 - iSCSI and FC
 - Clustered file system orchestrated by the *pacemaker* cluster service
 - Presented volumes must show with the same name on each host
 - HPE Alletra Storage MP B1000
 - Leverages native Alletra Storage plugin for direct VM virtual disk to array volume mapping

ADD DATA STORE

NAME

New_Datastore

TYPE

Select

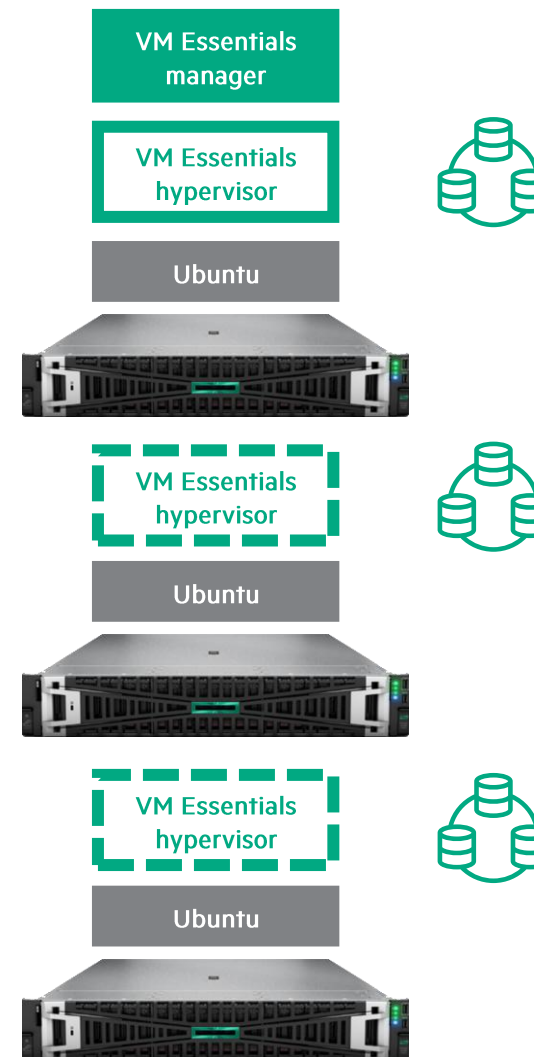
Select

Directory Pool

NFS Pool

GFS2 Pool (Global File System 2)

HPE Alletra Storage MP B10000



HPE Alletra Storage plugin

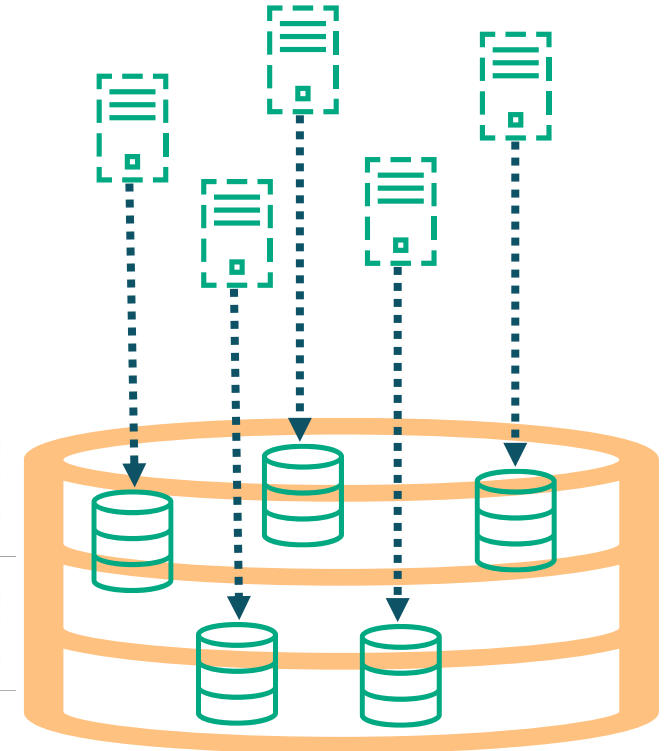
- An optional plugin for HPE Alletra MP B10000 storage arrays that acts as a storage abstraction layer between VM Essentials and the HPE Alletra MP array (via WS3 V3 APIs)
- During deployment, a logical datastore is created in VM Essentials
 - Each VM virtual disk gets a dedicated volume on the array
 - VM snapshot and backups leverage array volume snapshots
 - Operation is largely transparent in the VM Essentials UI
- Facilitated VM provisioning workflows:
 - Create VM
 - Clone VM
 - Resize VM
 - Migrate VM
 - Snapshot
 - Delete VM
 - Backup and Restore
 - Array snapshots are used as a consistency point while the backup is copied to its destination
- The plugin does not provide HA capabilities on its own. It is necessary to create a shared datastore on the cluster and enable heartbeat on that datastore to enable HA failover.



HPE ProLiant DL



HPE Alletra Storage MP
B10000



Networking



HPE VM Essentials – networking overview

- **Management network**

- The network used for managing the HPE VM Essentials hypervisor hosts

- **Compute network**

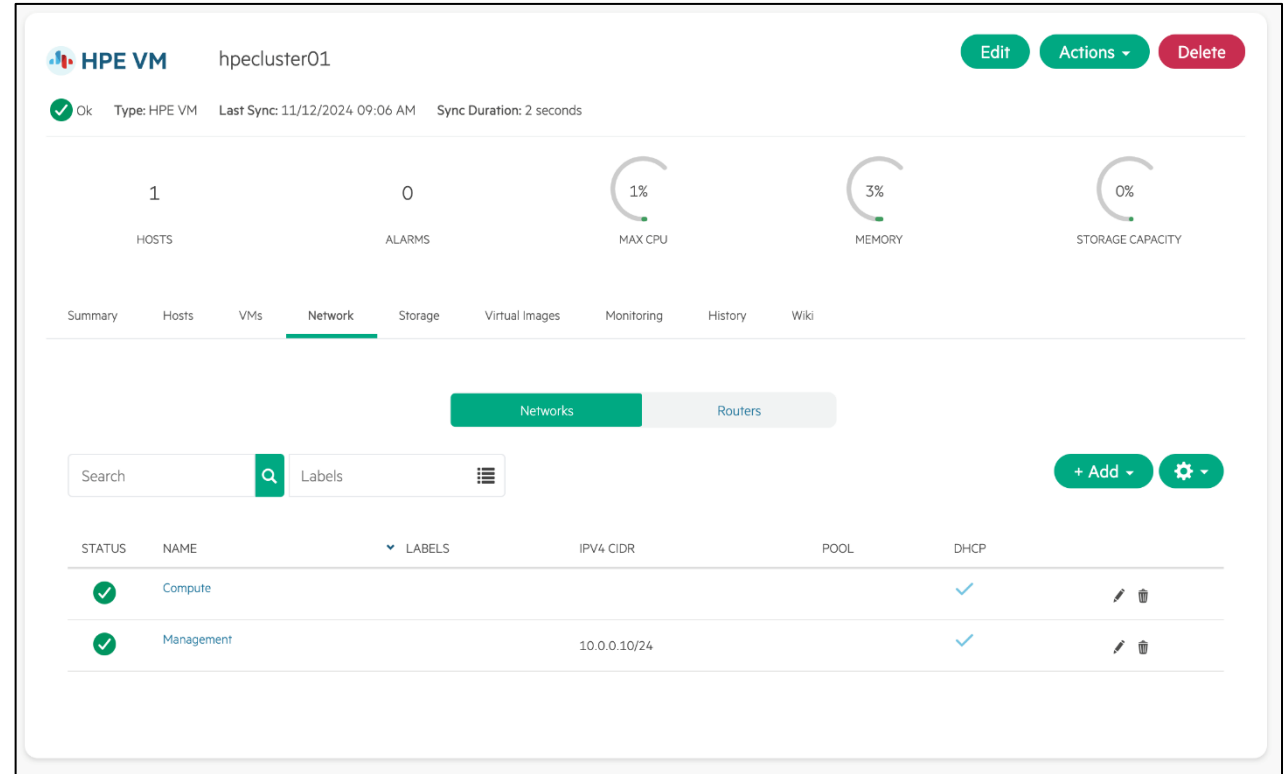
- The network used for VM traffic

- **Storage network**

- The network used to interact with external storage, such as NFS, iSCSI, FC

Note:

- Best practice is to have Compute and Management networks separate
- It is possible to deploy a cluster without a dedicated Compute network, running VM traffic over the Management network



VM IP assignment and domain management

- Several options for VM network management:
 - IP addresses assigned via DHCP
 - IP addresses assigned from manually specified network pools within VM Essentials
 - Integration with third-party IPAM and DNS tools

ADD IPAM INTEGRATION

NAME

InfoBloxIPAM

☒

ENABLED

API URL

https://x.x.x.x/wapi/v2.2.1

Warning! Using HTTP URLs are insecure and not recommended.

CREDENTIALS

Local Credentials

USERNAME

adminuser

PASSWORD

••••••••••

THROTTLE RATE

0

CREATE NETWORK POOL

NAME

New IP Pool

GROUP

RTP-VME-Grp

POOL TYPE

Morpheus

IP Ranges

STARTING ADDRESS

192.168.0.2

ENDING ADDRESS

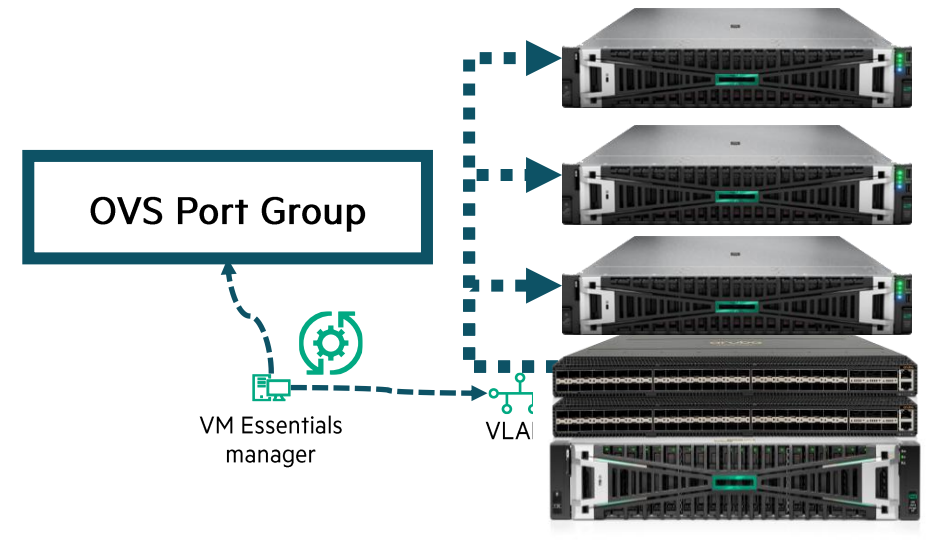
192.168.0.255

+

Save changes

HPE Aruba CX network plugin

- An optional plugin for HPE Aruba CX switches that simplifies the over network provisioning process for users of certain Aruba CX models
- Configured and leveraged as part of the Network Automation feature
 - Also available separately for users leveraging Aruba CX switches but not Network Automation
- Acts as a network abstraction layer between VM Essentials and the HPE Aruba CX switches
 - Plugin interacts directly with Aruba CX switches
- Tasks managed as part of deployment
 - Integrate VM Essentials with the Aruba switch pair
 - Edit the cluster
- Tasks managed post deployment
 - Create/delete OVS port group
 - Creates/deletes associated VLANs on the switches
 - Assigns/unassigns VLANs to switch ports
 - Adds/removes VLAN to lag1 (uplink to the upstream network)
- The HPE Aruba CX network plugin is installed and leveraged by HPE Private Cloud Business Edition if the Network Automation feature is leveraged.

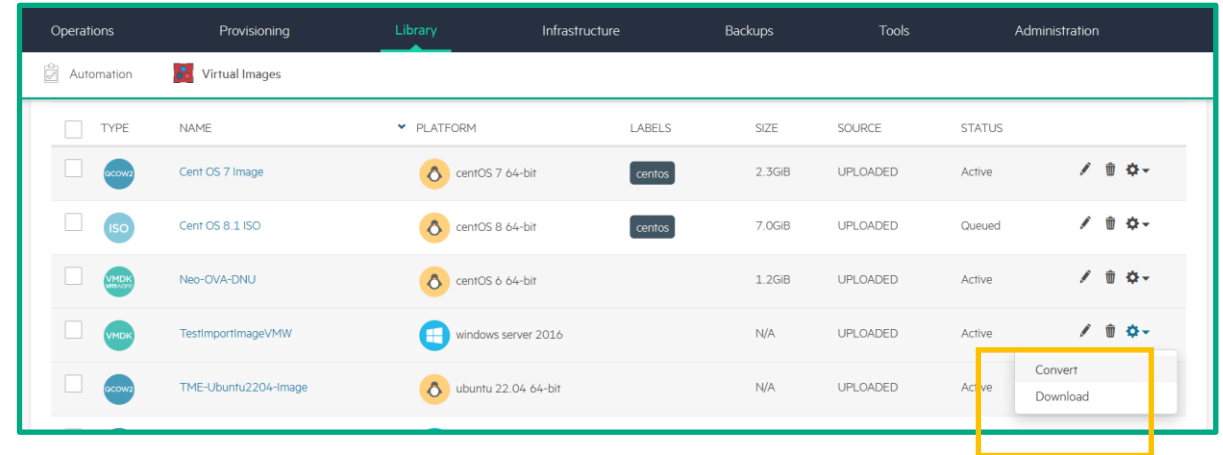


VMware to VM Essentials migration feature



VMware to VM Essentials image conversion

- Built into VME is the capability to convert VMware virtual machine images that are in the VME Virtual Image library to QCOW2 images
- This allows conversion of VMware assets into VME-compatible assets
- To convert:
 - Click the gear icon next to the desired VMware image
 - Select Convert
 - Format should be set to QCOW2
 - Click Convert
- This will automatically convert to a VM Essentials compatible QCOW2 image, which can then be used to deploy a VM within VME
- NOTE: when deploying Windows VMs, ensure that the virtio drivers option is selected, to ensure proper function of VM disks and networking



CONVERT IMAGE?

What would you like to convert this image to?

FORMAT: QCOW2

BUCKET:

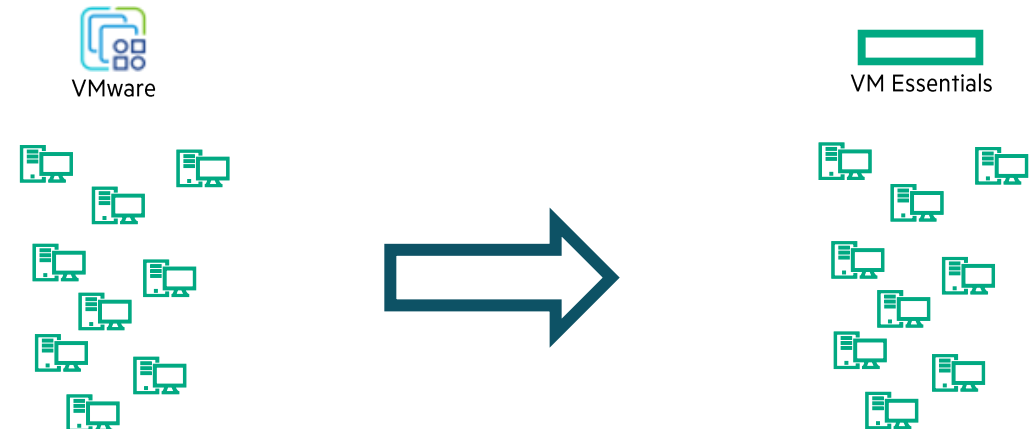
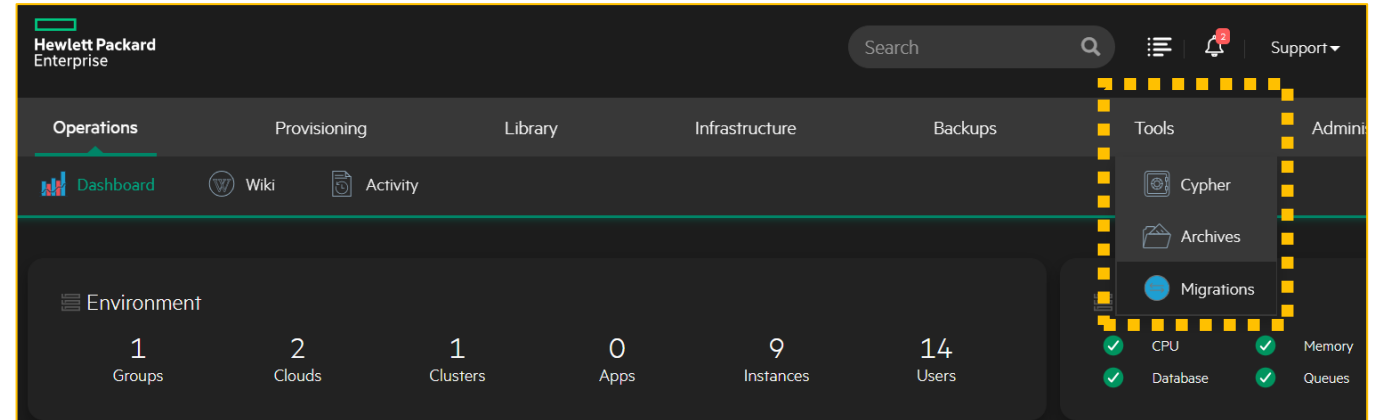
NAME: Image Name (optional)

Cancel Convert

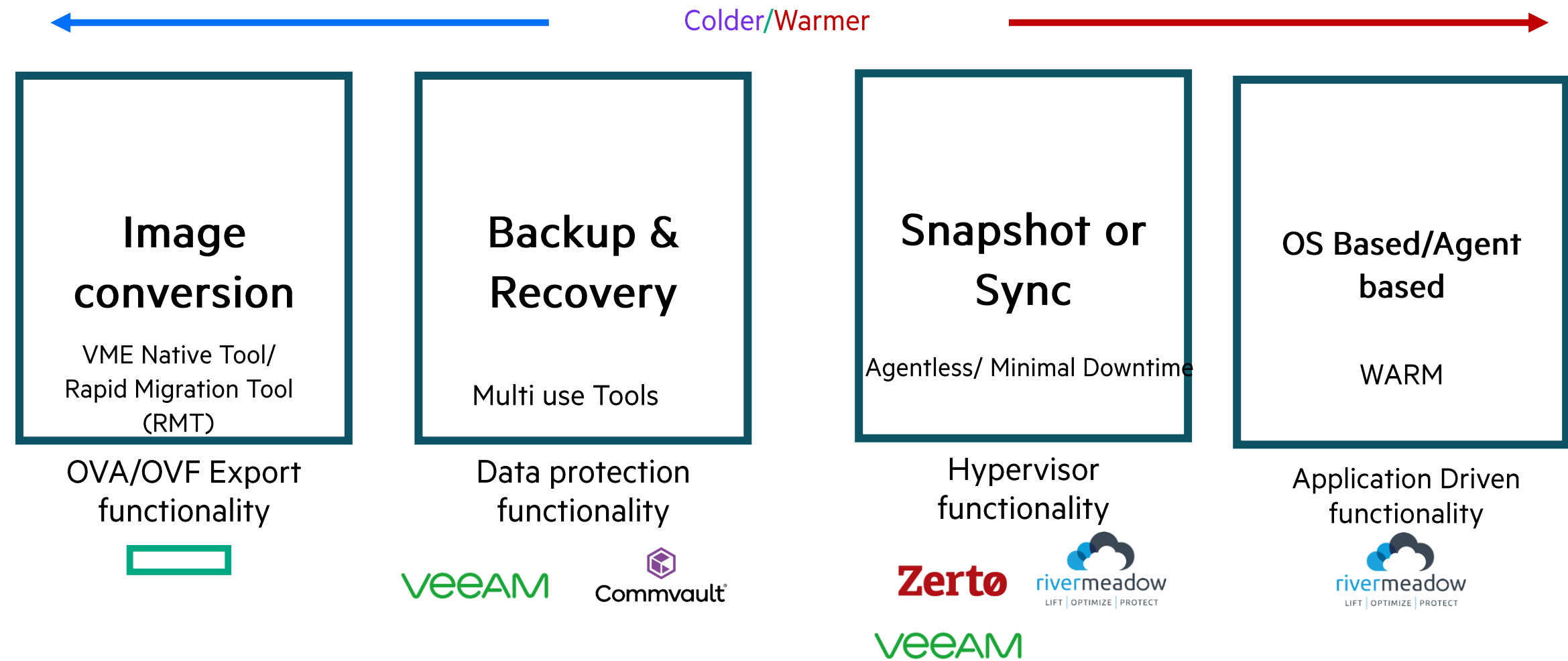
☐	VMDK	TestImportImageVMW	windows server 2016	N/A	UPLOADED	Active	⚙️
☐	QCOW2	TestImportImageVMW	windows server 2016	N/A	UPLOADED	33	⚙️

VM Migration feature

- Built in feature that facilitates conversion and import of VMware VMs into the HVM environment
- Can initiate multiple VM conversions simultaneously
 - Maximum of 20 simultaneous tested currently
- Depending on the guest OS, some preparation may be necessary before beginning migration
 - Verify virtio drivers are present and install if not
 - Verify qemu guest agent is present and install if not
 - Recommended to change mount points to utilize UUIDs.
 - /dev/sdX device names may change to /dev/vdX device names upon migration
 - If mount points are not changed to use UUID, it will be necessary to modify post migration to use the new device names
- The vCenter environment must have been added as a cloud to VM Essentials and the VMs inventoried
- Refer to the HPE Morpheus VM Essentials migration guide for more information



Methodologies to address requirements



VM management



High availability

- Once a datastore is provisioned it can be edited to enable it as a heartbeat target
- Once enabled, HA failover is managed between the hosts via the host agents
- Ensures that if the VM Essentials manager VM become unavailable VMs will still be able to failover

EDIT DATA STORE

NAME

Prod-DS-01

☒

IMAGE TARGET

☒

ACTIVE

☒

HEARTBEAT TARGET

This enables HA Failover of Virtual Machines running in the cluster by allowing host agents to monitor and share state on a shared datastore. More than one can be enabled for additional redundancy.

▶ Group Access

Save changes



Dynamic placement

- Dynamic placement of VMs can be configured when creating the cluster or after cluster creation
- Workload balancing algorithm attempts to balance the VM CPU and memory workload across the hosts in the cluster
- Affinity groups can be created to ensure specific VMs remain on the same host or on separate hosts from each other
- VM Essentials manager monitors resource utilization across the cluster to ensure proper balance

EDIT CLUSTER

NAME

HPE-RTP-VME-Cluster01

DESCRIPTION

LABELS

vmeCluster01

A comma separated list of labels that can be used to group/organize items.

☒

ENABLED

☒

MANAGED

☒

AUTOMATICALLY POWER ON VMS

CPU TYPE

x86_64

CPU MODEL

host-passthrough

DYNAMIC

On

PLACEMENT

Save changes

VM placement and migration

- When a VM is deployed, a host can be explicitly defined or left to VM Essentials manager to determine best placement
- Compute placement can be modified through the Manage Placement action
- The host the VM is running on can be changed by selecting a new host in the drop down
- Placement strategy defines how placement is handled:
 - Auto – VM Essentials will automatically migrate VM based on host workload or host failure
 - Failover – VM will remain on selected host until a host failure
 - Pinned – VM remains on selected host and will not migrate
- The datastore where the VM resides can be changed through the Reconfigure action and can be selected at the individual volume:
 - Changing this will migrate the data from one datastore to another
- Note that for proper failover handling and resiliency, the VMs should be on shared storage

The screenshot shows the 'EDIT HOST' interface. It has three main sections: 'HOST' with a dropdown menu showing 'rtp-hpe-tme24', 'PLACEMENT' with a dropdown menu showing 'Auto', and 'STRATEGY' with a dropdown menu showing 'Select', 'Auto', 'Failover', and 'Pinned'. A 'Save changes' button is at the bottom right. An 'Actions' menu is open, showing options: 'Open Console', 'Stop', 'Start', 'Install Agent', 'Download Agent Script', 'Manage Placement' (highlighted), and 'Reconfigure'. The 'Edit' and 'Delete' buttons are also visible at the top of the actions menu.

The screenshot shows the 'RECONFIGURE SERVER' interface. It has a title bar with a close button. Below the title bar is a warning message: 'Due to limitations by most Guest Operating Systems, Disk sizes can only be expanded and not reduced. If a smaller plan is selected, memory and CPU (if relevant) will be reduced but storage will not.' The interface has three main sections: 'PLAN' with a dropdown menu showing '1 CPU, 2GB Memory', 'VOLUMES' with two rows: 'root' (20 GB) and 'data-2' (20 GB), and 'NETWORKS' with a dropdown menu showing 'Management' and 'DHCP'. A 'Reconfigure' button is at the bottom right. A 'Datastores' panel is open on the right, showing a list of datastores: 'DirPoolDS01 - 83.5GB Free', 'DS01-TME-VME - 2.8TB Free' (highlighted), and 'local - 83.5GB Free'.

Affinity / Anti-affinity

- HVM Clusters offer affinity groups and anti-affinity groups. These work similarly to affinity groups on other platforms, such as the affinity rules concept in VMware vSphere.
- An affinity group contains a type (either Keep Together or Keep Separate) and a list of servers which should have the rule applied.
- Whenever possible, servers configured to "Keep Together" will run on the same HVM Host. Servers (VMs) configured to "Keep Separate" will be balanced across HVM Hosts to the maximum extent possible.
- VM Affinity groups can also be created for VMware clouds

NEW AFFINITY GROUP

NAME

TYPE

Keep Separate

☒ ACTIVE

SERVERS

▶ Group Access

▶ Tenant Permissions

SAVE CHANGES

Monitoring

Resources

History

Wiki

Addon Package

Affinity Groups

Search

Q

+ ADD

NAME	TYPE	RESOURCE POOL	VISIBILITY	
Better Together	Keep Together	QA MVM Cluster	Private	ACTIONS ▼
Keep Separate	Keep Separate	QA MVM Cluster	Public	ACTIONS ▼
Keep Together	Keep Together	QA MVM Cluster	Public	ACTIONS ▼

Automation - tasks

- Automation capabilities within VM Essentials provide a set of tools enabling automation capabilities at and post deployment
- HPE VM Essentials supports a subset of the Morpheus Enterprise automation task types:
 - Restart – a dedicated task to restart the target before executing the next task
 - Shell script – Bash shell script for Linux based targets
 - Powershell script – Powershell script for Windows-based targets
- These scripts can be used to apply configurations and install software
- Variables can be passed from HPE VM Essentials manager to the scripts:
 - Many default variables are available
 - Custom variables can be specified on resources for use
 - Example variable call in a script calling the vmetest secret entry from the Cypher store:
 - <%=cypher.read('secret/vmetest')%>

NEW TASK

NAME	Percona Install
CODE	perconaInstall
LABELS	A comma separated list of labels that can be used to group/organize items.
TYPE	Shell Script
RESULT TYPE	None
	☒ SUDO
SOURCE	Local
CONTENT	<pre>MYSQL_ROOT_PASSWORD=<%=cypher.read('secret/mysql_root')%> apt-get remove apparmor -y apt-get install gnupg2 -y wget https://repo.percona.com/apt/percona-release_latest.\${lsb_release -sc}_all.deb dpkg -i percona-release_latest.\${lsb_release -sc}_all.deb apt-get update -y DEBIAN_FRONTEND=noninteractive echo "percona-server-server5.7 percona-server-server-5.7/root-pass password \$MYSQL_ROOT_PASSWORD" debconf-set-selections echo "percona-server-server5.7 percona-server-server-5.7/re-root-pass password \$MYSQL_ROOT_PASSWORD" debconf-set-selections apt install -y percona-server-server-5.7</pre>



Feature overview and comparison



HPE Morpheus VM Essentials Software features

Multi-hypervisor support

VM Essentials enables simple provisioning and management of HVM and VMware virtual machines

Centralized identity & single sign-on (SSO)

Enables external user authentication using Active Directory (AD) or LDAP. Optional SSO with Okta, OneLogin, Azure AD, or other SAML-enabled providers

IPAM integration

Integrate with external IP address management providers (Infoblox, phpIPAM, BlueCat) to automate the reservation of an IP address for the VM during the provisioning process

DNS integration

Integrate with external DNS providers (Infoblox, Microsoft DNS, BlueCat) to automate the creation of DNS records for a VM during the provisioning process

Provisioning automation

Execute Bash or PowerShell scripts during VM provisioning, to automate system bootstrapping operations

Day 2 automation

VM Essentials supports the execution of Bash and PowerShell scripts on provisioned and discovered VMs

Secrets management

Securely store and retrieve secrets from the native secrets manager for use with the solution's task automation feature

HTML 5 virtual machine console

Access the dashboard of VM Essentials and VMware virtual machines via the HTML 5 console



HPE Morpheus VM Essentials Software features

HPE-validated hardware

The HVM hypervisor will be validated on HPE servers to deliver an optimal experience and provide hardware compatibility assurance

VM live migration

Migrate a running HVM virtual machine from one host to another within the same cluster with zero downtime

VM high availability

Automatically restart HVM virtual machines on another host in the same cluster in the event of an unexpected host failure within the cluster

Dynamic workload scheduler

Dynamically schedule the placement of HVM virtual machines within a cluster, based upon optimal workload distribution across the cluster

Storage migration

Migrate the virtual disks of a running HVM virtual machine from one storage datastore to another with zero downtime

VMware VM conversion

Convert existing VMware virtual machines to HVM virtual machines using the native conversion feature within the VM Essentials solution



HPE Morpheus VM Essentials Software features

Virtual machine snapshots

Create and revert snapshots for HVM virtual machines

Native data protection

Backup and restore HVM virtual machines using the solution's native data protection feature

External storage support

The HVM hypervisor supports running virtual machines on external storage via iSCSI, NFS, and Fibre Channel

HPE Alletra Storage MP integration

VM Essentials includes an integration with the HPE Alletra Storage MP B10000 storage array, that enables HPE VM Essentials virtual machines to natively reference the Alletra MP storage for their storage (1:1 VM-to-disk mapping)

HPE Alletra Storage MP array-based snapshots

The Alletra MP storage integration provides the ability to create and revert array-based snapshots for HVM virtual machines through the VM Essentials UI



Value proposition

- **Competitively priced VMware alternative**

- Priced per socket on VM Essentials hosts for significant savings in most configurations, compared to per-core licensing found in VMware, eliminating un-needed software which is forced into VMware suites like VVF and VCF

- **Unified management experience**

- Connect existing brownfield VMware vCenter clusters for management and VM-vending into ESXi and HPE VM Essentials from one simple interface

- **Vertically integrated hardware and software solution**

- Integrated into the HPE hardware portfolio to leverage software and hardware synergy to deliver differentiating technical capabilities

- **Scalable path to Morpheus Enterprise**

- Upgradable to full Morpheus Enterprise suite, to add support for other hypervisors, public clouds, and Kubernetes; governance policy enforcement, and cloud cost management and optimization capabilities (FinOps)



Virtualization Solution and Hypervisor Comparison

Category	Feature	HPE Morpheus VM Essentials	VMware vSphere Standard	VMware vSphere Ent. Plus	Nutanix Cloud Infrastructure	Microsoft Hyper-V	Red Hat OpenShift Virtualization	Proxmox Virtual Environment
Pricing structure	Pricing unit of measure	Socket	Core	Core	n/a	Core	Core-pair / socket-pair	Socket
Infrastructure Management	Centralized repo for VM templates and files	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Identity and Access Management Federation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Security	Secure Communication Protocols (TLS 1.2/1.3)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Virtual Machine Encryption	No	No	Yes	Yes	Yes	Yes	No
	Virtual Trusted Platform Module (vTPM) 2.0	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Migration and Replication	Live migration of VMs (like host to like host)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Live migration of VM storage	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Built-in migration from VMware	Yes	No	No	Yes	Yes	No	Yes



Virtualization Solution and Hypervisor Comparison

Category	Feature	HPE Morpheus VM Essentials	VMware vSphere Standard	VMware vSphere Ent. Plus	Nutanix Cloud Infrastructure	Microsoft Hyper-V	Red Hat OpenShift Virtualization	Proxmox Virtual Environment
Networking	External IPAM and DNS integration	Yes	No	No	No	No	No	No
	Distributed Switch	Yes	No	Yes	Yes	Yes	Yes	Yes
	Micro segmentation (eg. VMW NSX)	Yes (CX10K)	No	No	Yes	Add-on	Add-on	No
Data Protection and DR	Stretch metropolitan cluster	Roadmap	No	Yes	Yes	No	Add-on	No
	Native VM snapshots	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Native VM backup and recovery	Yes	No	No	Yes	No	Add-on	Yes
	High Availability for automatic failover of VMs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HA and Data protection for management server	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Workload Management	Distributed Resource Scheduler (DRS)	Yes	No	Yes	Yes	No	Yes	Yes
	Affinity / Anti-Affinity Groups	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Storage DRS	No	No	Yes	Yes	No	Yes	No



What's available HPE Zerto Software

Available Today

- HVM to HVM Disaster Recovery and Continuous Data Protection

How it works

- Zerto sets up **continuous, journal-based replication** from HVM to HVM.
 - Zerto Virtual Manager Source and Target
 - Virtual Replication Appliance (VRA) Source and Target
- Replication runs in **near real time** to keep the target close to source.
- Customer needs to execute a **failover** to **recover** workloads over to VME Target site.
- Typical recovery impact is **minimal**, not hours.

Business Value

- Use for **Disaster Recovery and Continuous Data Protection**.
- Supports **non-disruptive testing** of workloads on VME before committing.

Upcoming TekTalk:

HPE Zerto Software support for HVM (DR and Migration) [Around May 27th 2026]



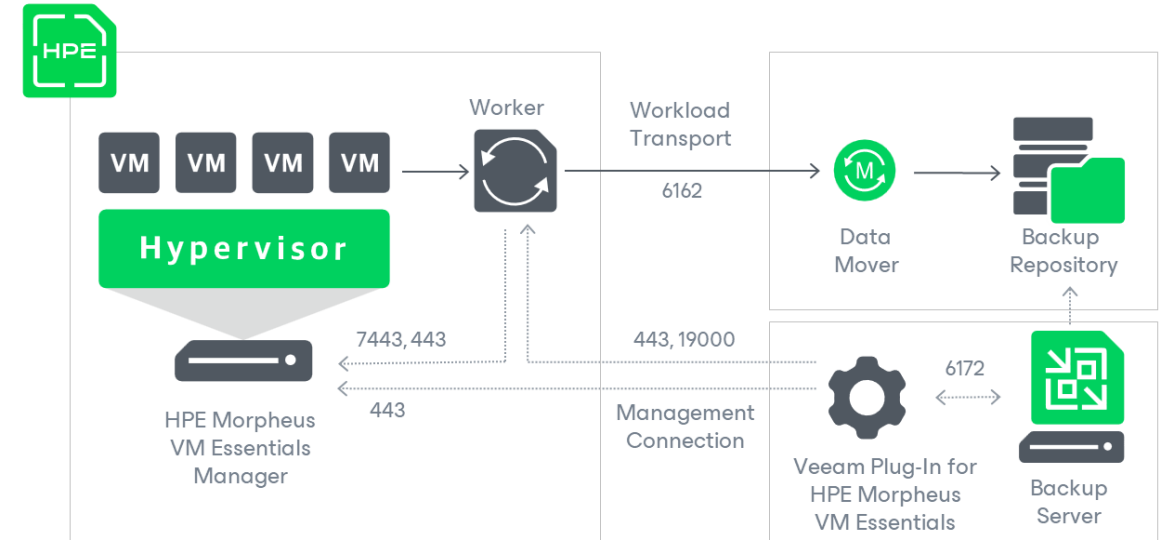
HPE Zerto v10.9 features—HVM vs VMware

HPE Zerto Software key features	HPE Morpheus Support	VMware Support
Continuous data protection (real-time replication of VM changes with journal retention up to 30 days)	●	●
Failover live (real-time failover of virtual machines to a recovery site during an outage)	●	●
Reverse protect (re-establishing replication back to the original production site after failover)	●	●
Failover test (validating recovery without impacting production workloads)	●	●
Real-time ransomware detection (detecting malicious encryption and enabling recovery to a granular point in time)	●	●
Move/migration workflows (moving a workload to the target site without reverse protection or recovery)	VMware	●
Cross-platform support (ability to replicate to other HPE Zerto supported hypervisors and public clouds)	VMware	●
One-to-many (protecting the same VM to multiple DR sites)		●
Extended journal copies (point-in-time journal copies for immutability)		●
HPE Zerto Analytics (cloud-based analytics providing insights and reporting across multiple sites)	●	●
Full API support (extensibility support for third-party integration, automation, and scripting)		●



Veeam Backup and Recovery

- Starting from version Veeam Backup & Replication 13.0.1
 - The current version of Veeam Backup & Replication is 13.0.1.1071; the current version of Veeam Plug-in for HPE Morpheus VM Essentials is 13.1.0.271
- VM restore is supported only for backups stored in backup repositories, object storage repositories.
 - Restore VMs from VMware ESXi, Microsoft, Nutanix AHV, Proxmox VE, Scale Computing HyperCore, oVirt KVM, Microsoft Azure, Amazon Web Services (AWS) and Google Cloud backups to the HPE Morpheus VM Essentials environment.
 - Restore physical machines from backups created by Veeam Agents to the HPE Morpheus VM Essentials environment
- Requires unique VM names across the HPE Morpheus VM Essentials environment
- Veeam Plug-in for HPE Morpheus VM Essentials does not support restore of advanced VM settings such as automation, placement strategy, domain, affinity group, nested virtualization flag settings.
- **TekTalk on Point: HPE VM Essentials – using Veeam agents for protection**
- Veeam Documentation



***A worker is a Linux-based VM that resides in the HPE Morpheus VM Essentials cluster and processes backup workloads when transferring data to and from backup repositories.

HPE VM Essentials licensing

- Licensing and quote configuration covered in prior TekTalk: [HPE VM Essentials – licensing and configuring the stand- alone virtualization solution for HPE Servers](#)
- Licensing model:
 - Per CPU socket
 - No core limitation
 - HPE Tech Care Essentials included with license



Start New Configuration

Product

- ☐ Obsolete
- ☐ Discontinued
- ☐ Pre-Release
- ☐ BTO
- ☐ CTO
- ☒ BOTH

Select Product

vm essentials

Product #	Description
S5Q81AAE	HPE VM Essentials Software per Socket 1-year E-LTU
S5Q82AAE	HPE VM Essentials Software per Socket 3-year E-LTU
S5Q83AAE	HPE VM Essentials Software per Socket 5-year E-LTU

Select from Product Catalog

>

Select from Smart Template

>

Select from Workgroup Smart Template

>

Select from My Library

>

Options

Quotation Mode

- ☒ Normal
- ☐ HPE GreenLake
- ☐ Renew (Remanufactured)
- ☐ Use for add-ons
- ☐ Support only

Solution Type

- ☒ Single Solution
- ☐ Icon Separation

Sub-configuration

New sub-configuration

>

Services

- ☒ Flexible Services
- ☐ Fixed Services

Is this a Cross-BU Solution?

- ☒ No
- ☐ Yes

Account

Configuration Name

OCA Config 3

Opportunity ID

>

Customer Account

Key in value / Select from list

OCA Workgroup

[US][DIST]Synnex Corporation-17050507050203200

>

Region

North America

>

Country

UNITED STATES

>

Input Voltage

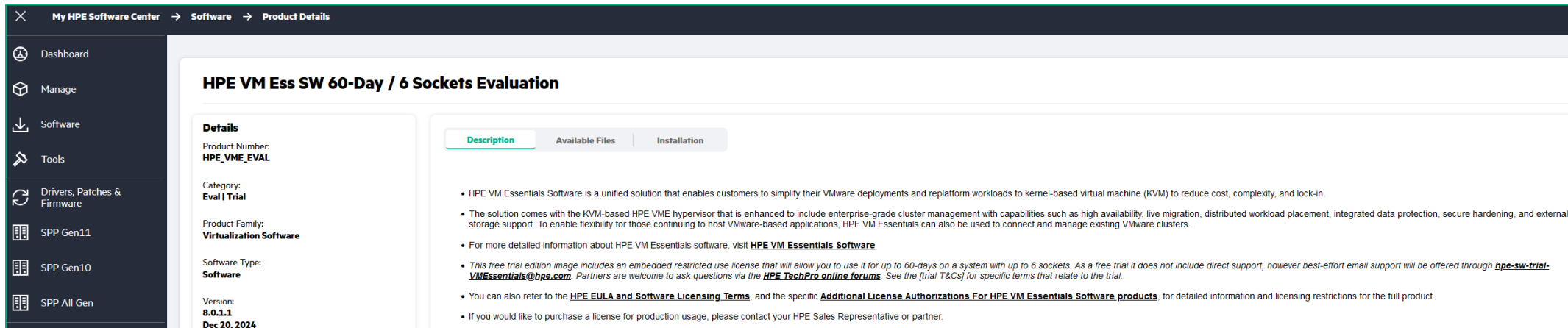
220V

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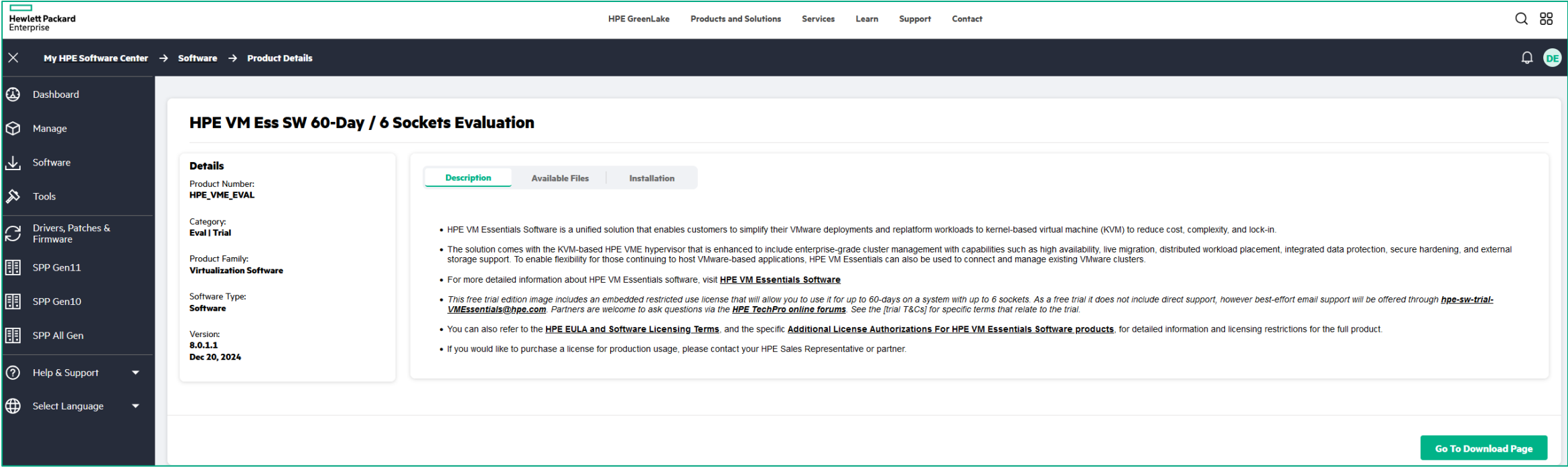
Trial licenses

- HPE VM Essentials software download include a default trial period
 - Support for up to 6 sockets
 - 60-day trial term
- Direct support not included
 - Best effort via engagement in the Tech Pro slack channels
 - <https://techpro.hpe.com/custom.aspx?page=COMMUNITIES>
 - #solutions-virtualization-external for partners



Software download

- Available through HPE My Software Center
 - <https://myenterpriselicense.hpe.com>



HPE VM Essentials demos

- **HPE Demo Portal**

- HPE VM Essentials Software – Live Demo
 - <https://hpedemoportal.ext.hpe.com?demoid=9305>
- HPE VM Essentials Software – Interactive Demo
 - <https://hpedemoportal.ext.hpe.com?demoid=9306>
- HPE VM Essentials Software – Recorded Demo (video 16:29)
 - <https://hpedemoportal.ext.hpe.com?name=HPE%20VM%20Essentials%20Software%20-%20Recorded%20demonstration>
- HPE VM Essentials Software – A True Alternative to VMware (video 6:12):
 - <https://hpedemoportal.ext.hpe.com?name=HPE%20VM%20Essentials%20-%20A%20True%20Alternative%20to%20VMware>
- HPE VM Essentials Software (video 3:10):
 - <https://hpedemoportal.ext.hpe.com?name=HPE%20VM%20Essentials%20Software>

- **HPE Tech Accelerator Sales Demos**

- HPE VM Essentials Sales Demo
 - <https://hpe-storage.techaccelerator.com/labs/2036#>
- HPE VM Essentials Install and Setup
 - <https://hpe-storage.techaccelerator.com/labs/2064#>
- HPE VM Essentials Instance Provisioning
 - <https://hpe-storage.techaccelerator.com/labs/2048#>



Resources

Publicly viewable

- [HPE VM Essentials](#)
- [HPE VM Essentials Software](#)
- Blog: [VME Blog](#)

Assets

- Quick Specs Guide: [Link](#)
- HPE VM Essentials Online Documentation: [Link](#)
- Reference Architecture: [Link](#)

Training

- Tech Pro [HPE VM Essentials](#) and [Morpheus](#) Learning Paths



Resources

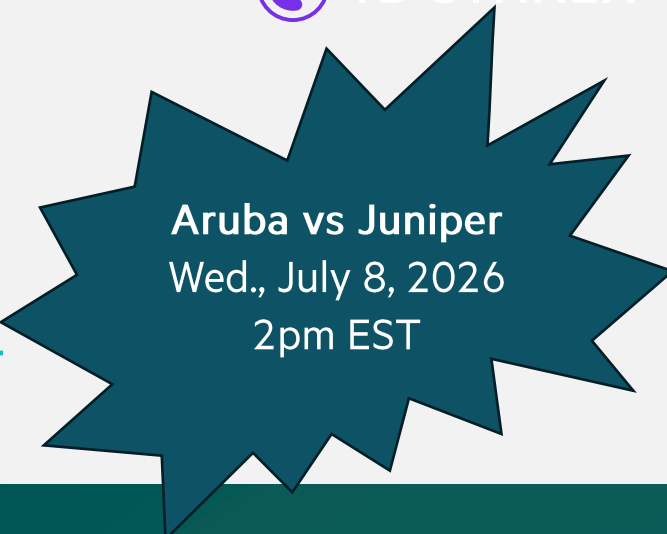
- [HPE VM Essentials Software documentation](#)
- [FAQ - HPE VM Essentials Software](#)
- [Solution brief - HPE VM Essentials Software and hybrid cloud operations powered by Morpheus](#)
- [Customer presentation - HPE VM Essentials](#)
- [Competitive positioning - HPE VM Essentials competitive battlecard](#)
- [Video - HPE VM Essentials product demo](#)
- [Video - HPE VM Essentials customer value proposition](#)
- **[Tech Pro – HPE Morpheus Maestros](#)** – One-Stop shop for VM Essentials and Morpheus Enterprise information



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Aruba vs Juniper
Wed., July 8, 2026
2pm EST

- Technical Training for reseller engineers (or sales)
 - HPE Products (servers, storage, networking, software, wireless, GreenLake)
 - HPE Tools (OCA, Sizers, ROI, Seismic, SPOCK, etc.)
- Technical Deep Dives
 - Q&A Sessions
- End user meetings as a technical resource
 - Assessment Assistance (CloudPhysics)
- HPE Product Demos

Demo Time!

