Secure Remote Access Virtual Appliance Setup

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SRA Virtual Appliance Installation

This guide is designed to walk you through the initial setup and configuration of your BeyondTrust SRA Virtual Appliance. Should you need any assistance, please log into the <u>Customer Portal</u> at <u>https://beyondtrustcorp.service-now.com/csm</u> to chat with Support.

Review License and Sizing Conditions

Sizing Guidelines	Users	Endpoints	CPU	Memory	Disk 1	Disk 2
Small	1 - 20	1 - 1,000	2 - 4	4 - 8 GB	8 - 128 GB	64+ GB
Medium	20 - 75	1,000 - 10,000	4 - 8	16 - 32 GB	32 - 256 GB	132+ GB
Large	75 - 150	10,000 - 35,000	8 - 16	64 - 128 GB	128 - 1024 GB	1024+ GB
Enterprise	150 - 300	35,000 - 50,000	16 - 32	128 - 512 GB	512 - 4096 GB	1024+ GB
Atlas	300 - 3,000	50,000 - 250,000	Enterprise	Enterprise	Enterprise	Enterprise

Note:

- For Atlas deployments please work with your solutions engineer for more detailed architecture planning.
- If you are an existing BeyondTrust customer and anticipate increasing to more than 300 concurrent users, please log into the <u>Customer Portal</u> at <u>https://beyondtrustcorp.service-now.com/csm</u> to chat with Support, to ensure that the resources allocated meet your needs. Most situations over 300 concurrent users require transitioning to an Atlas based architecture.
- The range that your deployment falls into is influenced by variables such as API usage, Console usage, size and number of Jump Groups, recording settings, failover replication frequency, and Jump Client upgrade settings.
- BeyondTrust offers a 150 Jump Clients per concurrent license.
- The above numbers assume one session per concurrent user.
- The resource specifications in this document represent recommendations. For troubleshooting purposes, BeyondTrust Technical Support may require your BeyondTrust SRA Virtual Appliance to be given reserved resources matching those listed here.

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Deploy the BeyondTrust SRA Virtual Appliance into a VMware Environment

Review Prerequisites for VMware

You must have a VMware account and environment already configured.

Before beginning the BeyondTrust SRA Virtual Appliance setup, please review the following prerequisites:

- VMware vCenter 6.5+ and virtual hardware versions 13+.
- · At least 4GB of memory available.
- At least 140GB of storage available.
- One 32GB partition for the BeyondTrust OS, and at least 100GB available for logs and recordings.
- External IP SANs require a 1Gbit or 10Gbit reserved network with a 10K RPM disk or better.

For more information about sizes, please see "Review License and Sizing Conditions" on page 4.

- A static IP for your SRA Virtual Appliance.
- A private DNS A-record resolving to the static IP of your SRA Virtual Appliance. A public A-record and a public IP are also required if public clients access the B Series Appliance. The DNS A-record is the fully qualified domain name (FQDN) of your site (support.example.com, for example).

Note: "Public clients" include any client software (browsers, BeyondTrust representative consoles, endpoint clients, etc.) which connect from external networks and VPN(s) local to the B Series Appliance's network.

- A valid NTP server that is reachable by the B Series Appliance.
- Ensure that the system time between the host ESXi server and the guest BeyondTrust OS are in sync. Variations by only a few seconds can potentially result in performance or connectivity issues.

Deploy the SRA Virtual Appliance

To deploy the BeyondTrustSRA Virtual Appliance into a VMWare environment, follow the steps below:

1. Open the email you received from BeyondTrust Technical Support, and click the link to download the BeyondTrust SRA Virtual Appliance OVA file.

BeyondTrust Download Available
BeyondTrust Build System <mysupport@beyondtrust.com></mysupport@beyondtrust.com>
() Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.
Greetings,
Thank you for choosing BeyondTrust for your Secure Remote Access needs!
Your BeyondTrust Virtual Appliance is registered in our systems for deploy.beyondtrust.com and is ready for download.
To install and configure this Virtual Appliance, follow all of the instructions below:
The BeyondTrust Virtual Appliance
Download your Beyond Trust Virtual Appliance
Click here for your BeyondTrust Virtual Appliance (VMware) Click here for your BeyondTrust Virtual Appliance (Hyper-V and Azure) Click here for your BeyondTrust Virtual Appliance (Nutanic AHV)
Deploy your BeyondTrust Virtual Appliance in AWS
Link your AWS account(s) by clicking here.
Beyond Trust Virtual Appliance Setup
Follow the appropriate installation guide for your product: BeyondTrust RS Virtual Applance Installation guide When prompted Remote Access Virtual Applance Installation guide When prompted for the Applance License Key (ALX), enter Install any vaniable BeyondTrust updates using Check for Updates'
Contacting BeyondTrust
If you need additional assistance, please contact BeyondTrust Support.
We look forward to serving you. If you have any questions, don't hesitate to contact us at mysupport@beyondtrust.com
Best Regards,

BeyondTrust Support Team

2. Log in to your virtual infrastructure client. You must use an account with permissions to deploy a virtual machine as an OVF template.

ACTIONS -

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3. On the Select an OVF Template screen, select the BeyondTrust.ova file.

Deploy OVF Template

1 Select an OVF template	Select an OVF template
2 Select a name and folder	Select an OVF template from remote URL or local file system
3 Select a compute resource	
4 Review details	Enter a URL to download and install the OVF package from the Internet, or browse to a
5 Select storage	location accessible from your computer, such as a local hard drive, a network share, or a
6 Ready to complete	CD/DVD drive.

Local file

Choose Files Bomgar.ova

CANCEL BACK

4. Review the OVF template details.

5. Read and accept the end user license agreement.

Deploy OVF Template

10 Ready to complete

,	1 Select an OVF template 2 Select a name and folder	Review details Verify the template details.			
1	3 Select a compute resource				
	4 Review details				
	5 License agreements	Publisher	Symantec Class 3 SHA256 Code Signing CA (Trusted certificate)		
	6 Configuration	Product	BeyondTrust Secure Remote Access Appliance		
8 Si 9 C	8 Select networks	Version	2.0		
	Customize template	Vendor	BeyondTrust		
	10 Ready to complete	Description	BeyondTrust Secure Remote Access Appliance		
		Download size	653.6 MB		
		Size on disk	Unknown (thin provisioned)		
			1.7 TB (thick provisioned)		



I accept all license agreements.

CANCEL BACK

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- BeyondTrust
 - 6. Specify a name for this OVF template, and select a location in the inventory to which you have rights.

1 Select an OVF template 2 Select a name and folder	Select a name and folder Specify a unique name and target location	
3 Select a compute resource	Virtual machine name:	
5 License agreements		
6 Configuration	Select a location for the virtual machine.	
7 Select storage		
8 Select networks	>	
9 Customize template	> 💼 (
10 Ready to complete	> 🗖 <	
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7. Select a configuration of **Small**, **Medium**, or **Large**. This selection defines your default resource allocations. Choose your configuration based on your usage needs and available resources.

For more information about sizes, please see <u>"Review License</u> and Sizing Conditions" on page 4.

Deplo	v OVF	Temp	late

Review details	Small		Description
License agreements	-		For up to 300 concurrent
Configuration	Medium		reps with 5,000 Jump
Select storage	Large		Clients 4 Virtual CPUs 8G
Select networks			memory 24GB Virtual Dis
Customize template			(Operating System)
Ready to complete			500GB Virtual Disk
			(Session Data)
		3 Items	

CANCEL BACK NEXT

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8. Select a resource pool to which you have rights.

 1 Select an OVF template 2 Select a name and folder 	Select a compute resource Select the destination compute resource for this operation					
3 Select a compute resource 4 Review details 5 License agreements 6 Configuration 7 Select storage 8 Select networks 9 Customize template 10 Ready to complete						
	Compatibility					
	✓ Compatibility checks succe	eded.				
			CANCEL	ВАСК	N	
eploy OVF Templat	e					
 1 Select an OVF template 2 Select a name and folder 	Select storage Select the storage for the config	guration and dis	sk files			
 3 Select a compute resource 4 Review details 	Select virtual disk format:	Thick	Provision Lazy Zerc	ed v		
5 License agreements	VM Storage Policy:		×			
6 Configuration	Disable Storage DRS for this	virtual machine				
8 Select networks	Name	Capacity	Provisioned	Free	Ту	
9 Customize template	Bronze_DatastoreCluster	15 TB 72 99 TB	11.88 TB	3.12 TB		
10 Ready to complete	Sliver_DatastoreCluster	18 TB	13.47 TB	4.53 TB		
	Bronze_Datastore_3	4 TB	4.43 TB	630.99 GB	V	
	A	4 TB	2.56 TB	1.77 TB	V	
	Bronze_Datastore_Cont			100 70	V	
	Bronze_Datastore_Cont	4 TB	2.01 TB	1.99 TB		
	Bronze_Datastore_Cont Bronze_Filetransfer Bronze_Replication	4 TB 4 TB	2.01 TB 1.62 GB	4 TB	V	
	Bronze_Datastore_Cont Bronze_Filetransfer Bronze_Replication Bronze_Zerto_Replication	4 TB 4 TB 4 TB	2.01 TB 1.62 GB 3.01 TB	4 TB 1.28 TB	VI	
	Bronze_Datastore_Cont Bronze_Filtransfer Bronze_Replication Bronze_Zerto_Replication Bronze_Zerto_Replicati Bronze_Zerto_Replicati Bronze_Zerto_Replicati Bronze_Zerto_Replicati	4 TB 4 TB 4 TB 4 TB 4 TB	2.01 TB 1.62 GB 3.01 TB 4.72 TB	1.99 TB 4 TB 1.28 TB 937.3 GB	V1 V1 V1	
	Bronze_Datastore_Cont Bronze_Piletransfer Bronze_Replication Bronze_Zerto_Replication Bronze_Zerto_Replicati Bronze_Zerto_Replicati Compute_Cluster_03	4 TB 4 TB 4 TB 4 TB 4 TB 4 TB 2 TB	2.01 TB 1.62 GB 3.01 TB 4.72 TB 1.05 TB 2.25 TB	4 TB 1.28 TB 937.3 GB 3.92 TB 71313 GB		
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	Irinze_Datastore_Cont. Finze_Diretansfer Bronze_Replication Bronze_Zerio_Replication Bronze_Zerio_Replication Bronze_Zerio_Replicati. Compatibility Compatibility checks succe	4 TB 4 TB 4 TB 4 TB 4 TB 2 TB 2 TB	2.01 TB 1.62 GB 3.01 TB 4.72 TB 1.05 TB 2.25 TB	4 TB 4 TB 128 TB 937.3 GB 3.92 TB 713.13 GB		
	Irinze_Datastore_Cont. Bronze_Areno_Replication Bronze_Areno_Replication Bronze_Zerio_Replication Bronze_Zerio_Replicati. Compile_Cluster_03 Compatibility Compatibility	4 TB 4 TB 4 TB 4 TB 4 TB 2 TB weeded.	2.01 TB 162 GB 3.01 TB 4.72 TB 105 TB 2.25 TB	4 TB 4 TB 128 TB 9373 GB 3392 TB 71313 GB BACK		
eploy OVF Templat	e e e e e e e e e e e e e e e e e e e	4 TB 4 TB 4 TB 4 TB 4 TB 2 TB 2 TB	20178 162268 30178 47278 10578 22578 22578	4 TB 4 TB 128 TB 9373 GB 3.92 TB 71313 GB BACK		
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 Select the datastore on which you want the SRA Virtual Appliance to run. This is where the operating system and session data is stored.

10. Select the appropriate network mapping for your environment. Your SRA Virtual Appliance can function anywhere in your network with internet access. If you plan to access systems outside of your network, security practices recommend that you place the SRA Virtual Appliance in a DMZ or outside of your internal firewall. Network location considerations are outlined in the table below.

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Network Location Considerations for B Series Appliances

Network Location	Advantages/Disadvantages		
Outside your firewall	Does not require that ports 80 and 443 be open inbound for TCP traffic on your firewall. Simplifies the setup process significantly because both the representative and customer clients consoles and clients are built to resolve to a specific DNS; if your registered DNS resolves to a public IP address directly assigned to your B Series Appliance, no additional setup is required by you to initiate a session.		
DMZ	May require additional setup depending on your router or routers.		
Inside your firewall	Requires port forwarding on your firewall and possibly additional setup of your NAT routing and internal DNS.		ional setup of your NAT routing and
11. Return to the email you rec	eived from BeyondTrust Technical	Deploy OVF Template	e
Support, and copy the App Wizard, paste the key into t	liance License Key. In the Deployment the field.	 1 Select an OVF template 2 Select a name and folder 3 Select a compute resource 	Customize template Customize the deployment properties of this software solution.

Note: If for some reason you are unable to provide the Appliance License Key at this time, you can manually enter it later, from the virtual machine console.

3 Select a compute 4 Review details O All properties have valid values \times 5 License agreements 6 Configuration License 1 settings 7 Select storage The Appliance License Key will be provided by Appliance License Key (ALK) 8 Select networks Bomgar when you purchased your appliance. If you don't have it right now, you may leave this 9 Customize temp blank and proceed with deployment. Please contact Bomgar Support to obtain your ALK, which can be configured later after you boot the system.

CANCEL BACK

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- 12. Review your settings and click **Finish**.
- 13. The SRA Virtual Appliance deploys in the location and with the resources you have specified.

Deploy OVF Template

 1 Select an OVF template 2 Select a name and folder 	Ready to complete Click Finish to start o	reation.	Î
 3 Select a compute resource 4 Review details 			1
✓ 5 License agreements	Provisioning type	Deploy from template	1
 6 Configuration 7 Select storage 8 Select networks 9 Customize template 10 Ready to complete 	Name	Bomgar	1
	Template name	Bomgar	1
	Download size	594.6 MB	1
	Size on disk	1.7 TB	1
	Folder	mining .	1
	Resource		1
	Storage mapping	1	1
	All disks	Datastore: PureStorage_Cluster; Format: Thick provision lazy zeroed	l
	Network mapping	1	1
	DMZ Network		1
	IP allocation settings		1
	IP protocol	IPV4	1
	IP allocation	Static - Manual	
		CANCEL BACK FINIS	ы

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For detailed information about network locations, please see <u>The BeyondTrust Appliance B Series in the Network</u> at www.beyondtrust.com/docs/remote-support/getting-started/deployment/dmz.

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Deploy the BeyondTrust SRA Virtual Appliance into a Hyper-V Environment

Review Prerequisites for Hyper-V

You must have a Hyper-V account and environment already configured.

Before beginning the BeyondTrust SRA Virtual Appliance setup, please review the following prerequisites:

- Hyper-V 2012 R2 (standalone or as a role) and Generation 2 hardware only.
- At least 4GB of memory available.
- At least 140GB of storage available.
- One 32GB partition for the BeyondTrust OS, and at least 100GB available for logs and recordings.
- External IP SANs require a 1Gbit or 10Gbit reserved network with a 10K RPM disk or better.

For more information about sizes, please see "Review License and Sizing Conditions" on page 4.

- A static IP for your SRA Virtual Appliance.
- A private DNS A-record resolving to the static IP of your SRA Virtual Appliance. A public A-record and a public IP are also required if public clients access the B Series Appliance. The DNS A-record is the fully qualified domain name (FQDN) of your site (support.example.com, for example).

Note: "Public clients" include any client software (browsers, BeyondTrust representative consoles, endpoint clients, etc.) which connect from external networks and VPN(s) local to the B Series Appliance's network.

- A valid NTP server that is reachable by the B Series Appliance.
- Ensure that the system time between the host ESXi server and the guest BeyondTrust OS are in sync. Variations by only a few seconds can potentially result in performance or connectivity issues.

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Configure via Hyper-V Manager

 Open the email you received from BeyondTrust Technical Support and click the link to download the **BeyondTrust SRA Virtual Appliance (Hyper-V and Azure)** file. Save the file to an appropriate location so that it can be imported to your Hyper-V host, and then double-click the self-extracting ZIP file to extract your SRA Virtual Appliance.

- 3. Start Hyper-V Manager.
- Ensure the server you will install the SRA Virtual Appliance is present. Right-click the desired server and select New > Virtual Machine to start the New Virtual Machine Wizard.



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6. Select Generation 2 and click Next.

- 5. Enter a display name to easily identify the virtual machine, and choose a location for the BeyondTrust SRA Virtual Appliance. Then click **Next**.
- 🖳 New Virtual Machine Wizard × Specify Name and Location Before You Begin Choose a name and location for this virtual machine. The name is displayed in Hyper-V Manager. We recommend that you use a name that helps you easily identify this virtual machine, such as the name of the guest operating system or workload. Specify Generation Assign Memory Name: New Virtual Machine Configure Networking You can create a folder or use an existing folder to store the virtual machine. If you don't select a folder, the virtual machine is stored in the default folder configured for this server. Connect Virtual Hard Disk Store the virtual machine in a different location Installation Options Summary Location: C:\ProgramData\Microsoft\Windows\Hyper-V\ Browse... ▲ If you plan to take checkpoints of this virtual machine, select a location that has enough free space. Checkpoints include virtual machine data and may require a large amount of space. < Previous Next > Finish Cancel 🐖 New Virtual Machine Wizard × ۲ Specify Generation Before You Begin Choose the generation of this virtual machine. Specify Name and Location Specify Generation O Generation 1 This virtual machine generation supports 32-bit and 64-bit guest operating systems and provides virtual hardware which has been available in all previous versions of Hyper-V. Assign Memory Generation 2 Configure Networking This virtual machine generation provides support for newer virtualization features, has UEFI-based firmware, and requires a supported 64-bit guest operating system. Connect Virtual Hard Disk Installation Options ▲ Once a virtual machine has been created, you cannot change its generation. Summary More about virtual machine generation sup < Previous Next > Finish Cancel New Virtual Machine Wizard X . Assign Memory Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 32 MB through 12582912/MB. To improve performance, specify more than the minimum amount recommended for the operating system. Before You Begin Specify Name and Location Specify Generation Startup memory: 1024 MB Assign Memory Use Dynamic Memory for this virtual machine. Configure Networking When you decide how much memory to assign to a virtual machine, consider how you intend to use the virtual machine and the operating system that it will run. Connect Virtual Hard Disk Installation Options Summary
- Enter 4096 MB for a small deployment, or 8192 MB for any other size. Do not use dynamic memory. Click Next.

< Previous Next > Finish Cancel

8. From the **Connection** dropdown, select the network interface option that best suits your needs, and then click **Next**.

Before You Begin	Each new virtual machine includes a network adapter. You can configure the network virtual switch, or it can remain disconnected.	adapter to use a
pecify Name and Location pecify Generation	Connection: Intel® 82574L Gigabit Network Connection - Virtual Switch	
Configure Networking		
onnect Virtual Hard Disk		
Installation Options		
ummary		

 Select Use an existing virtual hard disk and select the BeyondTrust-br.v.2.vhdx file that was extracted earlier from the download archive. BeyondTrust recommends putting the VHD file in the same location where the VM resides. Click Next.

eneration	 Create a virt Use this optic 	ual hard disk on to create a VHDX dynamically expanding virtual hard disk.	
Networking	Name:	BeyondTrust-br.v.2.vhdx	
/irtual Hard Disk	Location:	C:\Hyper-V\BeyondTrust-br.v.2\Virtual Hard Disks\	Browse
nmary	Size:	127 GB (Maximum: 64 TB)	
	Location:	C:\hyper-v\BeyondTrust-br.v.2.vhdx	Browse
	Location:	C:\hyper-v\BeyondTrust-br.v.2.vhdx	Browse
	O Attach a virt	ual hard disk later	
	Use this optic	on to skip this step now and attach an existing virtual hard disk la	ter.

•

Con

nect Virtual Hard Disk

- 10. Review the VM details on the **Summary** page and click **Finish**.
- 11. Once the VM has been created, right-click it and select Settings.



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12. Click **Security**, and uncheck **Enable Secure Boot**. This will help prevent unauthorized code from running when the machine is started.

13. Click SCSI Controller and select Hard Drive. Then click Add.

Add Hardware	
Firmware	Secure Boot
Boot from Hard Drive	Use Secure Boot to help prevent unauthorized code from running at boot time
Security	(recommended).
Security Security	Eashle Secure Boot
Secure Boot disabled	
Memory	Template:
4096 MB	
Processor	Microsoft Windows
2 Virtual processors	
L TH GOT CONTRACTOR	Encryption Support
B SCS1 Controller	
Hard Drive	Enable Trusted Platform Module
BeyondTrust-br.v.2.vhdx	A Trusted Platform Module (TPM) is a special purpose microprocessor which
Hard Drive	provides cryptographic services to a compute platform.
611-05-datadisk1 vbdv	province of prographic sciffices to a compare platform
	Encrypt state and virtual machine migration traffic
Network Adapter	
VSWITCH 1	Encryption support requires a key protector (KP) configuration for the virtual
lanagement	machine. If not already present, selecting one of these options will generate a
Name	KP that allows running the virtual machine on this host.
611-05	
Integration Services	Security Policy
Some services offered	Specify additional protection options for the virtual machine.
at a desister	Eastela Shieldan
Checipoints	
Production	This affects additional settings.
Smart Paging File Location	
D:\/hyper-v/ 611-05	Learn more about virtual machine security.
Automatic Start Action	
Restart if previously running	
A dama to the test	
Caus	
	OK Cancel Apply
Settings for 611-05 on	3
611-05 ~	
Hardware	
	1 AVIII FCFT Conduction
P Add Hardware	SCSI Controller
Add Hardware	You can add bard drives and CD/DVD drives to your SCSI controller or remove the SCSI
Add Hardware	You can add hard drives and CD/DVD drives to your SCSI controller or remove the SCSI controller from the virtual machine.
Add Hardware Firmware Boot from Hard Drive	You can add hard drives and CD/DVD drives to your SCSI controller or remove the SCSI controller from the virtual machine.
Add Hardware Firmware Boot from Hard Drive Security	Sign SCSI Controller You can add hard drives and CD/DVD drives to your SCSI controller or remove the SCSI controller moth with anadrine. Select the type of drive you want to attach to the controller and then click Add.
Add Hardware Firmware Boot from Hard Drive Security Security Secure Boot disabled	Set SCSI Controller You can add hard drives and CD/DVD drives to your SCSI controller or remove the SCSI controller from the virtual machine. Select the type of drive you want to attach to the controller and then click Add. Herd Drive
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Add Hardware Firmware Boot from Hard Drive Security Secure Boot disabled Memory 4096 MB Processor	Set SCSI Controller You can add hard drives and CD/DVD drives to your SCSI controller or remove the SCSI controller from the virtual madrine. Select the type of drive you want to attach to the controller and then click Add. Isor DVD Drive Shared Drive
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Add Hardware Firmware Boot from Hard Drive Goot from Hard Drive Goot from Hard Drive Goot from Hard Drive Goot from Hard Drive Carte Secure Boot Glasbied Processor 2 Versular processors Carte Drive BeyondTruster, v.2.vhdx Network Adapter vanisth1 Imagement I Name 611-05	Set Sci Controller You can add hard drives and CD,DND drives to your SCSI controller or remove the SCSI controller from the virtual machine. Select the type of drive you want to attach to the controller and then click Add. I would be added to
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Settings for 611-05 on

611-05

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14. Click the **New** button to create a new virtual hard disk. The **New Virtual Hard Disk Wizard** launches.



15. On the Choose Disk Format page, select VHDX and click Next.

Before You Begin Choose Daki Fomat Choose Daki Type Speafry Name and Location Configure Dak Summary	What format do you want to use for the virtual hard disk?
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16. Choose your desired disk type on the **Choose Disk Type** page, and click **Next**.

17. On the Specify Name and Location page, provide a name and

location for the virtual hard disk file. Click Next.

New Virtual Hard Disk With With With With With With With With	ard >
Before You Begin Choose Dick Format Choose Dick Type Specify Name and Location Configure Dick Summary	What type of virtual hard dak do you want to create? Fixed size This type of dak provides better performance and is recommended for servers running applications with infolvies of dak activity. The virtual hard dak file that is created initially uses the size of the virtual hard dak and dees not change when data is deleted or added. I or primarically expanding This type of dak provides better use of physical storage space and is recommended for servers running applications that are not dain iterative. The virtual hard dak file that is created is small initially and change as data is added. O Differencing This type of disk is associated in a parent-child relationship with another disk that you want to be the single to the data or opening system without affecting the parent dak format as the parent (VHD or VHDI).
New Virtual Hard Disk With Comparison of the second sec	<previous next=""> Finish Cancel ard be and Location</previous>
Before You Begin Choose Disk Format Choose Disk Format Specify Kome and Location Configue Disk Summary	Spedfy the name and location of the virtual hard disk file. Name: Very Virtual Hard Disk virtual Location: C:\Users'Public'Documents'/Hyper-V\Virtual Hard Disks\ Browse
	< Previous Next > Finish Cancel

18. Select Create a new blank virtual hard disk and specify a size of 100 GB. Click Next.

📥 Configure I	Disk			
lefore You Begin Choose Disk Format Choose Disk Type Specify Name and Location	You can create a blank virtual hard disk or copy the c Create a new blank virtual hard disk Size: 100 G8 (Maximum: 64 TB) Copy the contents of the specified physical disk:	contents of an exis	ting physical disl	ς.
Configure Disk Summary	Physical Hard Disk (\\ IPHYSICALDRIVE) (\\ IPHYSICALDRIVE1		Size 59 GB 1535 GB	
	Copy the contents of the specified virtual hard d Path:	isk		Browse
	< Previous	Next >	Finish	Cancel

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- 19. Review the hard disk option on the **Summary** page and then click **Finish**.
- 20. If your sizing requirements are for a medium or larger virtual machine, follow the above steps to create an additional disk, and specify a size of **500 GB**.

For more information about sizes, please see <u>"Review License and Sizing Conditions" on page 4</u>.

21. Finally, right click on the virtual machine and select Connect.



22. Click the Start button to start the Hyper-V virtual machine.

23. From the initial console configuration screen, press **Enter**, and then press **1** to enter the Appliance License Key.

New Virtual Machine on JXN2PVHYPERV01 - Virtual Machine Connection
le Action Media Clipboard View Help
BevondTrust
Secure Demote Access
Secure Remote Access
Booting the system (3/1%)
booting the system (S+70)
atus: Running 🔤 🖲 🔒 🚑
Action Media Clipboard View Help
Bergorid Trust
Appliance License Key:
Base Version: 5.5.0
administer and start using this system, browse to any of:
, press <enter> to start basic configuration</enter>
Action Media Clinkoard View Help
BeyondTrust

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24. Go back to the email you received from BeyondTrust Technical Support, get the Appliance License Key, enter it here, and then press **Enter**.

Note: If you are unable to provide the Appliance License Key at this time, you can manually enter it later from the virtual machine console.

New Virtual Machine on JXN2PVHYPERV01 - Virtual Machine Connection	_ 🗆 X
File Action Media Clipboard View Help	
BeyondTrust	
Hain Menu	
Nodel: br.v.2 Appliance Licenses Kay: Hostawa: Localhost	
1 - Englisere License Englisere 2 - Englis 3 - Rebarred Support Transl 4 - Entt	
Selection: 1 The MCW uill be provided by BeyondTrust when you purchase your license. Enter new value: ABCDE-12345-T0411-67090	
Status: Running	<u>ا</u>

Configure via PowerShell

To deploy the BeyondTrustSRA Virtual Appliance into a Hyper environment using Powershell, follow the steps below:

 Open the email you received from BeyondTrust Technical Support and click the link to download the BeyondTrust SRA Virtual Appliance (Hyper-V and Azure) file. Save the file to an appropriate location so that it can be imported to your Hyper-V host, and then double-click the self-extracting ZIP file to extract your SRA Virtual Appliance.

BeyondTrust Download Available
BeyondTrust Build System <mysupport@beyondtrust.com></mysupport@beyondtrust.com>
() Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.
Greetings,
Thank you for choosing BeyondTrust for your Secure Remote Access needs!
Your BeyondTrust Virtual Appliance is registered in our systems for deploy.beyondtrust.com and is ready for download.
To install and configure this Virtual Appliance, follow all of the instructions below:
The BeyondTrust Virtual Appliance
Download your BeyondTrust Virtual Appliance
Click here for your BeyondTrust Virtual Appliance (VMware) Click here for your BeyondTrust Virtual Appliance (Hyper-V and Azure) Click here for your BeyondTrust Virtual Appliance (Nutations AHV)
Deploy your BeyondTrust Virtual Appliance in AWS
Link your AWS account(s) by clicking here.
BeyondTrust Virtual Appliance Setup
Follow the appropriate installation guide for your product: BeyondTrust RS Virtual Appliance Installation guide Briveleged Remote Access Virtual Appliance Installation guide When prompted for the Appliance License Key (ALK), enter Install any available BeyondTrust guidates using Check for Updates'
Contacting BeyondTrust
If you need additional assistance, please contact BeyondTrust Support.
We look forward to serving you. If you have any questions, don't hesitate to contact us at mysupport@beyondtrust.com.
Best Regards,
BeyondTrust Support Team

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- 2. Double click BeyondTrust Remote Support-hyperv-azure.exe within your file browser to begin extraction.
- 3. Choose the destination directory for the extraction and click Extract.

Note: Extract to a directory where you want to run the virtual machine from.

- 4. When extraction is complete, the following files appear in the designated location:
 - Deploy-AzBeyondTrustVM.ps1: PowerShell script to assist deployment of your appliance to Hyper-V.
 - Deploy-HyperVBeyondTrustVM.ps1: PowerShell script to assist Azure deployment. Not used.
 - BeyondTrust-br.v.2.vhdx.
- 5. Deploy- HyperVBeyondTrustVM.ps1 uses the Hyper-V PowerShell module. Right-click on the script and click Edit.
- 6. Once the PowerShell script opens, locate the following variables and edit for your environment:
 - \$vmName: The name for the virtual machine.
 - \$vmLocation: The directory that the virtual machine resides in.
 - \$vmSwitch: The virtual switch this virtual machine uses.
 - \$beyondtrustVHD: The name of the VHDX. Leave as is.

```
Deploy-HyperVBeyondTrustVM.ps1* X
```

```
1
    ## BeyondTrust Hyper-V Deployment script
2
3
    ##
       This script will create a vm using
    ##
4
       the BeyondTrust VHD.
    ##
5
       Refer to BeyondTrust support documentation for custom
    ##
6
7
    ##
       deployment options.
    ##
8
    ## Required variables:
Q.
    ## vmName: What to call this vm in Hyper-V
10
    ## vmLocation: the folder to create this vm in
11
    ## vmSwitch: the switch to attach this vm to
12
13
    ## BeyondTrustVHD:
          The name of the vhd provided by BeyondTrust.
    ##
14
          THIS VHD SHOULD ALREADY BE IN $vmLocation
    ##
15
    16
17
    $vmName = ""
18
    $vmLocation = ""
19
    $vmSwitch = ""
20
    $beyondtrustVHD = "BeyondTrust-br.v.2.vhd"
21
- 1
```

- 7. Set the value of the **\$size** variable to the desired deployment size for your virtual machine. The options are:
 - small
 - medium
 - large

```
22
    23
    ## Select a size based on the number of
24
       licenses or endpoints. Only uncomment one.
25
    ##
        (Refer to BeyondTrust support for details)
26
    ##
27
    ##
    ## Small (1-20 licenses or 1-3000 endpoints) (Default)
28
    $size = "small"
29
30
    ## Medium (20-100 licenses or 3001-15000 endpoints)
31
    #$size = "medium"
32
33
    ## Large (100+ licenses or 15000+ endpoints)
34
    #$size = "large"
35
```

For more information about sizes, please see "Review License and Sizing Conditions" on page 4.

8. Save and run the script in Windows Powershell.

9. Once complete, you can view the newly created virtual machine in Hyper-V Manager or via PowerShell Hyper-V commands.

Network Location Considerations for B Series Appliances		
Network Location	Advantages/Disadvantages	
Outside your firewall	Does not require that ports 80 and 443 be open inbound for TCP traffic on your firewall. Simplifies the setup process significantly because both the representative and customer clients are built to resolve to a specific DNS; if your registered DNS resolves to a public IP address directly assigned to your B Series Appliance, no additional setup is required by you to initiate a session.	
DMZ	Might require additional setup depending on your router or routers.	
Inside your firewall	Requires port forwarding on your firewall and possibly additional setup of your NAT routing and internal DNS.	

Deploy the BeyondTrust SRA Virtual Appliance into a Microsoft Azure Environment

Review Prerequisites for Microsoft Azure

You must have a Microsoft Azure account and environment, including Microsoft Azure Resource Manager (ARM), already configured.

For deployment via Microsoft Azure, make sure the following is in place prior to deployment:

- A resource group.
- A storage account with a VHDX container.
- A VNET and subnet has been configured.

For deployment via Powershell, make sure the following is in place prior to deployment:

- Powershell AZ module installed.
- · Powershell Hyper-V module installed.

For more information about installing and configuring the Azure PowerShell Module, please see Install and configure Azure PowerShell at https://docs.microsoft.com/en-us/powershell/azure/install-Az-ps?view=azps-4.1.0.

Deploy the SRA Virtual Appliance

To deploy the BeyondTrust SRA Virtual Appliance into a Microsoft Azure environment, follow the steps below:

- Open the email you received from BeyondTrust Technical Support and click the Click Here for your BeyondTrust Virtual Appliance (Hyper-V and Azure) link to download the file.
- 2. Click **BeyondTrust Remote Support-hyperv-azure.exe** within your file browser to begin installation.
- 3. If you receive a Security Warning prompt, click Run.
- 4. Choose where you wish the files to be extracted. Click Extract.
- 5. When extraction is complete, Deploy-AzBeyondTrustVM.ps1, Deploy- HyperVBeyondTrustVM.ps1, and BeyondTrustbr.v.2.vhdx files appear in the location you designated during the extraction process. A PowerShell script is provided to assist in the deployment of your B Series Appliance to Azure: Deploy-AzBeyondTrustVM.ps1. A second script, Deploy-HyperVBeyondTrustVM.ps1, is provided to assist with Hyper-V deployments, and should not be used to deploy to Azure. Deploy-AzBeyondTrustVM.ps1 uses the Az module. Right-click Deploy-AzBeyondTrustVM.ps1 and click Edit.



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- Once the PowerShell script opens, locate STEP 1 and modify the following variables based on the specifics of your Microsoft Azure environment:
 - resourceGroupName
 - storageAccountName
 - location (westus, for example)
 - vnetName
 - subnetName

	/ ************************************
	F Instructions
) 8 mbis semint deployers providencet Burlisses to the Missessft Baune
	F This script deploys a BeyondTrust Appliance to the Microsoft Azure
	F CMED 1 (DECUIDED), Bill out those Marishles
	SIEF 1 (REQUIRED): FILL OUT THESE VALIABLES
	F resourceGroupName:
	The name of the Resource Group to create the VM in
	storageAccountName: The name of the Storage Account to
	upload and create VHDs in
	NOTES: This must already exist with a container
	named the same as SyndFolder (default: vhds)
	vnetName: The name of the virtual network to add the NIC
	subnetName: The name of the subnet to add the NIC to
	Iocation: the Location that the vm should be created in
	<pre>{ (must match the location of previous settings)</pre>
	vmName: what name to set the vm to in Azure
	(Name must only contain alphanumeric (A-z 0-9)
	<pre># dash (-), underscore (_), or period (.))</pre>

1	resourceGroupName = ""
1	storageAccountName = ""
1	<pre>\$vnetName = ""</pre>
1	<pre>\$subnetName = ""</pre>
1	<pre>\$location = ""</pre>
1	<pre>\$vmName = "BeyondTrust-br.v.2"</pre>

Note: The vmName does not need to be changed.

Note: The Storage Account used for storing the Azure Virtual Appliance must be General purpose v2.

- In the Deploy-AzBeyondTrustVM.ps1 script, set the value of \$size to the desired deployment size of your SRA Virtual Appliance. The options are:
 - small
 - medium
 - large

For more information about sizes, please see <u>"Review License</u> and Sizing Conditions" on page 4.



- 8. The Az module requires a subscription and tenant ID from Azure to deploy. Enter this information.
- 9. Change optional variables as required for your Microsoft Azure environment.
- 10. For US government accounts, set the value of **\$azureUSGovernment** to **\$true**.

11. Save, then run the script in Windows PowerShell.

- 12. When prompted, enter your credentials and sign into your **Microsoft Azure** account.
- 13. Next, the system configures an MD5 hash, uploads the SRA Virtual Appliance into your Azure environment, and configures a public IP address for your BeyondTrust SRA Virtual Appliance.

14. You are prompted to go to the IP address configured for your SRA Virtual Appliance. The message reads *For Appliance administration, go to https://xx.xx.xx.xx/appliance.*



Mindowr Pow

ageest, is used for boot diagnestics. Itid essStatuscode : True Softene : Ok

25

access this appliance at https://20.185.153.167/appliance

SALES: www.beyondtrust.com/contact SUPPORT: www.beyondtrust.com/support DOCUMENTATION: www.beyondtrust.com/docs

1

- 15. On the /appliance page, enter your **Appliance License Key** provided in the email from BeyondTrust Technical Support. Click **Save**.
- 16. To setup a persistent URL for your SRA Virtual Appliance, you can perform one of two options:
 - In the Azure console, set the SRA Virtual Appliance's external IP to static. Then assign your DNS entry to that external IP.
 - Apply a DNS name within Azure. Set a CNAME record pointed to that address.

BeyondTrust Secure Remote Access	Virtual Appliance LOGIN
Appliance License Key (ALK)	
The ALK will be provided by BeyondTrust Appliance License Key: Save	when you purchase your license.
Copyright © 2002-2019 BeyondTrust Corporation. Redistribution Prohil	bited. All Rights Reserved.

For information about using BeyondTrust Vault with an Microsoft Azure Active Directory Domain Services Account, please see the Beyond Trust Vault Guideat https://www.beyondtrust.com/docs/remote-support/how-to/vault/index.htm.

Deploy the BeyondTrust SRA Virtual Appliance into an Amazon AWS Environment

Note: You must have an Amazon AWS account and support plan already configured. You are also responsible for registering the DNS hostname for your site.

Administrators can deploy the BeyondTrust SRA Virtual Appliance into their Amazon Web Services (AWS) environment by following the steps below.

 Open the email you received from BeyondTrust Technical Support and select the Link your AWS account(s) link to be redirected to the BeyondTrust site.

 Enter your Commercial AWS Account ID or Government AWS Account ID in the text box and click Add Account ID. Your SRA Virtual Appliance is shared with your Amazon AWS account as a Private Amazon Machine Image (AMI) within an hour. The AMI is shared to each of your AWS regions.

Note: If you are uncertain what your AWS Account ID is, the email contains a link to an Amazon help page that details how to find it.



- 3. In the AWS EC2 Dashboard, in the AWS services section, click the EC2 link to start the wizard.
- 4. Browse to Images > AMI.
- 5. Select **Private Images** from the dropdown.
- Select the SRA Virtual Appliance (for example, BeyondTrust SRA Appliance 6.x.x) in the AMI list. This is the base software image, which must next be updated and configured.
- 7. Click the Launch button.
- 8. Choose an instance type. BeyondTrust supports all T3 and M5 instance types.

For more information about sizes, please see "Review License and Sizing Conditions" on page 4.

9. Click Next: Configure Instance Details.

- 10. After configuring the instance launch details, click Next: Add Storage.
- 11. On the Add Storage page, configure the sizes and volume types of the drives you wish to include on the AMI. A second EBS volume is set to device /dev/sdb with a size of 10GB. We recommend you increase this second disk to 100GB. If you need a large volume for recordings, and this is a cost-sensitive deployment, then you can provision a third drive and configure it as Magnetic (standard). The third drive must be added as /dev/sdg. You may enable the Encrypted option if desired.
- 12. Click Next: Add Tags.
- 13. Click Next: Configure Security Group.
- 14. The Launch Wizard creates a security group which you must edit, or you can create a new security group after you deploy the image, so that the site is accessible on ports 443 and 80. This can be accomplished from **Network & Security > Security Groups** in the **EC2 Dashboard**.
- 15. Click Review and Launch. Review your instance details and click Launch.
- 16. Skip the option to select or create a key pair, as the instance does not allow SSH access. Instead, select **Proceed without a key pair**, check the acknowledgment box, and click **Launch Instances**.
- 17. After the site launches, browse to **Instances > Instances** in the EC2 Dashboard and locate the assigned **Public IP** address in the **Description** tab. This is the IP address used to configure your B Series Appliance and your DNS A record.

Note: If you stop or terminate your Instance, you are not guaranteed to retrieve the same IP address after it reboots. To facilitate managing your DNS, we recommend purchasing an Elastic IP address.

- 18. Navigate in a web browser to https://[Public IP address]/appliance.
- 19. Enter your **Appliance License Key** provided in the email from BeyondTrust Technical Support. Click **Save**.

BeyondTrust Secure Remote Access	Virtual Appliance LOGIN
Appliance License Key (ALK)	
The ALK will be provided by BeyondTrust	t when you purchase your license.
Copyright © 2002-2019 BeyondTrust Corporation. Redistribution Proh	nibited. All Rights Reserved.

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Deploy the BeyondTrust SRA Virtual Appliance into a Nutanix AHV Environment

Review Prerequisites for Nutanix

You must have a Nutanix account and environment already configured.

Before beginning the BeyondTrust SRA Virtual Appliance setup, please review the following prerequisites:

- Nutanix AHV 20190916.410+.
- At least 4GB of memory available.
- At least 140GB of storage available.
- One 32GB partition for the BeyondTrust OS, and at least 100GB available for logs and recordings.
- External IP SANs require a 1Gbit or 10Gbit reserved network with a 10K RPM disk or better.

For more information about sizes, please see "Review License and Sizing Conditions" on page 4.

- A static IP for your SRA Virtual Appliance.
- A private DNS A-record resolving to the static IP of your SRA Virtual Appliance. A public A-record and a public IP are also required if public clients access the B Series Appliance. The DNS A-record is the fully qualified domain name (FQDN) of your site (support.example.com, for example).

Note: "Public clients" include any client software (browsers, BeyondTrust representative consoles, endpoint clients, etc.) which connect from external networks and VPN(s) local to the B Series Appliance's network.

- A valid NTP server that is reachable by the B Series Appliance.
- Ensure that the system time between the host ESXi server and the guest BeyondTrust OS are in sync. Variations by only a few seconds can potentially result in performance or connectivity issues.

Deploy the SRA Virtual Appliance

Administrators can deploy and configure the BeyondTrust SRA Virtual Appliance into their Nutanix AHV environment by following the steps below.

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- Open the email you received from BeyondTrust Technical Support, and click the Click Here for your BeyondTrust Virtual Appliance (Nutanix AHV) link to download the file. Save the file to an appropriate location to be uploaded to your Nutanix environment.
- 2. Log in to Nutanix AHV.

 Go to Menu > Virtual Infrastructure > Images and click Add Image to upload the BeyondTrust.qcow2 file to the image repository.

BeyondT	rust Download Available			
MS Be	eyondTrust Build System <mysuppo< td=""><td>rt@beyondtrust.com></td><td></td><td></td></mysuppo<>	rt@beyondtrust.com>		
Click here	to download pictures. To help protect your p	rivacy, Outlook prevented automatic download of	some pictures in this message.	
Greetings,				
Thank you f	for choosing BeyondTrust for you	Ir Secure Remote Access needs!		
Your Beyon	dTrust Virtual Appliance is regist	tered in our systems for deploy.beyo	ondtrust.com and is ready for down	load.
To install ar	nd configure this Virtual Appliance	e, follow all of the instructions below	:	
The Beyo	ondTrust Virtual Appliance			
Download	your Beyond Trust Virtual Appl	liance		
<u>Click</u> <u>Click</u> <u>Click</u>	here for your BeyondTrust Virtua here for your BeyondTrust Virtua here for your BeyondTrust Virtua	al Appliance (VMware) al Appliance (Hyper-V and Azure) al Appliance (Nutanix AHV)		
Deploy you	ur Beyond Trust Virtual Applian	ce in AWS		
Link	your AWS account(s) by clicking	here.		
BeyondTru	ist Virtual Appliance Setup			
° 2. Whe 3. Insta	BeyondTrust RS Virtual Appliance Privileged Remote Access Virtual n prompted for the Appliance Lic III any available BeyondTrust upd	Installation guide Appliance Installation guide ense Key (ALK), enter lates using 'Check for Updates'		
Contactin	ng BeyondTrust			
If you need	additional assistance, please cor	ntact BeyondTrust Support.		
We look for	ward to serving you. If you have	any questions, don't hesitate to cont	act us at mysupport@beyondtrust.	.com.
Best Regar	ds,			
BeyondTrus	st Support Team			
	l Images			Prism
Add I	mage → Import Image	es Actions Y		
Type r	name to filter by			
Viewing	all 229 Images			
0	▲ Name		Description	Ţ
0	zonini_ing with a first		-	D

4. Click Next.

Select Image 2 Select Loca	ition
Image Source	
ininge bounde	
Image File O URL O VM Disk	
+ Add File	
Source: [LOCAL]\BeyondTrust.qcow2	Remove
Name Type	
BeyondTrust Appliance Disk	*
Description	
	//
Checksum	
	SHA-1 ×
	Coursel New
	Cancel

Add Images

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- 5. Select the location for the image in your Nutanix cluster.
- 6. Click Save.
- 7. Go to Home > VM and select + Create VM.

- 8. In the **Create VM** dialog, select the desired CPU and Memory configuration for this Appliance.
- 9. Click Next.

Add Images
1 Select Image Select Location
Placement Method
 Place image directly on clusters This option is good for smaller environments. The image will be placed on all selected clusters below.
Place image using image Placement policies This option is good for larger environments. It requires you to first set up image Placement policies between categories assigned to clusters and categories assigned to images. From there on, you only need to associate a relevant category to an image while uploading it here.
Select Clusters
Select the set of clusters to use for placement
All clusters
Name
NTXCLUSTER01
Create VM
Configuration 2 Resources 3 Management 4 Review
ame
BeyondTrust Appliance Deployment
escription
(Optional)
luster
NTACLOSTEROT ·
umber of VMs
M Properties
PU Cores Per CPU Memory
2 2 VCPU 1 Cores 4 GB
_

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10. Click Attach Disk.

- 11. Change **Operation** to **Clone from Image Source** and select the previously uploaded BeyondTrust image.
- 12. Click Add.
- 13. Click Attach Disk.

				Create	e VM					
	Dísks						Attac	:h Disk		
0	# Type		Image		Size	Bus Type	Act	tions		
	1	Disk	BeyondT Appliance	BeyondTrust Appliance		32 GiB SCSI		ŵ		
	2	Disk	-		100 GiE	scs	ii 🖌	ŵ		
	Network	s					Attach to S	Subnet		
	Subne	t	VLAN ID / VPC	Private	IP	Public IP	Ac	tions		
	it-lab1	06	106	Auto-/	Assign	None	1	ŵ		
	Boot Co Lega UEFI S V V	nfiguration cy BIOS Mo Mode ecure Boot Vindows® D	de efender Credeni	tial Guar	d P			Next		
				Add	d Disk				?	×
Туре										
DI	SK									•
Oper	ation									_
CI	one fro	m Image	e Service							~
Bus T	Type									
SU	-21									
Image	e (?)									_
Be	eyondTi	rust 6.1.1								Ť
Size ((GiB) 🕐									
32 Pleas	e note ti	hat chang	ing the size o	of an im	nage is no	ot allowe	d.			
Index	¢		-		-					
Ne	ext Ava	ilable								•
							Canc	el	Ad	d



Cancel

33

14. Create a disk of at least 100GiB.

For more information about sizes, please see <u>"Review License</u> and Sizing Conditions" on page 4.

15. Click Add.

i

16. Click the X next to the CD-ROM disk.

Add Disk	?	×
Туре		
DISK		•
Operation		
Allocate on Storage Container		•
Bus Type		
SCSI		•
Storage Container		
SelfServiceContainer (11.31 TiB free)		•
Size (GiB) 💿		
100		
Index		
Next Available		•

17. Select UEFI under Boot Configuration.

- 18. Click the Attach to Subnet text button.
- 19. Select the desired network in the dropdown.
- 20. Click Add.

sks					Attach Dis	
# Type	Image	\$	Size		Actions	
1 Disk	BeyondT Applianc	rust e	32 GiB	SCSI	/ =	
2 Disk	-		IOO GiB	SCSI	/ 🕯	
stworks	VIANID/VPC	Privato IP	P	Att	ach to Subne	
oublict	1011101110	110000	10	biic ii	Hellons	
it-lab106	106	Auto-Assi	gn No	one		
ot Configuration Legacy BIOS M UEFI Mode 😨	lode					

Create VM

0

Back

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- 21. Select UEFI Mode and click Confirm on pop-up.
- 22. Click Save.
- 23. Nutanix AHV begins deploying the BeyondTrust Appliance.
- 24. Wait for the appliance to deploy, then select the BeyondTrust Appliance and click **Power On**.

Dion	100 010	0001	· •
Change Boot Co	nfiguration		
The disk image format is differ Legacy BIOS. By switching bet	ent between ween them, p	UEFI and blease	> Subn
make sure that you are booting image.	g from the co	rrect disk	• 💼
Cancel	Confirm		
Biod mode			
Priority			
It Boot Order (CD-ROM, Disk, Netw	ork)		\$

depository institution. It is not authorized to accept deposits or trust accounts and is not licensed or regulated by any state or federal banking authority.

SRA Virtual Appliance First Boot

- In the virtual infrastructure client, browse to the VM folder you configured, and locate the new entry for the SRA Virtual Appliance. Right-click on this entry and then select **Open Console**.
- 2. Click the play button to start booting your BeyondTrust SRA Virtual Appliance.

BeyondTrust Secure Remote Access

Initializing the kernel..

- 3. After your BeyondTrust SRA Virtual Appliance has finished booting, one or more IP addresses display.
- Note: If you were unable to provide the Appliance License Key during deployment, press Enter to start basic configuration.
 Selection 1 on the next menu screen allows you to manually enter the Appliance License Key. Then exit back to the main screen.
- 4. From a computer on the same network, open a web browser and browse to any of the IP addresses listed, followed by /appliance. If none of the IPs listed are accessible, see <u>"SRA Virtual Machine</u> <u>Console Administration" on page 38</u> to assign a usable IP address using the console interface. Otherwise, you are done with the VMware portion of the setup and can close the VMware console.



Configure the SRA Virtual Appliance

- 1. From the */appliance* interface of your BeyondTrust SRA Virtual Appliance, log in using **admin** as the username and **password** as the default password. You are prompted to change your password the first time you log in.
- BeyondTrust Secure Remote Access Login Username Password Login Cookies must be enabled to Login

- 2. Next, go to Networking > IP Configuration.
- 3. Under the NIC Configuration section, click Add New IP.
- 4. Enter the static IP address and subnet mask for your BeyondTrust Appliance B Series. You can decide if this IP addresses session traffic, web traffic, or both. Then click **Save Changes**.
- 5. Under the **Global Network Configuration** section, set your default gateway. Configuring DNS servers is not required but we highly recommend it. After entering the required information, click **Save Changes**.

Note: Valid DNS settings are required for failover and automatic updates to function properly. To help determine the appropriate IP and DNS configuration for your network, see <u>The BeyondTrust</u> <u>Appliance B Series in the Network at</u> <u>https://www.beyondtrust.com/docs/remote-support/getting-</u> started/deployment/dmz/index.htm.

6. Wait for the format to complete, and then go to **Status > Health** to verify that the needs of the SRA Virtual Appliance are being met.

IP :: Add	
Enabled	2
*Network Port	etho 🗸
•IP Version	IPv4 V
•IP Address	
*Subnet Mask	
Access Type	Allow Both
*Required	Save Changes
WARNING: Change	s to the network settings should be made ONLY when the device is not in use by other users!
NOTE: When config the Certificates pag	uring a new IP address, the Factory Default certificate configuration will be used. Once added, you may change the certificate configuration used for this IP on e.

Global Network Conf	iguration
Hostname	bomgar.com
IPv4 Default Gateway	10.1 Using Device: eth0 V
IPv6 Default Gateway	Using Device: eth0 🗡
Custom DNS Servers	10. NOTE Octoma Enter a lat of P addresses, one are line to be used for DNS lookuss.
Fallback to Public DNS Servers	NOTE: If no DNS servers are configured above, or if they are unreachable, enabling this setting will cause the Secure Remote Access Appliance to use the publicly-available DNS servers from OpenDNS. For more information about OpenDNS, please viat www.opendite.com.
Respond to Ping	
NTP Server	Sectionage con Last producting 77 Second spip (*1 20 Sec of 1940) NOTE: The setting is used to keep the system clock in sync with an HTP time server. You may enter a single hostname or P address. "clock.bompar.com" is the clock. Seve Changes
WARNING: Changes to the	network settings should be made ONLY when the device is not in use by other users!

Hardware Health			
	Value	Status	Notes
CPU	Count: 2 Model: Intel(R) Xeon(R) CPU E5-2697 V3 @ 2.60GHz Speed: 2593.993 MHz Reservation: 0 MHz Limit: Unlimited	0	Consider allocating a CPU Reservation to this VM of at least 500 MHz to help maintain functionality whe the hosts CPUs are under contention.
Memory	Physical: 3947 MiB Used: 3257 MiB Swap Used: 0 MiB Reservation: 0 MiB Limit: Unlimited Host Ballooning: 0 MiB Host Swapping: 0 MiB	0	Consider allocating a Memory Reservation to this VM for the full amount of physical memory to avoid hos swapping, which is detrimental to performance.
Storage	Total Space: 99.998 GiB	~	

7. Go to Security.

8. Configure an SSL certificate, using one of the following four options. Follow the link for instructions for each option.

- <u>Request a Let's Encrypt certificate</u>, at <u>https://www.beyondtrust.com/docs/remote-support/how-</u> to/sslcertificates/create-ca-signed.htm#Lets_Encrypt.
- Import a CA signed certificate, key, and chain, at https://www.beyondtrust.com/docs/remote-support/how-to/sslcertificates/create-ca-signed.htm#Import.



- Create a CSR for a CA signed certificate and import the certificate and chain, at https://www.beyondtrust.com/docs/remote-support/how-to/sslcertificates/create-ca-signed.htm#Create_CSR_Import.
- Create a self-signed certificate, at https://www.beyondtrust.com/docs/remote-support/how-to/sslcertificates/create-self-signed.htm. This option is not recommended, but may be used temporarily for testing.

For more information, please see "View SRA Virtual Appliance Health" on page 39.

URL reference

https://support.example.com/login - User Administration

https://support.example.com/appliance - Appliance Administration

SRA Virtual Machine Console Administration

After you have finished deploying your SRA Virtual Appliance, you can launch the virtual machine console to access some administrative functions

The first screen of the virtual machine console lists the hostnames and IP addresses for this SRA Virtual Appliance.

Press **Enter** to view the configuration menu. From here, you can log in to make configuration changes, or use the support tunnel to enable the BeyondTrust Technical Support to resolve complex issues with your B Series Appliance.



Configuration Options

Logging in provides additional configuration options. You can update your network settings, allow an advanced support tunnel, shut down or reboot the SRA Virtual Appliance, or reset the B Series Appliance password or a site's administrative password.

The **Networking** option allows you to manage the hostname, IP addresses, the default gateway, static routes, and DNS servers.

Select a network interface to manage its speed or duplex communication. From here, you also can add or edit IP addresses.

Model: br.v.2 Appliance License Key: B6C39-D883B-9A Hostname: localhost	C77-2FC20		
1 - Login 2 - Advanced Support Tunnel 3 - Exit			
Selection: 1 Isername: admin Password:			
Main Menu			
Model: br.v.2 Appliance License Key: B6C39-D883B-9A Hostname: localhost	C77-2FC20		
1 - Notworking 2 - Advanced Support Tunnel 3 - Shidown this device 4 - Robect this device 5 - Roset device admin pessuord 6 - Roset Site Admin 7 - Exit			

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View SRA Virtual Appliance Health

The **Status > Health** page in the /appliance administrative interface offers information to help you ensure efficiency from your BeyondTrust SRA Virtual Appliance installation. The information presented can help you solve problems you may encounter with your SRA Virtual Appliance.

Real-time information displays in three categories: **CPU**, **Memory**, and **Storage**. For each category, the item's **Value**, **Status**, and any associated **Notes** are listed.

Value displays the specific CPU, Memory, and Storage parameters associated with your SRA Virtual Appliance installation.

	Hardware Health				
	Value	Status	Notes		
CPU	Count: 2 Model: Intel(R) Xeon(R) CPU E5-2697 V3 @ 2.60GHz Speed: 2593.993 MHz Reservation: 0 MHz Limit: Unlimited	1	Consider allocating a CPU Reservation to this VM of at least 500 MHz to help maintain functionality whe the hosts CPUs are under contention.		
Memory	Physical: 3947 MIB Used: 3257 MiB Swap Used: 0 MIB Reservation: 0 MIB Limit: Unlimited Host Ballooning: 0 MIB Host Swanpin: 0 MIB	0	Consider allocating a Memory Reservation to this VM for the full amount of physical memory to avoid ho swapping, which is detrimental to performance.		

Status displays green check, blue exclamation mark, or red X icons to help you quickly assess your installation's performance.

Notes are displayed when changes are recommended, or installation errors have occurred.

Status Icons

*	A green check icon shows you at a glance that a certain category is sufficiently configured for optimal SRA Virtual Appliance performance.
Î	A blue exclamation mark indicates that you may need to make changes to improve performance. Suggested changes are listed in the adjacent Notes column.
*	A red X icon alerts you to a memory error situation that could cause disruptions for your SRA Virtual Appliance. The suggested changes to correct the issue associated with a red X are listed in the adjacent Notes column and may require you to contact BeyondTrust Technical Support.

Migrate Sites and Licenses to a New BeyondTrust SRA Virtual Appliance

Existing sites and licenses can be migrated to a new BeyondTrust SRA Virtual Appliance using the built-in **Site Migration** tool. A manual process is also available.

BeyondTrust offers a variety of implementation service packages that provide customized migration planning and upgrade assistance. For more details, please contact your account manager.

Your existing SRA Virtual Appliance must be running a recent software version. Older versions must be upgraded before migrating.

Note: If you are migrating to Atlas Cloud, please contact www.beyondtrust.com/support for assistance.

For more information about installation, please see <u>SRA Virtual Appliance Installation</u> at https://www.beyondtrust.com/docs/remote-support/getting-started/deployment/virtual-sra/index.htm.

For more information about upgrading, please see <u>Upgrade the BeyondTrust Remote Support Software</u> at https://www.beyondtrust.com/docs/remote-support/updates/upgrade/index.htm.

Use the Site Migration Tool

- 1. Log in to the /login interface of your current SRA Virtual Appliance.
- 2. Click on Management in the left menu.
- 3. Click on the Software tab.
- 4. Scroll down to Site Migration.
- 5. Read and review the conditions and instructions there, including steps to follow after the migration is complete. Post-migration steps can be reviewed again after the migration.
 - The site address and API account provided are used to download a backup from the source site and restore it onto this site automatically. The provided API account must have read-only or higher access to the command API, as well as permission to use the backup and vault encryption key APIs.
 - Recordings are not included as part of this migration. If you need to retain access to existing recordings you can either keep the source appliance online with a different hostname or use the integration client to back up the recordings before doing the migration.
 - The site must be a BeyondTrust Remote Support site.

SITE MIGRATION

Migrate all configuration and data from another site to this one. The site address and API account provided will be used to download a backup from the source site and restore it onto this site automatically. The provided API account must have read-only or higher access to the command API, as well as permission to use the backup and vault encryption key APIs.

Recordings are not included as part of this migration. If you need to retain access to existing recordings you can either keep the source appliance online with a different hostname or use the integration client to backup the recordings before doing the migration

The site must be a BeyondTrust Remote Support site

Once the migration is complete, you will need to update the DNS of your primary hostname to point to this appliance to complete the migration process and allow clients to connect to this instance and upgrade.

- Create a new DNS entry for the hostname that you would like to use to access the old site. You may not use the original BeyondTrust Remote Support hostname shown in the Status page of /login.
 In the old site's Public Portal section of /login, add the new hostname address under the default public portal. This step ensures that the old site will respond appropriately to the new hostname.
 After the DNS entries are propagated, confirm that you can access the old site under the new hostname.
- 4. Swing the DNS entries to point to this site instead of the old site.

5. Wait for all DNS entries to finish propagating across the networks from which your clients resolve those addresses. 6. From the old site's Status page, click the "Restart Software" button to trigger all clients to reconnect to your new site and begin upgrading themselves

Required field	
Hostname •	
	E
OAuth Client ID •	
OAuth Client Secret •	
RESET VERIFY	CONNECTION
SSL Certificate 🚯	
+ CHOOSE CERTI	FICATE

6. Enter the Hostname, OAuth Client ID, and OAuth Client Secret.

7. Click Verify Connection.

8. Once the connection is verified, click OK. If the connection does not verify, review the connection information that was entered.

9.	Check Automatically begin site migration to start the migration
	after downloading the backup files. Uncheck to manually confirm
	each backup file.

Note: Make sure there is a local account in case LDAP providers cannot connect.

10. Click Retrieve Backup.

11. If the migration is not automatic, a series of pop-up notifications require confirmation for each download.



DOWNLOAD SUCCESSFUL

The backup file has been retrieved. Do you want continue?



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12. Click **OK** on the last download.

VAULT ENCRYPTION KEY DOWNLOAD SUCCESSFUL

The Vault Encryption Key file has been retrieved.

13. Click **Migrate Site**. Review the notification and click **Continue**.

0		Managament					
*							
-		SOFTWARE SECURITY SITE CONFIGURATION EMAIL CONFIGURATION OUTBOUND EVENTS CLUSTER FAILOVER ***					
ŧ	Configuration	Company Name					
÷		Bearer Token					
æ		Version ARE YOU SURE?					
۹.	Rep Console	23.2.1 Existing data on this site will be overwritten by the backup. Migration can take some time. If the process is interrupted then it will need to be restarted.					
**	Users & Security	CANCEL					
B		Backup Filename					
Ţ							
••••		MIGRATE SITE					
		A Make sure there is a local account in case LDAP providers cannot connect.					
	*						

- 14. Pop-up notifications advise that the migration is in progress, and when it is complete.
- 15. Click OK on the Migration Successful notification.

MIGRATION IN PROGRESS

- The backup file is currently being migrated. This process may take some time.

MIGRATION SUCCESSFUL

The migration process has been completed. Please restart processes on .com.

- 16. Once the migration is complete, you must update the DNS of your primary hostname to point to this appliance. This will complete the migration process, and allow clients to connect to this instance and upgrade. The required steps display on the screen.
 - a. Create a new DNS entry for the hostname that you would like to use to access the old site. You may not use the original BeyondTrust Remote Support hostname shown in the Status page of /login.
 - b. In the old site's **Management > Site Configuration**, add the new hostname address under HTTP. This step ensures that the old site responds appropriately to the new hostname.

- c. After the DNS entries are propagated, confirm that you can access the old site under the new hostname.
- d. Swing the DNS entries to point to this site instead of the old site.
- e. Wait for all DNS entries to finish propagating across the networks from which your clients resolve those addresses.
- f. From the old site's **Status** page, click **Restart Software** to trigger all clients to reconnect to your new site and begin upgrading themselves.

0		Chatria Chatria					
Ŧ	Downloads						
-	My Account	Remote Support					
ŧ	Configuration	SITE MIGRATION					
<u>_+</u>	Jump						
⋳	Vault	A site migration was performed from the backup file "BeyondTrust-tt232ers.qa.bomgar.com-20230403-215637.nsb". Please complete the post-migration process. 1. Create a new DNS entry for the hostname that you would like to use to access the old site. You may not use the original BeyondTrust Remote Support hostname shown					
P.	Rep Console	in the status page of riogin. 2. In the old site's Public Portal section of /login, add the new hostname address under the default public portal. This step ensures that the old site will respond appropriately to the new hostname.					
2	Users & Security	3. After the DNS entries are propagated, confirm that you can access the old site under the new hostname. 4. Swing the DNS entries for the following addresses to point to this site instead of the old site.					
Đ	Reports						
Ŧ	Public Portals	5. Wait for all DNS entries to finish propagating across the networks from which your clients resolve those addresses.					
•••	More	6. From the old site's Status page, click the "Restart Software" button to trigger all clients to reconnect to your new site and begin upgrading themselves.					
	«						

17. Click Finish Migration.

18. A pop-up notification confirms the migration is complete.

SITE STATUS		
Primary Hostname Company/Division Name Company API Name Product Name BeyondTrust Privileged Remote Access Product Version 23.2.1	API Version 1.22.2 Supported ECM Protocol Version(s) 1.6, 1.5 Appliance GUID POST-MIGRATION COMPLETE Site migration has been completed.	Time Zone US/Pacific Total Active Jump Clients Allowed 10,000 Total Passive Jump Clients Allowed 90,000 Maximum Concurrent Users 10 Endpoint Licenses 500
Product Build RESTART PRIVILEGED REMOTE ACCESS SOFTWARE CLIENT SOFTWARE	System Time Wed, Jan 4, 2023 2:12 PM PST	Endpoints Configured 8 DOWNLOAD LICENSE USAGE REPORT

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Manual Site Migration

Manually migrating your sites and licenses to a new BeyondTrust SRA Virtual Appliance can vary by environment, individual case preferences, and setup conditions. The steps below represent the most common requirements.

Back Up Your Current SRA Virtual Appliance Configuration

Follow the steps below to make a backup of your current SRA Virtual Appliance configuration:

- 1. Log in to the /login interface of your current SRA Virtual Appliance.
- 2. Click on Management in the left menu.
- 3. Click on the **Software** tab.
- 4. Enter and confirm a **Backup Password**, if desired.
- 5. Leave Include logged session reporting data checked.
- 6. Click Download Backup. If you did not enter a backup password, you are prompted to confirm you want to proceed without one.
- 7. Save the backup file to a secure location.

Export Your Existing SSL Certificate Chain from Your Current SRA Virtual Appliance

Next, export your existing SSL certificate chain from your current SRA Virtual Appliance:

- 1. Log in to the */appliance* interface of your current SRA Virtual Appliance.
- 2. Browse to the Security tab, the Certificates sub-tab, and then the Certificates section.
- 3. Check the box next to your correct BeyondTrust site certificate.
- 4. Select Export from the Select Action dropdown box, and click Apply.
- 5. On the next screen, choose ALL options: Include Certificate, Include Private Key, and Include Certificate Chain (if available).
- 6. Click the Export button.
- 7. Save this file to a secure location.

Install the New Software Version

Use the directions in the BeyondTrust SRA Virtual Appliance Installation Kit to install the software in your virtual environment. These include instructions on how to access the /appliance web interface via an IP address.

Note: You must allocate storage space before booting your BeyondTrust SRA Virtual Appliance.

You must install Base software update(s) on the new SRA Virtual Appliance. There is a separate email containing instructions on how to install and update the Base software for the new SRA Virtual Appliance. The Base software is tied to the new SRA Virtual Appliance serial number.

Locate the SSL chain exported earlier, and import it into the SRA Virtual Appliance.

- 1. To do this, log in to the /appliance interface of your new SRA Virtual Appliance.
- 2. Click the Security tab, then the Certificates sub-tab.
- 3. Select Import.

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- 4. Browse to the certificate file that you previously exported, and click Upload.
- 5. Mark this as the default certificate by clicking the radio button in the right hand column of the Certificate description.

Install a License Package

Once the previous steps are completed, install the Remote Support software following the steps in the Remote Support <u>Upgrade Guide</u> at https://www.beyondtrust.com/docs/remote-support/updates/upgrade/index.htm.

- If the SRA Virtual Appliance has internet access, follow the steps for automatic updates.
- If the SRA Virtual Appliance does not have internet access, follow the steps for manual updates.

You now should have a functioning support portal and be able to access the /login interface to create user accounts and manage other settings.

1. For your first login, use the credentials emailed with the license information.

Note: If you are trying to reach /login by using the IP address and not the hostname, you need to mark the new site as the default site. This setting is located at **/appliance > Status > Basics > Default Site**.

- 2. Once logged in, click Management, then Software Management.
- Click Choose File and locate the backup file you created at the beginning of the process. A warning appears to remind you that you also need to provide a Vault key backup if you are restoring a configuration containing Vault credentials onto a new SRA Virtual Appliance.
- 4. Click Yes, and then click Upload Backup.
- 5. Next, update the DNS record and confirm login.
 - Update the DNS A-record to route BeyondTrust site traffic to the IP address of the new SRA Virtual Appliance.
 - Log in to your representative console and allow it to update (if applicable for your situation).
 - Test by starting a support session.

Note: DNS changes can take up to 72 hours to propagate.

To migrate currently deployed Jump Clients over to the new SRA Virtual Appliance, you must power down the old SRA Virtual Appliance.

If you need technical assistance, please visit www.beyondtrust.com/support to request a live support session.

SRA Virtual Appliance Frequently Asked Questions

The following are some of the questions frequently asked about administering the SRA Virtual Appliance and answers to these questions from BeyondTrust Technical Support.

VMware

Can I install VMware tools onto my BeyondTrust SRA Virtual Appliance?

The BeyondTrust SRA Virtual Appliance ships with the VMware guest tools pre-installed.

Can a time skew between my ESXi host and my BeyondTrust SRA Virtual Appliance cause connectivity issues?

Yes, any time difference between the BeyondTrust SRA Virtual Appliance and the host ESXi server can cause connectivity issues. To prevent this, specify a valid NTP source in the SRA Virtual Appliance /appliance interface as well as ensuring that your ESXi host is using a valid NTP source. VMware also has an option to sync the guest OS time with the host ESXi server time. If you use this option, then the NTP source within the BeyondTrust SRA Virtual Appliance does NOT need to be set. It is recommended to use one method or the other but NOT both together.

What version of VMware is supported to host the BeyondTrust SRA Virtual Appliance?

BeyondTrust certifies support for VMware vCenter 6.5+, Virtual Hardware Version 13+.

Does the BeyondTrust SRA Virtual Appliance require reserved resources in VMware?

For troubleshooting purposes, a BeyondTrust Technical Support representative may require the BeyondTrust SRA Virtual Appliance to have reserved resources to effectively diagnose a support issue.

Does BeyondTrust support using the VMware snapshot functionality?

BeyondTrust supports the use of the snapshot technology only in upgrade situations. A snapshot of a powered-off BeyondTrust SRA Virtual Appliance can be taken prior to an upgrade and can be utilized as a fallback in the case of a failed upgrade.

Note: BeyondTrust does not recommend or support taking snapshots of actively running SRA Virtual Appliances.

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Can I run the BeyondTrust SRA Virtual Appliance in my clustered VWware environment?

Yes, when installed in a vSphere cluster, the BeyondTrust SRA Virtual Appliance can benefit from many of VMware's value-added technologies, such as VMotion, DRS, and HA, to maximize performance and uptime.

Can I specify an alternate disk for recordings?

Yes, in some cases you may want to separate the disks for recordings if your VMware environment has tiered storage. Add a third disk to your BeyondTrust SRA Virtual Appliance and reboot. Once the BeyondTrust SRA Virtual Appliance is rebooted, the third disk is provisioned and used for recordings.

The virtual hardware of my BeyondTrust SRA Virtual Appliance is currently on an old version and needs to be upgraded. What are BeyondTrust's recommendations for virtual hardware version upgrades?

BeyondTrust certifies support for VMware vCenter 6.5+, Virtual Hardware Version 13+.

If your configuration does not match one of the above configurations, BeyondTrust does recommend updating the virtual hardware version of your BeyondTrust SRA Virtual Appliance.

What is the error: "The OVF certificate file is invalid"?

When importing a new BeyondTrust SRA Virtual Appliance to VMware using the OVA installation package, it is possible for VMware to return an error stating "The OVF certificate file is invalid". This happens when attempting to import the OVF file which is packaged inside the appliance's .ova file. This would require extracting the contents of the OVA package, and this would invalidate the package as a whole. To resolve this, re-download the OVA file and re-import it without extracting the OVA. If using Internet Explorer, it may be necessary to replace .tar with .ova in the download's file extension.

Should the second virtual disk use thick or thin provisioning?

In current versions, the OVF template automatically chooses thick provisioning for the second and (if present) third virtual disk(s).

According to ESXi and vCenter Server 5 Documentation, thin provision initially allocates only the space actually needed by the virtual machine and grows dynamically as needed. In contrast, both forms of thick provisioning allocate all the assigned disk space to the virtual machine upon creation, locking it from use by other machine (see "About Virtual Disk Provisioning Policies" in the ESXi and vCenter Server 5 Documentation under vSphere Virtual Machine Administration > Configuring Virtual Machines > Virtual Disk Configuration in the vSphere Documentation Center at vmware.com/support/pubs/). Although the SRA Virtual Appliance is expected to operate correctly with thin provisioning, this is not the preferred choice.

Why does the Virtual Applance download come as a .tar file?

When using Internet Explorer, BeyondTrust's OVA installer may download as a *BeyondTrust-br.v.2.tar* file instead of *BeyondTrust-br.v.2.ova*. To install the file per the SRA Virtual Appliance Setup Guide, replace the **.tar** extension with **.ova** and follow the guide as normal.

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Can the virtual hard disks be stored in multiple datastores?

Some customers with BeyondTrust SRA Virtual Appliances may be interested in distributing the various SRA Virtual Appliance disks across multiple VMware datastores. BeyondTrust does support this configuration, so we expect our SRA Virtual Appliances to work satisfactorily when their virtual drives are located in different datastores from one another.

Hyper-V

What version of Hyper-V is supported to host the BeyondTrust SRA Virtual Appliance?

BeyondTrust certifies support of Hyper-V on Windows Server 2012 R2, Windows Server 2016, and Windows Server 2019. We support both a stand alone Hyper-V server and Windows Server with the Hyper-V Role installed.

Does BeyondTrust support using the Hyper-V snapshot functionality?

BeyondTrust supports the use of the snapshot technology only in upgrade situations. A snapshot of a powered-off BeyondTrust SRA Virtual Appliance can be taken prior to an upgrade and can be utilized as a fallback in the case of a failed upgrade.

Can I specify an alternate disk for recordings?

Yes, in some cases you may want to separate the disks for recordings if your Hyper-V environment has tiered storage. Add a third disk to your BeyondTrust SRA Virtual Appliance and reboot. Once the BeyondTrust SRA Virtual Appliance is rebooted, the third disk is provisioned and used for recordings.

The virtual hardware of my BeyondTrust SRA Virtual Appliance is currently on an old version and needs to be upgraded. What are BeyondTrust's recommendations for virtual hardware version upgrades?

For Hyper-V, BeyondTrust supports only Generation 2 virtual machines at this time. The VA image is delivered as a Generation 2 VM.

If your configuration does not match the above configuration, BeyondTrust does recommend updating the virtual hardware version of your BeyondTrust SRA Virtual Appliance.

Microsoft Azure

Is the Azure Classic deployment model supported?

No. The only supported model is Azure Resouce Manager (ARM).

Do I need to configure the Windows PowerShell script differently if I have a premium storage account?

Yes. If you have a premium storage account, you need to modify the **vmSize** information in **STEP 2** of the script to indicate **Premium** along with the applicable size.

Can I use any additional Azure features provided by using Azure Linux Agent with my BeyondTrustSRA Virtual Appliance?

BeyondTrust does not support any of these features at this time.

Do I need to enter my Public IP anywhere in the BeyondTrust /appliance interface?

No. The Azure network layer maps the public IP to the private IP. The BeyondTrustSRA Virtual Appliance assigns the private IP using DHCP.

Is failover needed? Is failover supported for Microsoft Azure?

Although the risk for downtime is much lower within Azure, it is still possible to need a failover appliance. Failover is supported in Azure; however, IP sharing does not work with Azure networking. A DNS swing is needed to failover to a backup appliance.

Do I need a static IP for my BeyondTrustSRA Virtual Appliance?

Assigning a static IP is the easiest way to ensure there are not any DNS issues across reboots and also to make sure any integration points that require an IP address work properly. However, assigning a CNAME record for your SRA Virtual Appliance's DNS entry should suffice for most deployments.

General Issues

Can an evaluation SRA Virtual Appliance be converted to production?

Yes, the existing SRA Virtual Appliance can be converted to production.

Once the SRA Virtual Appliance licenses are purchased, confirm your intent to convert to production with your Account Manager.

Can available resources be modified?

It is possible to add additional resources to a BeyondTrust SRA Virtual Appliance, and it is possible to decrease available memory and CPU cycles; however, it is not possible to decrease available storage safely, and none of the above should be done when the appliance is powered on. After shutting down the appliance and making your changes, the SRA Virtual Appliance should recognize the changes upon next boot.

SRA Virtual Appliances have either two or three virtual hard disks, depending on which configuration was selected during deployment: Small, Medium, or Large. Small and Medium deployments have two disks, while Large deployments have three. The first disk is used for the root of the operating system in all three cases while the second disk is used for /login site data and recordings in Small and Medium deployments.

In Large deployments, recordings are moved from the second disk to the third. If your SRA Virtual Appliance was originally deployed with two virtual hard disks, you can add a third later, and the appliance automatically stores session recordings on the third disk. The appliance cannot use more than three disks.

- 1. Shut down the BeyondTrust SRA Virtual Appliance.
- 2. Adjust the RAM and/or CPU allocation and/or increase the disk space using VMware.
- 3. Power on the BeyondTrust SRA Virtual Appliance.

Can the SRA Virtual Appliance fail over to a slower storage tier?

Organizations may choose to present storage to SRA Virtual Appliances by means of tiered storage in a SAN. "Fast-tier 1" storage typically refers to arrays which employ SSD technology for frequently accessed data, and "slow" storage typically refers to data placed on technologies such as SAS, NL-SAS, or SATA. Either of these work with BeyondTrust, but certain storage configurations are not supported when using two appliances in failover.

In cases where the primary SRA Virtual Appliance has storage in SSD / tier-1 storage, these rules apply to the backup appliance:

- · Large SRA Virtual Appliances must be provisioned with storage of the same tier.
- Small and Medium SRA Virtual Appliances may have lower tier storage if it is backed by 10K or 15K disks.
- No backup SRA Virtual Appliance may have less than 10K / 15K disk storage speed.

The exact specs for Small, Medium and Large are described in the product specific deployment sections of this document. It is important to note that BeyondTrust does not require any particular tier for a SRA Virtual Appliance to boot and function in isolation. Tiered storage becomes a concern only when two appliances are used in failover.

Is cloning SRA Virtual Appliances supported?

After a BeyondTrust SRA Virtual Appliance is installed in an ESX or ESX environment, the administrator may wish to clone the appliance. Cloning a virtual machine creates a duplicate of the virtual machine with the same configuration and installed software as the original. This feature of ESX and ESX is not supported by the BeyondTrust SRA Virtual Appliance at this time.

Does the SRA Virtual Appliance support vCenter Site Recovery Manager (SRM)?

vCenter's Site Recovery Manager (SRM) builds off of vSphere Replication to provide disaster recovery. Administrators running BeyondTrust in a vCenter system may be interested in leveraging this with BeyondTrust SRA Virtual Appliances. While BeyondTrust is expected to work with vCenter SRM, restoring from a replication like this would appear to the appliance like pulling the power cable, so there would be a risk for file system corruption, which may result in potential data loss.

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