

# CentOS 6 to CentOS 7 Migration Guide for AHV

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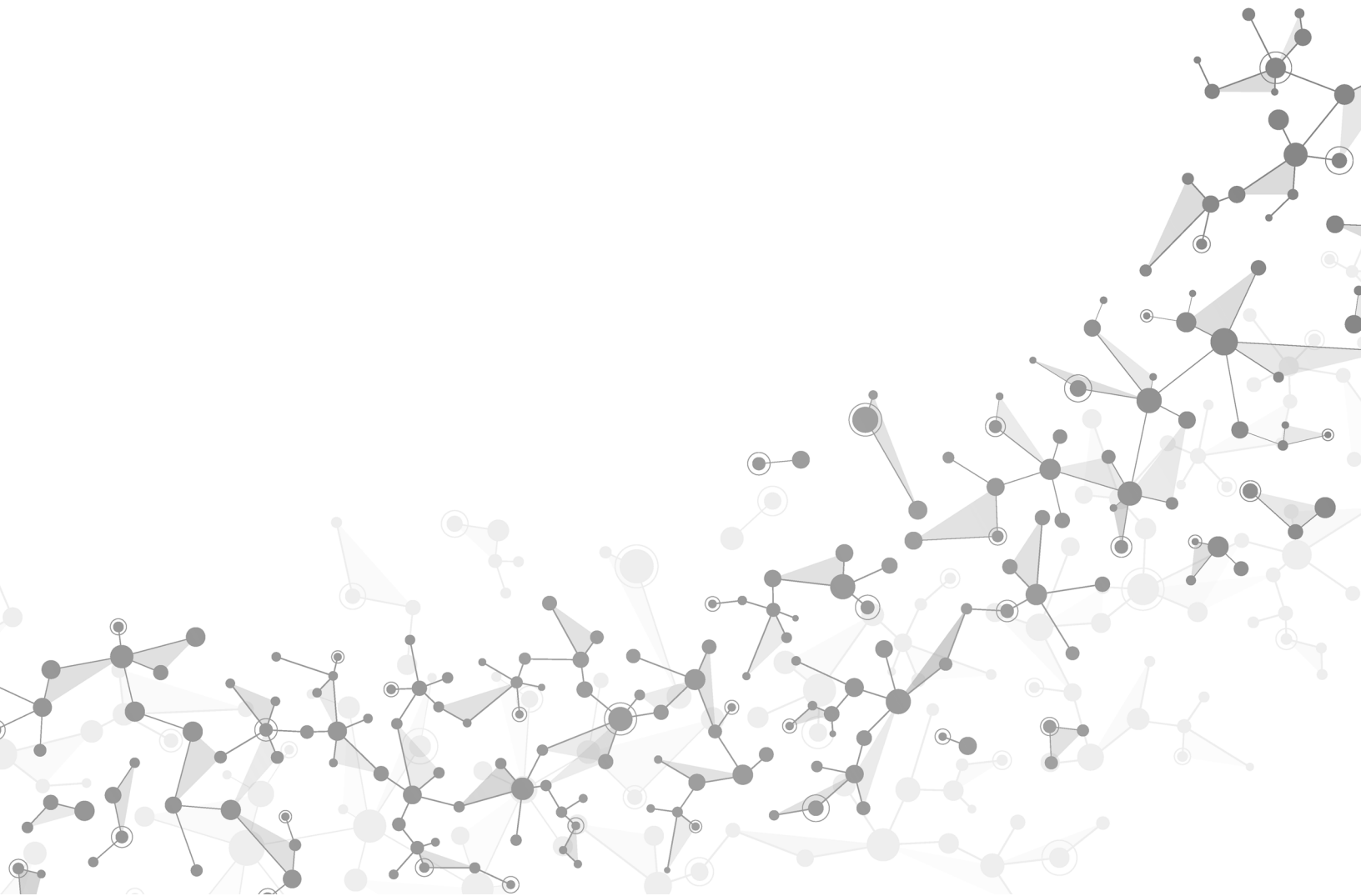
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# Chapter 1: Introduction

This guide provides instructions for migrating your Unitrends Backup virtual appliance from the CentOS 6 platform to CentOS 7. Migration consists of preparing the CentOS 6 appliance, deploying the CentOS 7 Unitrends Backup virtual machine (VM), attaching backup storage from the original CentOS 6 VM, and configuring settings on the new appliance.

To get started, review the ["Migration considerations"](#). Then use the ["Migration procedures checklist"](#) as a guide for performing the migration. Or, if you prefer more detail, review the complete ["Migration Requirements"](#), then perform the step-by-step ["Migration Procedures"](#).

## Migration considerations

Review these considerations before you start:

- Once you migrate the CentOS 6 data, the CentOS 6 appliance is no longer usable. You must recover the data to the newly deployed CentOS 7 VM. To deploy the CentOS 7 VM, the AHV host must be running Acropolis Operating System (AOS) version 5.1.4 or a higher version supported version listed in the [Unitrends Compatibility and Interoperability Matrix](#). Do not migrate data until you are ready to deploy the CentOS 7 VM.
- Before you migrate the CentOS 6 data, you must use the Nutanix Prism Web Console to consolidate any snapshots on the CentOS 6 VM. Snapshots must be consolidated for a successful migration.
- Before you migrate, check these tabs for any active recovery objects: Recover > File Level Recovery, Instant Recovery, and Replicas. Tear down any objects before starting the migration. You will need to recreate these objects on the CentOS 7 appliance.
- If you are encrypting backups, save the CentOS 6 encryption passphrase in a safe place. You must manually configure encryption with this same passphrase on the new CentOS 7 appliance. If you migrate and are not able to configure encryption with the CentOS 6 passphrase, any encrypted backups that were migrated cannot be recovered.
- Data copy access lab profiles are not migrated. If you are using this feature, you need to manually recreate lab profiles on the CentOS 7 appliance.
- Push install of the Windows agent is not supported on migrated appliances. After migrating to CentOS 7, the Windows agent must be installed manually on its protected assets.
- The migration tool verifies all requirements other than encryption, snapshot consolidation, and whether there are any active recovery objects. If a requirement has not been met, the migration does not proceed and you receive a message describing each issue that must be addressed. You can opt to simply run the migration tool without checking these CentOS 6 requirements, then address any issues if found. For detailed requirements, see ["Requirements for CentOS 6 Unitrends Backup virtual appliance"](#).

## Migration procedures checklist

- ["Step 1: Migrate data on the CentOS 6 appliance"](#) – To migrate the data, upgrade the CentOS 6 appliance to release 10.5.0-3 or higher, then select **Migrate from CentOS 6 to CentOS 7** in the Support Toolbox (**Configure > Appliances > Edit > Advanced > Support Toolbox**).

**IMPORTANT!** Migration time varies by database size. Do not manually close the user interface while the migration is running. It is safe to close the UI after the Results Migration message displays.

- "Step 2: Deploy the CentOS 7 Unitrends Backup VM" – Download the CentOS 7 image file from <https://www.unitrends.com/download/enterprise-backup-software> and deploy it on your Nutanix AHV host. Ensure that the memory and VCPU settings meet or exceed those of the CentOS 6 appliance VM.
- "Step 3: Attach backup storage" – Update the CentOS 7 VM to attach the all backup storage disks from the original CentOS 6 VM.

**IMPORTANT!**

- You must add all backup storage disks from the original CentOS 6 VM.
  - Do not add the 100GB disk. This disk was created during VM deployment and is NOT used to store backups.
  - You must add the first backup storage disk (typically `scsi.1`) before you add any other backup storage disks.
- "Step 4: Configure network settings" – Launch the VM console and configure these settings to match those of the CentOS 6 VM: Console Access Password, Network Settings, and DNS Settings.
  - "Step 5: Set up the CentOS 7 appliance using the Quick Setup Wizard" – Log in to the appliance UI. Use the Setup Wizard to configure appliance settings. When prompted to configure storage, click **Recover** to add the migrated backups to the appliance.
  - "Step 6: (If needed) Configure encryption with the CentOS 6 passphrase" – If backups were being encrypted on the CentOS 6 appliance, you must configure encryption with the passphrase that was used by the CentOS 6 appliance. If you do not use the original passphrase, any encrypted backups that were migrated cannot be recovered. To configure encryption settings, select **Configure > Appliances > Edit > Advanced**.
  - "Step 7: (If needed) Add data copy access profiles" – Data copy access profiles are not migrated from the CentOS 6 appliance. If you were using the copy data management feature, you need to recreate your data copy access profiles. For details, see [Copy Data Management](#) in the [Administrator Guide for Recovery Series, Recovery MAX, ION/ION+, and Unitrends Backup](#).
  - "Step 8: Register and license the CentOS 7 appliance" – You must register and license the appliance within 30 days of deploying the CentOS 7 VM. Go to **Configure > Appliances > Edit > License**. Click **Update** and select **I need to activate my purchase**.

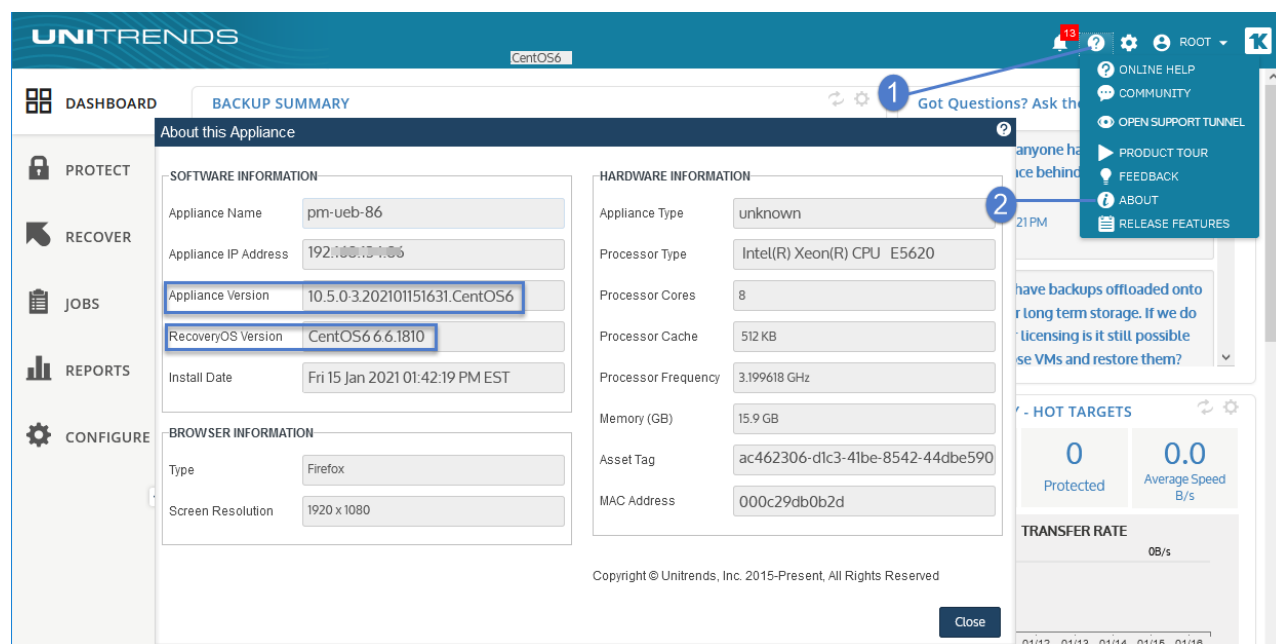
## Chapter 2: Migration Requirements

Migration requirements for the CentOS 6 and CentOS 7 Unitrends Backup virtual appliances are described below.

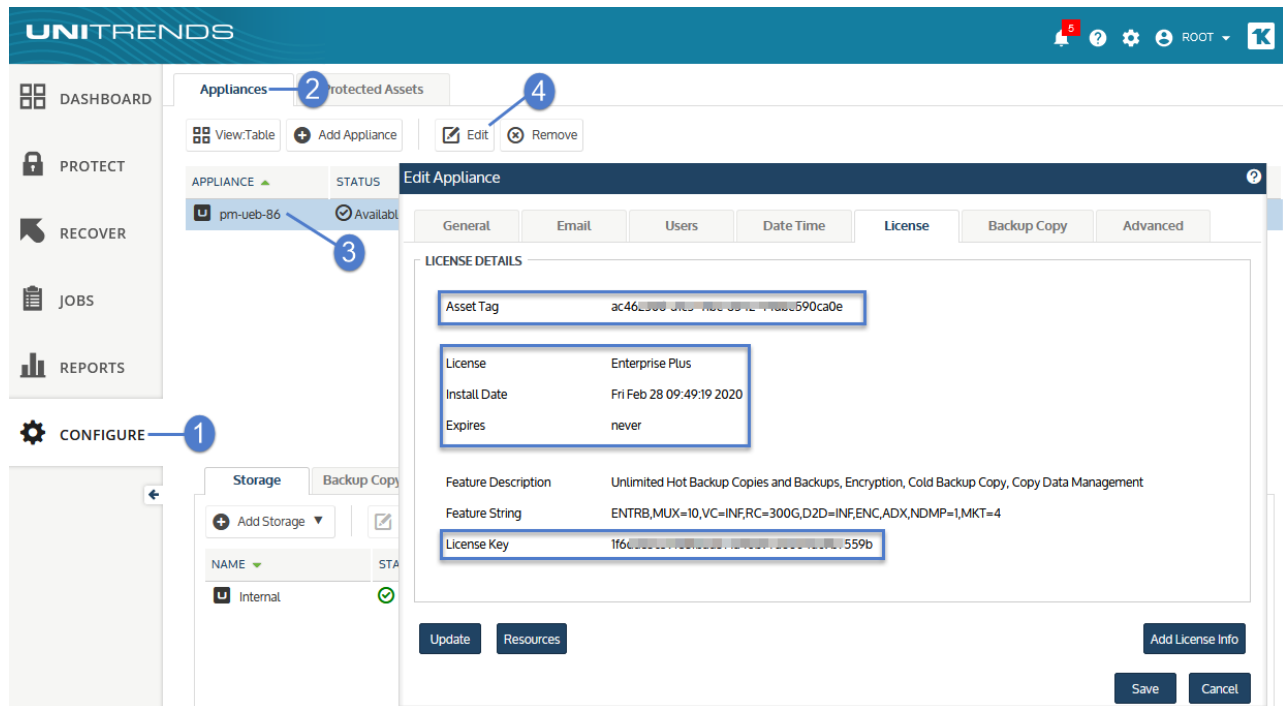
### Requirements for CentOS 6 Unitrends Backup virtual appliance

Your CentOS 6 Unitrends Backup appliance must meet these prerequisites:

- Snapshot consolidation – Use the Nutanix Prism Web Console to consolidate any snapshots on the CentOS 6 VM.
- Manager appliances – The CentOS 6 appliance must not be managing another appliance. Migration is not supported for manager appliances.
- Appliance version and platform – The appliance is running 10.5.0-3 or higher on the CentOS 6 platform. To check, select **? > About:**



- License and asset tag – The appliance has a valid license, support contract, and asset tag (**Configure > Appliance > Edit Appliance > License**):



- Internet access – The appliance has access to the Internet.
- Email – Email is configured on the appliance so you can receive email notifications related to platform migration (Configure > Appliance > Edit Appliance > Email):



**Edit Appliance**

General | **Email** | Users | Date Time | License | Backup Copy | Advanced

**SMTP SETTINGS**

☒ Enable email reporting  
Reporting is enabled

SMTP Server: unit[redacted]utlook.com  
SMTP server is configured

☐ Server requires credentials

Username: [text input]

Password: [password input]

Send a Test Email

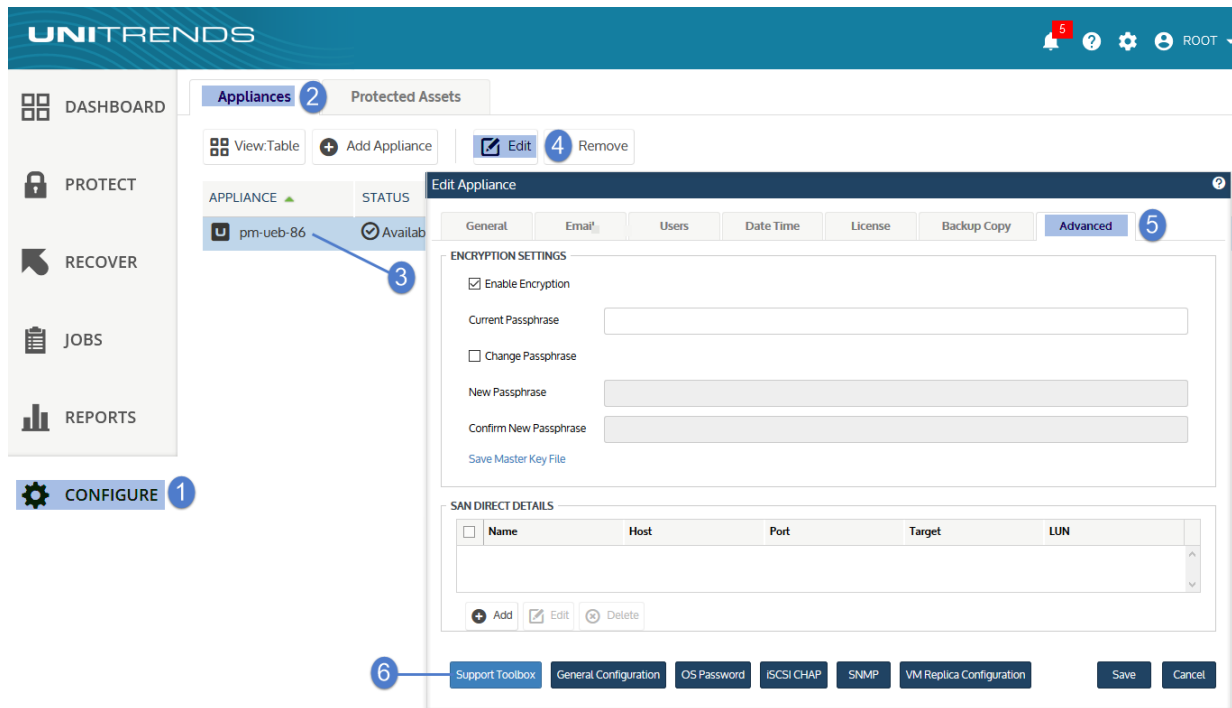
**EMAIL RECIPIENTS**

RECIPIENTS	APPLIANCE	JOBS	FAILURES	
dst[redacted]nds.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✗
ast[redacted]ds.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✗ +

Recipients are set up to receive Appliance notifications

Save Cancel

- Filesystem configuration – The database resides on the storage partition. This is the default configuration. If your database was moved to a separate partition, migration is not supported. The migration tool detects this and no data is migrated.
- Filesystem configuration – The appliance is configured with expanded storage. To verify that storage has been expanded:
  - On the **Configure > Appliances** page, select the appliance and click **Edit**. Click **Advanced** and select **Support Toolbox**.



- In the Support Toolbox (Advanced) dialog, click **Filesystem Information**. If you see `/_Stateless`, storage has been expanded.

The screenshot shows the 'Support Toolbox (Advanced)' dialog with a grid of system information cards. A blue circle with the number '1' points to the 'Filesystem Information' card. Below this, a 'Results: Filesystem Information' window is open, displaying the output of the 'df' command. A blue circle with the number '2' points to the line for the '/\_Stateless' partition, which shows 'xfs' filesystem and '1 2' blocks/size. A blue callout box with the text 'Storage has been expanded' points to this line. The 'Close' button is visible at the bottom right of the results window.

**Support Toolbox (Advanced)**

- Active Ports**  
All active or listening network ports
- Active Support Tunnel**  
Checks for an active support tunnel and returns its port number. Returns 0 if no tunnel exists.
- Appliance**  
Information about Appliance type
- Asset Tag**  
Asset tag display
- Date and Time**  
System date and time
- Disk Free Space**  
Free space available on each partition
- Disk Status**  
Gathers all relevant Disk Status from the Unitrends System.
- Filesystem Information**  
Information about all filesystems on the System
- Hardware**  
Hardware details

**Results: Filesystem Information**

```
#
# /etc/fstab
# Created by anaconda on Fri Apr 26 18:38:30 2019
#
# Accessible filesystems, by reference, are maintained under '/dev/disk'
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
#
UUID=8fcad43e-fd56-4f0f-bb26-cd93868aee96 /                ext4    defaults
1 1
UUID=70d093d9-bba3-4e94-8d5f-dd6b2951fdc6 /boot             ext4    defaults
1 2
UUID=4b98fec0-dd98-4ec6-b272-1d3deb5501cf /usr              ext4    defaults
1 2
UUID=5edd24fd-feba-4f59-9a3b-96acf4aa88c3 /usr/bp           ext4    defaults
1 2
UUID=349024e0-42cd-4979-8939-0a9da4f19d06 /var              ext4    defaults
1 2
/dev/mapper/vg_root-lv_swap swap              swap    defaults    0 0
/dev/dvd /media/cdrecorder1 auto              0 0
pamconsole,exec,noauto,managed 0 0
/tmp /var/tmp none rw,nosuid,nodev,noexec,bind 0 0
/dev/mapper/vg_state-lv_backup /_Stateless xfs defaults,inode64 1 2
```

Storage has been expanded

Close

- Available space – The `/_Stateless` partition must have adequate available space to accommodate the database migration. To check the space available, select **Disk Free Space** in the Support Toolbox (Advanced) dialog:

**Support Toolbox (Advanced)**

**Active Ports**  
All active or listening network ports

**Active Support Tunnel**  
Checks for an active support tunnel and returns its port number. Returns 0 if no tunnel exists.

**Appliance**  
Information about Appliance type

**Asset Tag**  
Asset tag display

**Date and Time**  
System date and time

**Disk Free Space**  
Free space available on each partition

**Results: Disk Free Space**

Filesystem	Size	Used	Avail	Use%	Mounted on
devtmpfs	1.9G	0	1.9G	0%	/dev
tmpfs	1.9G	32K	1.9G	1%	/dev/shm
tmpfs	1.9G	186M	1.7G	10%	/run
tmpfs	1.9G	0	1.9G	0%	/sys/fs/cgroup
/dev/sda2	976M	227M	683M	25%	/
/dev/sda5	5.8G	2.7G	2.9G	49%	/usr
/dev/sda1	239M	194M	29M	88%	/boot
/dev/sda6	3.9G	676M	3.0G	19%	/var
/dev/sda3	50G	6.0G	41G	13%	/usr/kr
/dev/mapper/vg_state-lv_backup	200G	96G	105G	48%	/_Stateless
overlay	200G	96G	105G	48%	/_Stateless/backup
/overlay2/760d154544					fe7eaab1253f271dcb7a135
shm	64M	0	64M	0%	/_Stateless/backup
/containers/771cc5					7b500c2026/shm
tmpfs	379M	0	379M	0%	/run/user/0
//19	932G	855G	78G	92%	/mnt/nas/nas92public2
//19	932G	855G	78G	92%	/mnt/nas/nas92public

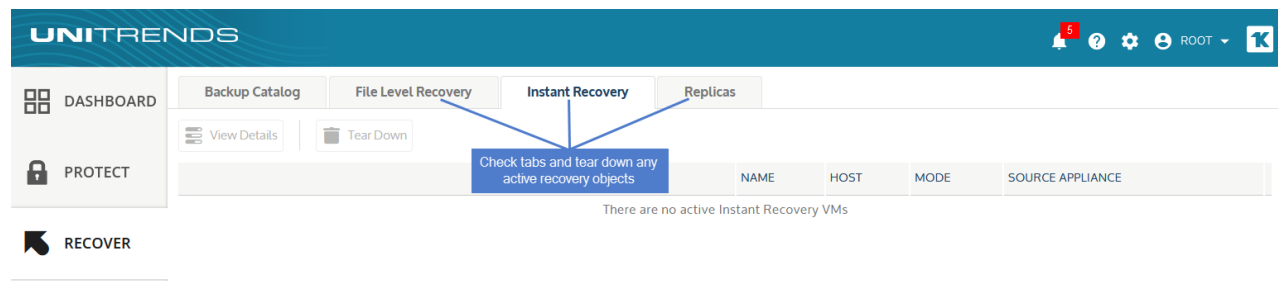
Available space is 105G

Close

- Encryption – If backups are being encrypted, save the encryption passphrase in a safe place. You must manually configure encryption with this same passphrase on the new CentOS 7 appliance.

**IMPORTANT!** If you are not able to configure encryption on the CentOS 7 appliance using the original passphrase, there is no way to recover the encrypted backups that were migrated from the CentOS 6 appliance.

- Cold backup copy devices – Any cold backup copy target devices have been disconnected.
- Backup and cold backup copy jobs – There are no active backup and cold backup copy jobs. If jobs are running, wait for them to complete or cancel them before starting the migration.
- Recovery objects – Check these tabs for any active recovery objects: Recover > File Level Recovery, Instant Recovery, and Replicas. Tear down any objects before starting the migration. You will need to recreate these objects on the CentOS 7 appliance.



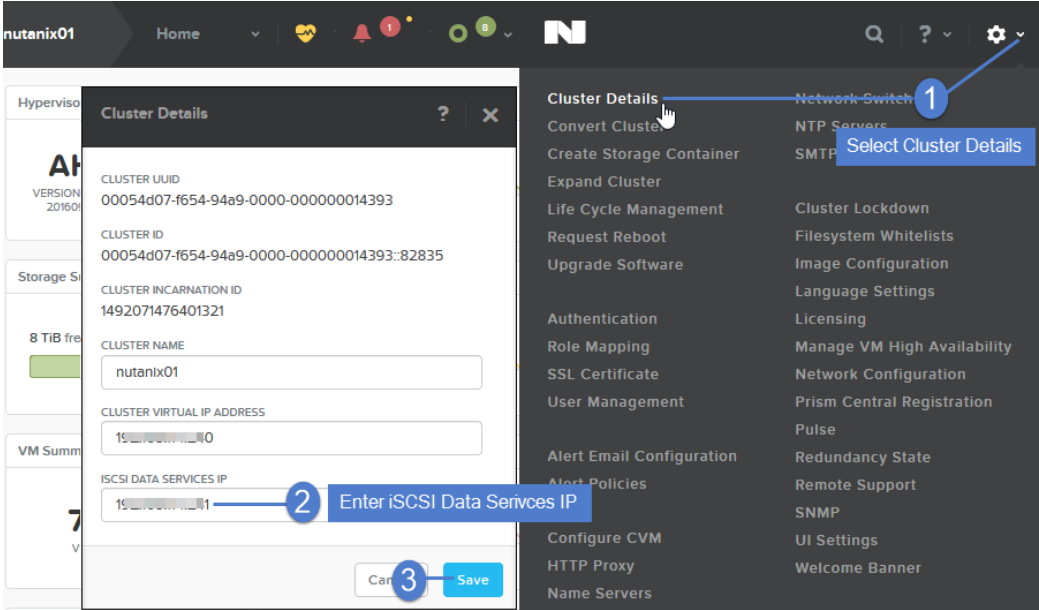
## Deployment requirements for CentOS 7 Unitrends Backup virtual appliance

You will deploy a new CentOS 7 Unitrends Backup appliance that will be used to replace your original CentOS 6 appliance. Deployment requirements are described below.

### Hypervisor requirements

The following requirements and considerations apply to the Nutanix AHV host cluster:

Item	Description
Nutanix AHV host cluster version	The AHV host must be running Acropolis Operating System (AOS) version 5.1.4 or a higher version supported version listed in the <a href="#">Unitrends Compatibility and Interoperability Matrix</a> .
AHV host for protected VMs	Unitrends recommends running your appliance and the VMs it protects on different hosts to avoid losing your VMs and their backups if one of the hosts fails.

Item	Description
iSCSI target access	<p>To protect AHV virtual machines by using host-level backups, backup and recovery jobs access the AHV host over the iSCSI protocol. Ensure the following:</p> <ul style="list-style-type: none"> <li>The Unitrends appliance is able to connect to the iSCSI targets on the Nutanix storage LAN.</li> <li>iSCSI Data Services are configured for the Nutanix AHV cluster. To configure this setting: <ol style="list-style-type: none"> <li>In the Nutanix Prism interface, select <b>Cluster Details</b> from the Options menu.</li> <li>Enter the iSCSI Data Services IP address.</li> <li>Click <b>Save</b>.</li> </ol> </li> </ul> 

## Network requirements

- During deployment, you will configure these network settings: IP address and subnet, gateway, and DNS. Be sure to use the same network configuration as the original CentOS 6 appliance.
- To view the network settings of the CentOS 6 appliance, select **Configure > Appliances > Network**:

### Notes:

- Initially, the Unitrends Backup VM is created with the IP address 10.10.10.1 and the subnet mask 255.255.255.0. If this IP is currently being used in your environment, disable it until you bring the Unitrends Backup VM online and assign it a new IP address.
- Additional ports must be open if there is a firewall between your appliance and its protected assets, for connectivity to the Internet, and for connectivity to any hot backup copy target. For details, see

[Appliance network settings > Additional ports](#) in the [Administrator Guide for Recovery Series, Recovery MAX, ION/ION+, and Unitrends Backup](#)

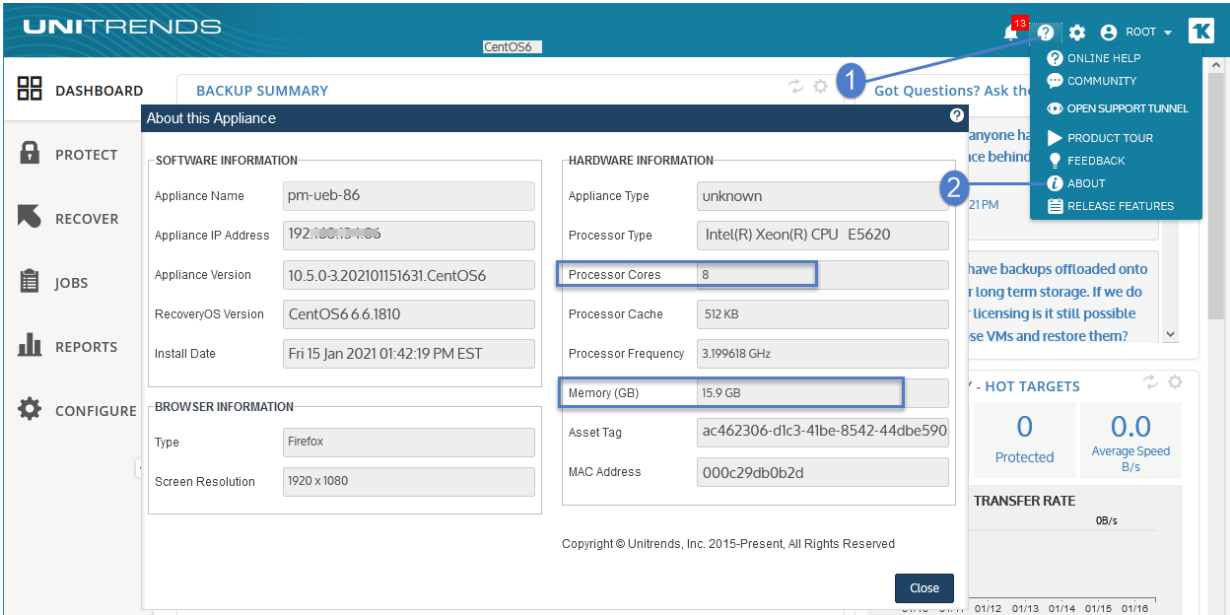
The screenshot displays the Unitrends web interface. The sidebar on the left contains navigation links: DASHBOARD, PROTECT, RECOVER, JOBS, REPORTS, and CONFIGURE (highlighted with a blue circle 1). The main content area is titled 'Appliances' (highlighted with a blue circle 2) and includes a 'Protected Assets' section. Below this, there are buttons for 'View Table', 'Add Appliance', 'Edit', and 'Remove'. A table lists appliances with columns: APPLIANCE, STATUS, ADDRESS, VERSION, STORAGE, and REGISTERED ASSETS. One appliance, 'pm-ueb-86', is highlighted with a blue circle 3. Below the table, there are tabs for 'Storage', 'Backup Copy Targets', 'Network' (highlighted with a blue circle 4), and 'Interactions'. The 'Network' tab is active, showing a table of network interfaces with columns: ADAPTER, MAC ADDRESS, IP ADDRESS, GATEWAY, SUBNET MASK, DNS1, DNS2, and DNS SEARCH. The interface also includes a top navigation bar with the Unitrends logo and user information.

## Virtual machine resource requirements

The following minimum resources are required:

- 100GB of space for the VM's initial disk.
- A minimum of 2 virtual processors (VCPUs) or the number of VCPUs on the original CentOS 6 appliance, whichever is greater.
- A minimum of 8GB of RAM or the amount of RAM on the original CentOS 6 appliance, whichever is greater.

To check the CPU and RAM of the CentOS 6 appliance in the appliance UI, select ? > **About**:





# Chapter 3: Migration Procedures

Use these procedures to migrate your CentOS 6 appliance to CentOS 7.

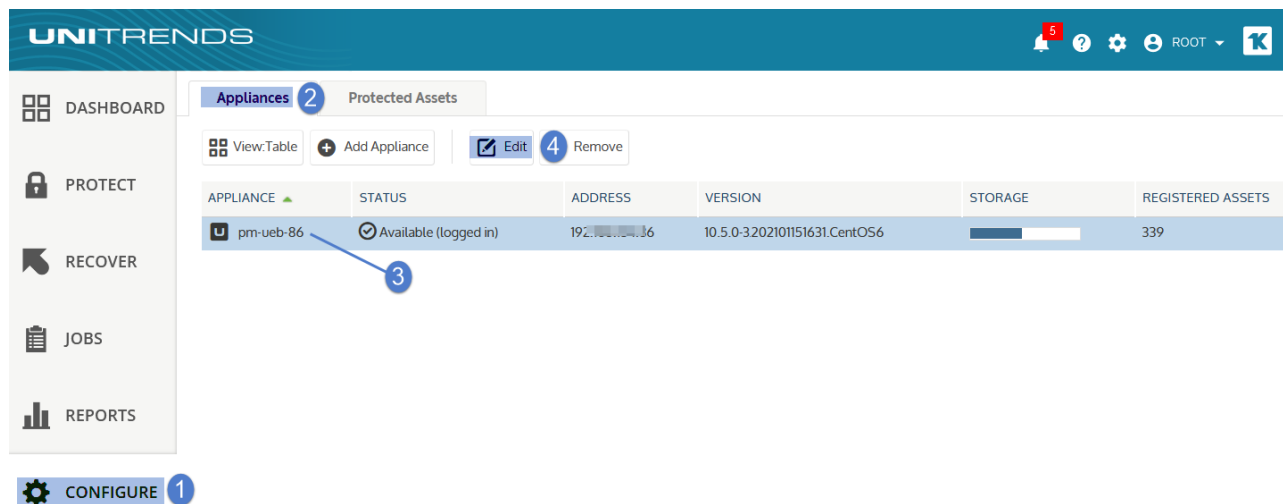
## Step 1: Migrate data on the CentOS 6 appliance

**IMPORTANT!** Before running this procedure, use the Nutanix Prism Web Console to consolidate snapshots on the CentOS 6 VM. If your backups are encrypted, be sure you can access the passphrase that was configured on the CentOS 6 appliance. Once data has been migrated, the original CentOS 6 appliance is no longer usable. Any encrypted backups can only be recovered by configuring encryption on the CentOS 7 appliance using the CentOS 6 passphrase.

- 1 Log in to the CentOS 6 appliance UI.

You must log in directly to the appliance. You cannot access the Support Toolbox of a managed appliance.

- 2 On the **Configure > Appliances** page, select the appliance and click **Edit**.



- 3 Click **Advanced** and select **Support Toolbox**.

**Edit Appliance**

General | Email | Users | Date Time | License | Backup Copy | **Advanced** 1

**ENCRYPTION SETTINGS**

☒ Enable Encryption

Current Passphrase

☐ Change Passphrase

New Passphrase

Confirm New Passphrase

[Save Master Key File](#)

**SAN DIRECT DETAILS**

<input type="checkbox"/>	Name	Host	Port	Target	LUN

+ Add 2 Edit - Delete

Support Toolbox | General Configuration | OS Password | iSCSI CHAP | SNMP | VM Replica Configuration | Save | Cancel

- 4 In the Support Toolbox (Advanced) dialog, scroll down and click **Migrate from CentOS 6 to CentOS 7**.

**IMPORTANT!** Migration time varies by database size. Do not manually close the user interface while the migration is running. It is safe to close the UI after the Results Migration message displays.

**Support Toolbox (Advanced)**

**Hosts File**  
Listing of system hosts file

**IOPS Test**  
Tests the IOPS to the primary storage

**IPMI Status**  
Gathers all relevant IPMI Status from the Unitrends System.

**Kernel Information**  
Kernel revision, build date, and system architecture

**LVM Status**  
Status of LVM subsystem: physical volumes, logical volumes, and volume groups

**Maximum Backups**  
Displays maximum amount of client data supported on this platform (if defined)

**Memory Usage**  
Free and available system **Click here**

**Migrate from CentOS6 to CentOS7**  
Refer to and complete all steps in the Migration KB found in the 10.5.0 release notes before clicking on this button. **Click to run "Migrate from CentOS6 to CentOS7" command**

**Modules Loaded**  
Status of modules loaded in the Linux Kernel

**Mountpoints**  
System mountpoints

Close

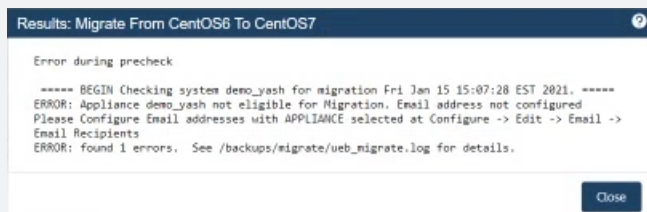
- 5 The migration tool does the following:

- Verifies that all appliance requirements have been met.

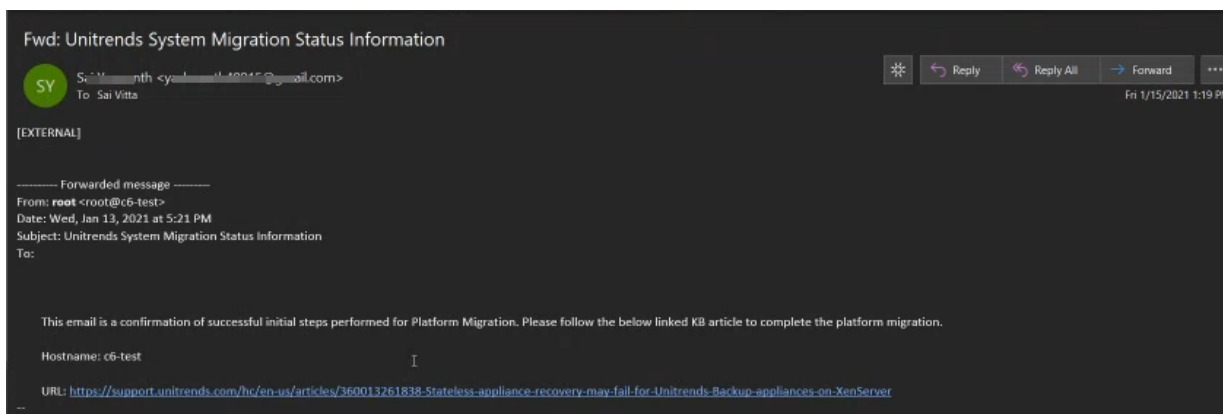
**Notes:**

- If requirements have not been met, a message displays describing the issue.

- Click **Close** to exit the message, then address the requirement.



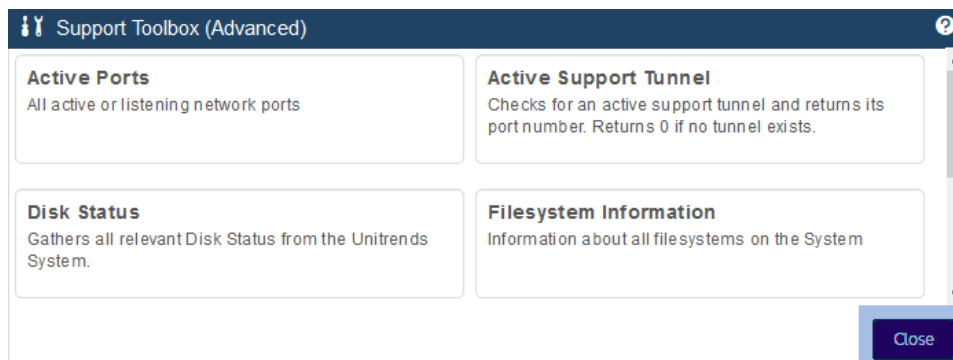
- Migrates the database, sends a confirmation message to the Appliance email recipients, then powers off the CentOS 6 VM. Sample confirmation email:



- 6 A confirmation message displays. Click **Close** to exit the message.



- 7 Click **Close** to exit the Support Toolbox.



## Step 2: Deploy the CentOS 7 Unitrends Backup VM

Use the following procedure to deploy the Unitrends Backup VM.

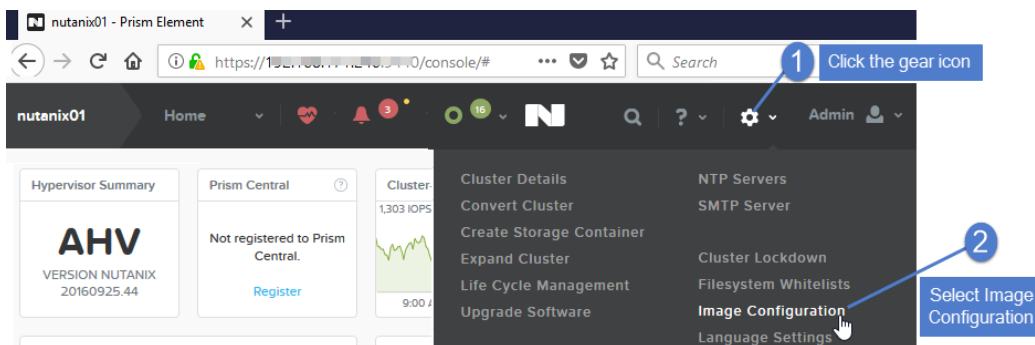
### 1 Download the Unitrends Backup image:

- Go to <https://www.unitrends.com/download/enterprise-backup-software>, complete the form under Try Unitrends Backup, and click **Download Now**.

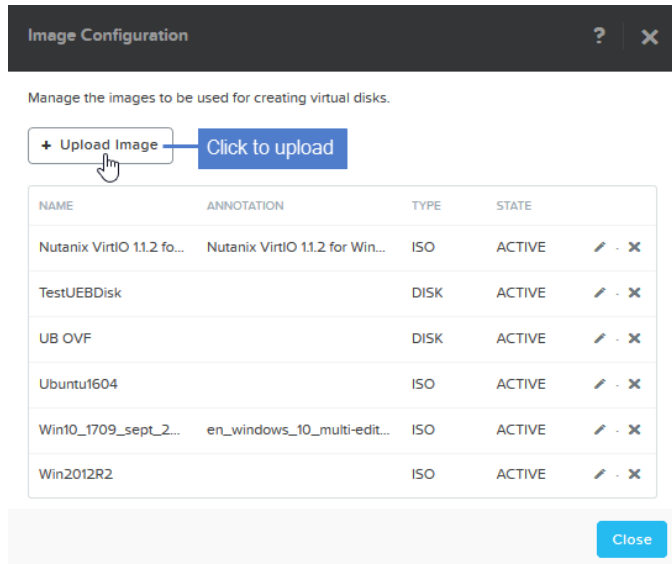


The image shows a web form titled "Unitrends Backup Software Free Trial". Below the title, it says "Try Unitrends Backup Software Free For 30 Days". The form has two input fields: "Email\*" with the value "d.burgett@unitrends.com" and "Industry\*" with a dropdown menu showing "Business Services". A blue callout "1" points to the "Enter details" button next to the industry dropdown. A red "Download Now" button is at the bottom, with a blue callout "2" pointing to it.

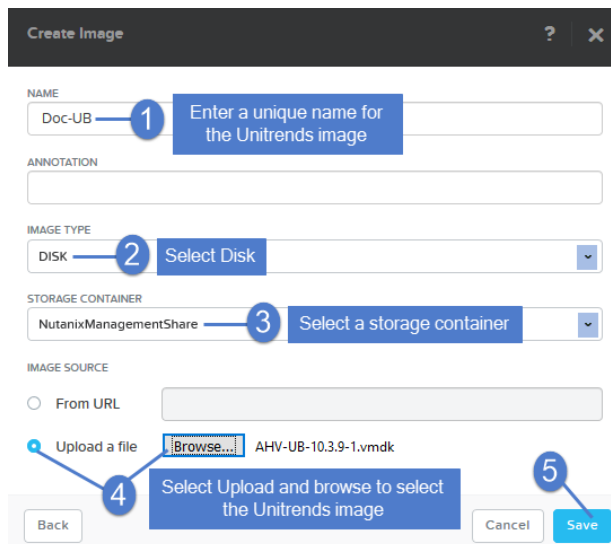
- Select **Nutanix AHV**. Download the file and save it on the machine you will use to access your Nutanix AHV host for the deployment.
- ### 2 Log in to Prism as a user with administrative privileges.
- ### 3 Upload the Unitrends image:
- Click the gear icon and select **Image Configuration**.



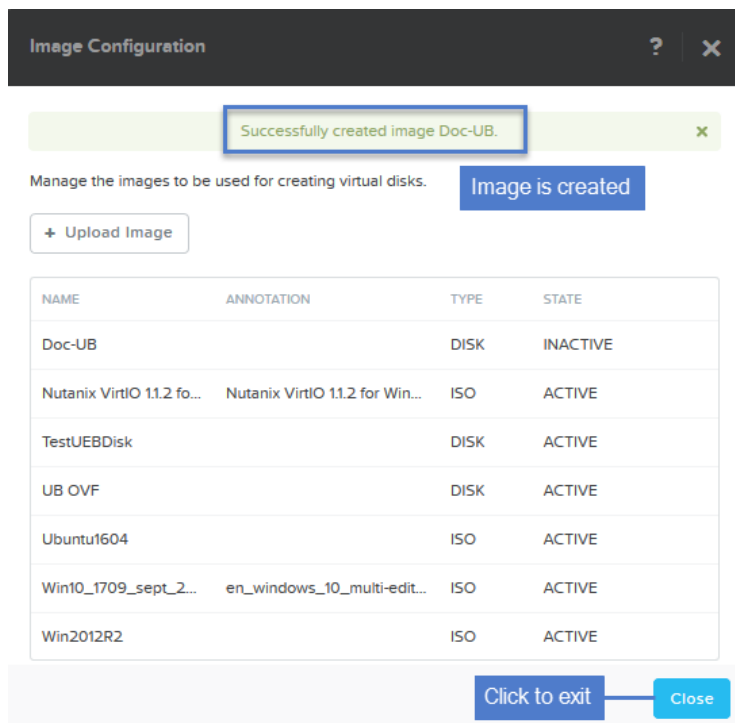
- Click **Upload Image**.



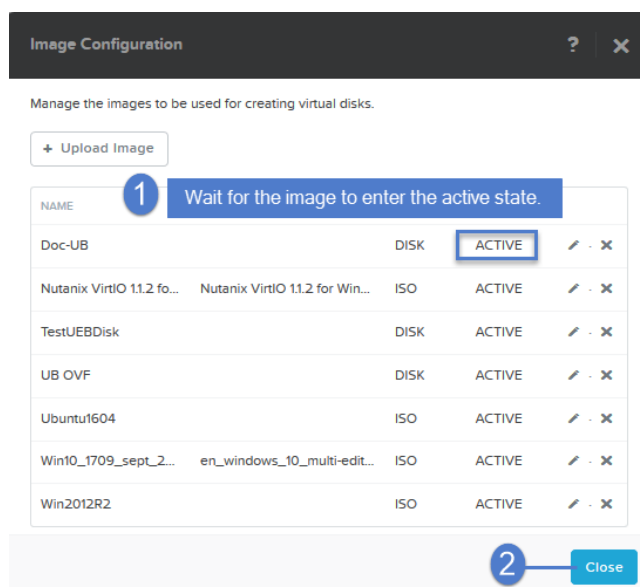
- Enter a unique name for the image.
- Select **Disk** in the Image Type list.
- Select a storage container that will be used to create the image.
- Select the **Upload a file** option, click **Browse** and select the Unitrends image.
- Click **Save**.



- The hypervisor uploads the file and creates the image. Click **Close** to exit.



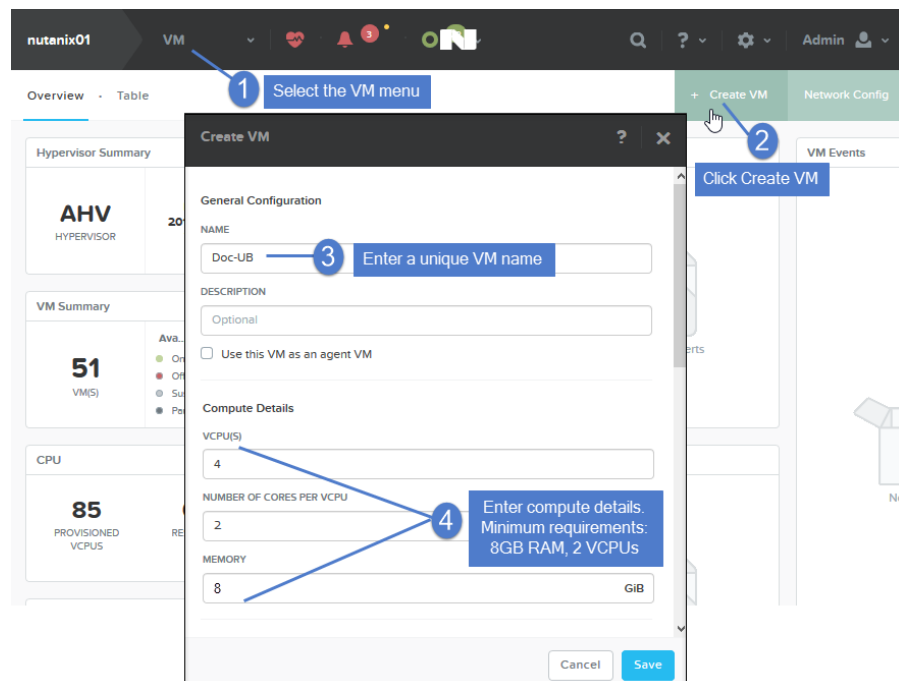
- 4 After the image is created, it takes some time to become active. Re-open the Image Configuration dialog and verify that the image has entered the active state before continuing to the next step.



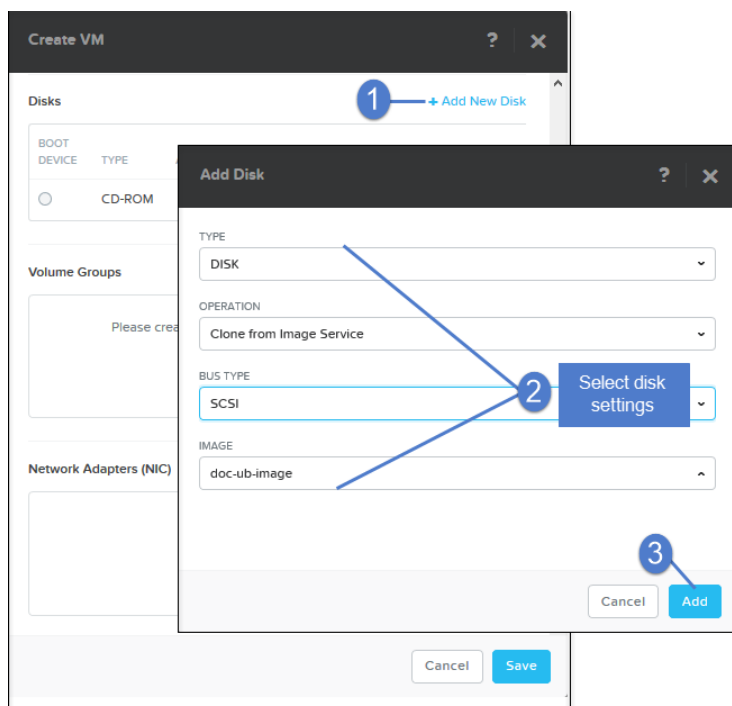
- 5 Create the Unitrends Backup VM:
- Select the **VM** menu and click **Create VM**.
  - Enter a unique Name for the VM.

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- Enter Compute Details. Ensure that the VCPUs and memory meet or exceed the settings of the CentOS 6 appliance.

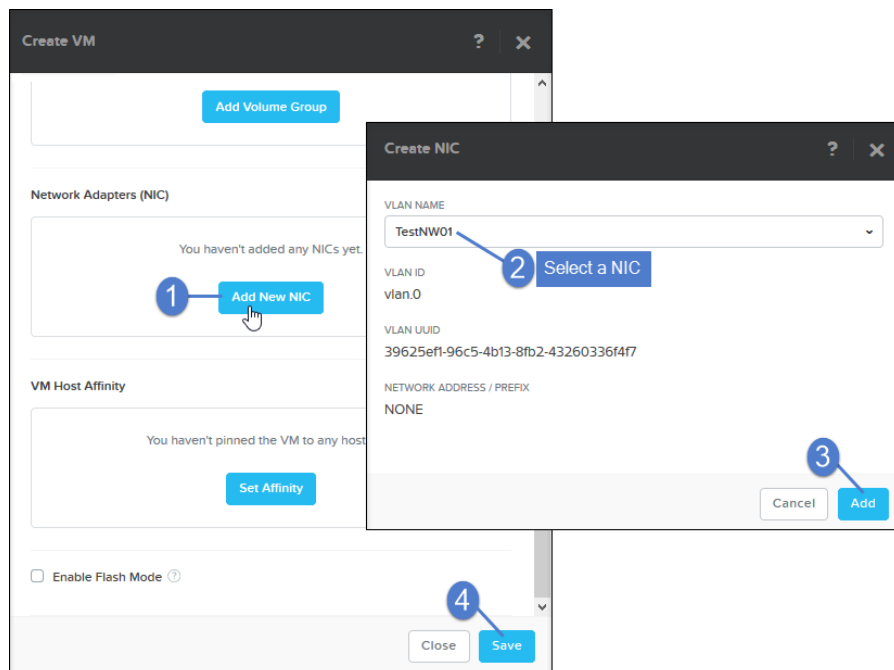


- Scroll down and select **Add New Disk**.
- Select the following settings, then click **Add**:
  - **Disk** in the Type list.
  - **Clone from Image Service** in the Operation list.
  - **SCSI** in the Bus Type list.
  - The Unitrends image you created above in the Image list.



- Configure a NIC:
  - Scroll down and click **Add New NIC**.
  - Select a NIC from the VLAN Name list, then click **Add**.
- Click **Save** to create the VM.





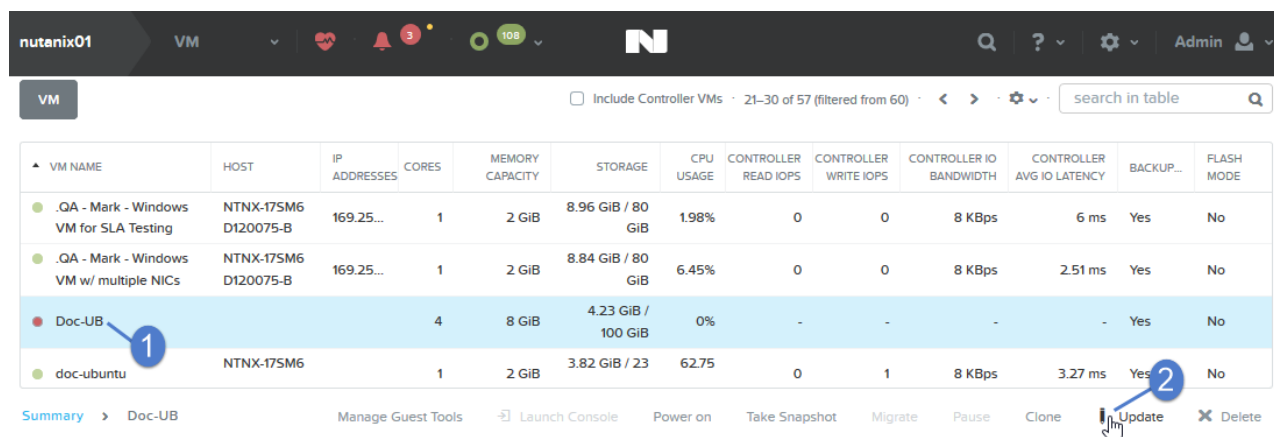
## Step 3: Attach backup storage

In this step you will attach the storage that contains backups from the CentOS 6 Unitrends Backup appliance.

**IMPORTANT!** Be sure to attach the vDisk that was used as the initial backup storage first (before adding any other vDisks). Adding the wrong vDisk first yields undesirable results. The appliance automatically uses the first vDisk you attach as the initial backup storage. The appliance then recognizes all subsequent attached disks and can access all existing backup data.

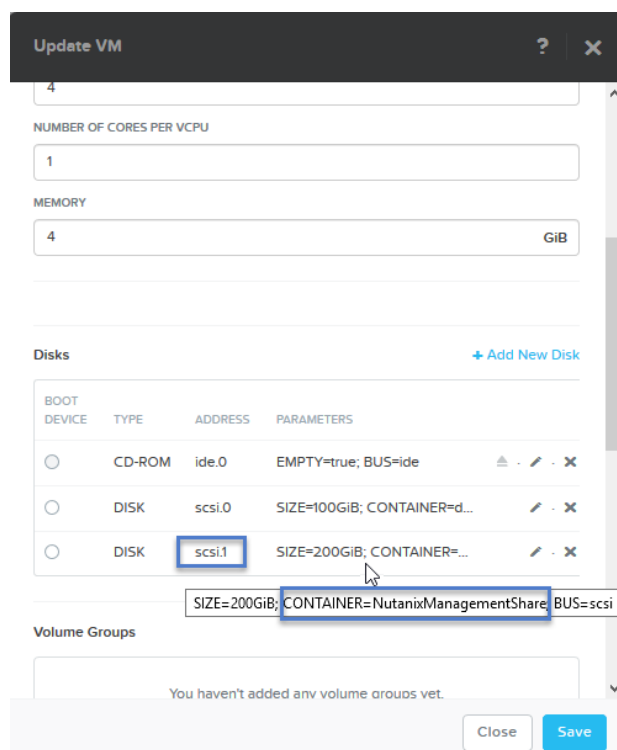
To add a vDisk that contains backups from the CentOS 6 Unitrends Backup appliance:

- 1 View the disks on the original AHV appliance to determine the SCSI ID of the vDisk you want to use:
  - Log in to Prism as a user with administrative privileges.
  - Select the original appliance VM ( the appliance with the vDisk that contains Unitrends backups) and click **Update**.



VM NAME	HOST	IP ADDRESSES	CORES	MEMORY CAPACITY	STORAGE	CPU USAGE	CONTROLLER READ IOPS	CONTROLLER WRITE IOPS	CONTROLLER IO BANDWIDTH	CONTROLLER AVG IO LATENCY	BACKUP...	FLASH MODE
.QA - Mark - Windows VM for SLA Testing	NTNX-17SM6 D120075-B	169.25...	1	2 GiB	8.96 GiB / 80 GiB	1.98%	0	0	8 KBps	6 ms	Yes	No
.QA - Mark - Windows VM w/ multiple NICs	NTNX-17SM6 D120075-B	169.25...	1	2 GiB	8.84 GiB / 80 GiB	6.45%	0	0	8 KBps	2.51 ms	Yes	No
Doc-UB	NTNX-17SM6		4	8 GiB	4.23 GiB / 100 GiB	0%	-	-	-	-	Yes	No
doc-ubuntu	NTNX-17SM6		1	2 GiB	3.82 GiB / 23	62.75	0	1	8 KBps	3.27 ms	Yes	No

- Scroll down to view VM disks. Find the container name and SCSI ID of the initial backup storage disk (typically `scsi.1`).
  - Do not add the 100GB disk. The 100GB disk was used to create the appliance VM. This disk does not store Unitrends backups.
  - The next disk that was added is the backup storage disk that you will add to the new appliance.
  - Hover over the disk to view the container name. Note this name and the disk size. You will need these later in this procedure.



**Update VM**

4

NUMBER OF CORES PER VCPU

1

MEMORY

4 GiB

**Disks** [+ Add New Disk](#)

BOOT DEVICE	TYPE	ADDRESS	PARAMETERS
CD-ROM	ide.0	EMPTY=true; BUS=ide	
DISK	scsi.0	SIZE=100GiB; CONTAINER=d...	
DISK	scsi.1	SIZE=200GiB; CONTAINER=NutanixManagementShare; BUS=scsi	

Volume Groups

You haven't added any volume groups yet.

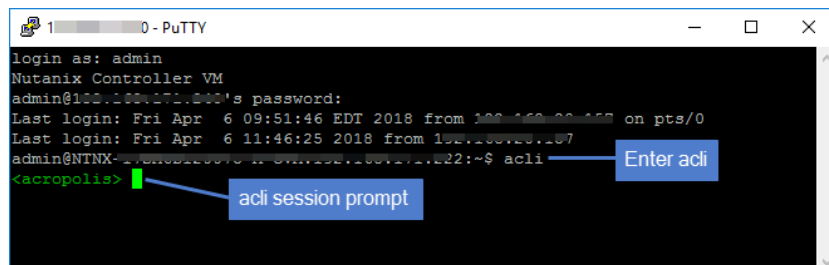
Close Save

- 2 Log in to any Controller VM of the Nutanix AHV cluster through an SSH session.

- 3 Enter this command to start an AHV CLI session:

```
# acli
```

Example:

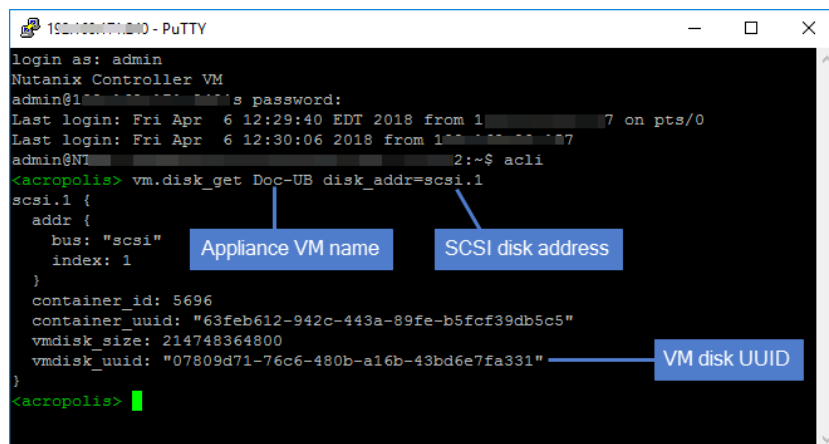


```
login as: admin
Nutanix Controller VM
admin@100.100.100.100's password:
Last login: Fri Apr  6 09:51:46 EDT 2018 from 100.100.100.100 on pts/0
Last login: Fri Apr  6 11:46:25 2018 from 100.100.100.100
admin@NTNX-100.100.100.100:~$ accli
<acropolis>
```

- 4 Enter the following command to find the `vmdisk_uuid` of the vDisk you identified in [step 1](#). Note the `vmdisk_uuid`. You will need to supply this ID later in this procedure.

```
<acropolis> vm.disk_get <vm_name> disk_addr=scsi.<number>
```

Example:



```
<acropolis> vm.disk_get Doc-UB disk_addr=scsi.1
scsi.1 {
  addr {
    bus: "scsi"
    index: 1
  }
  container_id: 5696
  container_uuid: "63feb612-942c-443a-89fe-b5fcf39db5c5"
  vmdisk_size: 214748364800
  vmdisk_uuid: "07809d71-76c6-480b-a16b-43bd6e7fa331"
}
<acropolis>
```

- 5 Return to the Prism Web Console.
- 6 Select the new CentOS 7 appliance VM and click **Update**.

The screenshot shows the Nutanix VM console interface. At the top, there's a navigation bar with 'nutanix01', 'VM', and various icons. Below it, a 'Table' tab is selected. A search bar and a filter checkbox 'Include Controller VMs' are present. The main table lists VMs with columns: VM NAME, HOST, IP ADDRESSES, CORES, MEMORY CAPACITY, STORAGE, CPU USAGE, MEMORY USAGE, CONTROLLER READ IOPS, CONTROLLER WRITE IOPS, CONTROLLER IO BANDWIDTH, CONTROLLER AVG IO LATENCY, BACKUP..., and FLASH MODE. The 'Doc-UB-2' VM is highlighted in blue. Below the table, there's a 'Summary' section for 'Doc-UB-2' with various action buttons: Manage Guest Tools, Launch Console, Power Off Actions, Take Snapshot, Migrate, Pause, Clone, Update, and Delete. A blue circle with the number 2 points to the 'Update' button.

VM NAME	HOST	IP ADDRESSES	CORES	MEMORY CAPACITY	STORAGE	CPU USAGE	MEMORY USAGE	CONTROLLER READ IOPS	CONTROLLER WRITE IOPS	CONTROLLER IO BANDWIDTH	CONTROLLER AVG IO LATENCY	BACKUP...	FLASH MODE
Doc-UB			4	4 GiB	1779 GiB / 300 GiB	-	-	-	-	-	-	Yes	No
Doc-UB-2	NTNX-175M6 D120075-C	192.168...	8	4 GiB	3.84 GiB / 100 GiB	0.25%	20.39 %	0	1	10 KBps	1.25 ms	Yes	No
doc-ubuntu	NTNX-175M6 D120075-C		1	2 GiB	7.4 GiB / 23 GiB	64.1%	72.91%	0	0	1 KBps	0.83 ms	Yes	No
doc-W2012R2	NTNX-175M6 D120075-C	160.35...	2	4 GiB	9.46 GiB / 70 GiB	3.24%	-	0	0	12 KBps	1.03 ms	Yes	No
doc-W2012R2_restore			2	4 GiB	9.46 GiB / 70 GiB	-	-	-	-	-	-	Yes	No

Summary > Doc-UB-2

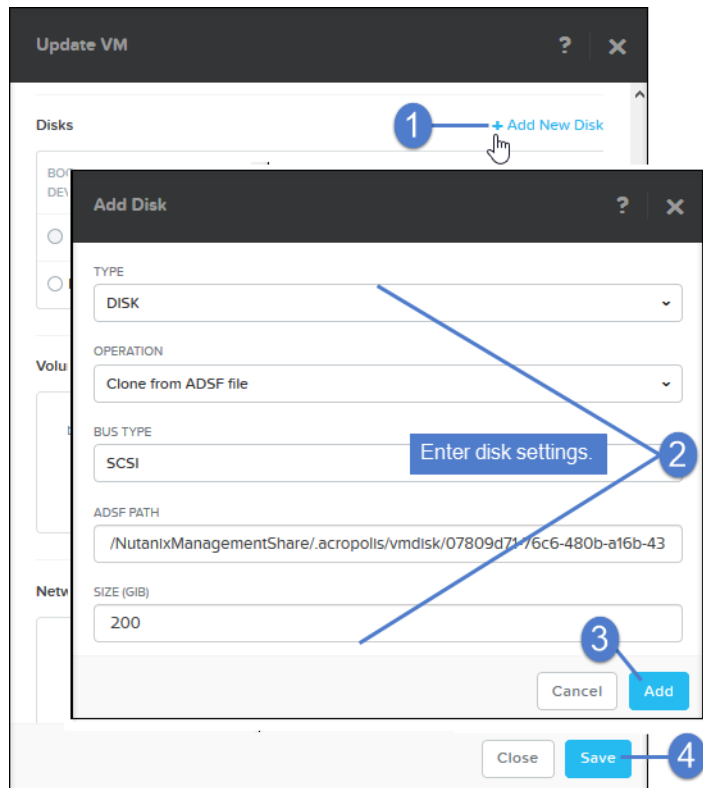
Manage Guest Tools Launch Console Power Off Actions Take Snapshot Migrate Pause Clone Update Delete

7 Scroll down and click **Add New Disk**.

8 Enter these disk settings, then click **Add**:

- Select **Disk** from the Type list.
- Select **Clone from ADSF File** from the Operation list.
- Select **SCSI** from the Bus Type list.
- Enter the following in the ADSF Path field: `/<containerName>/acropolis/vmdisk/<vmdisk_uuid>`
- Enter the disk size.

9 Click **Save** to update the VM.



10 Proceed to "Step 4: Configure network settings".

## Step 4: Configure network settings

**IMPORTANT!** Be sure to enter settings that match those of the original CentOS 6 appliance.

1 From the Prism VM menu, select the appliance VM and click **Power On**.

Overview - Table

VM

Include Controller VMs 21-30 of 57 (filtered from 60)

VM NAME	HOST	IP ADDRESSES	CORES	MEMORY CAPACITY	STORAGE	CPU USAGE	CONTROLLER READ IOPS	CONTROLLER WRITE IOPS	CONTROLLER IO BANDWIDTH	CONTROLLER AVG IO LATENCY	BACKUP...	FLASH MODE
.QA - Mark - Windows VM for SLA Testing	NTNX-17SM6 D120075-B	169.25...	1	2 GiB	8.96 GiB / 80 GiB	6.6%	0	1	16 KBps	13.03 ms	Yes	No
.QA - Mark - Windows VM w/ multiple NICs	NTNX-17SM6 D120075-B	169.25...	1	2 GiB	8.84 GiB / 80 GiB	2.31%	0	0	8 KBps	4.84 ms	Yes	No
Doc-UB	NTNX-17SM6 D120075-B		4	8 GiB	4.23 GiB / 300 GiB	0%	-	-	-	-	Yes	No
doc-ubuntu	NTNX-17SM6 D120075-B		1	2 GiB	3.82 GiB / 23 GiB	73.87 %	0	0	3 KBps	12.9 ms	Yes	No

Summary > Doc-UB

Manage Guest Tools Launch Console Power on Take Snapshot Migrate Pause Clone Update Delete

## 2 Launch the VM Console.

Overview - Table

VM

Include Controller VMs 21-30 of 57 (filtered from 60)

VM NAME	HOST	IP ADDRESSES	CORES	MEMORY CAPACITY	STORAGE	CPU USAGE	CONTROLLER READ IOPS	CONTROLLER WRITE IOPS	CONTROLLER IO BANDWIDTH	CONTROLLER AVG IO LATENCY	BACKUP...	FLASH MODE
.QA - Mark - Windows VM for SLA Testing	NTNX-17SM6 D120075-B	169.25...	1	2 GiB	8.96 GiB / 80 GiB	1.97%	0	0	3 KBps	20.24 ms	Yes	No
.QA - Mark - Windows VM w/ multiple NICs	NTNX-17SM6 D120075-B	169.25...	1	2 GiB	8.84 GiB / 80 GiB	3.77%	0	0	11 KBps	17.86 ms	Yes	No
Doc-UB	NTNX-17SM6 D120075-A		4	8 GiB	- / 300 GiB	9.36%	0	0	0 KBps	0 ms	Yes	No

Summary > Doc-UB

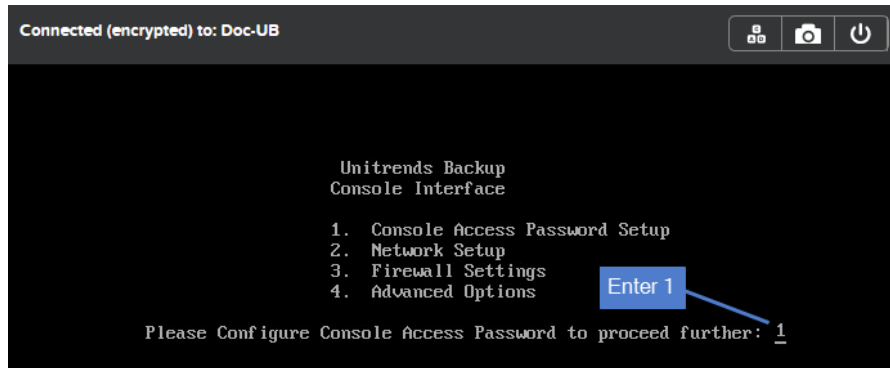
Manage Guest Tools Launch Console Power Off Actions Take Snapshot Migrate Pause Clone Update Delete

The remaining steps are run from the Unitrends Backup console interface. On these screens, you select a menu option by entering a number in the **Please enter choice** field.

### Notes:

- As you complete each step in the Unitrends Backup Console Interface, you are presented with the next configuration screen.
- You can press **Enter** to accept the default or current setting.

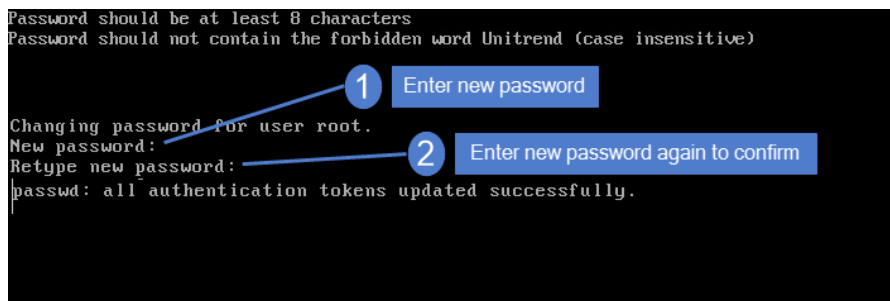
## 3 On the Console Interface screen, enter 1 in the Please Configure Console Access Password... field.



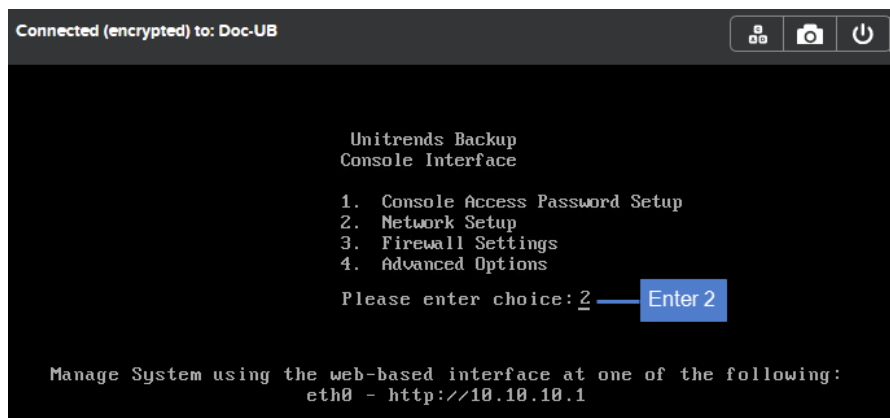
- 4 To change the direct console password, enter a new password, then enter the password again to confirm.

**Notes:**

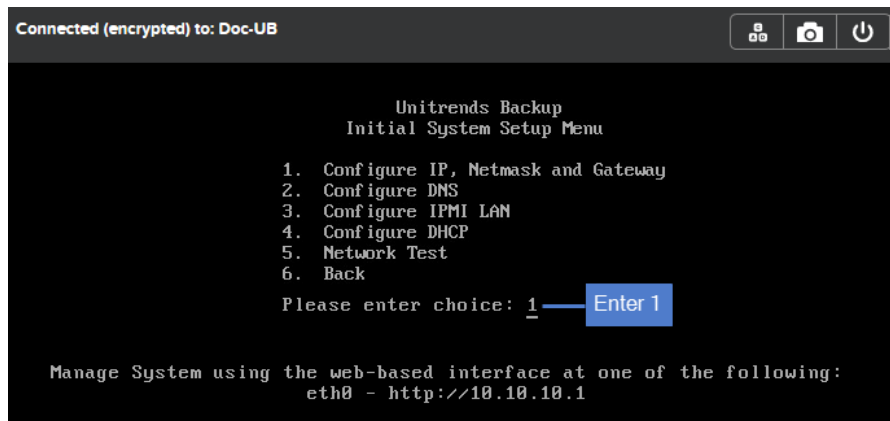
- This is the root operating system password that accesses the console. This password does not access the UI. (You will change the UI password in "Step 5: Set up the CentOS 7 appliance using the Quick Setup Wizard" on page 35.)
- All appliances are deployed with these default operating systems credentials: user *root*, password *unitrends1*. For appliance security, you must change this password.



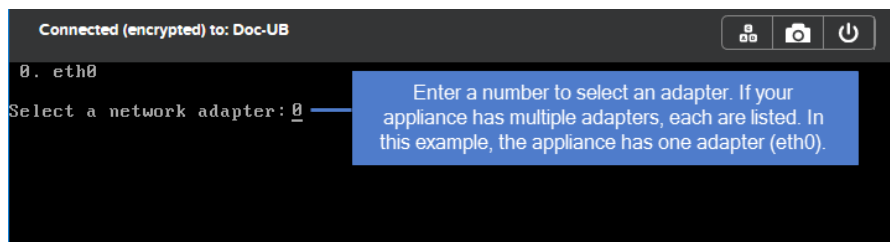
- 5 On the Console Interface screen, enter **2** in the **Please enter choice** field.



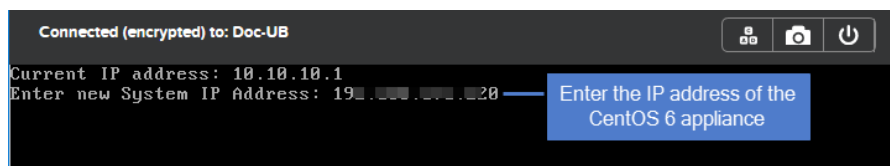
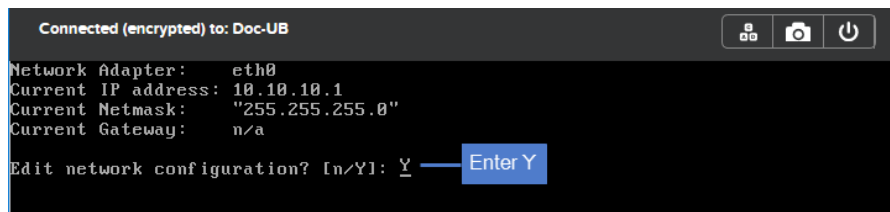
- 6 On the Initial System Setup Menu screen, enter **1** in the **Please enter choice** field.



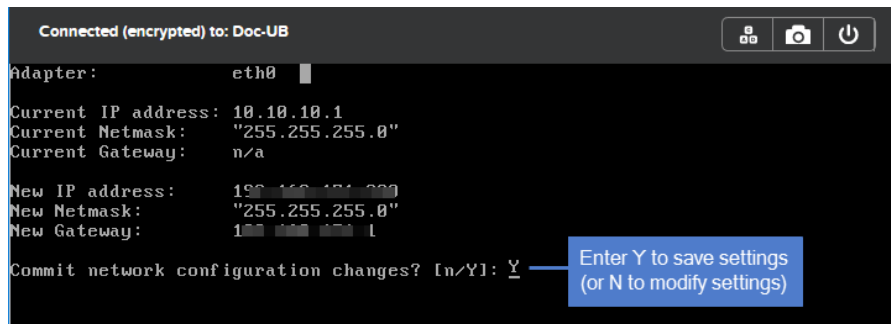
- 7 Enter a number in the **Select a network adapter** field. For example, enter **0** to select *eth0*.



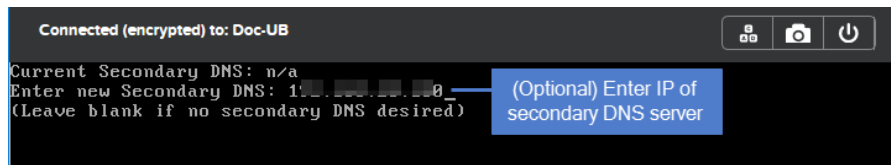
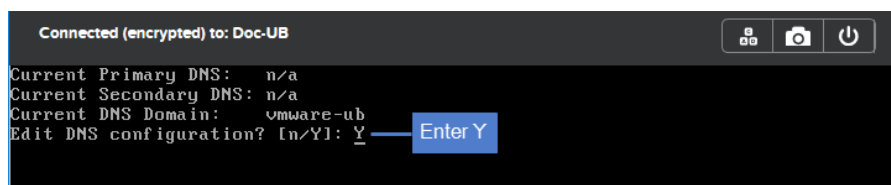
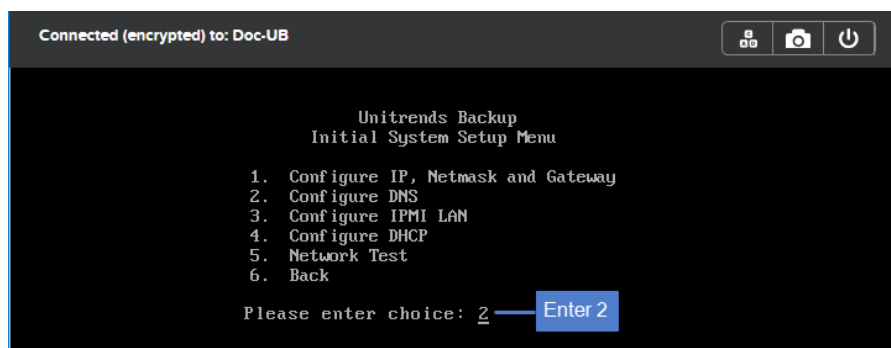
- 8 Enter **Y** in the **Edit network configuration** field. Then enter the **IP address**, **Netmask**, and **Gateway** of the CentOS 6 appliance. Review the settings and enter **Y** to save.

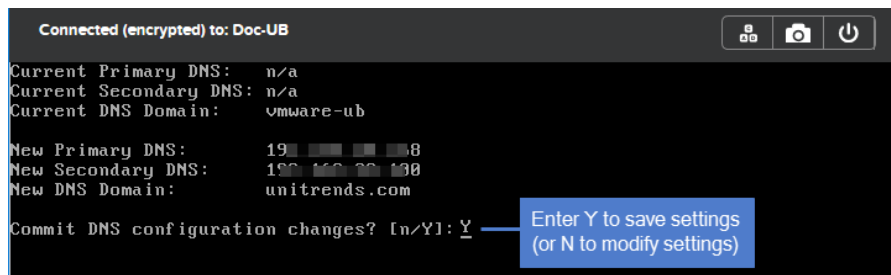




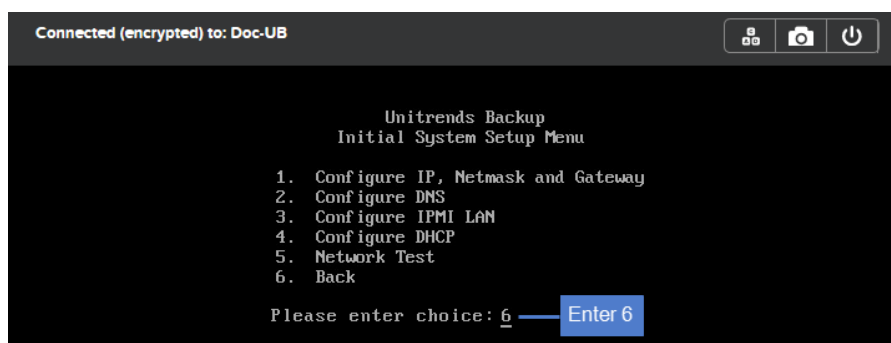


- 9 To configure DNS settings, enter **2**, then enter **Y** to edit. Enter the primary DNS IP address, a secondary DNS IP (optional), and a DNS domain. Review the settings and enter **Y** to save.

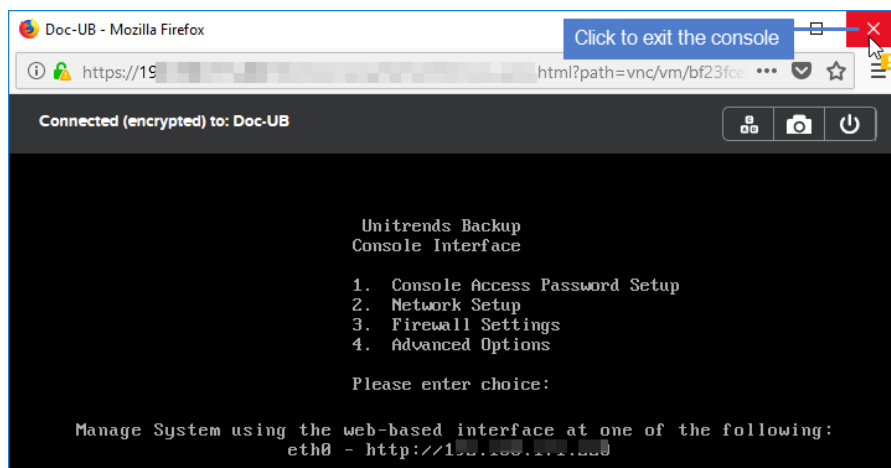




- 10 To exit network setup, enter 6.



- 11 Exit the VM console.

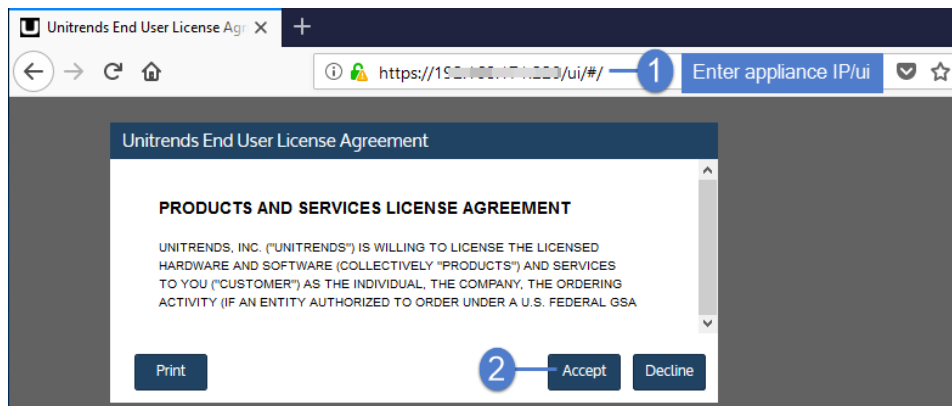


- 12 Proceed to "Step 5: Set up the CentOS 7 appliance using the Quick Setup Wizard".

## Step 5: Set up the CentOS 7 appliance using the Quick Setup Wizard

Use this procedure to set up the appliance:


- 1 Open a browser and connect to your appliance by entering: ***https://<applianceIP>/ui***. For example: ***https://10.10.10.1/ui***.
- 2 Click **Accept** to accept the license agreement.



- 3 Set the appliance date and time by doing one of the following, then click **Next**:
  - Select a **Timezone**. If needed, modify the appliance **Date** and **Time**.OR
  - Check the **Use an NTP Server** box to sync to an NTP server. (Optional) Enter your preferred NTP server address.

**UNITRENDS**

Date & Time    Host Name & Password    Email

 Crazy-committed to helping you play IT safe.

☒ Enter a date and time for your appliance

Date: 9/4/2019

Time: 16:05:03

Time Zone: America/New\_York

☐ Use an NTP Server

NTP Server Addresses: Add NTP Server Address (Optional) ?

0.centos.pool.ntp.org

1.centos.pool.ntp.org

Click to continue    Next

- 4 Enter a **Host Name**, a **Domain**, and a new **UI Password** for the appliance. If needed, enter a new **OS Password**. Confirm the passwords by entering them again in the fields to the right. Click **Next**.

**Notes:**

- The hostname can contain only alphanumeric characters, dashes, and underscores.
- The appliance has a UI root user and an OS root user. These are separate accounts. Changing the password of one root user account does NOT change the password of the other root user account. The UI root user is used to log in to the appliance UI. The OS root user is used to log in to the appliance console or for command line access.
- If you have already set the OS password, these fields are disabled in the Quick Setup Wizard.
- Passwords cannot contain the word *Unitrend* (case insensitive).
- The OS password must contain 8 or more characters.
- All appliances are deployed with these default UI and OS credentials: user *root*, password *unitrends1*. For appliance security, you must change these passwords in the Quick Setup Wizard.

**UNITRENDS**

Date & Time Host Name & Password Email

1 Enter hostname, domain (optional) and appliance UI and OS passwords

Host Name: vmware-ub ?

Domain: unitrends.com ?

UI Password: ..... ?

OS Password: ..... ?

2 Confirm UI password

3 Confirm OS password

4

Previous Next

with your success.

- 5 To enable email from the appliance, check **Enable email reporting** and enter the following:
- The fully qualified domain name of the **SMTP server**.
  - (If needed) If the SMTP server requires authentication, select **Authentication required** and enter a **Username** and **Password**.
  - Click **+ Add Recipients** to add an email recipient. Enter an email address in the **Recipient** field and select one or more of the **System**, **Jobs**, and **Failures** options to specify which reports the appliance will send to the recipient. Repeat as needed to add more recipients.
- 6 Click **Finish**.

**UNITRENDS**

Date & Time | Host Name & Password | **Email**

1 ☒ Enable email reporting

SMTP Server: unitrends.com 2 Enter the FQDN of the SMTP server

☐ Authentication Required

Username: 3 If the SMTP server uses authentication, check the box and enter credentials

Password:

Confirm Password:

Recipients	System	Jobs	Failures
jalvarez@unitrends.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
djones@unitrends.com	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

4 + Add Recipients Click to add an email recipient

5 For each recipient, enter an email address and select reports to send

6 Previous Finish

7 Click **Recover** to add the migrated backups to the appliance:

**Configure Storage**

The selected storage contains an existing filesystem. If it contains Unitrends backup data, you can attempt to recover it. Otherwise, you can erase the data or cancel and select different storage.

**Recover** Erase Data Cancel

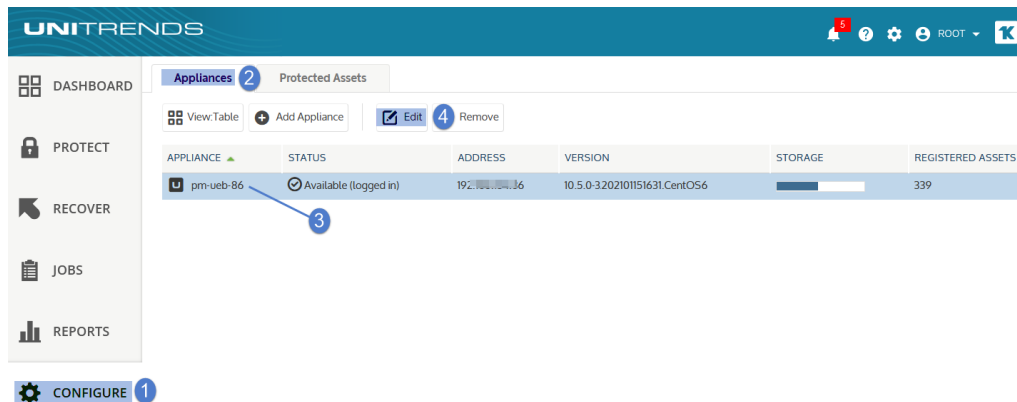
Recovering Storage...

## Step 6: (If needed) Configure encryption with the CentOS 6 passphrase

If backups were being encrypted on the CentOS 6 appliance, you must configure encryption with the passphrase that was used by the CentOS 6 appliance. If you do not use the original passphrase, any encrypted backups that were migrated cannot be recovered.

Use this procedure to configure encryption:

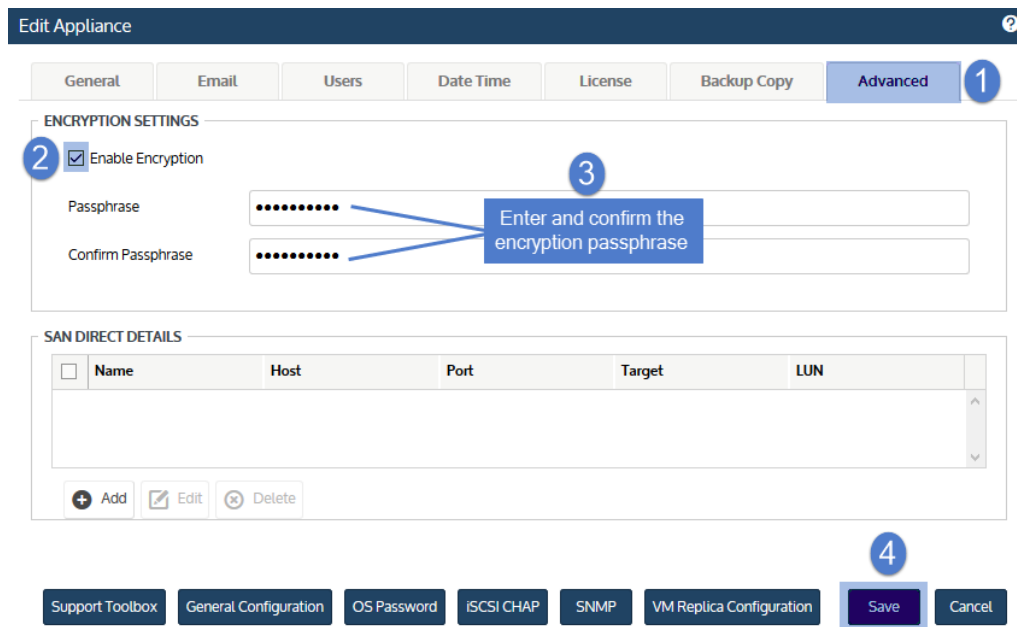
- 1 On the **Configure > Appliances** page, select the appliance and click **Edit**.



- 2 Select the **Advanced** tab.
- 3 Check **Enable Encryption**.
- 4 Enter the passphrase used by the CentOS 6 appliance in the **Passphrase** and **Confirm Passphrase** fields.

**IMPORTANT!** Be sure to keep the passphrase secure. If you forget the passphrase there is no way to recover it.

- 5 Click **Save**.



- 6 Return to the Edit Appliance dialog.
- 7 Select the **Advanced** tab and click **Save Master Key File**.
- 8 (Optional) If your appliance has a CD drive, you can save the key file directly to a CD. Insert a CD into your appliance's CD drive. (If no CD is inserted, the key file is saved to the appliance's samba share.)

9 Click **Continue**.

10 You receive a message indicating the master key file was saved to the appliance's samba share or to CD. Click **OK**.**Notice**

Master key file was saved to the samba share as `crypt_image.iso`. Please delete this when you have copied it to media.

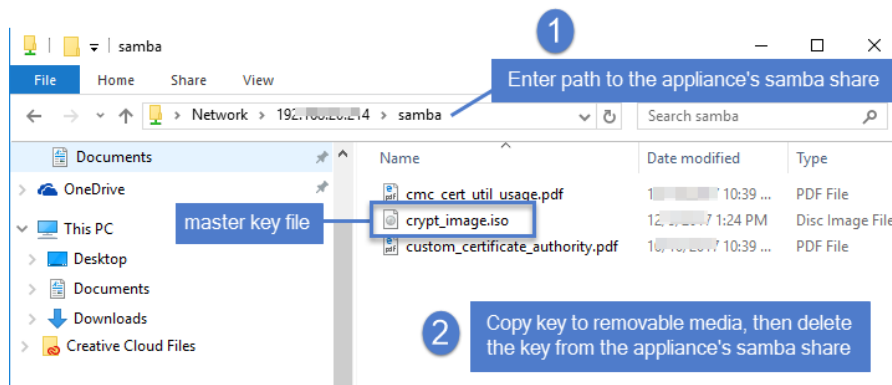
OK

**IMPORTANT!** Be sure to keep the master key file secure. If you ever need to perform disaster recovery of the appliance, you will need this key to access any encrypted backups.

## 11 If you saved the key to the appliance's samba share, do these steps:

- Log in to a Windows workstation as an administrator with full system access.
- Launch File Explorer and enter the following path to access the master key file on the Unitrends appliance:  
`\\ApplianceIP\samba`
- Copy the master key file, called `crypt_image.iso`, to removable media and store it in a safe location.
- Once you have copied the key to removable media, delete `crypt_image.iso` from `\\ApplianceIP\samba` for increased security.





## Step 7: (If needed) Add data copy access profiles

Data copy access profiles are not migrated from the CentOS 6 appliance. If you were using the copy data management feature, you need to recreate your data copy access profiles. For details, see [Copy Data Management](#) in the [Administrator Guide for Recovery Series, Recovery MAX, ION/ION+, and Unitrends Backup](#).

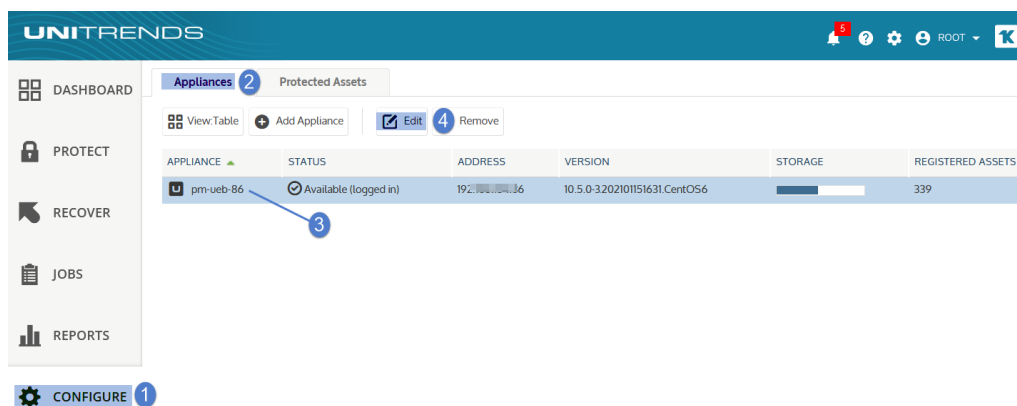
## Step 8: Register and license the CentOS 7 appliance

You must register and license the appliance within 30 days of deploying Unitrends Backup.

Each appliance requires an activation code and license key. Use the procedures below to register and license the appliance:

To register a Unitrends Backup appliance

- 1 On the **Configure > Appliances** page, select the appliance and click **Edit**.



- 2 Select the **License** tab and click **Update**. The Registration Center displays.

Edit Appliance

General Email Users Date Time **License** Backup Copy Advanced

LICENSE DETAILS

Asset Tag 038239cd-f421-42a9-8246-1d8e00a82157

License

Install Date

Expires

Feature Description

Feature String

License Key

Update Resources Add License Info

Save Cancel

- 3 Select I need to activate my purchase:

UNITRENDS

# Unitrends Enterprise Backup™ Registration Center.

YOUR CURRENT ASSET TAG: 038239cd-f421-42a9-8246-1d8e00a82157

YOUR CURRENT LICENSE: NO LICENSE

## How Can We Help You Today?

I have a promo code

Register my asset

**Click here** I need to activate my purchase

I would like a quote

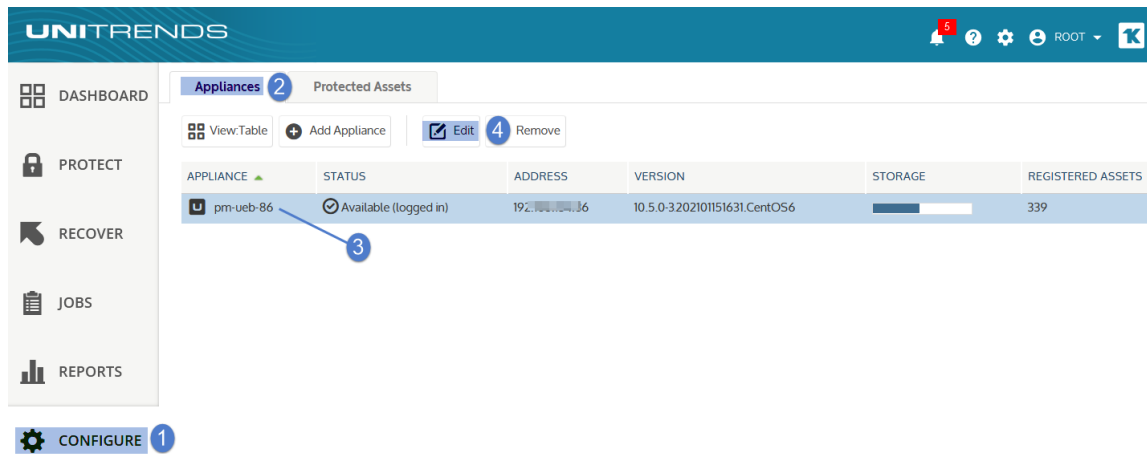
- 4 Complete and submit the applicable form.

Unitrends sends an email containing license details. Use the next procedure to apply this license information to the appliance.

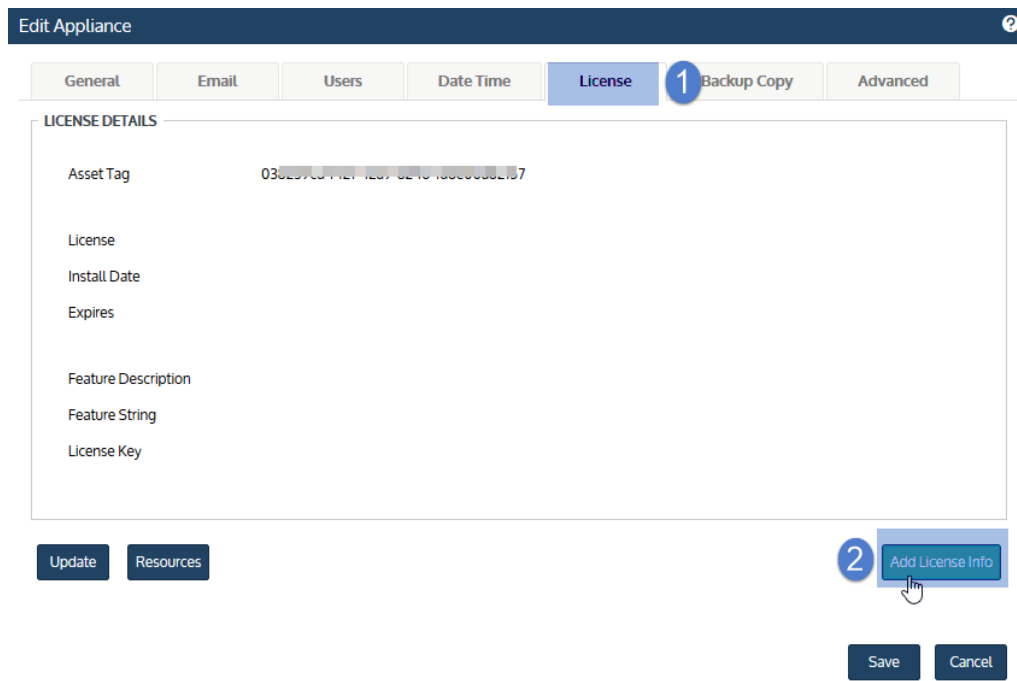
### To license a Unitrends Backup appliance

Use these steps to enter license information you have received from Unitrends.

- 1 On the **Configure > Appliances** page, select the appliance and click **Edit**.



- 2 Select the **License** tab and click **Add License Info**.



- 3 Enter the **License Key**, **Expiration Date**, and **Feature String**.
- 4 Click **Save**. The license is applied.

**Edit Appliance** ?

General Email Users Date Time **License** Backup Copy Advanced

**LICENSE DETAILS**

Asset Tag 03813000-M21-1007-02-10-10000002157

License

Install Date

Expires

Feature Description

Feature String

License Key

License Key f2a37793d077f00b37cd030b0c07003a030a

Expiration Date 01/31/2019 Clear Date

Feature String ENTRB,MUX=10,VC=INF,RC=INF,D2D=INF,ENC,ADX

1 Enter license key, expiration date, and feature string

2 Save Cancel

**Edit Appliance** ?

General Email Users Date Time **License** Backup Copy Advanced

**LICENSE DETAILS**

Asset Tag 03813000-M21-1007-02-10-10000002157

License Enterprise Edition

Install Date Thu Nov 3 16:27:42 2016

Expires 01/31/2019

Feature Description Unlimited Replication or Backups, Encryption, Archiving

Feature String ENTRB,MUX=10,VC=INF,RC=INF,D2D=INF,ENC,ADX

License Key f2a37793d077f00b37cd030b0c07003a030a

License is applied and details display

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