

Create CentOS 7.4 Golden Image

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This document describes the following steps required for Golden Image creation:

- 1.0 Create temporary Server Profile and assign to node**
- 2.0 Boot the node and install CentOS 7.4**
- 3.0 Login to OS and configure Networking and Multipathing**
- 4.0 Capture the Golden Image**
- 5.0 Unassign and delete temporary Server Profile**

1.0 Create temporary Server Profile and assign to node

Connect to Synergy OneView, login as Administrator. Identify a node that is not in use. Create a new profile with OS Deployment Plan “HPE - Foundation 1.0 - create empty OS Volume” and change size to 20480 (20GB) as shown below:

Create Server Profile General ?

General

Name

Install CentOS 7.4

Server profile template

none

Description

temp profile to create Golden Image

Server hardware

Katniss, bay 2

Server hardware type

SY 480 Gen9 1

Enclosure group

EG01

Affinity

Device bay

OS Deployment

To define OS deployment settings, select an enclosure group configured for OS deployment.

OS deployment plan

HPE - Foundation 1.0 - create empty OS Volume-2017-02

Deployment Settings

Setting	Value
VolumeSize	20480 MiB

Firmware

3

Add Connection: is3-depl-range

Create

Create +

Cancel

A connection to the deployment network will automatically be included in the profile. Click to add another connection, using a network set that has external access. This will enable the CentOS node to reach the network after it boots and install additional packages.

Add Connection
?

General

Nameether-A

Function typeEthernet

NetworkCentOS Net Set

PortAuto

Requested bandwidth (Gb/s)10

Requested virtual functions

None

Custom

Auto

BootNot bootable

☐ Use user-specified IDs

AddAdd +Cancel

Create Server Profile
Firmware
?

Firmware

Connections

ID	Name	Network	Port	Boot	
1	Deployment Network A	is3-depl-range	vlan906	Mezzanine 3:1-a	iSCSI primary
	Type	Ethernet			
	MAC address	Auto			
	Requested bandwidth	2.5 Gb/s			
	Initiator name	pending assignment			
	Initiator IP address	pending assignment			
	OS volume	pending assignment			
	Target name	pending assignment			
	Target LUN	pending assignment			
	Target IP address	pending assignment			
2	ether-A	CentOS Net Set (network set)	Auto	Not bootable	
	Type	Ethernet			
	MAC address	Auto			
	Requested virtual functions	None			
	Requested bandwidth	10 Gb/s			

Add Connection

4
Add Connection: CentOS Net Set

CreateCreate +Cancel

Click “Create” to apply the profile to the node.

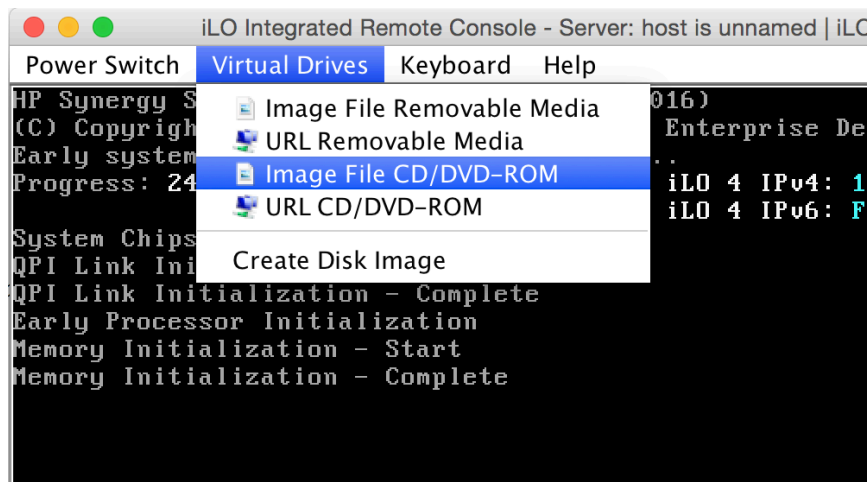
2.0 Boot the node and install CentOS 7.4

Download CentOS 7.4 minimal ISO and save to a directory on your local system that is connected to Synergy OneView.

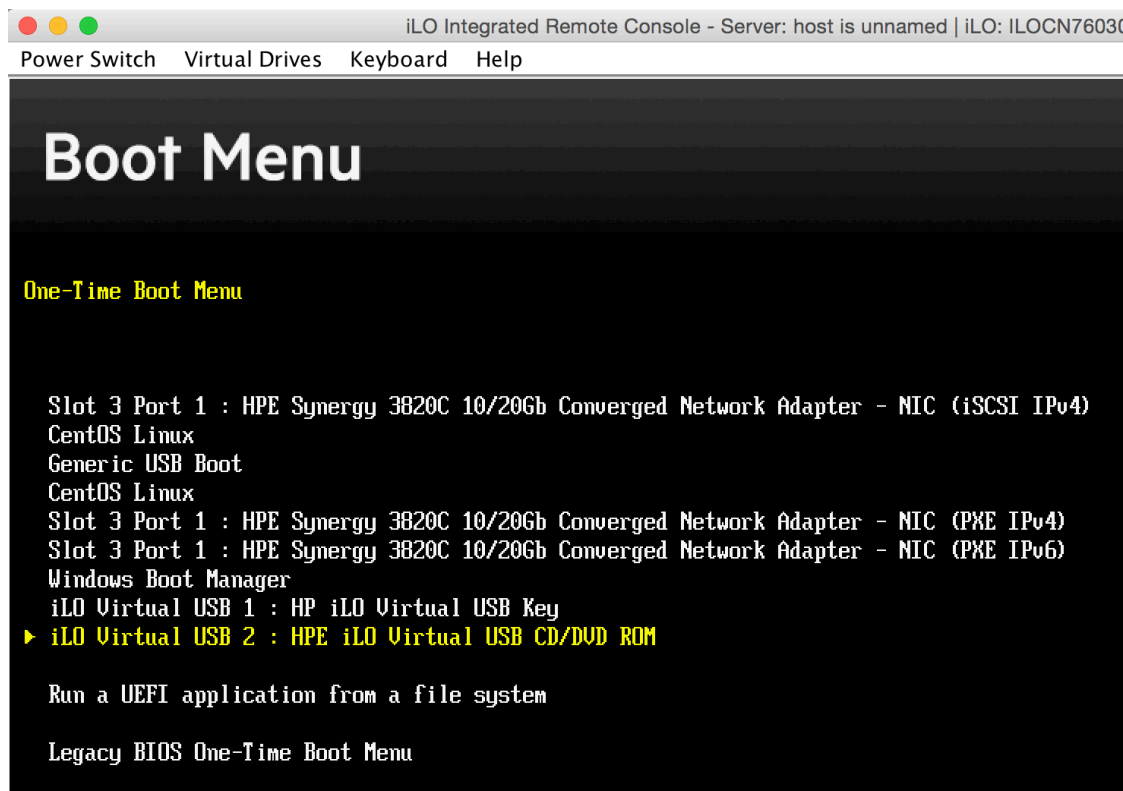
In OneView, select the new profile and click Actions → “Power On”

Click Actions → “Launch Console”

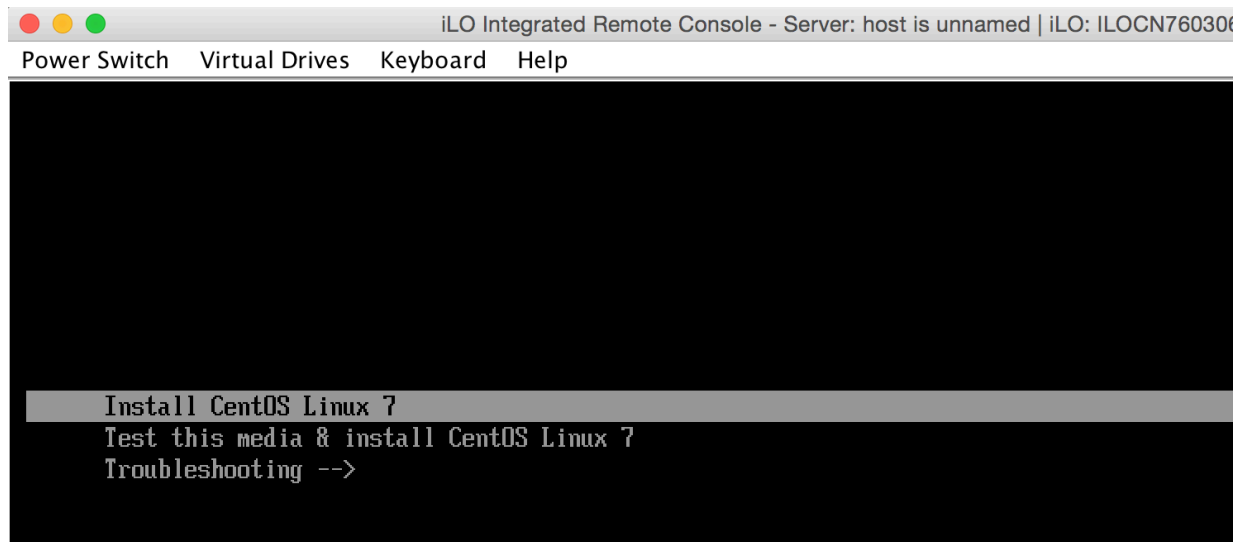
Map the “Image File CD/DVD-ROM” to the CentOS 7.4 minimal .iso on your local system



Press F11 to access the boot menu and choose to boot from Virtual CD/DVD ROM



When grub menu appears, arrow-up to highlight "Install CentOS 7 Linux" and press "e" to edit



Arrow-down to the "linuxefi" line and arrow-right to the end of the line. Type the following at the end of the line:

```
rd.iscsi.ibft=1
```

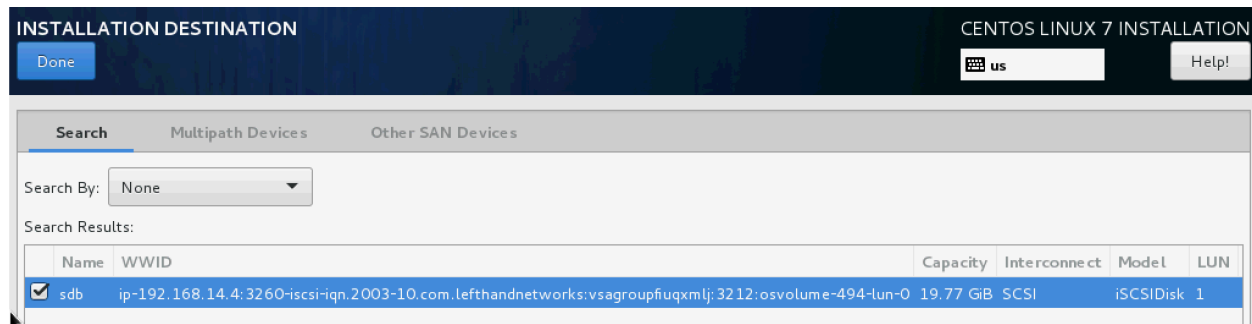
```
setparams 'Install CentOS Linux 7'
    linuxefi /images/pxeboot/vmlinuz inst.stage2=hd:LABEL=CentOS\x207\x20x86_64 quiet rd.iscsi\
    .ibft=1_
    initrdefi /images/pxeboot/initrd.img
```

Press Ctrl-X to boot

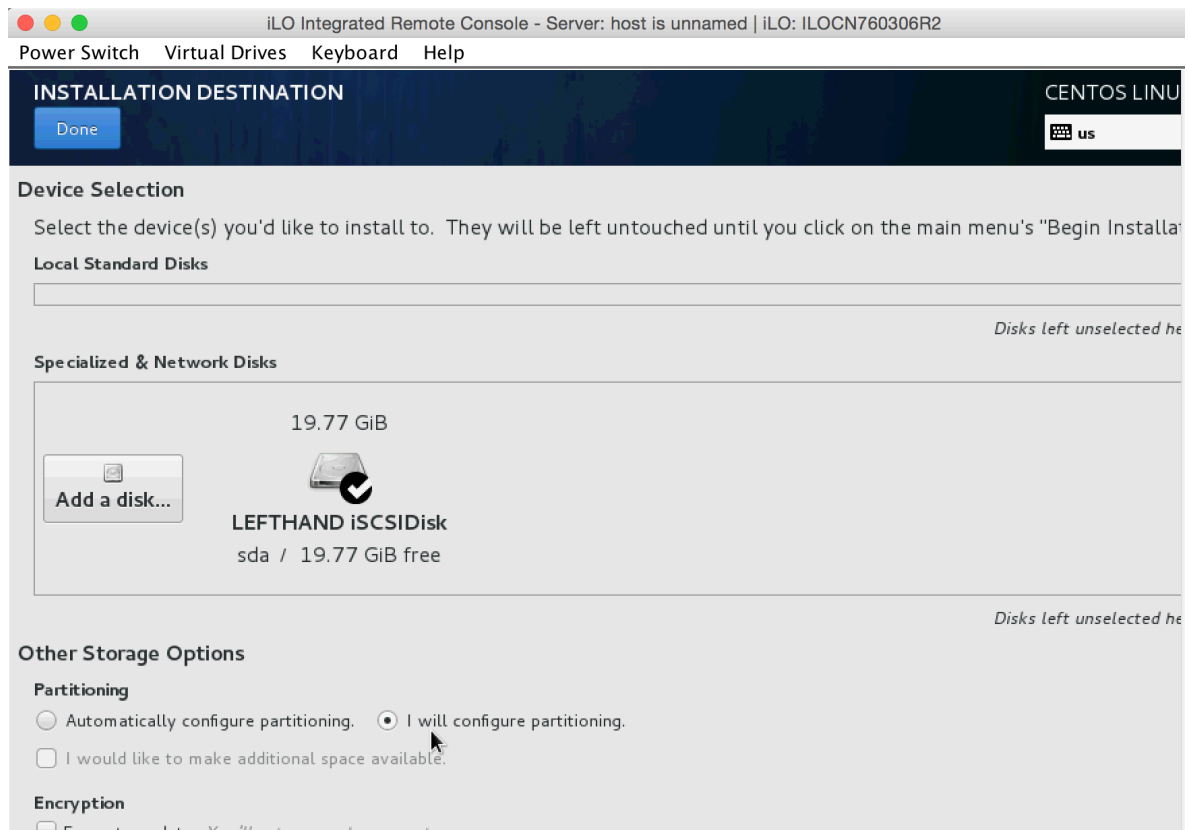
Installation UI should open automatically

Choose language, timezone, and then click "Installation Destination"

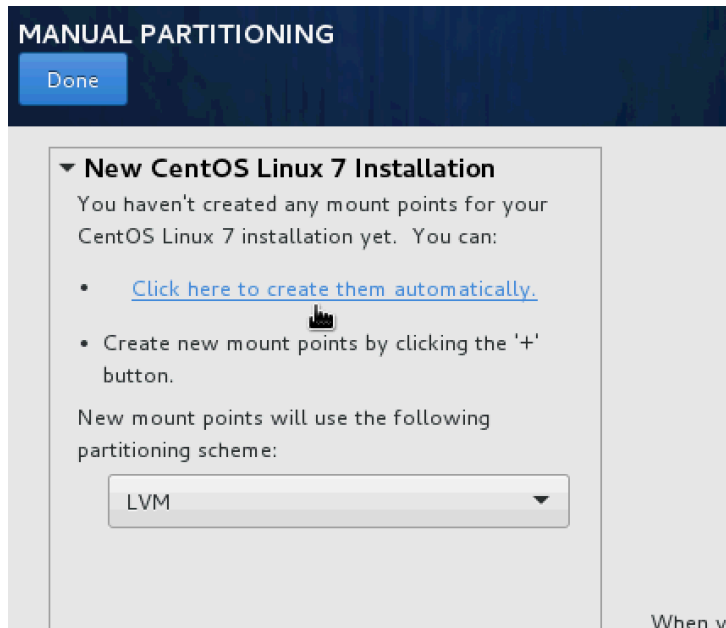
If the LEFTHAND iSCSIDisk is not shown in “Specialized and Network Disks”, click “Add a Disk” and check the box next to the iSCSI volume. Click “Done”



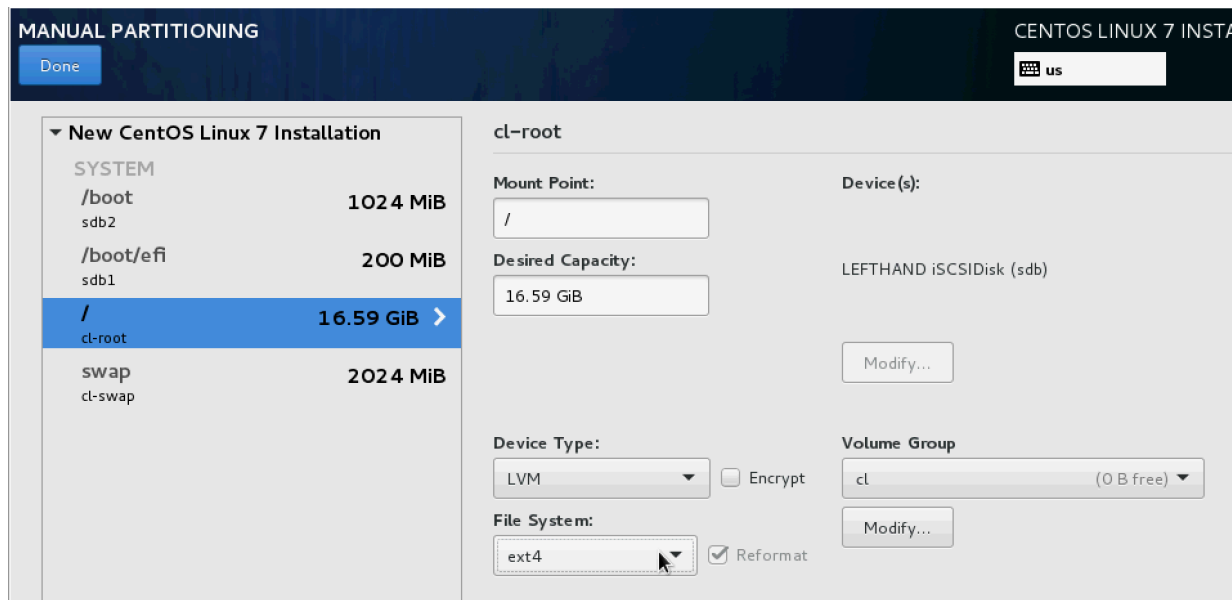
On the disk summary screen, under “Other Storage Options”, select “I will configure partitioning” and click “Done”



Click to create partitions automatically.



Click the / partition in the list and choose “ext4” from the File System pulldown (ext3 or ext4 filesystem type is required for an iSCSI boot volume).



Click “Done” and “Accept Changes”.

Click “Begin Installation” and click to set the root password. Do not create any user accounts.

Click “Reboot” when installation is complete.

Mapped Virtual Drives should automatically disconnect upon reboot.

3.0 Login to OS and configure Networking and Multipathing

Login as root user (password was chosen during the installation)

Disable NetworkManager and enable network:

```
# systemctl disable NetworkManager
```

```
# systemctl stop NetworkManager
```

```
# systemctl enable network
```

```
# systemctl stop network
```

Identify network interfaces:

```
# ip a
```

Edit appropriate ifcfg-xxxx file (i.e. ifcfg-ens3f1) and change ONBOOT=yes

```
# systemctl start network
```

Note: any ifcfg-xxxx networking files will be erased by Golden Image capture plan when Golden Image is captured.

Configure device multipathing (for direct-attached storage):

Optional: if internal yum repositories are to be used, configure /etc/yum.repos.d now. By default, yum will pull packages from CentOS mirrors

```
# yum install -y device-mapper-multipath
```

Enable multipath, allow it to use user_friendly_names, as well as to find_multipaths

```
# mpathconf --enable --user_friendly_names y --find_multipaths y --with_multipathd y
```

```
# systemctl enable multipathd
```

Multipathing configuration will be handled by the Build Plan Scripts and future DAS disks will be available to the OS as /dev/mapper/mpatha, /dev/mapper/mpathb, etc

4.0 Capture the Golden Image

Connect to the ImageStreamer UI

If you have not already done so, import and extract one or more of the HudsonAlpha CentOS 7.4 Artifact Bundle.

Choose “OS Volumes” from the main menu

Identify the OS Volume number that corresponds to the test profile that you created


Choose “Golden Images” from the main menu

Click “Create Golden Image” and select the appropriate OS Volume and “HudsonAlpha_CentOS7.4_capture” OS Build Plan.

Click “Create”

Create Golden Image ?

Name	<input type="text" value="CentOS 7.4 Golden Image"/>
Description	<input type="text" value="CentOS 7.4 with multipathing"/>
OS volume	<input type="text" value="OSVolume-28"/>
Capture OS build plan	<input type="text" value="HudsonAlpha_CentOS7.4_capture"/>

 4

Changed: Capture OS build plan to "HudsonAlpha_CentOS7.4_cap..."

Create

Create +

Cancel

CentOS 7.4 Golden Image should now appear in the Golden Images list.

5.0 Unassign and delete temporary Server Profile

In OneView UI, click the temporary Server Profile and click Actions → “Power off”

Click “Edit” and pull-down “Server Hardware” to “Unassigned”

Edit install_CentOS General ▾ ?

General

Name

install_CentOS

Description

Server profile template

none

✕ 🔍

Server hardware

unassigned

✕ 🔍

Server hardware type

unassigned

Enclosure group

Katniss, bay 1

empty

Affinity

Katniss, bay 5

SY 480 Gen9 1

Katniss, bay 6

empty

Katniss, bay 7


SY 480 Gen9 1

OS Deployment

OS deployment plan

HPE - Foundation 1.0 - create empty OS Volume

✕ 🔍

 1

Changed: OS deployment plan to "HPE - Foundation 1.0 - create empty OS Volume"

OK

Cancel

Click “OK”

Once the Server Profile has been unassigned, click Actions → “Delete”

You are now ready to create Deployment Plans.