

UVM Appliance Installation Guide



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UVM Appliance Installation

This guide provides information on UVM20 and UVM50 appliances and diagnostics information. This guide is intended for network security administrators responsible for protecting their organization's computing assets. A familiarity with networking and security concepts is needed.

FCC Certification

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

Limited Hardware Appliance Warranty

This hardware appliance is accompanied by a three-year manufacturer's warranty based on the invoice date. (Extended warranties available on request.) The warranty covers all hardware, including internal components supplied in this shipment. The warranty does not cover additional items, such as keyboards, monitors, and mice, not included in this shipment. During the warranty period, the appliance will be repaired or replaced at no cost under the warranty terms.

Due to continuing changes in the computer industry, if a replacement is necessary, the appliance manufacturer reserves the right to make product substitutions of equal or greater value.

Do not ship any appliance without first contacting BeyondTrust Technical Support to coordinate any repairs or replacements. Do not try to repair the appliance yourself.

Please back up all data before having the appliance serviced or repaired. Neither BeyondTrust nor the appliance manufacturer warrants that operation of the appliance will be uninterrupted or error-free. In no event will BeyondTrust or the appliance manufacturer be responsible or liable for loss or integrity of any data on the appliance or any storage media.

Warranty Invalidation

This warranty is void in the event that:

- the appliance is damaged due to accident, abuse, misuse, problems with electrical power, modifications or servicing not authorized by BeyondTrust or the appliance manufacturer, or failure to operate in accordance with the appliance instructions;
- serial tags, receiving numbers, product stickers, or manufacturer seals have been removed, altered, or tampered with;
- the appliance is opened for any reason;
- the appliance is damaged due to improper or inadequate packaging when returned for repair or replacement;
- the appliance has been tampered with, such as overclocking.

Labor and services performed on items or systems that are found not to be defective may be subject to a separate charge. In addition, the appliance manufacturer reserves the right to charge a ten percent restocking fee for items returned which are found not to be defective.





IMPORTANT!

Do not log on to the Console or Remote Desktop to the virtual appliance unless directed to do so by BeyondTrust Technical Support. Installing any software or changing any additional settings may void your warranty.



UVM Appliance Requirements

In this document, UVM applies to UVM20, UVMv20, UVM20 SQL Free, UVMv20 SQL Free and UVM50 appliance.

Client Requirements

Supported browsers:

- · Microsoft Edge
- Firefox
- · Google Chrome
- Safari
- Microsoft Internet Explorer (IE) 11

Appliance Requirements

- 10/100/1000 MB Ethernet Connection
- TCP/IP v4
- Rack Mount

Physical UVM Package Contents

The UVM package consists of the following items. Please verify all materials listed are present and free from visible damage or defects before proceeding. If any item appears to be missing or damaged, please contact BeyondTrust Technical Support.

- UVM Appliance
- Two Power Cords
- Getting Started Guide
- Rack Mount Kit

Virtual Appliance Specifications

UVMv20 and UVMv20 SQL Free

Requirement	Description
Hard Disk	300 GB
RAM	Note: For a BeyondInsight deployment with a local SQL Server instance, the minimum requirement is 32 GB. If SQL Server is remote or can be turned off based on the roles you are configuring, the minimum requirement can be set to 16 GB.
OS	Microsoft Windows Server 2016 Standard



Requirement	Description
Database	Microsoft SQL Server 2016 Standard
	Note: The database information does not apply to the UVMv20 SQL Free Appliance. The UVMv20 SQL Free Appliance does not include a database.
Form Factor	VMware VMDK for ESXi 5.5 or later or and Microsoft VHD for Hypervisor-V (Gen 2 2012 R2 or higher) USB 2.0 Thumb Drive for Distribution



Note: The license included with the UVMv20 Appliance and UVMv20 SQL Free Appliance for Microsoft Windows Server 2016 covers up to 16 cores on the physical virtualization (host) server.

Physcial Appliance Specifications

UVM20 Specifications

Specification	Description
AC Input Voltage	110 to 240 VAC
Rated Input Frequency	50 to 60 Hz
Cooling	5 Standard Fans; 1 Standard 1U Heatsink.
Chassis	Chassis with up to 8, 3.5" Hard Drives
Dimensions	1U rack-mountable server H: 1.68 in. (4.28 cm) (10.75 in. shipping) W: 18.97 in. (48.18 cm) (24 in. shipping) D: 26.89 in. (68.30 cm) (35.75 in. shipping) Weight: approx 45 lbs. (48 lbs. shipping)
Microprocessor	Intel Xeon Silver 4112, 2.6 GHz, 4-Core, 8-Thread, 8.25M Cache, Turbo, HT
Hard Drive	2 x 2 TB 7.2 RPM NLAS 12Gbps 512n 2.5in Hot-plug
RAM	128 GB
RAID Configuration	RAID 1
RAID Controller	PERC H730P, 2GB NV Cache
NIC	Broadcom 57416 2 Port 10Gb Base-T + 5720 2 Port 1Gb Base-T, rNDC
Power Supply	Dual, hot-plug, Redundant Power Supply (1+1), 495W
Power Cords	2 x NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m)
Rack Rails	ReadyRails™ Sliding Rails with Cable Management Arm
PCIe Riser	Risers with up to 4, x8 PCle Slots + 2, x16 PCle Slots
Operating System	Embedded Windows Server 2016 Standard
Database	Microsoft SQL Server 2016 Standard



UVM20 SQL Free

Specification	Description
AC Input Voltage	110 to 240 VAC
Rated Input Frequency	50 to 60 Hz
Cooling	5 Standard Fans; 1 Standard 1U Heatsink.
Chassis	Chassis with up to 8, 3.5" Hard Drives
Dimensions	1U rack-mountable server H: 1.68 in. (4.28 cm) (10.75 in. shipping) W: 18.97 in. (48.18 cm) (24 in. shipping) D: 26.89 in. (68.30 cm) (35.75 in. shipping) Weight: approx 45 lbs. (48 lbs. shipping)
Microprocessor	Intel Xeon Silver 4112, 2.6 GHz, 4-Core, 8-Thread, 8.25M Cache, Turbo, HT
Hard Drive	2 x 2 TB 7.2 RPM NLAS 12Gbps 512n 2.5in Hot-plug
RAM	128 GB
RAID Configuration	RAID 1
RAID Controller	PERC H730P, 2GB NV Cache
NIC	Broadcom 57416 2 Port 10Gb Base-T + 5720 2 Port 1Gb Base-T, rNDC
Power Supply	Dual, hot-plug, Redundant Power Supply (1+1), 495W
Power Cords	2 x NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m)
Rack Rails	ReadyRails™ Sliding Rails with Cable Management Arm
PCIe Riser	Risers with up to 4, x8 PCle Slots + 2, x16 PCle Slots
Operating System	Embedded Windows Server 2016 Standard

UVM50 Specifications

Specification	Description
AC Input Voltage	110 to 240 V AC, autoranging
Rated Input Frequency	50 to 60 Hz
Cooling	8 Standard Fans, 2 Standard 1U Heatsinks
Chassis	Chassis with up to 8, 3.5" Hard Drives
Dimensions	1U rack-mountable server H: 1.68 in. (4.28 cm) (10.75 in. shipping) W: 18.97 in. (48.18 cm) (24 in. shipping) D: 26.89 in. (68.30 cm) (35.75 in. shipping) Weight: approx 45 lbs. (48 lbs. shipping)
Microprocessor	2 x Intel Xeon Silver 4110, 2.1 GHz, 8-Core, 16-Thread, 11M Cache, Turbo, HT
Hard Drive	8 x 960 GB SSD SAS Mix Use 12Gbps 512n 2.5in Hot-plug
RAM	256 GB
RAID Configuration	RAID 10



Specification	Description
RAID Controller	PERC H740P, 8GB NV Cache
NIC	Broadcom 57416 2 Port 10Gb Base-T + 5720 2 Port 1Gb Base-T, rNDC
Power Supply	Dual, hot-plug, Redundant Power Supply (1+1), 750W
Power Cords	2 x NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m)
Rack Rails	ReadyRails™ Sliding Rails with Cable Management Arm
PCIe Riser	Risers with up to 4, x8 PCIe slots + 2, x16 PCIe slots
Operating System	Embedded Windows Server 2016 Standard
Database	Microsoft SQL Server 2016 Standard



Note: All BeyondTrust UVM appliances, physical and virtual, are licensed for the Microsoft Windows Server Operating System and Microsoft SQL Server based on Microsoft Core CAL licenses. Appliances ship with the Microsoft Certificate of Authenticity (COA) as proof of this licensing.



View UVM Appliance Firewall Settings and Port Requirements

Firewall Settings

- · All outgoing ports are allowed.
- Incoming ports are limited to the default Windows rules (includes allowing DCOM), plus the following:

TCP Ports

Port	Purpose	Target Program/System Resource	Initial Status
80	НТТР	System	Enabled
443	HTTPS	System	Enabled
445	SMB	System	Disabled
1433	SQL Server	C:\Program Files\Microsoft SQL Server\MSSQL13.MSSQLSERVER\MSSQL\Binn\sqlservr.exe	Enabled
2000	App Bus	C:\Program Files(x86)\Common Files\eEye Digital Security\Application Bus\eeyeevnt.exe	Disabled
2383	SQL Analysis Services	C:\Program Files\Microsoft SQL Server\MSAS13.MSSQLSERVER\OLAP\bin\msmdsrv.exe	Enabled
3389	RDP	C:\Windows\System32\svchost.exe	Enabled
4422	Session Monitoring SSH	C:\Program Files(x86)\eEye Digital Security\Retina CS\pbsmd.exe	Enabled
4489	Session Monitoring RDP	C:\Program Files(x86)\eEye Digital Security\Retina CS\pbsmd.exe	Enabled
5022	SQL Server Mirroring	C:\Program Files\Microsoft SQL Server\MSSQL13.MSSQLSERVER\MSSQL\Binn\sqlservr.exe	Enabled
5985	WinRM	System; Restricted to 10.0.0.0-16	Enabled
8530	WSUS HTTP	System	Disabled
8531	WSUS HTTPS	System	Disabled
10001	Central Policy v1	C:\Program Files(x86)\eEye Digital Security\Retina CS\REMCentralPolicyService.exe	Enabled
21690	App Bus	(C:\Program Files(x86)\Common Files\eEye Digital Security\Application Bus\eeyeevnt.exe	Enabled
21690	Event Server	C:\Program Files(x86)\Common Files\eEye Digital Security\Event Server\REMEventsSvc.exe	Enabled
21691	Android Mobile Connector via BeyondInsight Web Service	C:\Program Files(x86)\eEye Digital Security\Retina CS\eEye.RetinaCS.WebService.exe	Disabled

UDP Port

Port	Purpose	Target Program/System Resource	Initial Status
4609	Appliance Discovery	C:\Program Files(x86)\Common Files\eEye Digital Security\Scheduler\eeyeschedulersvc.exe	Enabled



ICMPv4 Protocol

Port	Purpose	Target Program/System Resource	Protocol	Initial Status
Any	ICMP Type 3, Code 4- Destination Unreachable Fragmentation Needed	Any	ICMPv4	Enabled
Any	ICMP Type 8- Echo	Any	ICMPv4	Enabled



Access Features from the UVM LCD Panel

You can access the following features from the UVM LCD panel.

Access Settings Menu

To access the settings:

The LCD panel displays Please wait. Once the appliance completes the powering procedures, UVM displays the following actions.

LCD Panel Functionality

LCD Panel	Description
V	Press the check to enter or accept the setting.
△ ▼	Press the up or down arrow to navigate through the menus.
	Press the right or left arrow to access settings in the menu.
×	Press the X to cancel the setting.

Enable RDP

From the LCD panel, start where UVM 20 Ready is displayed.

- 1. Press the check to enter Settings / Show IP.
- 2. Press check . The IP address of the appliance is displayed.
- 3. Hold both the up \triangle and down \bigvee buttons for four seconds. Do not do anything else between the previous step and this one.

Reset Administrator Password

- 1. Check the Allow LCD Panel to Reset Administrator Password box.
- 2. If needed, go to the appliance to reset the administrator password.
- 3. Select Show IP to view the IP address.
- 4. Hold the up \triangle and down \bigvee buttons simultaneously on the UVM LCD panel. A random password is generated.
- 5. Press the check to accept the changed password.

On a UVM with Windows Server 2016, you cannot reset an administrator account from the LCD panel. A locked administrator account will be unlocked after 20 minutes. Try logging on again after the 20-minute timeout period. If the account remains locked, contact BeyondTrust Technical Support.



Appliance Version

- 1. On the LCD panel, select **Versions** with the check .
- 2. Scroll through with the left or right arrows to see the version for the Appliance, BeyondInsight, Discovery Scanner, and Audits.

Power Off

You can power off the appliance using the LCD panel. To power off, on the LCD panel, select **Power Off**. The appliance powers off.



Set Up the UVM Appliance

Your UVM Appliance is designed to be configured and used with a web browser.



IMPORTANT!

If you purchased Professional Services, schedule your engagement with your Professional Services representative before starting the configuration wizard.

Power on the Appliance

- 1. Plug the power cables for the appliance into a safe power source. The appliance's power supplies will automatically switch between 120v and 240v, as needed.
- 2. Plug a network cable into the network interface port.
- 3. Press and release the power button on the front of the appliance. The power LED immediately to the right of the reset button will illuminate, and the HDD activity LED (immediately to the right of the power LED) will begin to flash. Initialization of the appliance will complete in about 60 seconds.



Note: The NIC1 and NIC2 LEDs may illuminate and show activity even when the appliance is not powered on; therefore, it is important to check the power and HDD LEDs to confirm that the appliance is on.

Perform Initial Network Configuration

The appliance is configured to use DHCP and will receive an assigned IP address. To access your appliance the first time, open a browser on a device on the same network subnet as the appliance. Enter the appliance's factory IP address as displayed on the LCD screen, preceded by https://10.10.123.456). You can find this IP address using the LCD display of the appliance. You will need the IP address later in the process when you configure the UVM Appliance.

Display IP Address

To display the IP address, select **Show IP** on the LCD panel. The IP address automatically displays.

Automatically Enter IP Address

On the LCD panel, select Config IP, then select Auto DHCP. The UVM automatically updates the IP address to the DHCP protocol.

Manually Enter IP Address

On the LCD panel, select Config IP, then select Manual. Enter the IP Address, Subnet Mask, Gateway, DNS 1 and DNS 2.

Hardware Notes

The integrated Dell Remote Access Controller (iDRAC) is configured to use the primary interface (LAN1). The iDRAC shares the interface with Windows. By default, iDRAC is not configured.

The appliance has more than one adapter. If all adapters are used, the adapter chosen during scan time is determined by the route associated with it.



Configure UVM Virtual Images

The UVMv20 appliance can be shipped to you as a virtual image in VMware or Hyper-V. The UVMv20 is based on the Windows Server 2016 version of the UVM20.



For virtual machine requirements, please see "Virtual Appliance Specifications" on page 5.

Import the Virtual Machine



IMPORTANT!

Review the following important setup details before proceeding:

The image must be installed directly from the USB drive. Do not copy the files to a local computer.

Do not insert the USB drive into a computer where an AV engine might change the attributes of the file. Otherwise, the image may appear to be corrupt.

We recommend that you do NOT join the appliance to a domain. If this is a requirement, please contact BeyondTrust Services for assistance.

If multiple UVM images are being configured to test high availability, ensure each virtual image has an appropriate BeyondTrust license and is imported separately from the USB flash drive. Cloning an image using Hypervisor utilities is not supported. Each image must be a unique import.

Before you can configure the appliance, you must go through the following steps to prepare the virtual image.

VMware

- 1. In vSphere Client, select File > Deploy OVF Template.
- 2. Browse to the VMWare folder > .ova package.
- 3. Go through the wizard.

Hyper-V



Note: You must retain the unique ID (UUID) of the virtual machine that was shipped to you. Otherwise, the licensing for the Microsoft software shipped to you might be deactivated.

The following procedure is a guide only. For more detailed information about Hyper-V features, refer to Hyper-V product documentation.

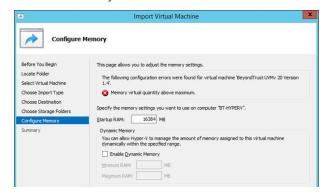
- 1. In **Hyper-V Manager**, select the host machine, then select **Action > Import Virtual Machine**. If the **Before You Begin** page appears, click **Next**. Otherwise, go to step 4.
- 2. On the **Locate Folder** page, browse to the USB key provided by BeyondTrust. Find the folder containing the image, and select the name
- 3. Click the **Select Folder** button at the bottom.





Note: The folder you want to select contains three other folders (Virtual Machine, Virtual Hard Drive, Snapshots). Do not import the VHD directly.

- On the Select Virtual Machine page, verify that the machine appears in the list and click Next.
- 5. On the Choose Import Type page, make sure you retain the existing unique ID.
- 6. Restore the Virtual Machine (use the existing unique ID) and click Next.
- 7. If you already copied the contents of the USB flash drive to your server, you can optionally use the **Register** selection in the list. Do not copy and create a new ID, or you will break the Windows and SQL Server Licensing in place on the virtual machine.
- 8. On the Choose Destination page, select where you want to store your virtual machine files.
- 9. The default behavior is to import the files to the default Hyper-V folders set by your server configuration. If you want to override this, select the **Store the Virtual Machine** in a different location check box and browse to your locations.
- Select where you want to store the imported VHD and click Next. If there are any issues with the import, additional steps will appear.
 - For example, a Virtual UVM is configured to use a minimum of 32 GB of RAM. If your server does not support this much RAM or have enough RAM available, you will see the message *Memory virtual quantity above maximum*.
- 11. Review the import settings.
- 12. Click Finish to import UVM.



Configure the IP Address

You can use the following account to set your IP address.

Account Name: btadmin

Password: ch@ngeM3now#!#!



Note: If you completed the configuration wizard, you have already changed the password.

- 1. Log on to the VM using the btadmin account.
- 2. Double-click the Local Area Connection on the desktop.
- Click the **Properties** button.
- 4. From the list, select Internet Protocol Version 4.
- 5. Click the **Properties** button.
- 6. Enter the IP address and DNS server fields, as needed.



Configure the BeyondTrust UVM Appliance

SQL Server can be included as part of your UVM appliance, or you can use your own SQL Server deployment. If SQL Server is part of your appliance package, a license key for SQL Server is included along with the Windows Operating System key and the BeyondInsight key.

If you are using a UVM virtual image, you must configure the virtual image before proceeding with UVM configuration.



For more information, please see "Configure UVM Virtual Images" on page 14.

1. Open a browser, and enter the IP address for the UVM, https://[UVM IP address].



For more information, please see "Set Up the UVM Appliance" on page 13.

The SSL certificate warning window displays. The SSL certificate automatically created for UVM ensures encrypted communications.

We recommend that you replace the automatically generated certificate with a valid certificate issued by a certificate authority. Check the box to not display the information page again. The Internet Explorer warnings will be displayed until the SSL certificate is installed or a valid certificate is obtained.

3. Select Continue to this Website. The UVM Configuration Wizard displays.



Note: If updates were installed, you might need to restart.

- 4. Click Start the Configuration Wizard.
- 5. On the Welcome page, enter the machine name for the appliance (host name). Once entered, do not change the appliance name.
- 6. Read the license agreement, and then click I Agree. You must accept the licensing agreement for the installation to continue.
- Read through the Microsoft Agreement (for the Windows Server license). Select the I agree to the above terms and conditions
 check box. Click Next.
- 8. Depending on your SQL Server implementation, read through the SQL Server License Agreement. Select the I agree to the above terms and conditions check box. Click Next. You must accept the licensing agreement for the installation to continue.

If you are using your existing SQL Server implementation, enter the database information here, and then click Next.

- 9. On the Network Settings page, select one of the following ways to enter the license keys:
 - Connect to the Internet for licensing and updates. No proxy required: Select if there is an Internet connection and no proxy server.
 - Connect to the Internet for licensing and updates through a proxy server: Select if you are using a proxy server.
 - No Internet connection: Requires performing manual updates: Select if the appliance does not have an Internet connection.



- 10. On the SMTP Settings page:
 - Enter the SMTP server IP address and port.
 - Select the SMTP Server requires authentication check box to use credentials to access the server.
 - · Click Next.



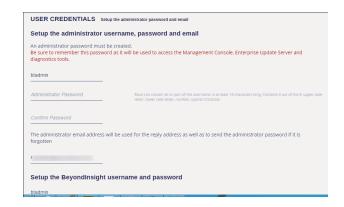
- 11. On the Registration Information page, enter the name, organization, and address information. Click Next.
- 12. On the BeyondTrust Licenses page, enter the license keys.
 - Evaluate the solution: Enter the evaluation keys. Evaluation keys are available only for pre-licensed UVM images. The trial period is 30 days with one 30-day extension period. An evaluation license can be extended later on the Accounts and Licensing on the Maintenance website. If you enter valid license keys at any time, then the evaluation mode is no longer available.
 - Enter serial numbers: Select to enter valid license keys.

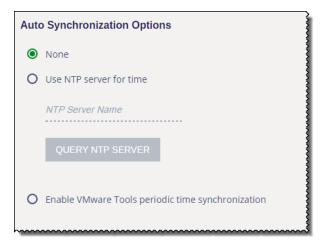
Click Next.

- 13. On the **User Credentials** page, enter the following passwords:
 - Administrator password: This password enables you to access the appliance. The email address will receive UVM reports, alerts, and alerts on hardware events.
 - BeyondInsight: User name and password.
 - BeyondTrust Updater: Password is used to login to the BeyondTrust Updater website.

Click Next.

- 14. On the Machine Configuration page:
 - Enter the time zone information, and date and time.
 - · Select an auto synchronization setting.
 - Click Next.







- 15. To save the settings to a configuration file, click **Download Configuration File**. If you need to go through the configuration for the appliance again, you can upload the configuration file to apply your settings. Click **Next**.
- On the BeyondInsight for Unix & Linux page, select the check box to configure the BIUL database connection for a local SQL server only.
 - Enter the Administrator user name and password and confirm it. This is the BIUL user account that will be created.
 - Enter the SQL user password and confirm it. SQL user password is the BIUL user account the application will use to
 access the database.
 - If SQL server is NOT installed on UVM, a message will display stating that SQL Server is not installed and to configure BIUL using the **Roles Editor** after configuration.
 - If you will be using a remote SQL server, you must configure the BIUL database connection later using the **Roles Editor**. The configuration wizard will configure a connection only for a local SQL server.
 - If BIUL is not installed, a message will display stating that BIUL is not installed. To install it manually, use BeyondTrustUpdater and configure it using the **Roles Editor** after configuration.
 - New images will have BIUL preinstalled. Existing UVMs can install it by subscribing to BeyondInsight for Unix & Linux within BeyondTrust Updater.
 - Version 2.5 of BeyondTrust Updater is required.



Note: If you do not want to configure the SQL user password at this time, you can configure it later using the Roles Editor.

- 17. On the **Review** page, verify the information. Click **Change** to adjust settings.
- 18. Click Finish to restart the appliance.
- 19. Restarting the appliance can take a few minutes. Proceed after the appliance restarts.

Offline Licensing

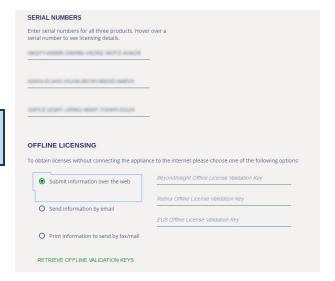
Select one of the following options if you are using offline licensing:

- Submit information over the web: Submit the request online if the computer you are using has internet access.
- Send information by email: All licensing information is sent in an email.



Note: An email client must be configured on the computer you are using to request the license.

 Print information to send by fax/mail: Registration information is displayed on a browser page. Fax or mail the registration details to BeyondTrust.



TC: 3/7/2022