

# Hitachi Content Platform Gateway VM Deployment Guide

Release Version 4.1.4

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## Windows & Linux

The objective of this document is to cover how to deploy the Hitachi Content Platform Gateway software in VM environments.

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# Chapter 1 Introduction

The purpose of this document is to cover how to deploy standalone Hitachi Content Platform Gateway (HCP Gateway) VMs in VMWare and Hyper-V environments. This guide does not cover Cluster deployments.

## The minimum VM Resources for HCP Gateway on Windows Server (SMB):

- CPU/cores 10 cores (hyper threading enabled)
- Memory 128 GB RAM
- SAS Controller 12Gb SAS
- OS Disk C:\ 100 GB
- Database Disk D:\ 100 GB (2 GB per million files)
- Data Disk E:\ 1 TB+ (see notes below)
- Network 2 x 1 GigE (1 Data and 1 Management network) or 1 x 10 GigE  
(4 Network Interfaces are needed if using Clustering)

## The recommended VM Resources for HCP Gateway on Windows Server (SMB):

- CPU/cores 20 cores (hyper threading enabled)
- Memory 256 GB RAM (128 GB RAM per CPU)
- SAS Controller 12Gb SAS
- OS Disk C:\ 100 GB
- Database Disk D:\ 1-2 TB (2 GB per million files)
- Data Disk E:\ 1 TB+ (see notes below)
- Network 1 x 1 GigE (Management network) and 1 x 10 GigE (Data network)  
(4 Network Interfaces are needed if using Clustering)

## The minimum VM Resources for HCP Gateway on Debian Linux 10 (NFS):

- CPU/cores 10 cores (hyper threading enabled)
- Memory 128 GB RAM
- SAS Controller 12Gb SAS
- OS Disk 100 GB
- Database Disk 100 GB (2 GB per million files)
- Data Disk 1 TB+ (see notes below)
- Network 2 x 1 GigE (1 Data and 1 Management network) or 1 x 10 GigE  
(4 Network Interfaces are needed if using Clustering)

## The recommended VM Resources for HCP Gateway on Debian Linux 10 (NFS):

- CPU/cores 20 cores (hyper threading enabled)
- Memory 256 GB RAM (128 GB RAM per CPU)
- SAS Controller 12Gb SAS
- OS Disk 60-100 GB
- Database Disk 1-2 TB (2 GB per million files)
- Data Disk 1 TB+ (see notes below)
- Network 1 x 1 GigE (Management network) and 1 x 10 GigE (Data network)  
(4 Network Interfaces are needed if using Clustering)

## Recommended CPU & RAM Sizing

Total Number of Files	Total CPU Cores	Total RAM
250M	20	256GB
500M	20	256-512GB
1B	20	512GB

## Database Disk Sizing

1. Recommend at least 2 GB disk space for every 1 million files for normal HCP Gateway operation.
2. When using HDI Migrator or Copy2Gateway migration tools, the recommended size increases to 4 GB disk space for every 1 million files. Please note that this extra space used by the migration tools is recoverable after the migration is done.

## Data Disk Sizing

If using local storage, do not use the cache drive for local storage, add a separate drive for local storage.

In the Windows version, the E:\ drive contains the following components:

- Virtual File System - E:\SAM
- Temporary cache - E:\Cache
- Reports - E:\Reports
- Backup Restore – E:\Backup\Restore

In the Windows version, the F:\ drive contains the following components:

- Default Local Storage – F:\Storage

In the Linux version, the /storage filesystem contains the following components:

- Virtual File System (Temporary Read and Write cache) - /storage/sam
- Default Local Storage – /storage/local - mounted on a different disk than /storage/sam
- Reports - /storage/reports
- Backup Restore – /storage/Restore

When sizing the Data Disk (E:\ drive in Windows and /storage in Linux) the primary consideration is the space required by the cache and the items listed above. When data is ingested into the HCP Gateway it lands in a temporary cache, where it stays for 3 minutes to enable file close operations. Cache storage is governed by policies. A Tiering Policy can be used to set the minimum time a file remains on cache (e.g. 1 month or 1 minute). A Copy Policy is used to keep files on the cache until they are subject to the Caching Policy and writes them to the HCP storage after the Copy time expires. Shares created with an Archive Mode policy or a Server Mode Tiering policy can be configured to keep files in cache until they are subject to the Caching Policy. The Caching Policy works with a high and low watermark. Files remain in the cache until the high watermark is reached then the HCP Gateway drains the cache on a first in first out basis. The Data Disk is also used as a temporary storage location when recovering the HCP Gateway Database from Backup.

### Database Management

Managing the HCP Gateway is easier with a GUI SQL interface in Windows. Applications that can be used in Windows include: DBeaver, HeidiSQL, or MySQL CLI. For Linux, the MySQL CLI is available to manage the HCP Gateway database. The documentation references HeidiSQL by name, but any of the applications listed above can be used. HeidiSQL and DBeaver are not included due to distribution limitations associated with its Open-Source license. These applications can be installed when configuring the HCP Gateway software.

### Disk Setup and Management

The configuration of disks in the HCP Gateway documentation is written for normal use cases.

**WARNING:** Do not delete any folders, or files on the D: and E: drives in Windows and the /storage filesystem in Linux

The Cache (E:\Cache or /storage/sam) is stored on the Data Disk (E: drive in Windows and /storage in Linux). For local storage, create another drive, such as the F: drive in Windows or mount a second Data Disk to /storage/local in Linux.

## Data Migration

If there is existing data to be migrated to the HCP Gateway, there are a few key considerations:

1. Only write to Shares and Exports presented, do not write directly to local drives (such as E:, F: in Windows and /storage in Linux) on the HCP Gateway.
2. Despite its popularity, Robocopy has known issues working with HCP Gateway that can result in corrupted data, hence we highly discourage the use of Robocopy.

**WARNING:** We do not recommend Robocopy for migrations to HCP Gateway as it can result in corrupted data.

3. We suggest considering these migration tools:
  1. DataTrust Copy2HCPG (C2HCPG)
  2. Quest SecureCopy
  3. GuruSquad RichCopy 360
  4. Hitachi CMT
  5. Hitachi Content Intelligence
4. Please pay special attention to permissions management prior to starting the migration. Please follow the instructions in the **Access and Permissions Management** section below.
5. If the Share is configured with Retention and data needs to be validated or metadata updated prior to being committed, consider using a longer grace period in the Retention policy, so the files can be hash validated by the migration application and recopied if needed before the files are locked under Retention.

## Access and Permissions Management

There are two areas to consider when managing permissions on HCP Gateway. The first is access to the HCP Gateway UI. Typically, this is managed in Active Directory (see Administrator Guide for details) or users can be configured locally on the HCP Gateway.

In Windows, the second is the ACLs and Access Permissions on the exposed Shares, which are configured in Windows File Explorer or Windows compmgmt.msc. When using Windows, configure the inheritable ACL permissions at the top the share before creating any folders or files, by accessing the

share on the HP Gateway in Windows File Explorer using [\\localhost\share](#) and then right-clicking in the white space of the share and selecting Properties -> Security.

**WARNING:**

1. Depending upon how DNS is configured the HCP Gateway host file may need to be updated to reflect the location of the HCP (IP -> Name).
2. If you are using Active Directory contact your administrator to find out the HCP Gateway user/service and credentials plus what the Search Base to use.

In Linux, the second is the Host Access Permissions on the exposed Shares, which are separately managed via the Shares page of the HCP Gateway UI. In this page, configure the Linux hosts that have either Read/Write access or only Read Access to the share. Use the Linux chown and chmod commands to configure the owner and access permissions to the folders and files on the HCP Gateway shares.



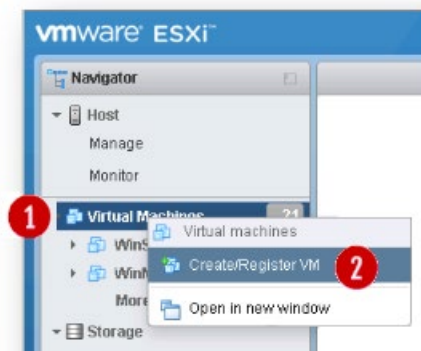
## Chapter 2 VM Deployment Process using ESXi GUI

These are the steps for deploying the HCP Gateway as a VM:

**Step 1:** Download the appropriate Windows or Linux OVA image and extract the files from the compressed file.

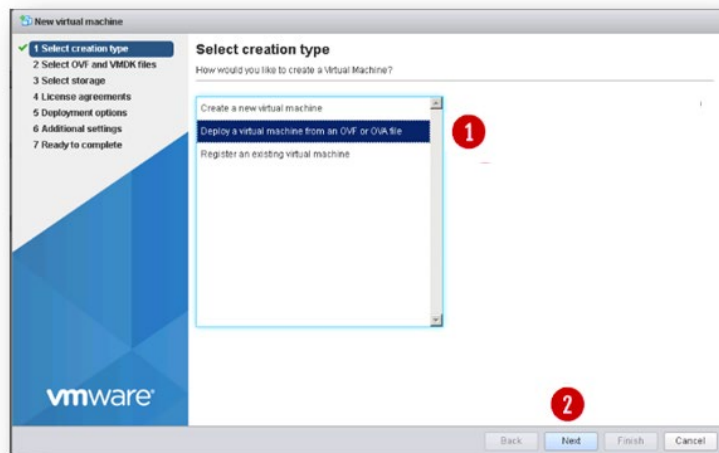
**Step 2:** Open ESXi Management GUI (Figure 2.1) and right click **Virtual Machines** (Figure 2.1.1) and select **Create/Register VM** (Figure 2.1.2).

Figure 2.1 ESXi Management GUI



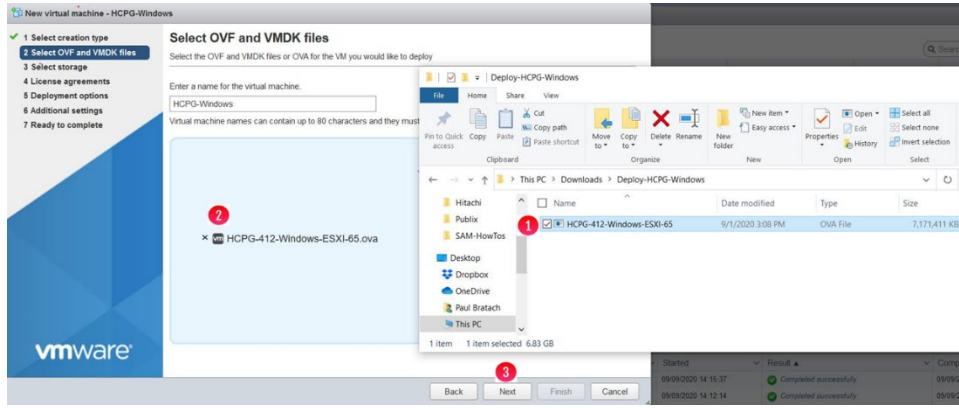
**Step 3:** Select **Deploy a virtual machine from an OVF or OVA file** (Figure 2.2.1). Then Select the **Next** button (Figure 2.2.2).

Figure 2.2 Select Creation Type



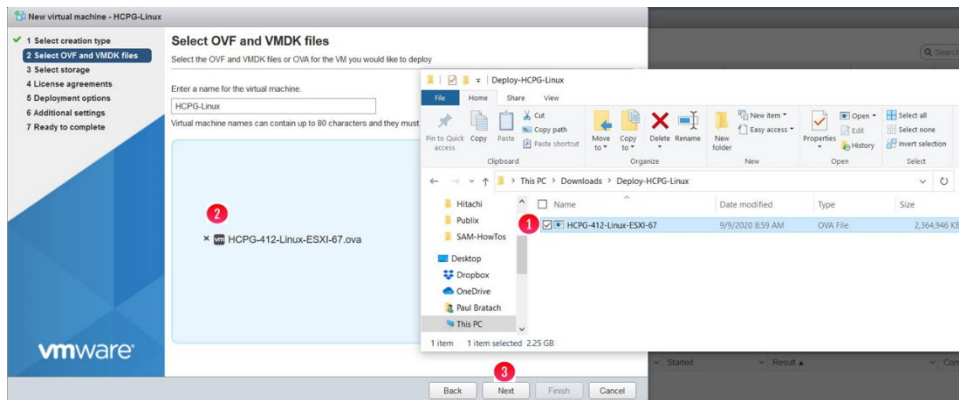
**Step 4A:** Enter the name for the VM and then using Microsoft Explorer select the Windows **OVA file** (Figure 2.3.1). Then drag the OVA file into the ESX GUI (Figure 2.3.2) and click the **Next** button (Figure 2.3.3).

Figure 2.3 Drag HCP Gateway Windows files into ESX GUI



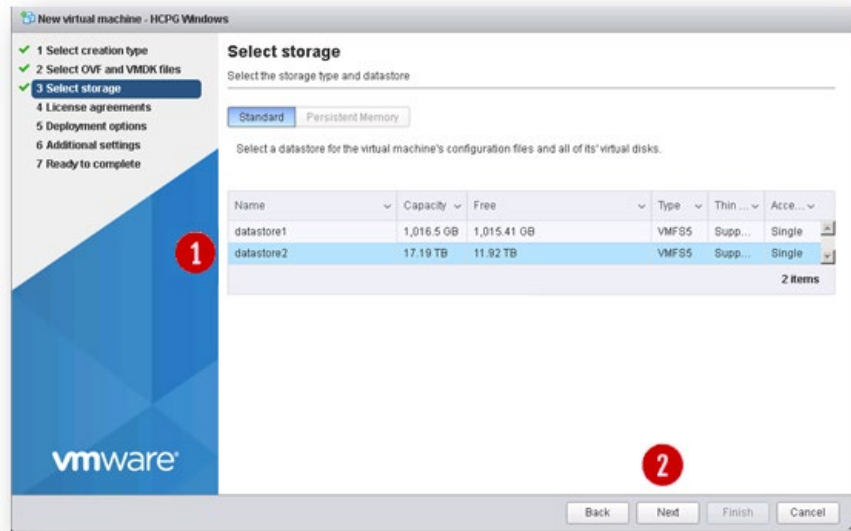
**Or Step 4B:** Enter the name for the VM and then select the Linux **OVA file** (Figure 2.4.1). Then drag the OVA file into the ESX GUI (Figure 2.4.2) and click the **Next** button (Figure 2.4.3).

Figure 2.4 Drag HCP Gateway Linux files into ESX GUI



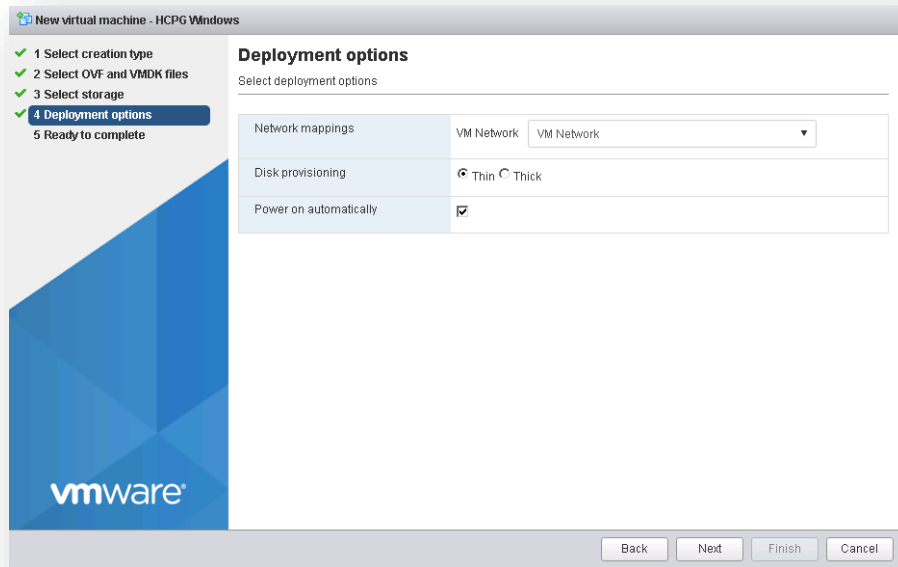
**Step 5:** Select the appropriate **datastore** (Figure 2.5.1) from the ESX GUI. Then click the **Next** button (Figure 2.5.2)

Figure 2.5 Select Data Store



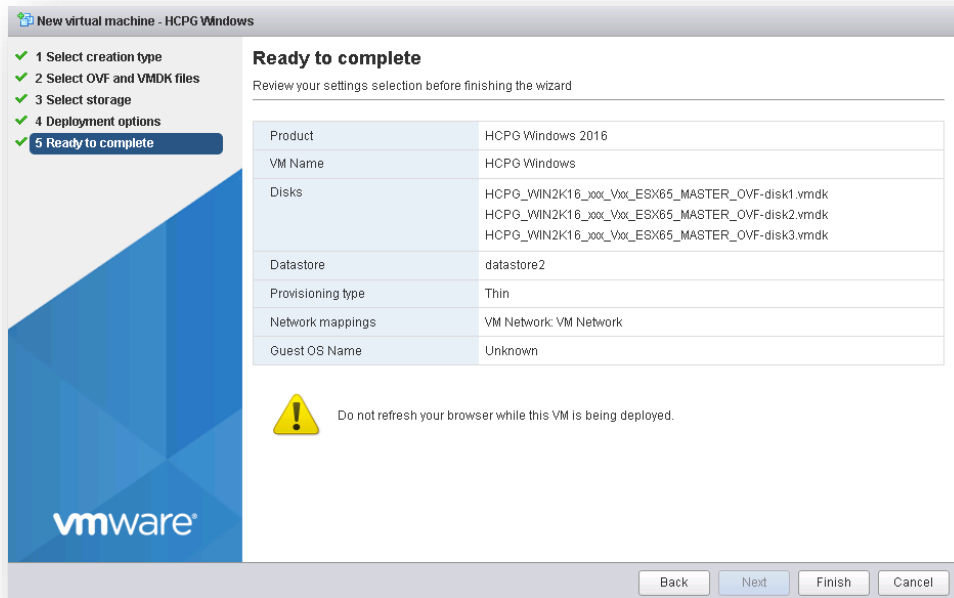
**Step 6:** Select the appropriate settings for your environment then click on **Next** (Figure 2.6). Please note that you may want to *unselect* the **Power on automatically** option as you will need to shut down the VM in Chapter 3 for Windows or Chapter 4 for Linux if you need to modify any of the VM settings.

Figure 2.6 Environment Settings



**Step 7:** Select **Finish** (Figure 2.7). and do NOT refresh browser until complete. Please note that if you receive a warning for a **required disk image missing**, just click the 'X' icon to close the warning message. If you are unable to deploy the VM through this method, please follow the directions in Chapters 5 and 6 for alternative ways to deploy the VM.

Figure 2.7 Finalize VM



The HCP Gateway is now deployed. The next step is to assign resources to the VM and then change the networking. For HCP Gateways installed before version 4.1.3, the software license was tied to the IP and MAC addresses so make sure they are static. Starting with version 4.1.3, a new software license can be generated based on a digital fingerprint of the HCP Gateway server in the Configuration -> License page in the UI.

## Chapter 3 Windows VMWare ESXi Settings

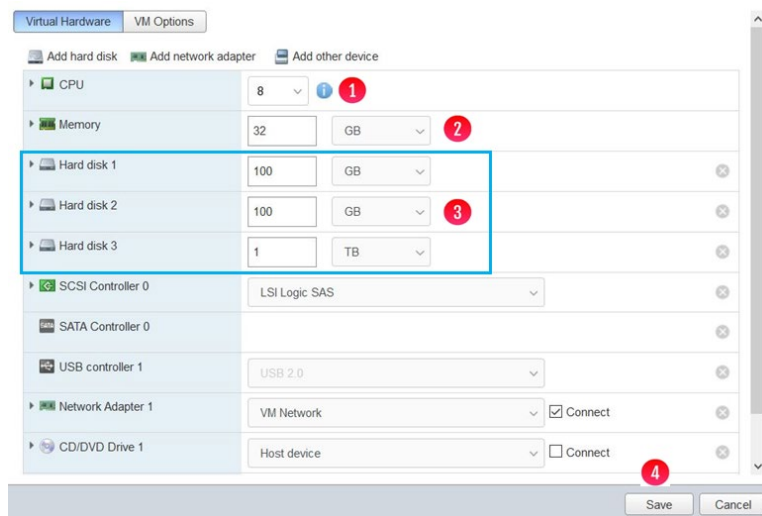
Now that the VM is on the ESXi host it is time to edit the Virtual Hardware settings.

### Step 1: Select *Virtual Hardware*

If you selected the option to power on the VM automatically during the deployment, you will first need to shut down the HCP Gateway. Now open the console to the HCP Gateway you just deployed, login with the default username “**administrator**” and password “**hvlab124!**”. Please note that if the VM does not boot because it cannot find the boot device, edit the settings of the VM as described in Step 2 and make sure that in the **VM Options** menu, that the **Boot Options** -> **Firmware** setting is set to **EFI**. Since this is the first time you deployed the VM, you will be prompted to reset 4 user account passwords then the VM will reboot again. When the VM is back up, login again as the “**administrator**” user and click the Windows Start button and select the option to shut down the VM.

Once the VM is powered off, right-click on the VM and select **Edit Settings**. The form for **Virtual Hardware** will appear (Figure 3.1). In this example we will enter **8** for CPU (Figure 3.1.1), **32 GB** for Memory (Figure 3.1.2), and **100 GB** for Hard disk 1 which is the C: drive for the operating system, **100 GB** for Hard disk 2 which is the D: drive for the database, and **1 TB** for Hard disk 3 which is the E: drive for the cache (Figure 3.1.3). If using local storage, then add another Hard disk for the local storage. Then click **Save** (Figure 3.1.4). Please note that you will need to set these parameters to meet the customer requirements of the HCP Gateway.

Figure 3.1 Virtual Hardware



## Step 2: Configure Virtual Options

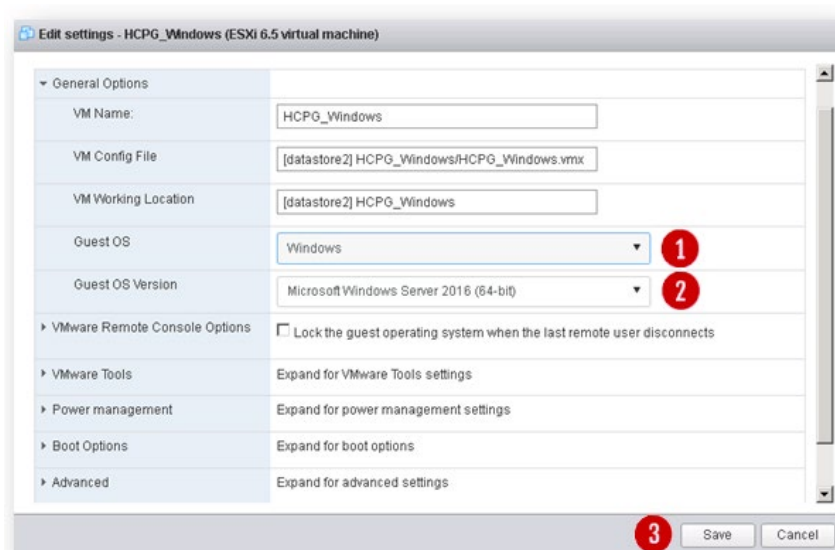
Right-click on the VM and select **Edit Settings**. This will bring up the previous form. However, this time select **VM Options** button (Figure 3.2.1).

Figure 3.2 Virtual Options



The **VM Options** form will now appear (Figure 3.3). Open the General Options menu and make sure the **Guest OS** (Figure 3.3.1) is set to Windows and **Guest OS Version** is set to **Microsoft Windows Server 2016 (64-bit)** (Figure 3.3.2). Then select **Save** (Figure 3.3.3).

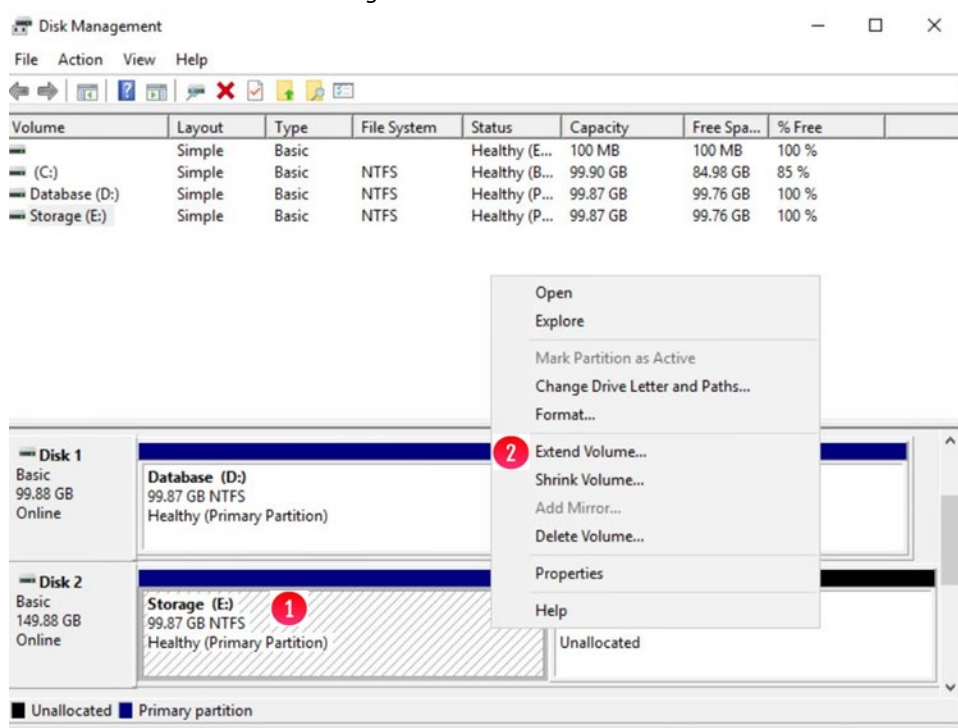
Figure 3.3 Edit VM Options



## Step 3: Storage Configuration

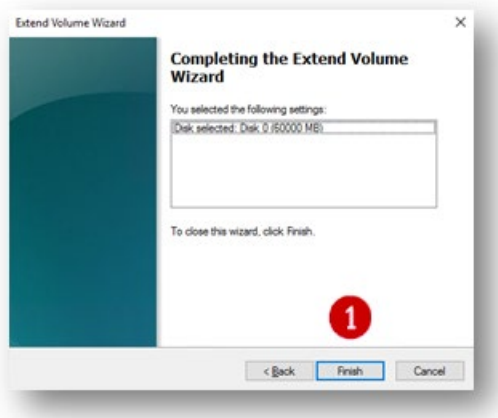
Start the VM and login with the credentials provided. Open **Disk Management** by typing **diskmgmt.msc** from the Windows Start menu **Run** command. In Step 1, if you changed the size of the disks from the default size of the disks in the OVA file, then extend each disk that was changed to the maximum size. Right-click the drive (Figure 3.4.1) then select **Extend Volume** (Figure 3.4.2).

Figure 3.4 Extend Volume



Click **Next** on the first screen of the Wizard, select **Next** again as the remaining space will be automatically selected. Select **Finish** (Figure 3.5.1).

Figure 3.5 Extend Volume Wizard



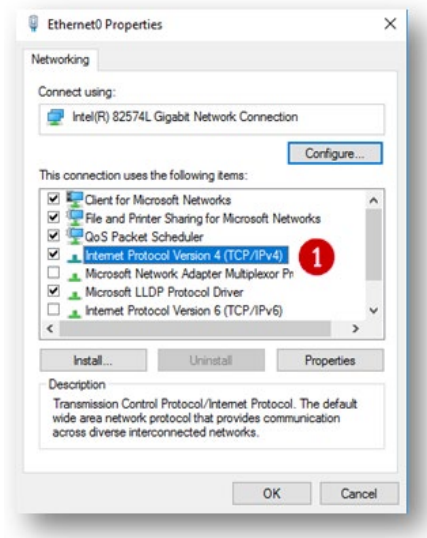
Do this for each drive that the disk size was increased.



#### Step 4: Network Configuration

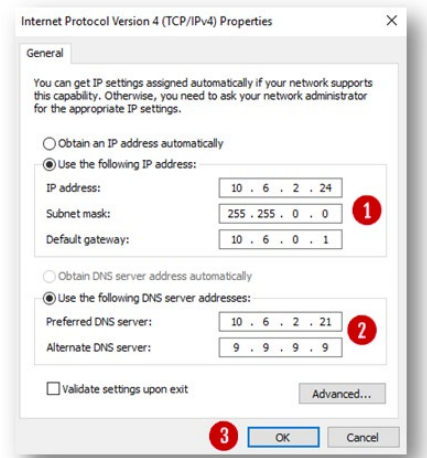
From the Windows Start menu **Run** command type *ncpa.cpl*. This will open the *Network Connections* window. Right-click on the production network adapter and select **Properties**. Double click **Internet Protocol Version 4 (TCP/IPv4)** (Figure 3.6.1)

Figure 3.6 Configure Networking



Enter the appropriate IP information (Figure 3.7.1) and then enter DNS (Figure 3.7.2) information. Select **OK**. Select **OK** in the Properties window for the production network adapter.

Figure 3.7 Configure IP



**Step 5: HCP Gateway Sub-shares Information**

The HCP Gateway Sub-share feature allows creating a share inside of an HCP Gateway share at any level of the share folder tree. This feature is currently only available in Windows. The **registry.shares** parameter needs to be in the **C:\SAM\etc\sam\sam.properties** file for the Sub-share feature to operate. Refer to the **Administration Guide** for **Chapter on HCP Gateway Software Upgrade** for details on this parameter.

## Chapter 4 Linux VMware ESXi Settings

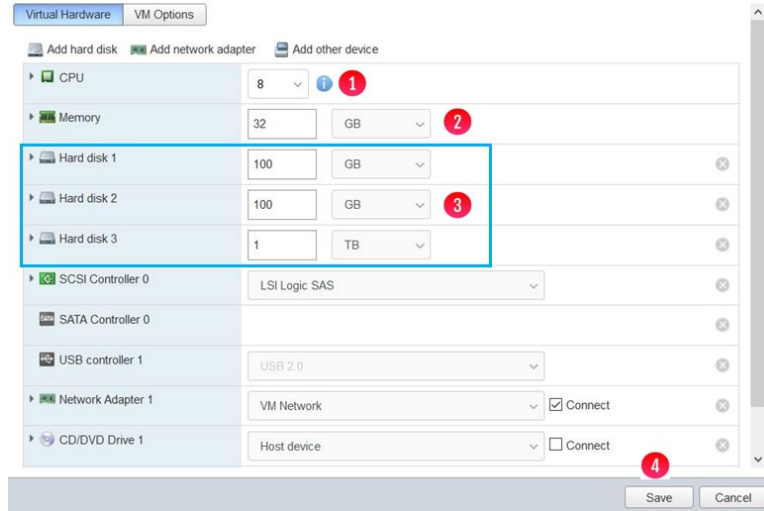
Now that the VM is on the ESXi host it is time to edit the Virtual Hardware settings.

### Step 1: Select *Virtual Hardware*

If you selected the option to power on the VM automatically during the deployment, you will first need to shut down the HCP Gateway. Now open the console to the HCP Gateway you just deployed, login with the default username “vault” and password “0rgan1c” and issue the command “sudo shutdown –h now”. When prompted, enter the default password to run the shutdown command.

Once the VM is powered off, right-click on the VM and select **Edit Settings**. The form for Virtual Hardware will appear (Figure 4.1). In this example we will enter **8** for CPU (Figure 4.1.1), **32 GB** for Memory (Figure 4.1.2), **100 GB** for Hard disk 1 which is the “/” (root) filesystem for the OS, **100 GB** for Hard disk 2 which is the /var/lib/mysql MariaDB database filesystem, and **1 TB** for Hard disk 3 (Figure 4.1.3) which is the data disk. Then click **Save** (Figure 4.1.4). **Please note that you will need to set these parameters to meet the customer requirements of the HCP Gateway.**

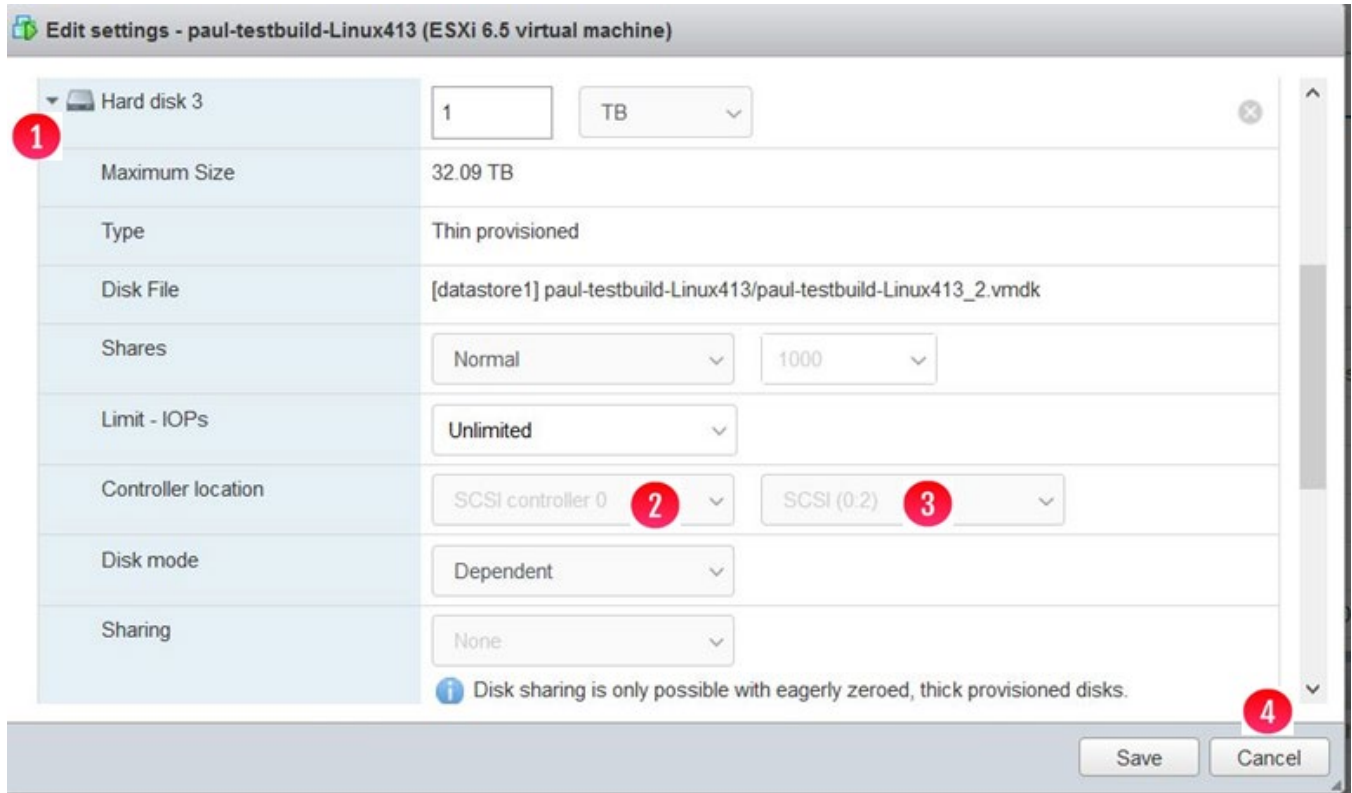
Figure 4.1 Virtual Hardware



Right-click on the VM and select **Edit Settings** again. Click on the arrow to the left of the name **Hard disk 3** (Figure 4.2.1). Take note of the information in the Controller location line, for this example, the disk is on **SCSI controller 0** (Figure 4.2.2) **target 0** and **LUN 2** (Figure 4.2.3). Click **Cancel** (Figure 4.2.4) to close the **Edit settings** window. Repeat this process on each disk that

you expanded the size. Please note that you will need to check each of the ESXi Hard disk names and the Linux filesystem names in Step 3 as they may be different in your environment.

Figure 4.2 Controller location



## Step 2: Configure Virtual Options

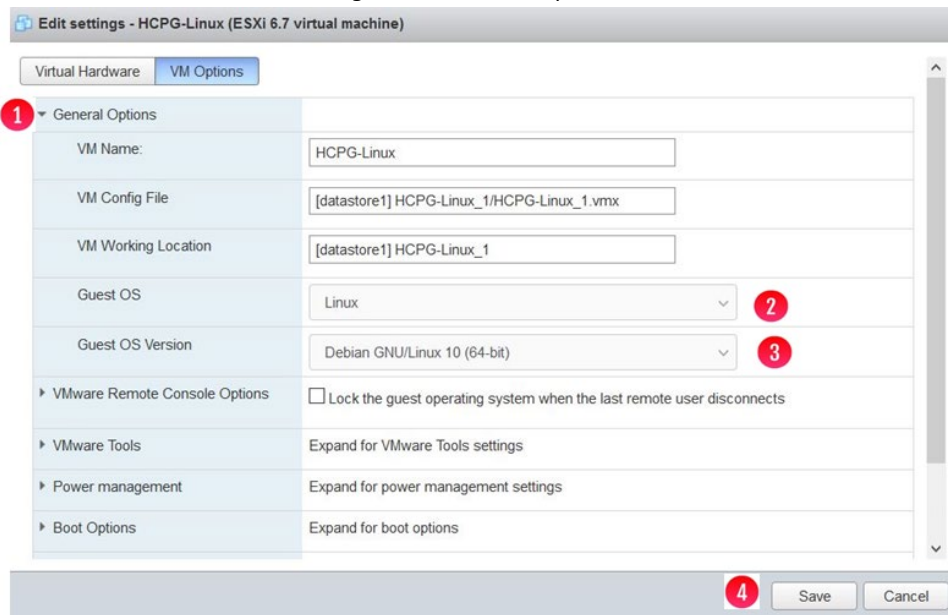
Right-click on the VM and select **Edit Settings**. This will bring up the previous form. However, this time select **VM Options** (Figure 4.3.1) button.

Figure 4.3 Virtual Options



The VM Options form will now appear (Figure 4.4). Open the **General Options** menu (Figure 4.4.1) and make sure the **Guest OS** (Figure 4.4.2) is set to Linux and **Guest OS Version** is set to **Debian GNU/Linux 10 (64-bit)** (Figure 4.4.3). Then select **Save** (Figure 4.4.4).

Figure 4.4 Edit VM Options



### Step 3: Storage Configuration

If you changed the size of any of the disk partitions, and the VM was still powered on, login to the VM as the user **vault** with default password **Organ1c** and issue the command **sudo reboot** to reboot the VM. If you did not change the size of any of the disk partitions, then skip this step and go to Step 4. Please note that this step should be taken before any storage and shares are created on the HCP Gateway. If there already are storage and shares configured, you will need to stop all the shares before proceeding with this step.

If necessary, power on the VM and log into the Linux VM as the user **vault** with default password **Organ1c** to expand the sizes of the filesystem partitions whose disk sizes were modified in VMWare. Issue the command **sudo ls -l /dev/disk/by-path** (Figure 4.5.1). Notice that the disk with **SCSI controller 0, target 0, LUN 2** has the name **sdcl** (Figure 4.5.2).

Figure 4.5 `sudo ls -l /dev/disk/by-path`

```
vault@hpcpg-1:~$ sudo ls -l /dev/disk/by-path 1
total 0
lrwxrwxrwx 1 root root 9 Sep 11 14:16 pci-0000:02:03.0-ata-1 -> ../../sr0
lrwxrwxrwx 1 root root 9 Sep 11 14:16 pci-0000:03:00.0-scsi-0:0:0:0 -> ../../sda
lrwxrwxrwx 1 root root 10 Sep 11 14:16 pci-0000:03:00.0-scsi-0:0:0:0-part1 -> ../../sda1
lrwxrwxrwx 1 root root 10 Sep 11 14:16 pci-0000:03:00.0-scsi-0:0:0:0-part2 -> ../../sda2
lrwxrwxrwx 1 root root 10 Sep 11 14:16 pci-0000:03:00.0-scsi-0:0:0:0-part3 -> ../../sda3
lrwxrwxrwx 1 root root 9 Sep 11 15:20 pci-0000:03:00.0-scsi-0:0:1:0 -> ../../sdb
lrwxrwxrwx 1 root root 10 Sep 11 15:20 pci-0000:03:00.0-scsi-0:0:1:0-part1 -> ../../sdb1
lrwxrwxrwx 1 root root 9 Sep 11 14:16 pci-0000:03:00.0-scsi-0:0:2:0 -> ../../sdc
lrwxrwxrwx 1 root root 10 Sep 11 14:16 pci-0000:03:00.0-scsi-0:0:2:0-part1 -> ../../sdcl 2
```

Issue the command `df -h` (Figure 4.6.1). Notice that the disk with the name `sdcl` is mounted on `/storage` (Figure 4.6.2), the `cache` and `local storage` disk on the HCP Gateway.

Figure 4.6 `df -h`

```
vault@hpcpg-1:~$ df -h 1
Filesystem      Size  Used Avail Use% Mounted on
udev            3.9G   0  3.9G   0% /dev
tmpfs           797M  17M  780M   3% /run
/dev/sda2       92G   3.6G  88G   4% /
tmpfs           3.9G   0  3.9G   0% /dev/shm
tmpfs           5.0M   0  5.0M   0% /run/lock
tmpfs           3.9G   0  3.9G   0% /sys/fs/cgroup
/dev/sdcl       100G  135M  100G   1% /storage 2
/dev/sda1       511M  5.2M  506M   1% /boot/efi
/dev/sdb1       100G  258M  100G   1% /var/lib/mysql
tmpfs           797M   0  797M   0% /run/user/1000
```

Please make sure all the shares are stopped on the HCP Gateway before proceeding. Issue the command `sudo umount /storage` (Figure 4.7.1) to unmount the `/storage` filesystem. Issue the command `sudo parted` (Figure 4.7.2) to start the parted utility to increase the size of the Linux disk partition. Enter the option `select /dev/sdc` (Figure 4.7.3) to select the disk to expand. Enter the option `print` (Figure 4.7.4) and notice that the disk size is now **1100GB** (Figure 4.7.5) but the Linux disk partition `End` remains as **100GB** (Figure 4.7.6 displays the size as 107GB in parted). Enter the option `resizepart` (Figure 4.7.7). Enter the **Partition number 1** (Figure 4.7.8) to match the output of the `sudo ls -l /dev/disk/by-path` command above. Enter the new size of the disk as reported by parted, for this example, **1100GB** (Figure 4.7.9). Enter the option `print` (Figure 4.7.10) to display the new settings for the partition. Notice that the `End` of the disk partition is now **1100GB** (Figure 4.7.11). Enter the option `quit` (Figure 4.7.12) to close `parted`.

Figure 4.7 Unmount /storage and run parted

```
vault@hccpg-linux-1:~$ sudo umount /storage 1
vault@hccpg-linux-1:~$ sudo parted 2
GNU Parted 3.2
Using /dev/sda
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) select /dev/sdc 3
Using /dev/sdc
(parted) print 4
Model: VMware Virtual disk (scsi)
Disk /dev/sdc: 1100GB 5
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start  End    Size  Type   File system  Flags
 1      1049kB 107GB 107GB primary xfs

(parted) resizepart 7
Partition number? 1 8
End? [161GB]? 1100GB 9
(parted) print 10
Model: VMware Virtual disk (scsi)
Disk /dev/sdc: 1100GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start  End    Size  Type   File system  Flags
 1      1049kB 1100GB 1100GB primary xfs

(parted) quit 12
Information: You may need to update /etc/fstab.

vault@hccpg-linux-1:~$
```

Issue the command **sudo mount /storage** (Figure 4.8.1) to remount the **/storage** filesystem. Issue the command **sudo xfs\_growfs -d /storage** (Figure 4.8.2), to expand the size of the **/storage** filesystem. Issue the command **df -h** (Figure 4.8.3) and notice that the **/storage** filesystem is now **1TB** in size (Figure 4.8.4).

Figure 4.8 Mount storage and verify new size

```
vault@hccpg-linux-1:~$ sudo mount /storage 1
vault@hccpg-linux-1:~$ sudo xfs_growfs -d /storage 2
meta-data=/dev/sdc1          isize=512    agcount=6, agsize=6553472 blks
=                           sectsz=512   attr=2, projid32bit=1
=                           crc=1       finobt=1, sparse=1, rmapbt=0
=                           reflink=0
data            =           bsize=4096  blocks=39306384, imaxpct=25
=                           sunit=0
naming          =version 2   bsize=4096  ascii-ci=0, ftype=1
log            =internal log  bsize=4096  blocks=12799, version=2
=                           sectsz=512   sunit=0 blks, lazy-count=1
realtime       =none       extsz=4096  blocks=0, rtextents=0
data blocks changed from 39306384 to 268435200
vault@hccpg-linux-1:~$ df -h 3
Filesystem      Size  Used Avail Use% Mounted on
udev            2.0G   0  2.0G   0% /dev
tmpfs           395M   5.6M 389M   2% /run
/dev/sda1       96G   3.9G  93G   5% /
tmpfs           2.0G   0  2.0G   0% /dev/shm
tmpfs           5.0M   0  5.0M   0% /run/lock
tmpfs           2.0G   0  2.0G   0% /sys/fs/cgroup
/dev/sdb1      100G  137M 100G   1% /var/lib/mysql
tmpfs           395M   0  395M   0% /run/user/1000
/dev/sdc1       1.0T   1.1G 1023G   1% /storage 4
vault@hccpg-linux-1:~$
```

Repeat this Step 3 for any other disks whose size was expanded in VMWare. Please note that if you expand the size of Hard disk 1, the OS disk, in parted, you will need some additional steps to

be able to work around the swap partition that is at the end of the `/dev/sda` disk. Contact support for assistance if this is the case.

#### Step 4: Network Configuration

Log into the Linux VM as the user **vault** with default password **Organ1c**. Use an editor tool like **vi**, which is supplied with the VM, to edit the **/etc/network/interfaces** file. You need to set the **primary network interface** settings, **eth0** in this example, based on the customer's requirements so the interface is **static** and has at least an **IP address, netmask, default gateway and dns-nameservers**.

```
vault@hpcg-single-1:~$ sudo vi /etc/network/interfaces
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces.

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto eth0
iface eth0 inet static
    address 10.6.8.100
    netmask 255.255.0.0
    gateway 10.6.0.1
    dns-nameservers 10.6.0.21,8.8.8.8
```

Issue the command **sudo reboot** to reboot the HCP Gateway and verify the new disk and network settings.



## Chapter 5 Deploy using OVF and VMDK

Sometimes problems are encountered when importing the OVA into the ESXi host using the GUI. This next method takes a step backwards and breaks the OVA into components. Then the OVF and VMDK files are imported. These instructions will work with both the Windows and Linux versions of the OVA, you just need to substitute the name of the disks in the OVA file you downloaded instead of using the Linux file names listed here.

**Step 1:** Download the OVA file.

**Step 2:** Unzip the OVA file using a tool like 7-Zip and select “Extract to HCPG-410-Linux\” (Figure 5.1). The HCPG-Linux-2.ovf and the 3 HCPG-Linux-2-disk#.vmdk files will now be in the HCPG-4-Linux folder (Figure 5.2).

Figure 5.1 – Download and Unzip OVA

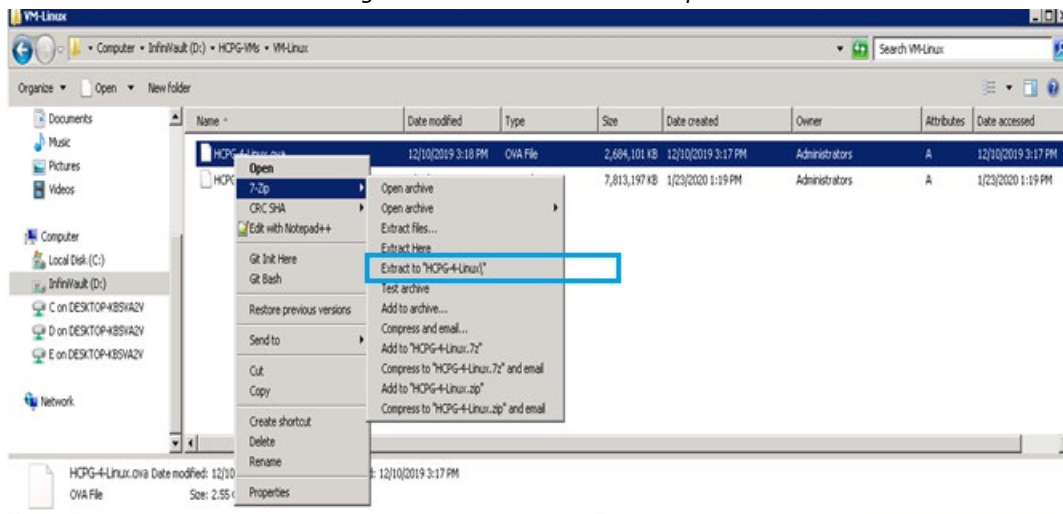
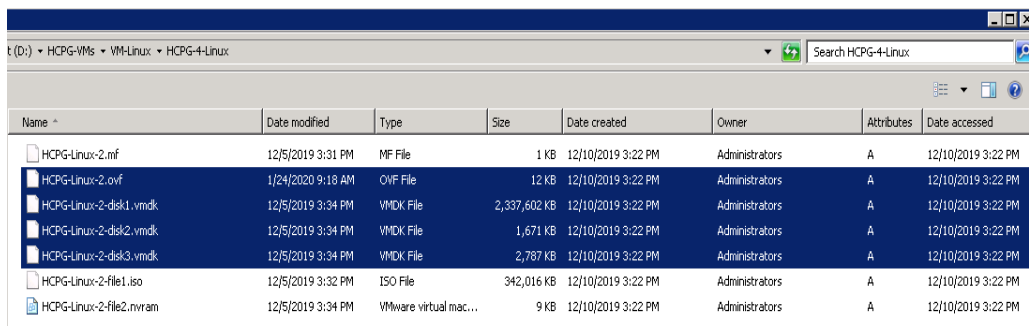
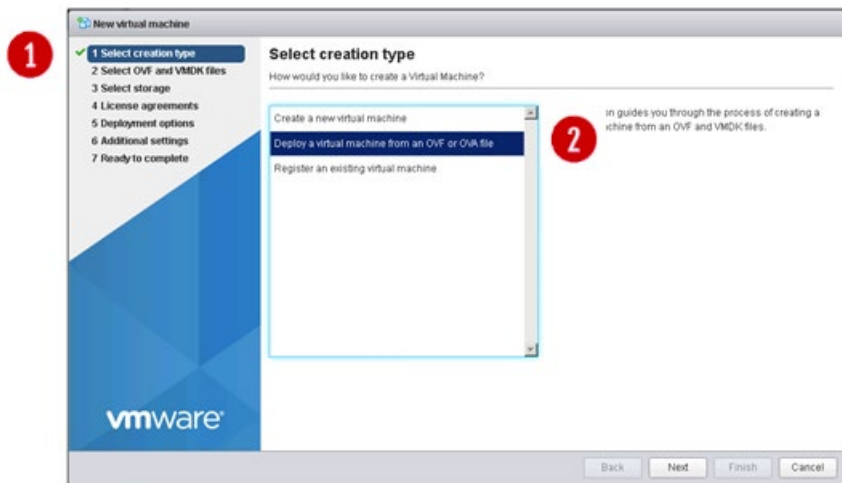


Figure 5.2 – Unzip Results



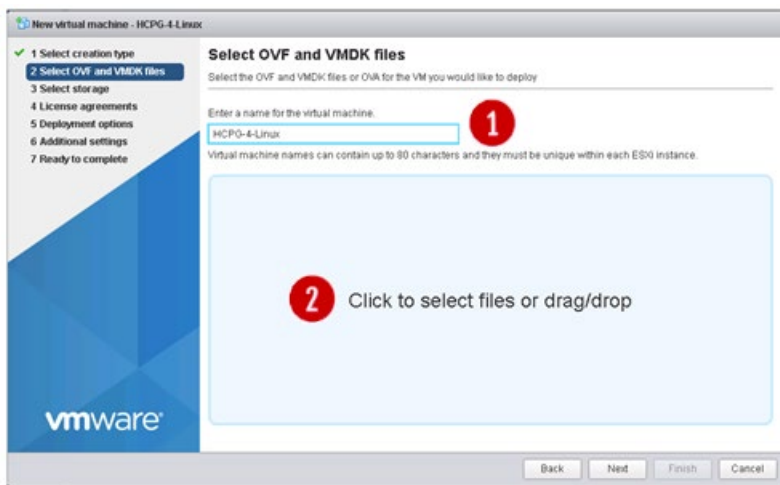
**Step 3:** On your ESXi host Web Client, select **Create/Register VM** (Figure 5.3.1), then select **Deploy a virtual machine from an OVF or OVA file** (Figure 5.3.2), then click the **Next** button

Figure 5.3 – ESXi Register VM



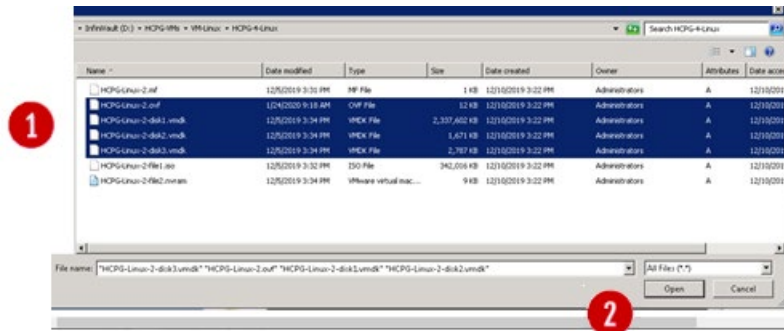
**Step 4:** Enter the name of the VM (Figure 5.4.1). Click in the **Select OVF and VMDK files** screen (Figure 5.4.2), navigate to the location where you unzipped the OVA Files.

Figure 5.4 – Add OVF and VMDK Files



**Step 5:** Select the HCPG-Linux-2.ovf and the 3 HCPG-Linux-2-disk#.vmdk files (Figure 5.5.1), then click the **Open** (Figure 5.5.2) button.

Figure 5.5 – Select Files



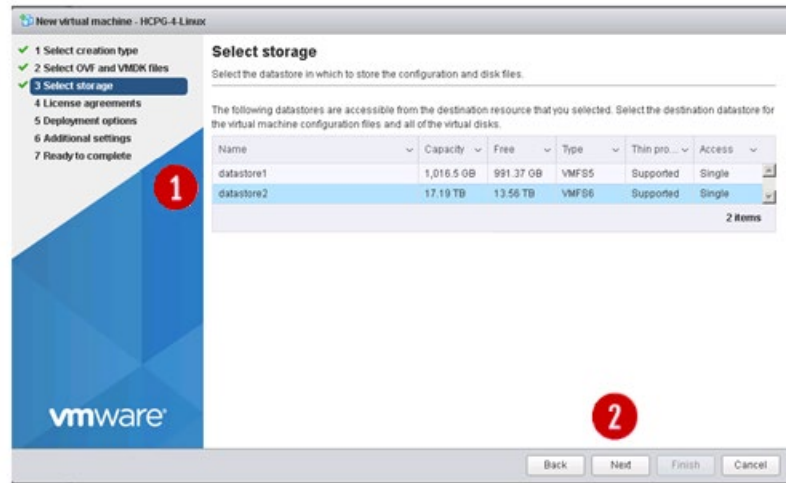
The GUI will be updated with the selected files (Figure 5.6.1). Click on the **Next** button (Figure 5.6.2) to advance the installation process.

Figure 5.6 – Select Files



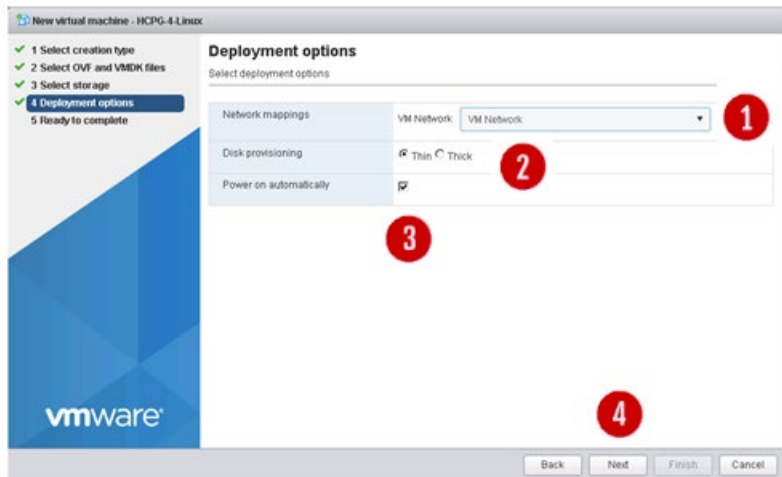
**Step 6:** Now we will need to select the datastore from the list (Figure 5.7.1). This will determine where to store the VM files. Then click the **Next** button (Figure 5.7.2) to continue.

Figure 5.7 – Select Datastore



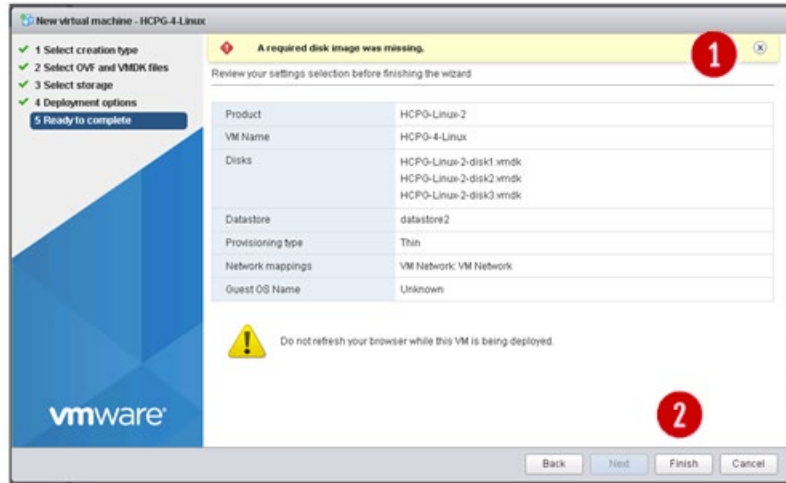
**Step 7:** Select the Network mappings (Figure 5.8.1) from the pull-down list. Then decide whether to configure Thin or Thick provisioning of storage (Figure 5.8.2). Next, optionally set the VM to power on automatically (Figure 5.8.3). Then click the **Next** button to continue.

Figure 5.8 – Networking



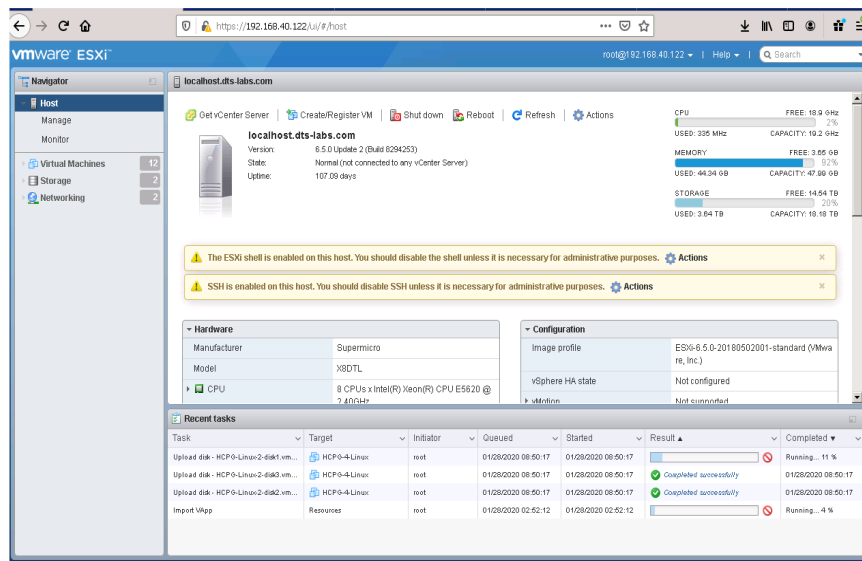
**Step 8:** If you see the “A required disk image was missing” error at the top of the screen, click the “X” button (Figure 5.9.1) to dismiss the warning. Then Click the **Finish** button (Figure 5.9.2) to deploy the VM.

Figure 5.9 – Disk Image Error



Notice in the **Recent tasks** screen that the vmdk files are now uploading to the ESXi host (Figure 5.10). After the VM deployment is complete, follow the instructions in Chapter 3 for Windows or 4 for Linux to configure the OS settings. If the VM does not deploy, or after deployment, the VM does not boot, refer to Chapter 6 for instructions to use the ovftool to deploy the VM.

5.10 – VM Deployed



## Chapter 6 Deploy using ESXi OVFTool

The Open Virtualization Format Tool (OVFTool) is a command line utility that allows you to import and export OVF packages to and from many VMware products.

**Step 1:** Log into your VMware account and download the 64-bit version of the OVFTool. The name should be similar to: VMware-ovftool-4.2.0-5965791.msi  
<https://my.vmware.com/web/vmware/details?downloadGroup=OVFTOOL420&productId=614>

**Step 2:** Login to the ESXi host CLI using an ssh tool like putty. If the file is zipped, uncompress the file to the following folder on the ESXi host:  
/vmfs/volumes/datastore1/Downloads

**Step 3:** Run the following commands at the command prompt.  
cd /vmfs/volumes/datastore1  
tar xjpf /vmfs/volumes/datastore1/Downloads/vmware-ovftool.tar.bz2

**Step 4:** Upload the HCP Gateway OVA file to the following folder on the ESXi host:  
/vmfs/volumes/datastore1/Downloads

**Step 5:** Run the OVFTool on the ESXi host to deploy the VM. You will need to replace the parameters in this example with the parameters that work in your environment.

**Note:** You will not be able to copy and paste this command directly into the ESXi host CLI, you will need to manually enter the text. The “vi://root:password@localhost” is the connection string to login to the ESXi host. If you run OVFTool on another server, replace “localhost” with the name or IP address of the ESXi host.

```
/vmfs/volumes/datastore1/vmware-ovftool/ovftool --name=testovftooldeploy --  
disableVerification --noSSLVerify --datastore=datastore2 --network="VM Network"  
/vmfs/volumes/datastore1/Downloads/HCPG-410-Windows-ESXI-60.ova  
vi://root:password@localhost
```

After the VM deployment is complete, follow the instructions in Chapter 3 for Windows or 4 for Linux to configure the OS settings.

## Chapter 7 Changing HCP Gateway Passwords

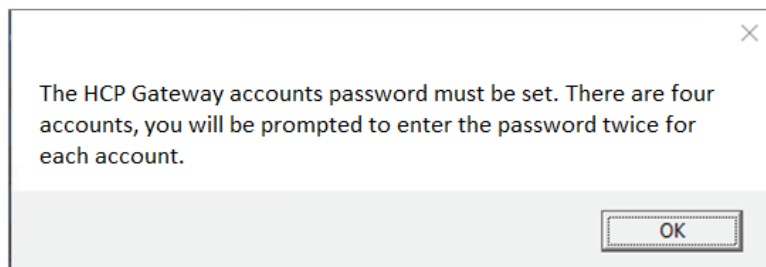
When doing VM deployment, upon first login to the HCP Gateway Operating System, the default passwords will need to be changed, after which the system will reboot.

**WARNING:** For security reasons the default passwords will need to be changed after initial login to the HCP Gateway Operating System and a reboot is required. Please secure all passwords. If passwords are forgotten or lost you must contact Hitachi Vantara support for assistance.

### Changing the Password (MS Windows OS):

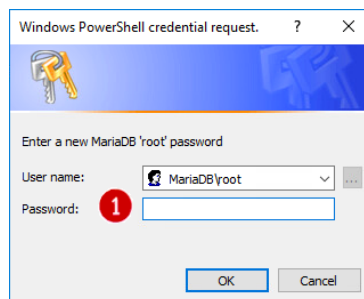
**Step 1** – A popup window will appear click **OK** to start the process to reset the Admin password (Figure 8.1).

Figure 8.1 – Reset password



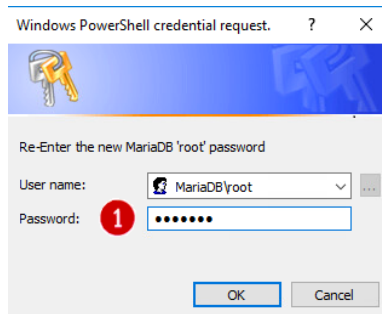
**Step 2** – A popup will appear asking for the MariaDB\root Administrator password. Your Professional Services Engineer will enter this password (Figure 8.2.1), then click **OK**. Note the MariaDB\root user is for non HCP Gateway operations like replication.

Figure 8.2 – Enter New MariaDB Root password



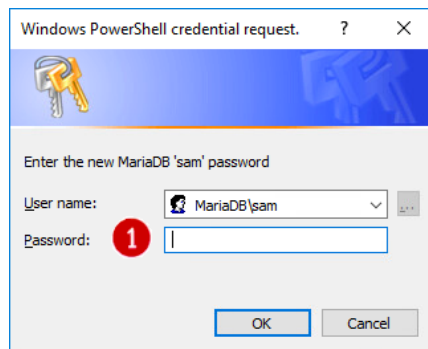
**Step 3** – Re-Enter the MariaDB\root Administrator password (Figure 8.3.1) and click the **OK** button.

*Figure 8.3 – Re-Enter New MariaDB Root password*



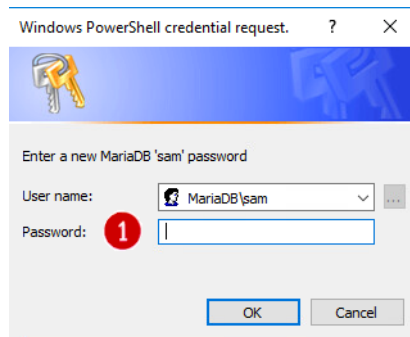
**Step 4** – Now you will be prompted to enter the MariaDB\sam user password (Figure 8.4.1). The MariaDB\sam is the 'user' account used by all the HCP Gateway applications, filter driver, UI, Copy2HCPG and HDI Migrator. Then you will be prompted to re-enter the password.

*Figure 8.4 – Enter New MariaDB sam user password*



**Step 5** – Re-Enter the MariaDB\sam user password (Figure 8.5.1) and click the **OK** button.

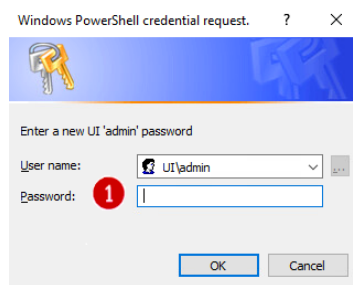
*Figure 8.5 – Re-enter New MariaDB sam user password*





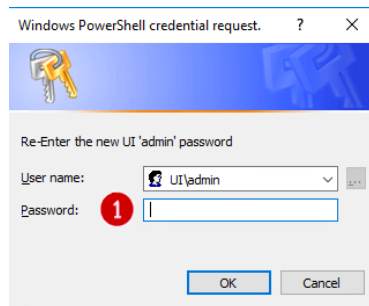
**Step 6** – Now you will be prompted to enter a new UI Admin password (Figure 8.6.1) that will be used to log into the HCP Gateway UI. Then click the **OK** button.

*Figure 8.6 – Enter New UI Admin password*



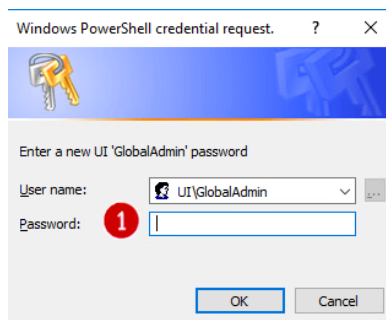
**Step 7** – Now you will be asked to verify the UI password (Figure 8.7.1) by re-entering it. Then click the **OK** button.

*Figure 8.7 – Re-enter New UI Admin password*



**Step 8** – Now you will need to set the password for the GlobalAdmin (Figure 8.8.1) in the UI. This user is primarily used in AD Groups.

*Figure 8.8 – Enter New UI Global Admin Password*



**Step 9** – Now you will be prompted to re-enter the UI\GlobalAdmin, then click **OK**.

**Upon successful completion the system will reboot.**

**Note:** If any of the re-entered passwords do not match, the Change password popup screen will not advance. If you do not remember the initial password the only way to fix the issue is to kill the current process via the Windows Task Manager and use the PowerShell script to change passwords.

### **Force Password Change for HCP Gateway Application**

When doing a VM deployment, the password change should happen after the initial login to the HCP Gateway Operating System.

Below are the steps to run the HCP Gateway change password process manually for physical server deployments or if the process fails or if the customer wants to change the passwords.

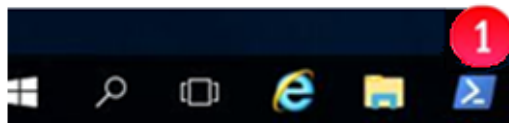
Running the PowerShell script will reset the registry entries to initiate the password change process after a reboot and login to the Windows OS:

1. Log into Windows OS as “administrator”
2. Open a PowerShell console
3. Change directory to “C:\SAM\ps”
4. Run the script “setRunOnce.ps1”
5. Reboot the HCP Gateway
6. Log in to Windows Operating System
7. Password Change will be initiated

### **How to work around the Password Reset hang issue during VM deployment:**

Step 1 – Open the Windows PowerShell window using the icon in the system taskbar (Figure 8.9.1).

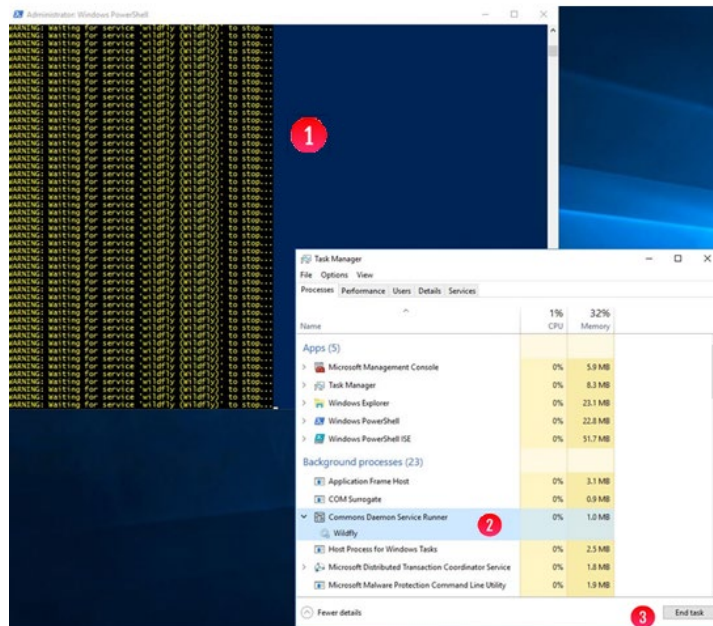
*Figure 8.9 – Open PowerShell Window*



Step 2 – If the Windows PowerShell window displays the message “**WARNING: waiting for service “wildfly (wildfly)” to stop...**” (Figure 8.10.1), then open Windows Task Manager, locate the “Background processes” named “Commons Daemon Service Runner” that is running the service “Wildfly” (Figure 8.10.2). Click the “**End Task**” button (Figure 8.10.3) to stop the “Wildfly” service.

The password reset prompt should appear now.

Figure 8.10 – End Wildfly Service



## Hitachi Vantara



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