Technical Documentation

Hewlett Packard Enterprise

HPE Synergy Image Streamer ESXi Artifact Bundle Documentation

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1 HPE Synergy Image Streamer ESXi Artifact Bundle

1.1 Introduction

HPE Synergy ImageStreamer ESXi Artifact Bundle includes artifacts to deploy and capture ESXi. The following ESXi versions are supported by ESXi artifact bundle.

- ESXi 5.5
- ESXi 6.0
- ESXi 6.5
- ESXi 6.7 (Refer to page15)

Hewlett Packard Enterprise does not ship ESXi golden images as part of ESXi artifact bundle. In order to use ESXi artifact bundle, an existing ESXi golden image should be added to ImageStreamer appliance or use ImageStreamer functionality to install and capture an ESXi image as explained in section “1.5”.

NOTE:

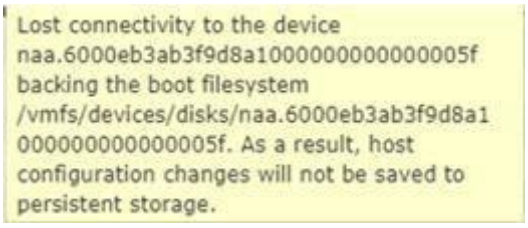
1) HPE Synergy ImageStreamer does not support OS Deployments on compute modules that have UEFI secure boot enabled.

2) In multi frame environments, it is recommended that high availability is enabled for management and iSCSI connections in the deployed ESXi using the build plan HPE – ESXi – deploy with multiple management NIC HA config.

1.2 Known Issue

1) In a typical Synergy Setup with Interconnect Modules configured in HA mode where ESXi hosts run from an Image Streamer appliance, there are 2 iSCSI paths configured at the ESXi host to the Image Streamer appliance from where the ESXi host is booted from and is running. Each path from an ESXi host to the Image Streamer appliance traverses through a different Master Interconnect Module.

Upon boot, the ESXi host establishes iSCSI connection to the Image Streamer appliance via one of the Master Interconnect Modules. If this interconnect module becomes unavailable for some reason, ESXi generates the following alert at the vCenter.



Meanwhile, a failover procedure occurs at the ESXi host, and an iSCSI connection is established via the alternate path. This ensures that the changes made to the host configuration would get saved.

ESXi host upon re-establishment of iSCSI doesn't clear the Alert on vCenter.

Please contact VMWare to understand the options to clear this Alert.

2) In case of ungraceful or forceful shutdown of the server (within an hour of the deployment), there may be a loss of personalization.

Please refer to the VMware article for the same: https://kb.vmware.com/s/article/2001780

1.3 ESXi Build Plans

1.3.1 Deploy Build Plan: HPE - ESXi – deploy in single frame non HA config

Deploys ESXi with a single ESXi management NIC configuration. The following parameters can be personalized using this build plan:

- hostname
- domain name
- root password
- enable SSH
- ESXi management NIC configuration - DHCP or static

Steps: Plan Script Names	**Attributes**
HPE - ESXi - mount	(none)
HPE - ESXi - unpack state	(none)
HPE - ESXi - configure management 1st NIC	DomainName Hostname ManagementNIC.mac ManagementNIC.ipaddress ManagementNIC.netmask ManagementNIC.gateway

	ManagementNIC.vlanid ManagementNIC.dns1 ManagementNIC.dns2
HPE - ESXi - set password	Password
HPE - ESXi - configure ssh	SSH
HPE - ESXi - repack state	(none)
HPE - ESXi - umount	(none)

Step 1: HPE - ESXi - mount

Mounts ESXi partition 5 (/bootbank) so that ESXi configuration files can be accessed for personalization.

Step 2: HPE - ESXi – unpack state

ESXi stores its configuration files in a compressed tar archive format (.tgz file) in /bootbank area. This build step downloads and extracts ESXi configuration files such as onetime.tgz or state.tgz, boot.cfg files from /bootbank area and keeps it ready for personalization

Step 3: HPE - ESXi - configure management 1st NIC

Prerequisite: During server profile creation, ESXi management connection should be added after selecting OS deployment plan so that ESXi management connection appears after the deployment connections in '**Connections'** part of Server Profile.

This step configures ESXi with a management NIC either with DHCP or static values. It adds a new vswitch '**vswitch1'** with uplink corresponding to ESXi management NIC and portgroup-name '**ManagementNetwork1'**. A new network interface '**vmk2'** is created with portgroup-name '**ManagementNetwork1'**.

This step also configures host name and domain name of ESXi host.

Step 4: HPE - ESXi - set password

Set password for ESXi root user.

Note: Password values should meet password complexity requirements defined for ESXi 5.x and ESXi 6.x appropriately. For details, please refer 1.4.6.

Step 5: HPE - ESXi - configure ssh

Enables SSH access to ESXi host.

Step 6: HPE - ESXi - repack state

Updates onetime.tgz or state.tgz with local.sh containing personalization commands and uploads it to the ESXi /bootbank area

Step 7: HPE - ESXi – umount

Unmounts ESXi /bootbank partition

1.3.2 Deploy Build Plan: HPE – ESXi – deploy with multiple management NIC HA config

Deploys ESXi with HA configuration for management NIC and iSCSI boot connections in a multi-frame environment containing a pair of ImageStreamer appliances. The following parameters can be personalized using this build plan

- hostname
- domain name
- root password
- enable SSH
- ESXi management NIC configuration - DHCP or static

Steps: Plan Script Names	**Attributes**
HPE - ESXi - mount	(none)
HPE - ESXi - unpack state	(none)
HPE - ESXi - configure management 1st NIC	DomainName Hostname ManagementNIC.mac ManagementNIC.ipaddress ManagementNIC.netmask ManagementNIC.gateway ManagementNIC.vlanid ManagementNIC.dns1 ManagementNIC.dns2
HPE - ESXi - configure management 2nd NIC HA	ManagementNIC2.mac

HPE - ESXi – mpio - configure iSCSI boot HA	(none)
HPE - ESXi - set password	Password
HPE - ESXi - configure ssh	SSH
HPE - ESXi - repack state	(none)
HPE - ESXi - umount	(none)

Step 1: HPE - ESXi - mount

Mounts ESXi partition 5 (/bootbank) so that ESXi configuration files can be accessed for personalization.

Step 2: HPE - ESXi – unpack state

ESXi stores its configuration files in a compressed tar archive format (.tgz file) in /bootbank area. This build step downloads and extracts ESXi configuration files such as onetime.tgz or state.tgz, boot.cfg files from /bootbank area and keeps it ready for personalization

Step 3: HPE - ESXi – mpio configure iSCSI boot HA

Prerequisite: During server profile creation, ESXi management connection should be added after selecting OS deployment plan so that ESXi management connection appears after the deployment connections in 'Connections' part of Server Profile.

This step adds a 2nd deployment uplink '**vmnic1'** to vSwitch0. This step configures vSwitch0 to enable HA on ESXi for iSCSI boot from Image Streamer.

Step 4: HPE - ESXi - set password

Set password for ESXi root user.

Note: Password values should meet password complexity requirements defined for ESXi 5.x and ESXi 6.x appropriately. For details, please refer 1.4.6.

Step 5: HPE - ESXi - configure management 1st NIC

Prerequisite: During server profile creation, ESXi management connection should be added after selecting OS deployment plan so that ESXi management connection appears after the deployment connections in ‘Connections’ part of Server Profile.

This step configures ESXi with a management NIC either with DHCP or static values. It adds a new vswitch ‘**vswitch1’** with uplink corresponding to ESXi management NIC and portgroup-name ‘**ManagementNetwork1’**. A new network interface ‘**vmk2’** is created with portgroup-name ‘**ManagementNetwork1’**.

This step also configures host name and domain name of ESXi host.

Step 6: HPE - ESXi - configure management 2nd NIC HA

This step configures ESXi with a 2nd management NIC either with DHCP or static values.

Step 7: HPE - ESXi - configure ssh

Enables SSH access to ESXi host.

Step 8: HPE - ESXi - repack state

Updates onetime.tgz or state.tgz with local.sh containing personalization commands and uploads it to the ESXi /bootbank area

Step 9: HPE - ESXi – umount

Unmounts ESXi /bootbank partition

1.3.3 Capture Build Plan: HPE - ESXi - generalize full state

Performs full generalization of an ESXi image without retaining any of the ESXi host configuration.

Steps: Plan Script Names	**Attributes**
HPE – ESXi – mount	(none)
HPE – ESXi – generalize host configuration	(none)
HPE – ESXi – umount	(none)

Step 1: HPE - ESXi - mount

Mounts ESXi partition 5 (/bootbank) so that ESXi configuration files can be accessed for generalization.

Step 2: HPE - ESXi – generalize full state

Perform full generalization of ESXi host configuration by doing the following:

- empty the contents of jumpstrt.gz and useropts.gz files
- delete state.tgz file
- edit boot.cfg to point to onetime.tgz instead of state.tgz

Step 3: HPE - ESXi – umount

Unmounts ESXi /bootbank partition

1.4 ESXi Plan Scripts

1.4.1 HPE - ESXi - mount

ESXi stores its configuration files (state.tgz, onetime.tgz, boot.cfg etc) in /bootbank partition (partition no. 5). This planscript mounts this ESXi /bootbank partition so that ESXi configuration files can be accessed for personalization/generalization.

Attributes:

(none)

1.4.2 HPE - ESXi – unpack state

ESXi stores its configuration files in a compressed tar archive format (.tgz file) in /bootbank area. This planscript downloads and extracts ESXi configuration files such as onetime.tgz, state.tgz, boot.cfg files from /bootbank area and keeps it ready for personalization.

Attributes:

(none)

1.4.3 HPE - ESXi - configure management 1st NIC

Configures ESXi with a management NIC either with DHCP or static values. It adds a new vswitch ‘vswitch1’ with uplink corresponding to ESXi management NIC and portgroup-name ‘ManagementNetwork1’. A new network interface ‘vmk2’ is created with portgroup-name ‘ManagementNetwork1’.

This step also configures host name and domain name of ESXi host.

This planscript writes esxcli commands corresponding to above configuration into local.sh so that this configuration takes effect during first boot of ESXi.

Attributes:

DomainName (FQDN)

Fully Qualified Domain Name of ESXi host

Hostname (Hostname)
Host name for the ESXi host

ManagementNIC (NIC)
ESXi management NIC configuration, either DHCP or static. In case of static, the following values needs to be specified during deployment.

- ManagementNIC.ipaddress
- ManagementNIC.netmask
- ManagementNIC.gateway
- ManagementNIC.vlanid
- ManagementNIC.dns1
- ManagementNIC.dns2
- ManagementNIC.mac

Mac address corresponding to ESXi management network connection. Set automatically by Server profile.

1.4.4 HPE - ESXi - configure management 2nd NIC HA

This step adds an uplink corresponding to second ESXi management connection to vSwitch1.

Attributes:

ManagementNIC2.mac

Mac address corresponding to second ESXi management network connection. Set automatically by Server profile.

1.4.5 HPE - ESXi – mpio configure iSCSI boot HA

This step enables HA for iSCSI boot connection using mpio

Attributes:

(none)

1.4.6 HPE - ESXi - set password

Set password for ESXi root user.

Attributes:

Password (Password)

Password value for ESXi root user. Note that password value should meet password complexity requirements defined for ESXi 5.x, ESXi 6.x appropriately.

For details, please refer

https://pubs.vmware.com/vsphere-55/index.jsp?topic=%2Fcom.vmware.vsphere.security.doc%2FGUID-DC96FFDB-F5F2-43EC-8C73-05ACDAE6BE43.html

https://communities.vmware.com/docs/DOC-31941

1.4.7 HPE - ESXi - configure ssh

Enables SSH access to ESXi host.

Attributes:

SSH (Option)

enabled – enables and starts SSH service in ESXi host. Also enables and starts ESXi shell

1.4.8 HPE - ESXi - repack state

Updates onetime.tgz or state.tgz with local.sh containing personalization commands and uploads it to the ESXi /bootbank area.

Attributes:

(none)

1.4.9 HPE - ESXi – umount

Unmounts ESXi /bootbank partition.

Attributes:

(none)

1.4.10 HPE - ESXi – generalize full state

Perform full generalization of ESXi host configuration by doing the following:

- empty the contents of jumpstrt.gz and useropts.gz files
- delete state.tgz file
- edit boot.cfg to point to onetime.tgz instead of state.tgz

Attributes:

(none)

1.5 Create ESXi golden image using ImageStreamer

The following process explains how to create an ESXi golden image using Image Streamer.

1. Ensure that you have access to HPE provided ESXi ISO installation file containing iSCSI device drivers.
2. Create a server profile with “HPE - Foundation 1.0 - create empty OS Volume” as OS Deployment plan and any available server hardware. Set an appropriate value for volume size in MiB units. The Synergy Server will be configured for access to this empty OS Volume.
3. Launch iLO Integrated Remote Console of this server and set ESXi ISO file as virtual CD-ROM/DVD image file. Power on the server.
4. ESXi installation starts and ESXi installer detects the configured empty OS Volume as an iSCSI disk device. Select this iSCSI disk device as the target for ESXi installation.
5. Follow onscreen instructions and complete the ESXi installation.
6. Power off the server.
7. Navigate to ImageStreamer -> Golden Images and Click ‘Create Golden image’
8. Select the OS volume corresponding to the server profile created for empty OS volume and choose “HPE – ESXi – generalize full state” as the capture build plan.
9. ImageStreamer generalizes and captures ESXi image and adds it as a golden image.

2 HPE Synergy Image Streamer ESXi 6.7 Artifact Bundle

2.1 Introduction

HPE Synergy ImageStreamer ESXi 6.7 Artifact Bundle includes artifacts to deploy and capture ESXi 6.7.

Hewlett Packard Enterprise does not ship ESXi 6.7 golden images as part of ESXi 6.7 artifact bundle. In order to use ESXi 6.7 artifact bundle, an existing ESXi 6.7 golden image should be added to ImageStreamer appliance or use ImageStreamer functionality to install and capture an ESXi image as explained in section “1.5”.

NOTE:

1) HPE Synergy ImageStreamer does not support OS Deployments on compute modules that have UEFI secure boot enabled.

2) In multi frame environments, it is recommended that high availability is enabled for management and iSCSI connections in the deployed ESXi using the build plan HPE – ESXi – deploy with multiple management NIC HA config.

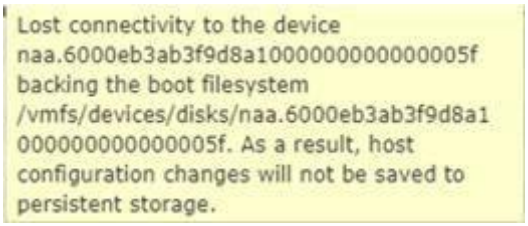
3) An Image Streamer Golden Image for ESXi 6.7 is to be captured ‘as is’, without any generalization scripts. This also introduces a constraint that the ESXi 6.7 image to be captured, shouldn’t contain any personalization.

Any personalization, if done on the host before capturing the image will be retained and should be overwritten during the subsequent deployments.

2.2 Known Issue

1) In a typical Synergy Setup with Interconnect Modules configured in HA mode where ESXi hosts run from an Image Streamer appliance, there are 2 iSCSI paths configured at the ESXi host to the Image Streamer appliance from where the ESXi host is booted from and is running. Each path from an ESXi host to the Image Streamer appliance traverses through a different Master Interconnect Module.

Upon boot, the ESXi host establishes iSCSI connection to the Image Streamer appliance via one of the Master Interconnect Modules. If this interconnect module becomes unavailable for some reason, ESXi generates the following alert at the vCenter.



Meanwhile, a failover procedure occurs at the ESXi host, and an iSCSI connection is established via the alternate path. This ensures that the changes made to the host configuration would get saved.

ESXi host upon re-establishment of iSCSI doesn't clear the Alert on vCenter.

Please contact VMWare to understand the options to clear this Alert.

2) In case of ungraceful or forceful shutdown of the server (within an hour of the deployment), there may be a loss of personalization.

Please refer to the VMware article for the same: https://kb.vmware.com/s/article/2001780

2.3 ESXi 6.7 Build Plans

2.3.1 Deploy Build Plan: HPE – ESXi 6.7 – deploy in single frame non HA config

Deploys ESXi with a single ESXi management NIC configuration. The following parameters can be personalized using this build plan:

- hostname
- domain name
- root password
- enable SSH
- ESXi management NIC configuration - DHCP or static

Steps: Plan Script Names	**Attributes**
HPE - ESXi 6.7- mount	(none)
HPE - ESXi 6.7- unpack state	(none)
HPE – ESXi 6.7- replace initiator ip	(none)

HPE – ESXi 6.7-remove system uuid	(none)
HPE – ESXi 6.7- generalize state	(none)
HPE - ESXi - configure management 1st NIC	DomainName Hostname ManagementNIC.mac ManagementNIC.ipaddress ManagementNIC.netmask ManagementNIC.gateway ManagementNIC.vlanid ManagementNIC.dns1 ManagementNIC.dns2
HPE - ESXi - set password	Password
HPE - ESXi - configure ssh	SSH
HPE - ESXi 6.7- clear local	(none)
HPE - ESXi 6.7- repack state	(none)
HPE - ESXi - umount	(none)

Step 1: HPE – ESXi 6.7 - mount

Mounts ESXi partition 5 (/bootbank) so that ESXi configuration files can be accessed for personalization.

Step 2: HPE – ESXi 6.7 – unpack state

ESXi stores its configuration files in a compressed tar archive format (.tgz file) in /bootbank area. This build step downloads and extracts ESXi configuration files such as onetime.tgz or state.tgz, boot.cfg files from /bootbank area and keeps it ready for personalization

Step 3: HPE – ESXi 6.7 – replace initiator IP

ESXi 6.7 does not support complete generalization. Hence the script to replace the initiator IP set during image capture.

Step 4: HPE – ESXi 6.7 – remove system uuid

ESXi 6.7 does not support complete generalization. Hence the script to remove the uuid set during image capture.

Step 5: HPE – ESXi 6.7 – generalize state

Clear the contents of local.sh in state.tgz and revert it to default contents

Step 6: HPE - ESXi - configure management 1st NIC

Prerequisite: During server profile creation, ESXi management connection should be added after selecting OS deployment plan so that ESXi management connection appears after the deployment connections in '**Connections'** part of Server Profile.

This step configures ESXi with a management NIC either with DHCP or static values. It adds a new vswitch '**vswitch1'** with uplink corresponding to ESXi management NIC and portgroup-name '**ManagementNetwork1'**. A new network interface '**vmk2'** is created with portgroup-name '**ManagementNetwork1'**.

This step also configures host name and domain name of ESXi host.

Step 7: HPE - ESXi - set password

Set password for ESXi root user.

Note: Password values should meet password complexity requirements defined for ESXi 5.x and ESXi 6.x appropriately. For details, please refer 1.4.6.

Step 8: HPE - ESXi - configure ssh

Enables SSH access to ESXi host.

Step 9: HPE – ESXi 6.7 – clear local

Clear the contents of local.sh post personalization.

Step 10: HPE - ESXi 6.7- repack state

Updates state.tgz with local.sh containing personalization commands and uploads it to the ESXi /bootbank area

Step 11: HPE - ESXi – umount

Unmounts ESXi /bootbank partition

2.3.2 Deploy Build Plan: HPE – ESXi 6.7– deploy with multiple management NIC HA config

Deploys ESXi with HA configuration for management NIC and iSCSI boot connections in a multi-frame environment containing a pair of ImageStreamer appliances. The following parameters can be personalized using this build plan

- hostname
- domain name
- root password
- enable SSH
- ESXi management NIC configuration - DHCP or static

Steps: Plan Script Names	**Attributes**
HPE - ESXi 6.7- mount	(none)
HPE - ESXi 6.7- unpack state	(none)
HPE – ESXi 6.7- replace initiator ip	(none)
HPE – ESXi 6.7-remove system uuid	(none)
HPE – ESXi 6.7- generalize state	(none)
HPE - ESXi – mpio - configure iSCSI boot HA	(none)
HPE - ESXi - configure management 1st NIC	DomainName Hostname ManagementNIC.mac ManagementNIC.ipaddress ManagementNIC.netmask ManagementNIC.gateway ManagementNIC.vlanid ManagementNIC.dns1 ManagementNIC.dns2
HPE - ESXi - configure management 2nd NIC HA	ManagementNIC2.mac

HPE - ESXi - set password	Password
HPE - ESXi - configure ssh	SSH
HPE - ESXi 6.7- clear local	(none)
HPE - ESXi 6.7- repack state	(none)
HPE - ESXi - umount	(none)

Step 1: HPE – ESXi 6.7 - mount

Mounts ESXi partition 5 (/bootbank) so that ESXi configuration files can be accessed for personalization.

Step 2: HPE – ESXi 6.7 – unpack state

ESXi stores its configuration files in a compressed tar archive format (.tgz file) in /bootbank area. This build step downloads and extracts ESXi configuration files such as onetime.tgz or state.tgz, boot.cfg files from /bootbank area and keeps it ready for personalization

Step 3: HPE – ESXi 6.7 – replace initiator IP

ESXi 6.7 does not support complete generalization. Hence the script to replace the initiator IP set during image capture.

Step 4: HPE – ESXi 6.7 – remove system uuid

ESXi 6.7 does not support complete generalization. Hence the script to remove the uuid set during image capture.

Step 5: HPE – ESXi 6.7 – generalize state

Clear the contents of local.sh in state.tgz and revert it to default contents.

Step 6: HPE - ESXi – mpio configure iSCSI boot HA

Prerequisite: During server profile creation, ESXi management connection should be added after selecting OS deployment plan so that ESXi management connection appears after the deployment connections in ‘Connections’ part of Server Profile.

This step adds a 2nd deployment uplink ‘**vmnic1’** to vSwitch0. This step configures vSwitch0 to enable HA on ESXi for iSCSI boot from Image Streamer.

Step 7: HPE - ESXi - configure management 1st NIC

Prerequisite: During server profile creation, ESXi management connection should be added after selecting OS deployment plan so that ESXi management connection appears after the deployment connections in '**Connections'** part of Server Profile.

This step configures ESXi with a management NIC either with DHCP or static values. It adds a new vswitch '**vswitch1'** with uplink corresponding to ESXi management NIC and portgroup-name '**ManagementNetwork1'**. A new network interface '**vmk2'** is created with portgroup-name '**ManagementNetwork1'**.

This step also configures host name and domain name of ESXi host.

Step 8: HPE - ESXi - configure management 2nd NIC HA

This step configures ESXi with a 2nd management NIC either with DHCP or static values.

Step 9: HPE - ESXi - set password

Set password for ESXi root user.

Note: Password values should meet password complexity requirements defined for ESXi 5.x and ESXi 6.x appropriately. For details, please refer 1.4.6.

Step 10: HPE - ESXi - configure ssh

Enables SSH access to ESXi host.

Step 11: HPE – ESXi 6.7 – clear local

Clear the contents of local.sh post personalization.

Step 12: HPE - ESXi 6.7- repack state

Updates state.tgz with local.sh containing personalization commands and uploads it to the ESXi /bootbank area

Step 13: HPE - ESXi – umount

Unmounts ESXi /bootbank partition

2.4 ESXi 6.7 Plan Scripts

2.4.1 HPE - ESXi 6.7- mount

ESXi stores its configuration files (state.tgz, boot.cfg etc) in /bootbank partition (partition no. 5). This planscript mounts this ESXi /bootbank partition so that ESXi configuration files can be accessed for personalization/generalization.

Attributes:

(none)

2.4.2 HPE - ESXi 6.7– unpack state

ESXi stores its configuration files in a compressed tar archive format (.tgz file) in /bootbank area. This planscript downloads and extracts ESXi configuration files such as state.tgz, boot.cfg files from /bootbank area and keeps it ready for personalization.

Attributes:

(none)

2.4.3 HPE - ESXi 6.7– replace initiator IP

This planscript replaces the initiator IP set during image capture.

Attributes:

(none)

2.4.4 HPE - ESXi 6.7– remove system uuid

This planscript removes the unique UUID set at the time of image capture, to allow the new UUID to be set while deployment.

Attributes:

(none)

2.4.5 HPE - ESXi 6.7– generalize state

This planscript clears the contents of the local.sh in state.tgz and revert it to default contents.

Attributes:

(none)

2.4.6 HPE - ESXi – mpio – configure iSCSI boot HA

This step enables HA for iSCSI boot connection using mpio

Attributes:

(none)

2.4.7 HPE - ESXi - configure management 1st NIC

Configures ESXi with a management NIC either with DHCP or static values. It adds a new vswitch ‘vswitch1’ with uplink corresponding to ESXi management NIC and portgroup-name

'ManagementNetwork1'. A new network interface 'vmk2' is created with portgroup-name 'ManagementNetwork1'.

This step also configures host name and domain name of ESXi host.

This planscript writes esxcli commands corresponding to above configuration into local.sh so that this configuration takes effect during first boot of ESXi.

Attributes:

DomainName (FQDN)

Fully Qualified Domain Name of ESXi host

Hostname (Hostname)
Host name for the ESXi host

ManagementNIC (NIC)
ESXi management NIC configuration, either DHCP or static. In case of static, the following values needs to be specified during deployment.

- ManagementNIC.ipaddress
- ManagementNIC.netmask
- ManagementNIC.gateway
- ManagementNIC.vlanid
- ManagementNIC.dns1
- ManagementNIC.dns2
- ManagementNIC.mac

Mac address corresponding to ESXi management network connection. Set automatically by Server profile.

2.4.8 HPE - ESXi - configure management 2nd NIC HA

This step adds an uplink corresponding to second ESXi management connection to vSwitch1.

Attributes:

ManagementNIC2.mac

Mac address corresponding to second ESXi management network connection. Set automatically by Server profile.

2.4.9 HPE - ESXi - set password

Set password for ESXi root user.

Attributes:

Password (Password)

Password value for ESXi root user. Note that password value should meet password complexity requirements defined for ESXi 5.x, ESXi 6.x appropriately.

For details, please refer

https://pubs.vmware.com/vsphere-55/index.jsp?topic=%2Fcom.vmware.vsphere.security.doc%2FGUID-DC96FFDB-F5F2-43EC-8C73-05ACDAE6BE43.html

https://communities.vmware.com/docs/DOC-31941

2.4.10 HPE - ESXi - configure ssh

Enables SSH access to ESXi host.

Attributes:

SSH (Option)

enabled – enables and starts SSH service in ESXi host. Also enables and starts ESXi shell

2.4.11 HPE - ESXi 6.7– clear local

This planscript is used to clear the contents of local.sh .

Attributes:

(none)

2.4.12 HPE - ESXi - repack state

Updates state.tgz with local.sh containing personalization commands and uploads it to the ESXi /bootbank area.

Attributes:

(none)

2.4.13 HPE - ESXi – umount

Unmounts ESXi /bootbank partition.

Attributes:

(none)

2.5 Create ESXi 6.7 golden image using Image Streamer

Golden Image creation procedure for ESXi 6.7:

1. Ensure that you have access to ESXi 6.7 ISO file.

2. Create a server profile with “HPE - Foundation 1.0 - create empty OS Volume” as OS Deployment plan and a server hardware of desired hardware type. Set an appropriate value for volume size in MiB units, say 20480 MiB. The HPE Synergy Compute Blade will be configured for access to this empty OS Volume.

3. Launch iLO Integrated Remote Console of this server and set the ESXi 6.7 ISO file as virtual CD-ROM/DVD image file. Power on the server.

4. Install ESXi 6.7.

5. **Reboot the Compute Blade**. [required for the OS to create the state.tgz folder]

6. 1) *To capture ESXi 6.7 base image:*

    a. Shutdown the server gracefully by pressing F12, and shutting it down, or by giving ‘poweroff’ command from SSH console, or by, clicking on the Momentary Press from iLO console of the server.

    b. Perform an as-is capture using "HPE - Foundation 1.0 - capture OS Volume as is" build plan to create the "as-is" golden image of the OS. (NOTE: There are no generalization - capture scripts for ESXi 6.7)

    ESXi update using VUM is supported.
    Please make sure you set the minimum personalization required for the host to be added to vCenter.
    The personalization attributes set on the host will persist in the golden image and same should be overwritten during the subsequent deployments (using Plan Scripts).

    To manually install VIBs or updates via virtual media and then capture ESXi 6.7 image:

    a. The golden Image should be captured only from an ESXi OS instance that is not personalized.

    Note: Any personalization, if done on the host before capturing the image will be retained and should be overwritten during the subsequent deployments.

    b. Identify a compute blade to capture the ESXi image. Install the base ESXi ISO if required.

    c. Convert the ZIP file containing VIBs to be installed into an ISO, using any application available on internet or in linux using the command:

    mkisofs –o /tmp/<FileName.iso> /tmp/directory/

    d. Select this ISO file as virtual CD-ROM/DVD image file.

    e. SSH to the console and run following commands:

esxcfg-mpath –l | grep –i cd-rom
vmkload_mod iso9660
/sbin/vsish –e set /vmkModules/iso9660/mount <Device Display Name>

f. To verify the contents:

ls /vmfs/volumes/<Device Display Name>

g. To install VIB:

esxcli software vib install –d /vmfs/volumes/<.ISO file>

h. Unmount CD ROM and unload module:

vsish –e set /vmkModules/iso9660/umount<Device Display Name>
vmkload_mod –u iso9660

i. Reboot the Compute Blade.

j. Verify the VIBs are installed:

esxcli software vib list

k. Shutdown the server gracefully by pressing F12, and shutting it down, or by giving ‘poweroff’ command from SSH console, or by, clicking on the Momentary Press button.

l. Perform an as-is capture using "HPE - Foundation 1.0 - capture OS Volume as is" build plan to create the "as-is" golden image of the OS. (NOTE: There are no generalization - capture scripts for ESXi 6.7)

The golden image captured in previous step can be used to deploy ESXi 6.7 to any compute blade.

Note: The ports on which the physical NICs are configured for various connections defined in sever-profile/ server-profile template, before capturing the image, will be retained. Please ensure to use the same ports for subsequent deployments.