



BeyondTrust

U-Series Appliance 3.4 Migration Guide

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U-Series Appliance Migration

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

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

Getting Started

Assumptions

- Terminology:
 - Existing 2008, 2012 R2 U-Series Appliance = Source
 - New 2016 U-Series Appliance = Target
- Only one U-Series Appliance is running at a time.
- The target U-Series Appliance will be named the same as the source U-Series Appliance when deployed.
- U-Series 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 U-Series Appliances.
- Back up and copy necessary data on the source U-Series Appliance.
- Prepare the target U-Series Appliance to accept data from the source.
- Restore and copy necessary data onto the target U-Series Appliance.
- Verify the migration.

Under most circumstances downtime is necessary, as there is no U-Series Appliance during the migration process.

- A standard migration takes approximately four hours with small databases between physical U-Series Appliances.
- A Virtual U-Series Appliance can be faster to deploy than a physical U-Series Appliance.
- Physical may involve reimaging if hardware supports the new image and the upgrade was purchased.
- For an active / active setup, the U-Series Appliance can be removed from the pool before migration and re-added after migration is complete. This prevents downtime for the end user.

Alternative Approaches Not Covered

- Physical U-Series Appliances: A replacement U-Series Appliance can be ordered.
- Virtual U-Series Appliances: A Windows Server 2016 can be deployed side by side.
- Beware DNS conflicts.
- Migration to preexisting U-Series Appliances.
 - This process assumes brand new U-Series Appliance (configuration must be run).
 - No data is kept on the target U-Series Appliance.

Use iDRAC to Perform the Reimaging and Migration Process

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

Once the reimaging USB flash drive has been inserted into the source U-Series Appliance, 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 need to be stored on a network location or removable media for transfer to the new or reimaged U-Series Appliance.

To migrate U-Series Appliances that are part of a High Availability pair, follow these steps:

1. Unpair the existing U-Series Appliance High Availability pair.
2. Perform the full migration on the primary U-Series Appliance.
3. Deploy a new secondary U-Series Appliance.
4. Pair the two new U-Series Appliances for high availability.

Identify The Host

Hardware

Find the Dell service tag to identify the hardware model at <https://www.dell.com/support/contents/en-us/category/product-support/self-support-knowledgebase/locate-service-tag>.

Hardware Concerns

If drives are protected by Bitlocker, 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 U-Series Appliance

Step 1: Prerequisites

Run Updates on the Source

- Run BeyondTrust Updater.
- If using Enterprise Update Server and BeyondTrust Updater, we recommend connecting the U-Series 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 at "[U-Series Appliance Migration](#)" on page 3, this process is only valid for U-Series Appliance Management Software 3.2 and later.

If you migrate 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 U-Series Appliance.

- 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 U-Series Appliance (If Using the Local Database)

Time estimate: 6 minutes

1. Run the **Backup** feature on the **Maintenance** page and record the password. We recommend making more than one copy of the password to avoid a situation in which the text file gets corrupted. Have one resource type the first password and another resource to confirm. This minimizes support cases and escalation resulting from human error.
2. If the backup is saved locally, use RDP to connect to the U-Series Appliance to get the backup from **C:\LocalBackups** (or the appropriate folder if another local backup location is 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 U-Series Appliances.

Collect Additional Details

The following details are not included in the import process:

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

Step 3: Reimage the U-Series Appliance

Reimage or Deploy the New U-Series Appliance

Time estimate: 2 hours (Physical)

Virtual U-Series Appliances

Deploy new U-Series Appliance. There is no conversion.

Physical U-Series Appliances

Two options:

- Customer purchases new U-Series Appliance hardware with the latest available image already installed.
- Customer purchases upgrade option to have their current U-Series Appliance rebuilt with the latest available image.
 1. Get a 64GB (or greater) USB flash drive in advance.
 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 for the U-Series Appliance](#)" on page 9.

Rebuild the U-Series Appliance



For steps to rebuild a U-Series Appliance on R720 or R730 hardware, please see "[Reimage the U-Series Appliance](#)" on page 10.

Step 4: Configure the U-Series Appliance

Run the Configuration Wizard on the Target U-Series Appliance

Time estimate: 1 hour

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

Time estimate: 10 minutes (assuming 600MB U-Series Appliance backup file)

1. Copy the U-Series Appliance backup file to **C:\LocalBackups**.
2. Log in to the U-Series Appliance **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

We recommend that you verify the following items to confirm functionality of your newly migrated U-Series Appliance:

Windows

If the U-Series Appliance is a physical U-Series Appliance, ensure that the C: drive has BitLocker enabled. If it does not, repeat steps 2-6 of "[Build a Reimaging USB for the U-Series Appliance](#)" on page 9, followed by turning the TPM module OFF and then ON (with reboots in between).

BeyondInsight

- Confirm all expected assets are present in the asset table.
- Ensure the migrated U-Series 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.

U-Series Appliance Settings

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



For more information, please see "Reimage the U-Series Appliance" on page 10.

Build a Reimaging USB for the U-Series Appliance

Download Required Files

Download the files from the BeyondTrust Secure Download Tool:

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

Requirements

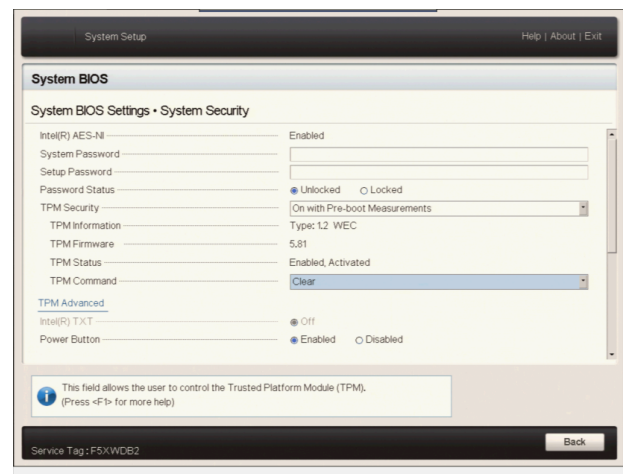
- Admin rights to the local machine where you run the Rufus application
- Minimum USB size: 64GB

Create the Image

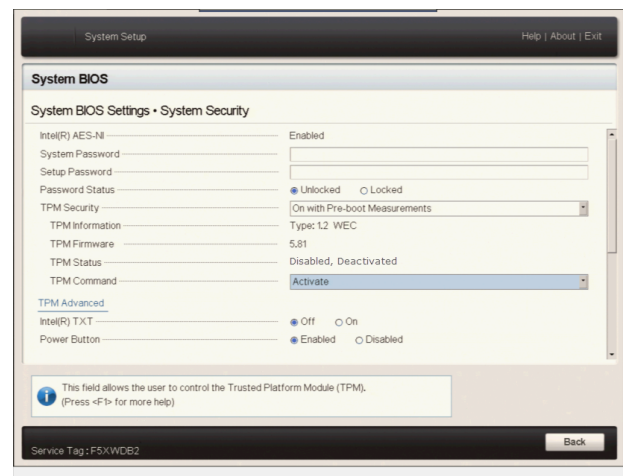
1. Run **rufus*.exe**.
2. Select a USB drive from the device list.
3. Select **GPT partition scheme** for UEFI.
4. Select **FAT32** for the file system.
5. Enter a volume label: **UVMBuilder**.
6. Deselect **Create a bootable disk using**.
7. Click **Start *Warning: all data will be erased from the USB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

Reimage the U-Series Appliance

1. Go to <https://www.dell.com/support/home/en-us> and enter the Dell service tag associated with your U-Series Appliance. Take note of the hardware model of your U-Series Appliance (either Dell PowerEdge R720 or R730). This will be relevant toward the end of the reimaging process, as additional drivers are needed on the R730 platform.
2. Reboot the U-Series Appliance.
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.
5. 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.
6. During the boot sequence, enter the **System Setup** again by pressing the **F2** key when prompted.



7. 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.
8. During the boot sequence, enter the UEFI Boot Manager by pressing the **F11** key when prompted.
9. Select **UEFI Boot Menu** and choose the USB device containing the BeyondTrust U-Series Appliance Builder USB.
10. When the U-Series Appliance finishes booting into the BeyondTrust U-Series Appliance Builder USB, a command prompt similar to **X:\Dell\Toolkit\Tools>** appears. Type **diskpart** to start the Windows disk partitioning tool and enter the command **list vol**. Identify the drive letter associated with the BeyondTrust U-Series Appliance Builder USB and enter **exit** to leave **diskpart**.
11. Change to the drive associated with the BeyondTrust U-Series Appliance Builder USB and run the **builduvm.bat** file.
12. When prompted, enter the selection for the desired U-Series Appliance image. The scripts automatically reimage the U-Series Appliance, which involves several reboots. Allow the process to continue until all script windows have completed.
13. Open a command prompt and run the command:



```
C:\users\public\Desktop\BeyondTrust-Release-UpdaterInstaller.exe ENABLE_ENTERPRISE=1
```

14. Open the **Drivers** folder on the desktop and run **OM-iSM-Dell-Web-X64-3.4.0-1471_A00.exe**. Extract 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.
15. If your U-Series Appliance 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 U-Series Appliance 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 U-Series Appliance uses the Dell PowerEdge R720 platform, skip this step.

If your U-Series Appliance 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 shuts down the VM when completed, because it is then typically prepared to ship to a customer. Be prepared to turn on the U-Series Appliance.

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.