



BeyondTrust

UVM Appliance Migration Guide

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Prepare the UVM

This process only applies if the UVM Appliance Management Software is at or above version 3.2.

Earlier versions of Appliance Management software require a manual process that is documented separately.

Getting Started

Assumptions

- Terminology:
 - Existing 2008, 2012 R2 UVM = Source
 - New 2016 UVM = Target
- Only one UVM is running at a time
- The target UVM will be named the same as the source UVM when deployed
- Appliance Management Software is at or above version 3.2 on the source and target machines

High-level Overview

The migration consists of the following general steps:

- Match software versions between the source and target UVMs
- Back up and copy necessary data on the source UVM
- Prepare the target UVM to accept data from the source
- Restore and copy necessary data onto the target UVM
- Verify the migration

Under most circumstances downtime is necessary, as there will be no UVM during the migration process.

- A standard migration takes approximately four hours with small databases between physical UVMs.
- A virtual appliance can be faster to deploy than a physical appliance.
- Physical may involve reimaging if hardware supports the new image and the upgrade was purchased.
- For an Active/Active setup, the UVM can be removed from the pool before migration and added back after migration is complete. This will prevent downtime for the end-user.

Alternative Approaches Not Covered

- Physical appliances: A replacement UVM can be ordered
- Virtual appliances: A Windows Server 2016 can be deployed side by side
- Beware DNS conflicts
- Migration to pre-existing appliances
 - This process assumes brand new appliances (configuration must be run)
 - No data will be kept on the target UVM

Use iDRAC to Perform the Reimaging and Migration Process

Although the process can be performed using iDRAC, we recommend that there be a local resource in close physical proximity to the data center.

Once the reimaging USB stick has been inserted into the source UVM, the migration can be performed through the iDRAC interface by logging in and using the virtual console. Any backups or exported data pertaining to the migration will need to be stored on a network location or removable media for transfer to the new or reimaged UVM.

To migrate UVMs that are part of a High Availability pair, follow these steps:

1. Unpair the existing UVM High Availability pair.
2. Perform the full migration on the primary UVM.
3. Deploy a new secondary UVM.
4. Pair the two new UVMs for High Availability.

Identify The Host

Hardware

Find the Dell service tag to identify the hardware model at <https://www.dell.com/support/home/en-us/Products?app=warranty>.

Hardware Concerns

If drives are Bitlocked, a TPM module is required. A TPM module must be manually reset before reimaging (steps are included as part of the reimaging process).

Migration Toolkit

Various tools have been added to the Secure Download Tool under **migrate-to-win2016** (other tools that may be present are not required for this process):

- Rufus
- USB Image

Migrate the UVM

Step 1: Prerequisites

Run Updates on the Source

- Run BeyondTrust Updater.
- If using Enterprise Update Server / BeyondTrust Updater, we recommend connecting the appliance to the same server to avoid version mismatch and manual updates.
- All product versions should match what will be on the target image. As noted earlier, this process is only valid for Appliance Management Software 3.2 and above. A separately documented process is required for Appliance Management Software 3.1.5 and below.

If you are migrating from Windows 2008 R2 to Windows 2016, we recommend updating BeyondInsight to v6.9 before you proceed. BeyondInsight v6.10 is not supported on 2008 R2; however, the BeyondInsight database will be upgraded on import to the 2016 target UVM.

- If the target does not exist yet, first verify what versions will download from Auto Update.
- It is *not* required to apply SUPI updates.

Step 2: Back up Necessary Data

Run a Backup on the Source UVM (If Using the Local Database)

Time estimate: 6 minutes

1. Run the Backup feature on **Maintenance** page and record the password. We recommend more than one copy of the password to avoid a situation where the text file gets corrupted. Have one resource type the first password and another resource to confirm. This will minimize support cases and escalation resulting from human error.
2. If the backup was saved locally, RDP to the appliance to get the backup in **C:\LocalBackups** (or the appropriate folder if another local backup location was specified).
3. Transfer the backup and any additional backups you want to migrate to either removable media or a network location accessible to both the source and target UVMs.

Collect Additional Details

The following details are not included in the import process:

- Licensing: Gather BeyondTrust product license numbers from the appliance **Maintenance** page on the source UVM.
- HA Pairing Settings (from the primary node): Write down or screenshot what you need to replicate on the target UVM.
- Backup Schedule: Write down or screenshot what you need to replicate on the target UVM.
- WSUS is no longer supported and will not be part of the migration.

Step 3: Reimage the UVM

Reimage or Deploy the New Appliance

Time estimate: 2 hours (Physical)

Virtuals

Deploy new UVM. There is no conversion.

Physicals

Two options:

- Customer purchases new UVM hardware with the latest available image already installed.
- Customer purchases upgrade option to have their current UVM rebuilt with the latest available image.
 1. Get a 64GB (or greater) USB stick ahead of time.
 2. Obtain the following files from the Tool Kit:
 - **Rufus-2.3.exe**
 - **20xxMigrationUVMBuilder.zip**
 3. Obtain the Windows license. The license is provided when the USB upgrade is purchased.
 4. Follow the process guide to build a USB.

 For more information, please see [Build a Reimaging USB](#).

Rebuild the Appliance

 For more information, please see [Reimage the UVM](#) for steps to rebuild a UVM on R720 or R730 hardware.

Step 4: Configure the UVM

Run the Configuration Wizard on the Target UVM

Time estimate: 1 hour

1. Rename the UVM to the same as the source. Migration will fail if this is incorrect.
2. Apply your BeyondTrust product licenses.
3. Verify you are at the expected software versions in **Maintenance**. These must match those on the source UVM.
4. Configure BeyondInsight for Unix and Linux if being used by the customer.
5. Roles do not need to be set and will be imported with the registry keys contained in the backup file.
6. High Availability should be set up *after* the migration is complete for *both* appliances in the pair.

Step 5: Download Pending

Prepare the Target

Time estimate: 10 minutes

- Enable RDP.
- If not updating right away, ensure that Auto Update and BeyondTrust Updater roles are disabled in the Roles Editor to prevent changes to versions.

Step 6: Restore and Import Data

Restore Data From the Source UVM

Time estimate: 10 minutes (assuming 600 MB UVM Backup file)

1. Copy the UVM backup file to **C:\LocalBackups**.
2. Log in to the UVM **Maintenance** page and go to **Backup and Restore**.
3. Ensure **C:\LocalBackups** exists as a backup location and import backups.
4. Start a restore from the pre-migration backup.
5. Wait until the restore completes.

Step 7: Post-Migration Steps

Time estimate: 3 minutes

Post-Import Reconfiguration

- Enterprise Update Server (EUS)
- Backup Schedule
- Configure BeyondInsight Analytics & Reporting
- Set up High Availability (HA)

Post-Migration Validation

You may want to verify the following items to confirm functionality of your newly migrated UVM appliance:

Windows

- If your UVM is a physical appliance, ensure that the C: drive has BitLocker enabled. If it is not, repeat steps 2-6 of Reimage the UVM, followed by turning the TPM module OFF and then ON (with reboots in between).



For more information, please see [Reimage the UVM](#).

BeyondInsight

- Confirm all expected assets are present in the asset table.
- Ensure the migrated appliances are recognized as vulnerability scanners.
- Run a new asset scan to verify database writes.
- Check that you can access saved credentials.

Session Monitoring

- Ensure you can access your archived sessions.
- Ensure you can record new admin sessions.

UVM Settings

- Schedule a new backup and confirm that it runs.
- Roles configuration.

Build a Reimaging USB

Download Required Files

Download the files from the BeyondTrust Secure Download Tool:

- **rufus*.exe** (no specific version required)
- **20xxMigrationUVMBuilder.zip**

Requirements

- Admin rights to the local machine where you run the Rufus application
- Minimum USB size: 64GB

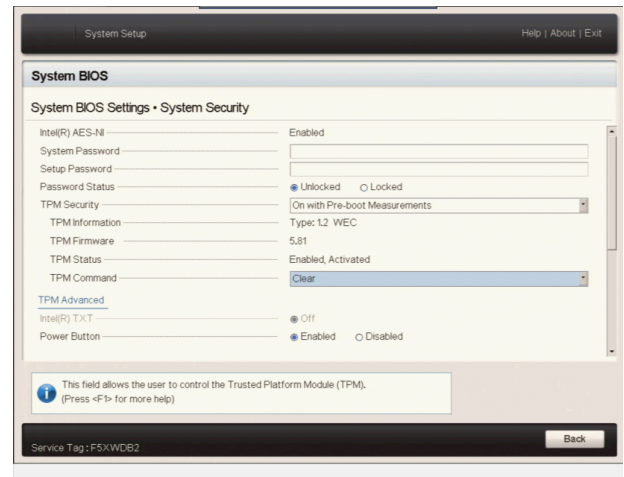
Create the Image

1. Run **rufus*.exe**.
2. Select a USB drive from the device list.
3. Select **GPT partition scheme** for UEFI.
4. Select **FAT32** for the file system.
5. Enter a volume label: **UVMBuilder**.
6. Deselect **Create a bootable disk using**.
7. Click **Start *Warning: all data will be erased from the USB drive***.
8. Copy all contents from **2016MigrationUVMBuilder.zip** to the root of the USB drive.

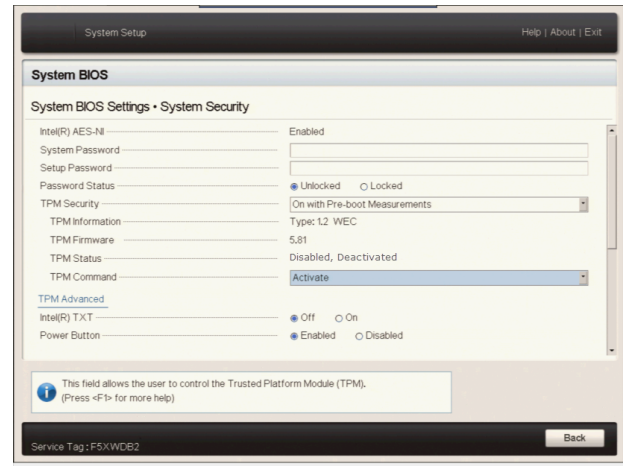
Reimage the UVM

1. Go to <https://www.dell.com/support> and enter the Dell service tag associated with your UVM. Take note of the hardware model of your UVM (either Dell PowerEdge R720 or R730). This will be relevant towards the end of the reimaging process, as additional drivers are needed on the R730 platform.
2. Reboot the UVM.
3. During the boot sequence, enter the **System Setup** by pressing the **F2** key when prompted.
4. Change the **Boot Type** from **BIOS** to **UEFI**, if not already set.

- When the **System Setup Main Menu** appears, select **System BIOS > System Security** and set **TPM Clear** to **Yes**. Select **Back** to return to the **System BIOS Settings** menu. Select **Finish** and choose **Yes** to save changes to return to the **System Setup Main Menu**. Select **Finish** and confirm that you want to exit and reboot.



- During the boot sequence, enter the **System Setup** again by pressing the **F2** key when prompted.
- When the **System Setup Main Menu** appears, select **System BIOS > System Security** and set **TPM Activation** to **Activate**. Select **Back** to return to the **System BIOS Settings** menu. Select **Finish** and choose **Yes** to save changes to return to the **System Setup Main Menu**. Select **Finish** and confirm that you want to exit and reboot.



- During the boot sequence, enter the UEFI Boot Manager by pressing the **F11** key when prompted.
- Select **UEFI Boot Menu** and choose the USB device containing the BeyondTrust UVM Builder USB.
- When the UVM finishes booting into the BeyondTrust UVM Builder USB, you will see a command prompt similar to **X:\Dell\Toolkit\Tools>**. Type **diskpart** to start the Windows disk partitioning tool and enter the command **list vol**. Identify the drive letter associated with the BeyondTrust UVM Builder USB and enter **exit** to leave diskpart.
- Change to the drive associated with the BeyondTrust UVM Builder USB and run the **builduvm.bat** file.
- When prompted, enter the selection for the desired UVM image. The scripts will now automatically reimagine the UVM, which will involve several reboots. Allow the process to continue until all script windows have completed.
- Open a command prompt and run the command:


```
C:\users\public\Desktop\BeyondTrust-Release-UpdaterInstaller.exe ENABLE_ENTERPRISE=1
```
- Open the **Drivers** folder on the desktop and run **OM-iSM-Dell-Web-X64-3.4.0-1471_A00.exe**. Unzip the contents to the **C:\OpenManage** folder, and then run the **C:\OpenManage\iSM\windows\iDRACSvcMod.msi** installer. Follow the wizard to install this update with the **Typical** configuration.
- If your UVM uses the Dell PowerEdge R720 platform, open the **Device Manager**. If there are a large number of **Base System Device** items listed under **Other devices**, open the **Drivers** folder on the desktop followed by the **R720** folder and install **Chipset_Driver_GKXMM_WN64_10.1.2.77_J00_01.EXE**, selecting the **Typical** configuration, if prompted.

If your UVM uses the Dell PowerEdge R730 platform, open the **Drivers** folder on the desktop followed by the **R730** folder and install **Chipset_Driver_1MM6C_WN_9.4.2.1019_A02.exe**, selecting the **Typical** configuration, if prompted.

16. If your UVM uses the Dell PowerEdge R720 platform, skip this step.

If your UVM uses the Dell PowerEdge R730 platform, open the **Drivers** folder on the desktop and install **Crystalfontz_USB_Drivers-20170831.exe**, selecting the Typical configuration, if prompted.

17. Run the **Update Appliance** shortcut on the desktop and wait until the scripts finish executing.
18. Run the **License** shortcut on the desktop to license Windows. When prompted for the SQL Server key, press **Enter**.
19. Run the **Prepare for Shipping** shortcut on the desktop and wait until the scripts finish executing. This script will shut down the VM when completed as it is then typically prepared to ship to a customer. Be prepared to turn the UVM on.

Windows Activation in Isolated Environments

1. Open an elevated command prompt.
2. Type **slmgr.vbs /ipk XXXXX-XXXXX-XXXXX-XXXXX-XXXXX** into the command prompt.



Note: Substitute XXXXX-XXXXX-XXXXX-XXXXX-XXXXX in the following command with your product key number with dashes included.

3. Type **slui 4** to access the phone activation screen and follow the steps to activate over the phone.