



UVM Appliance

Getting Started Guide

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Introduction

This guide provides information on UVM20 and UVM50 appliances, virtual 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.

Standards Compliance

UVM has been tested and verified to comply with the applicable sections of the following standards:

- FCC Emissions
- Binational standard, UL-1950/CSA-C22.2 No. 950-95: Safety of Information Technology Equipment

Limited Hardware Appliance Warranty

This hardware appliance is accompanied by a 3-year manufacturer's warranty based on the invoice date. 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 and/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 and/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 10 percent restocking fee for items returned which are found not to be defective.

Contacting Support

For support, go to our [Customer Portal](#) then follow the link to the product you need assistance with.

The Customer Portal contains information regarding contacting Technical Support by telephone and chat, along with product downloads, product installers, license management, account, latest product releases, product documentation, webcasts and product demos.

Telephone

Privileged Account Management Support

Within Continental United States: 800.234.9072

Outside Continental United States: 818.575.4040

Vulnerability Management Support

North/South America: 866.529.2201 | 949.333.1997

+ enter access code

All other Regions

Standard Support: 949.333.1995

+ enter access code

Platinum Support: 949.333.1996

+ enter access code

Online

<http://www.beyondtrust.com/Resources/Support/>

Getting Started

In this document, UVM applies to both the UVM20 appliance and UVM50 appliance, unless stated otherwise.

System Requirements

Client Requirements

- Supported browsers: Microsoft Edge, Firefox, Chrome, Safari, and Microsoft Internet Explorer 10+, 11 preferred
- Compatibility mode in new browsers might need to be turned on for pages to render and work correctly. This is a known issue with Internet Explorer 11.
- TCP/IP v4

Appliance Requirements

- 10/100/1000 MB Ethernet Connection
- TCP/IP v4
- Optional 2U Rack Mount

For a list of specifications, see [Appendix C: Appliance Specifications](#).

Verify 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
- Bezel Keys

UVMv20 Specifications

Specification	Description
Hard Disk	330 GB
RAM	32 GB Note: For a BeyondInsight deployment with a local SQL Server 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	Windows Server 2012 R2
Database	SQL Server 2014

Hyper-V Requirements

The following requirements apply to Hyper-V 2008R2 and Hyper-V 2012 R2.

Requirement	Description
CPU	Minimum: 1.4 GHz, 64-bit processor The processor also requires the following: Hardware-assisted Virtualization support (processors like Intel VT or AMD Virtualization). NX bit-compatible CPU must be available and Hardware Data Execution Prevention must be enabled. Recommended: 2 GHz, 64-bit processor Each VM vCPU should have no more than 8 vCPUs for 1 physical core.
RAM	Each VM: 2–4 GB Host machine: At least 2 GB
Hard Drive	Depending on the size of the VM and how many are used: 500 GB

Firewall Settings

All outgoing ports are allowed.

Incoming ports are limited to the default Windows rules (includes allowing DCOM), plus the following:

Traffic	Port
Database Connectivity: BeyondInsight to SQL Server, BeyondInsight Analytics and Reporting to SQL Server	1433
Event Client: Retina, PowerBroker Endpoint Protection Platform, or Retina Protection Agent to BeyondInsight	21690
Mobile Agents and PowerBroker Windows Connector to Web Services, Update Servers SyncIT or EUS to BeyondTrust	443
Android Mobile Connector, Android Agents to BeyondInsight	21691
PowerBroker Endpoint Protection Platform or Retina Protection Agent Central Policy Endpoint to BeyondInsight	V1 – 2000, V2 - 443
Retina Central Policy, Retina to BeyondInsight	V1 - 10001, V2 - 443
Update Servers SyncIT or EUS to BeyondTrust, Client Browser User to BeyondInsight or BeyondInsight Reporting	443 or 80
BeyondSaaS Job Results	8080

Windows Passwords: Password Safe Service to Client	135, 139, 445, 389
UNIX, Linux, Other: Password Safe Service to Client	22
Database: Password Safe Service to Client	MS SQL 1433, Oracle 1521
RDP Client and Target Proxy Session Monitoring	4489 / 3389
SSH Client and Target Proxy Session Monitoring	4422 / 22
High Availability BeyondInsight HA	443, 5022
Notifications (email): SMTP	25
Appliance Discovery Tool	4069

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.

Table 1 LCD Panel Functionality


LCD Panel	Description
	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

Start from the state at the LCD panel where "UVM 20 Ready" is displayed:

1. Press  to enter "Settings / Show IP".
2. Press . The IP address of the appliance is displayed.
3. Hold both the up and down button for 4 seconds. (Do not do anything else between step 2 and step 3).

Reset Administrator Password

1. Select the Allow LCD Panel to Reset Administrator Password check box.
2. If needed, go to the appliance to reset the administrator password.
3. Select the Show IP option to view the IP address.
4. Hold the <UP> and <DOWN> arrows simultaneously on the UVM LCD panel. A random password is generated.
5. Press  to accept the changed password.

Appliance Version

1. On the LCD panel, select Versions from the menu with the checkmark.
2. Scroll through with the Left or Right arrows to see the version for Appliance, BeyondInsight, Retina, and Audits.

Power Off

You can power off the appliance using the LCD panel.

To power off:

1. On the LCD panel, select Power Off. The appliance powers off.

Setting up Your Appliance

You can configure the UVM using your web browser. The appliance is designed to be configured and used with a web browser.

Power on the UVM Appliance

To power on the appliance:

1. Plug the two power cords in the auto switching dual power supply.
2. Plug your network cable in the network interface port.
3. Push the recessed button in the top-left corner of the faceplate to power on.

Set IP Address

You can display the IP Address on the LCD panel. You can automatically or manually enter the IP address, as needed.

You need the IP address later when you are [configuring the appliance](#).

Display IP Address

To display the IP address:

1. On the LCD panel, select **Show IP**. The IP address automatically displays.

Automatically Enter IP Address

To automatically update an IP address:

1. 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

To manually enter the IP address:

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

Hardware Notes

The iDRAC is configured to use the primary interface (LAN1). The iDRAC shares the interface with Windows. By default, iDRAC is not configured. See [Configuring iDRAC](#).

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

Working with 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 2012 R2 version of the UVM20.

UVMv20 Specifications

Requirement	Description
Hard Disk	330 GB
RAM	32 GB Note: For a BeyondInsight deployment with a local SQL Server 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	Windows Server 2012 R2
Database	SQL Server 2014
VMWare	ESX versions: 5.5, 6.0, 6.5 vSphere Windows client: 5.5, 6.0 vSphere web client: 6.0, 6.5

Hyper-V Requirements

The following requirements apply to Hyper-V 2008 R2 and Hyper-V 2012 R2.

Requirement	Description
CPU	Minimum: 1.4 GHz, 64-bit processor The processor also requires the following: Hardware-assisted Virtualization support (processors like Intel VT or AMD Virtualization). NX bit-compatible CPU must be available and Hardware Data Execution Prevention must be enabled. Recommended: 2 GHz, 64-bit processor Each VM vCPU should have no more than 8 vCPUs for 1 physical core.
RAM	Each VM: 2–4 GB Host machine: At least 2 GB
Hard Drive	Depending on the size of the VM and how many are used: 500 GB

Import the Virtual Machine



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.
- The virtual image must be imported as a standalone server. Joining the server to an Active Directory domain is not supported.
- 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 stick. 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, and then select **Action > Import Virtual Machine**. If the Before You Begin page appears, click **Next**. Otherwise, go to step 3.
2. On the Locate Folder page, browse to the USB key provided by BeyondTrust. Find the folder containing the image, select the name and click the **Select Folder** button at the bottom.

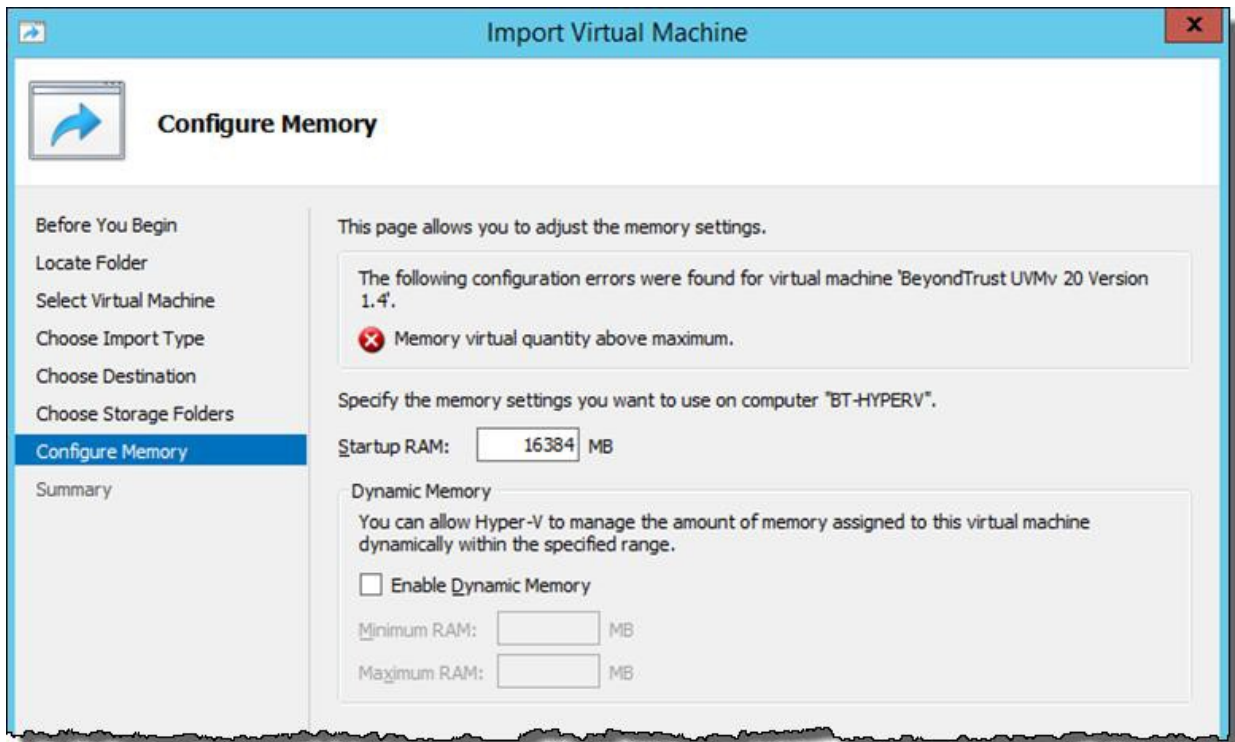
Note: The folder you want to select should be the one that contains three other folders (Virtual Machine, Virtual Hard Drive, Snapshots). Feel free to navigate in and check, but remember to return to the top level folder. Do not import the VHD directly.

3. On the Select Virtual Machine page, verify that the machine appears in the list and click **Next**.
4. On the Choose Import Type page, ensure you retain the existing unique ID by selecting the option: **Restore the Virtual Machine** (use the existing unique ID) and click **Next**.

If you already copied the contents of the USB 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.

5. On the Choose Destination page, select where you want to store your virtual machine files. 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.
6. Select where you want to store the imported VHD and click **Next**.
7. 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 or have that much available, the following message is displayed:



8. Review the import settings.
9. Click **Finish** to import the 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 following shortcut on the desktop:
Local Area Connection
3. Click the **Properties** button.
4. Select **Internet Protocol Version 4** from the list.
5. Click the **Properties** button.
6. Enter IP address and DNS server fields as needed.

Configuring the UVM Appliance

SQL Server Installations

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, then a license key for SQL Server is included along with the Windows Operating System key and the BeyondInsight key.

Virtual Images

If you are using a UVM virtual image, you must configure the virtual image before proceeding with UVM configuration. See [Working with Virtual Images](#).

Configuring the Appliance

To configure the appliance:

1. Open a browser, and enter the IP address for the UVM:

https://[UVM IP address]

Note that the IP address was set earlier in Setting up Your Appliance. You can automatically or manually set the IP address. See [Set IP Address](#).

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

To avoid the warnings, install the SSL certificate through the web browser or obtain a valid certificate from a certificate authority. Or, select the check box to not display the information page again.

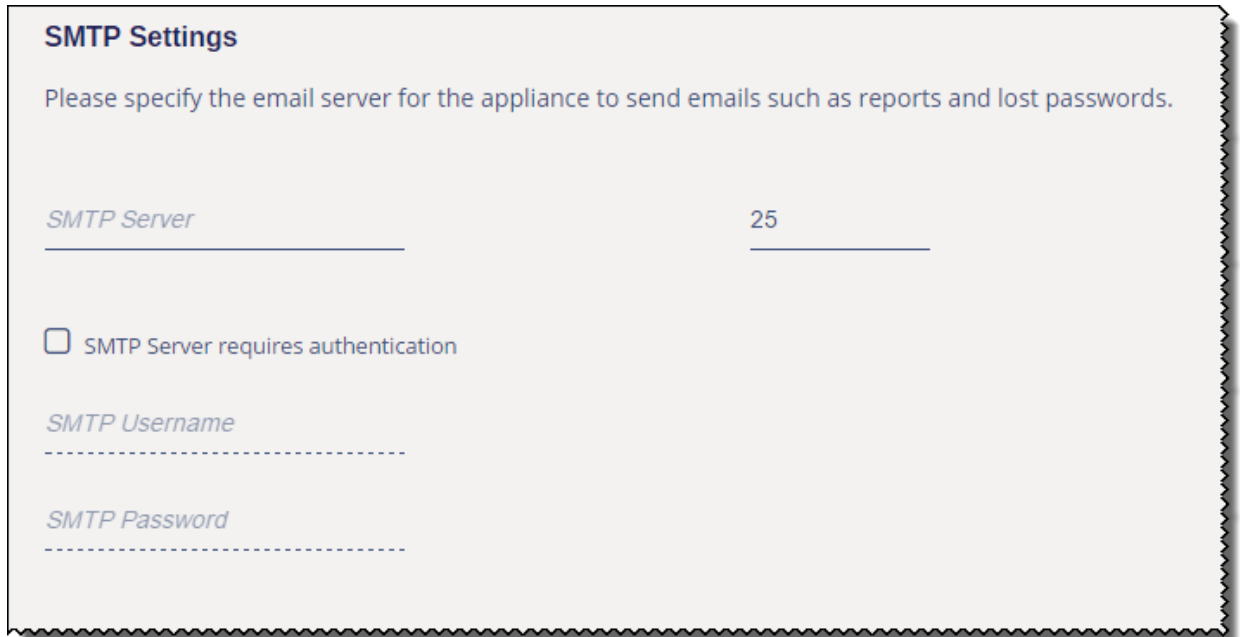
The Internet Explorer warnings will be displayed until the SSL certificate is installed or a valid certificate is obtained.

2. Select **Continue to this Website**. The UVM Configuration Wizard displays.
Note: You might need to restart if updates were installed. If so, restart the appliance and start this procedure again.
3. Click **Start the Configuration Wizard**.
4. Read the license agreement, and then click **I Agree**.
You must accept the licensing agreement for the installation to continue.
5. Read through the Microsoft Agreement (for the Windows Server license). Select the **I agree to the above terms and conditions** check box. Click **Next**.
6. Depending on your SQL Server implementation:
 - Read through the SQL Server 2014 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**.
7. On the Network Settings page, provide the following details:
Network State

- **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.

SMTP Settings

- Enter the SMTP server IP address and port.
- Select the SMTP Server requires authentication check box to use credentials to access the server.



SMTP Settings

Please specify the email server for the appliance to send emails such as reports and lost passwords.

SMTP Server

SMTP Server requires authentication

SMTP Username

SMTP Password

8. Click **Next**. On the Registration Information, enter the name, organization, and address information.
9. Click **Next**. On the BeyondTrust Licenses page, enter the license keys.
If you selected No internet connection is step 7, see [Offline Licensing](#).
 - **Client Portal Login** - You can choose to retrieve license keys automatically from the BeyondTrust client portal. Enter your user name and password, and then click Retrieve Serial Numbers.
 - **Serial Numbers** - Enter the serial number provided when you purchased the product. To access your serial number, log on to the client portal, and select Product Licensing > Managing Your Serial Numbers. Click Get Offline License and follow the instructions on obtaining the license key offline. Manually enter the license key once it is received.

BEYONDTRUST LICENSES Enter your serial numbers

CLIENT PORTAL LOGIN

If you have a BeyondTrust Client Portal account you can automatically retrieve your serial numbers by entering your login credentials below.

Username

Password

RETRIEVE SERIAL NUMBERS

SERIAL NUMBERS

If you have retrieved your serial numbers from the portal, you can select the desired license for each product from the dropdown box below. Otherwise, serial numbers can be entered manually. Hover over a serial number to see licensing details.

BeyondInsight Serial Number

Retina Serial Number

EUS Serial Number

10. 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.
- **Central Policy Server password** - This password is used by Central Policy, to deploy Retina Protection agents and to run Retina scans.
- **BeyondInsight** user name and password.

USER CREDENTIALS Setup the administrator password and email

Setup the administrator username, password and email

An administrator password must be created.
 Be sure to remember this password as it will be used to access the Management Console, Enterprise Update Server and diagnostics tools.

btadmin

Administrator Password Must not contain all or part of the username. Is at least 14 characters long. Contains 3 out of the 4: upper case letter, lower case letter, number, special character.

Confirm Password

The administrator email address will be used for the reply address as well as to send the administrator password if it is forgotten

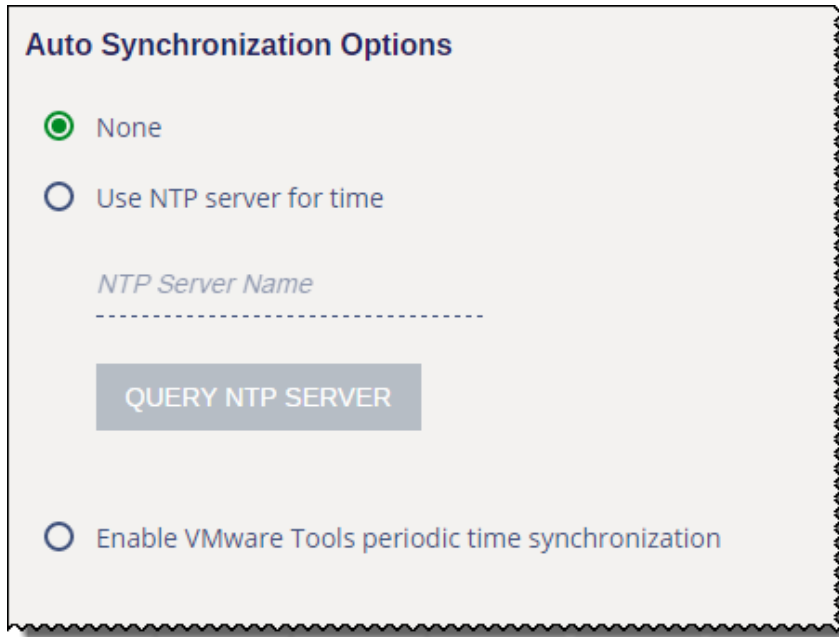
Setup the BeyondInsight username and password

btadmin

11. Click **Next**.
12. On the Machine Configuration page:
 - Enter the name of the appliance (host name), time zone information, and date and time.

Note: Once entered here, do not change the appliance name.

 - Select an auto synchronization setting.



Auto Synchronization Options

None

Use NTP server for time

NTP Server Name

QUERY NTP SERVER

Enable VMware Tools periodic time synchronization

13. Click **Next**. On the Review page verify the information. Click **Change** to adjust settings.
 14. To save the settings to a configuration file, click **Download Configuration File**. If for any reason you need to go through the configuration for the appliance again, you can upload the configuration file to apply your settings.
 15. Click **Next**, and then click **Finish** to restart the appliance.
- 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 that 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.

SERIAL NUMBERS

Enter serial numbers for all three products. Hover over a serial number to see licensing details.

RETRIEVE OFFLINE VALIDATION KEYS

RETRIEVE OFFLINE VALIDATION KEYS

RETRIEVE OFFLINE VALIDATION KEYS

OFFLINE LICENSING

To obtain licenses without connecting the appliance to the internet please choose one of the following options:

Submit information over the web

BeyondInsight Offline License Validation Key

Send information by email

Retina Offline License Validation Key

Print information to send by fax/mail

EUS Offline License Validation Key

RETRIEVE OFFLINE VALIDATION KEYS

Access BeyondInsight

For more information about using BeyondInsight, refer to the BeyondInsight product documentation.

To log on to BeyondInsight:

1. Open a web browser, and then enter the URL to access BeyondInsight.

`https://[BeyondInsight server name]/eEye.RetinaCS.Server`

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

To avoid the warnings, install the SSL certificate through the web browser or obtain a valid certificate from a certificate authority. Or, select the check 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.

The BeyondInsight Login page displays.

2. Enter your user name (btadmin) and the password you created in the configuration wizard, then click **Login**.
The BeyondInsight console displays.

Appendix: Appliance Specifications

This appendix provides detailed specifications for your appliance.

730 Appliance

UVM20 Specifications

Specification	Description
System Input	
AC Input Voltage	110 to 240 VAC
Rated Input Current	9A (115V) to 4.5A (230V)
Rated Input Frequency	50 to 60 Hz
Cooling	Continuously variable speed fan; front-to-back air flow.
Chassis	Chassis with up to 8, 3.5" Hard Drives
Microprocessor	Single Xeon, 2.4 GHz, 6-core
Hard Drive	4 x 1TB (RAID 10 - 2TB)
RAM	32 GB
RAID Configuration	RAID 1
RAID Controller	PERC H730, 1GB NV Cache
Network Daughter Card	Broadcom 5720 QP 1GB
Power Supply	Dual, hot-plug, Redundant Power Supply (1+1), 495W
Power Cords	NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m) (x2)
Rack Rails	ReadyRails™ Sliding Rails with cable management arm
Internal Optical Drive	DVD ROM, SATA, Internal
PCIe Riser	Risers with up to 4, x8 PCIe Slots + 2, x16 PCIe Slots
Operating System	Windows Server 2012 R2 Standard
Database	MS SQL 2014 Standard

UVM50 Specifications

Specification	Description
System Input	

AC Input Voltage	110 to 240 VAC
Rated Input Current	9A (115V) to 4.5A (230V)
Rated Input Frequency	50 to 60 Hz
Cooling	Continuously variable speed fan; front-to-back air flow.
Chassis	Chassis with up to 8, 3.5" Hard Drives
Microprocessor	Dual Xeon, 2.6 GHz, 8-core per CPU
Hard Drive	8 x 1 TB (RAID 1 - 4TB)
RAM	128 GB
RAID Configuration	RAID 1
RAID Controller	PERC H730, 1GB NV Cache
Network Daughter Card	Broadcom 5720 QP 1GB
Power Supply	Dual, hot-plug, Redundant Power Supply (1+1), 750W
Power Cords	NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m) (x2)
Rack Rails	ReadyRails™ Sliding Rails with Cable Management Arm
Internal Optical Drive	DVD ROM, SATA, Internal
PCIe Riser	Risers with up to 4, x8 PCIe slots + 2, x16 PCIe slots
Operating System	Windows Server 2012 R2 Standard
Database	Microsoft SQL Server 2014 R2

720 Appliance

UVM20 Specifications

Specification	Description
System Input	
AC Input Voltage	110 to 240 VAC
Rated Input Current	9A (115V) to 4.5A (230V)
Rated Input Frequency	50 to 60 Hz
Cooling	Continuously variable speed fan; front-to-back air flow.
Chassis	Chassis with up to 8, 3.5" Hard Drives
Microprocessor	Intel® Xeon® E5-2620 2GHz,15M Cache,7.2GT/s QPI,Turbo,HT,5C (95W) Max Mem 1333MHz,OEM,XL
Hard Drive	500GB 7.2K RPM SATA 3Gbps 3.5in Hot-plug Hard Drive (x4)

RAM	32GB RDIMM, 1333 MT/s, Low Volt, Quad Rank, x4 Data Width
RAID Configuration	RAID 1
RAID Controller	PERC H710
Network Daughter Card	Broadcom 5720 QP 1GB (4 ports)
Power Supply	Dual, hot-plug, Redundant Power Supply (1+1), 495W
Internal Optical Drive	DVD ROM, SATA, Internal
Operating System	Microsoft Windows Server 2008 R2 Standard
Database	Microsoft SQL Server 2008 R2

UVM50 Specifications

Specification	Description
System Input	
AC Input Voltage	110 to 240 VAC
Rated Input Current	9A (115V) to 4.5A (230V)
Rated Input Frequency	50 to 60 Hz
Cooling	Continuously variable speed fan; front-to-back air flow.
Chassis	Chassis with up to 8, 3.5" Hard Drives
Microprocessor	Intel Xeon E5-2640 v3 2.6GHz (x2), 15M Cache, 7.2GT/s QPI, Turbo, HT,6C (95W) Max Mem 1333MHz, OEM, XL
Hard Drive	1TB 7.2K RPM SATA 3Gbps 2.5in Hot-plug Hard Drive (x8)
RAM	64GB RDIMM, 1333 MT/s, Low Volt, Quad Rank, x4 Data Width
RAID Configuration	RAID 1
RAID Controller	PERC H310
Network Daughter Card	Broadcom 5720 QP 1GB (4 ports)
Power Supply	Dual, hot-plug, Redundant Power Supply (1+1), 750W
Internal Optical Drive	DVD ROM, SATA, Internal
Operating System	Microsoft Windows Server 2008 R2 Enterprise
Database	Microsoft SQL Server 2008 R2