

Dell EMC Avamar Virtual Edition for VMware

Version 7.5

Installation Guide

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REV 01

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PREFACE

As part of an effort to improve our product lines, we periodically release revisions of our software and hardware. Therefore, some functions described in this document might not be supported by all versions of the software or hardware currently in use. The product release notes provide the most up-to-date information on product features.

Contact your technical support professional if a product does not function properly or does not function as described in this document.

Note

This document was accurate at publication time. Go to Online Support (<https://support.EMC.com>) to find the latest version of this document.

Purpose

This guide describes how to install the Avamar Virtual Edition solution, a single-node, non-RAIN Avamar server that runs as a virtual machine in a VMware ESXi or vSphere Server environment.

Audience

The information in this guide is primarily intended for system administrators who are responsible for installing and maintaining Avamar virtual servers.

Revision history

The following table presents the revision history of this document.

Revision	Date	Description
01	June 2017	GA release of Avamar 7.5

Related documentation

The following publications provide additional information:

- *Avamar Release Notes*
- *Avamar Administration Guide*
- *Avamar Operational Best Practices Guide*
- *Avamar Product Security Guide*
- *Avamar Backup Clients User Guide*

Special notice conventions used in this document

We use these conventions for special notices.

▲ DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

▲ WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

▲ CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Addresses practices not related to personal injury.

Note

Presents information that is important, but not hazard-related.

Typographical conventions

These type style conventions are used in this document.

Table 1 Typographical conventions

Bold	Used for names of interface elements, such as names of windows, dialog boxes, buttons, fields, tab names, key names, and menu paths (what the user specifically selects or clicks)
<i>Italic</i>	Used for full titles of publications referenced in text
Monospace	Used for: <ul style="list-style-type: none"> • System code • System output, such as an error message or script • Pathnames, filenames, prompts, and syntax • Commands and options
<i>Monospace italic</i>	Used for variables
Monospace bold	Used for user input
[]	Square brackets enclose optional values
	Vertical bar indicates alternate selections - the bar means "or"
{ }	Braces enclose content that the user must specify, such as x or y or z
...	Ellipses indicate nonessential information omitted from the example

Where to get help

The Avamar support page provides access to licensing information, product documentation, advisories, and downloads, as well as how-to and troubleshooting information. This information may enable you to resolve a product issue before you contact Customer Support.

To access the Avamar support page:

1. Go to <https://support.EMC.com/products>.
2. Type a product name in the **Find a Product by Name** box.
3. Select the product from the list that appears.
4. Click the arrow next to the **Find a Product by Name** box.
5. (Optional) Add the product to the **My Products** list by clicking **Add to My Saved Products** in the upper right corner of the **Support by Product** page.

Comments and suggestions

Comments and suggestions help us to continue to improve the accuracy, organization, and overall quality of the user publications. Send comments and suggestions about this document to DPAD.Doc.Feedback@emc.com.

Please include the following information:

- Product name and version
- Document name, part number, and revision (for example, 01)
- Page numbers
- Other details to help address documentation issues

CHAPTER 1

Introduction

This chapter includes the following topics:

- [Overview of Avamar Virtual Edition for VMware](#).....12
- [Appropriate environments for AVE](#).....12

Overview of Avamar Virtual Edition for VMware

Avamar Virtual Edition (AVE) is a single-node non-RAIN (Redundant Array of Independent Nodes) Avamar server that runs as a virtual machine in a VMware ESXi 5.1/5.5/6.0 environment. AVE integrates the latest version of Avamar software with SUSE Linux as a VMware virtual machine.

AVE is similar to single-node Avamar servers in the following ways:

- Runs autonomously as a target for all Avamar client backups
- Performs replication to a physical Avamar system or another AVE

AVE is available in four configurations: 0.5 TB, 1 TB, 2 TB, and 4 TB licensed capacity. AVE is not scalable to a multi-node Avamar server and resizing the virtual machine is not supported. You can increase storage capacity by deploying additional AVE virtual machines, and then divide backups among them. Or you can replicate the data to another Avamar server, delete the smaller virtual machine, create a larger virtual machine, and replicate the data back to the larger virtual machine.

AVE supports backup of physical and virtual clients:

- For physical clients, install Avamar client software on each client.
- For virtual clients, there are two options for backups. Virtual clients can be backed up through guest OS backups (requires installing Avamar client software on each virtual machine) or through host-based backups (requires a proxy server).

Appropriate environments for AVE

The following factors have the most direct impact on the long-term reliability, availability, and supportability of the AVE virtual machine:

- I/O performance capability of the AVE storage subsystem
- Amount of data added daily to the AVE virtual machine (change rate)
- Capacity utilized within the AVE virtual machine

Specifications in this section and [AVE virtual disk requirements](#) on page 17 describe minimum or maximum requirements for these factors. AVE generally performs better when I/O performance is higher, and change rate and utilized capacity are lower. To maximize the capacity the AVE virtual machine can use, the daily change rate of the data AVE protects must be balanced with adequate I/O performance.

The first step in determining the proper implementation of AVE is to establish which kind of customer environment AVE will be used to protect, file server or mixed environment. File server environments include file system data and mixed environments include file system data and structured data (for example, database data).

The following table describes the maximum change rates that AVE supports for file server and mixed environments.

Table 2 Maximum change rates AVE supports for file server and mixed environments

Configuration	File server data	Mixed data
0.5 TB AVE	Less than 2 GB per day	Less than 5 GB per day
1 TB AVE	Less than 4 GB per day	Less than 10 GB per day

Table 2 Maximum change rates AVE supports for file server and mixed environments (continued)

Configuration	File server data	Mixed data
2 TB AVE	Less than 8 GB per day	Less than 20 GB per day
4 TB AVE	Less than 20 GB per day	Less than 20 GB per day

Actual results depend on the retention policy and the actual data change rate. When the daily change rate exceeds the limits specified in the previous table, deploy a single or multi-node Avamar server.

CHAPTER 2

Installation

This chapter includes the following topics:

- [Preinstallation requirements and best practices](#)..... 16
- [Upgrade requirements and best practices](#)..... 18
- [Installation](#)..... 19
- [Post-installation tasks](#)..... 24
- [Upgrading Avamar software](#)..... 26

Preinstallation requirements and best practices

Before you install an AVE virtual machine, follow the preinstallation requirements and review the best practices in the following sections.

Note

Using third party tools to create clones or exact copies of deployed Avamar Virtual Edition systems is known to cause issues. Cloning of Avamar Virtual Edition systems is not supported.

System requirements

Supported versions of the VMware ESXi are available in the Avamar Compatibility and Interoperability Matrix on Online Support at <http://compatibilityguide.emc.com:8080/CompGuideApp/>.

The following table defines the minimum system requirements for each size of AVE.

Table 3 Minimum requirements for AVE

	0.5 TB AVE	1 TB AVE	2TB AVE	4 TB AVE
Processors	Minimum two 2 GHz processors	Minimum two 2 GHz processors	Minimum two 2 GHz processors	Minimum four 2 GHz processors
Memory	6 GB	8 GB	16 GB	36 GB
Disk space	900 GB	1,650 GB	3,150 GB	6,150 GB
Network connection	1 GbE connection	1 GbE connection	1 GbE connection	1 GbE connection

Verifying the DNS configuration

Prior to installing AVE, DNS must be properly configured. Failure to have DNS set up properly can cause runtime or configuration issues.

Procedure

1. Open a command prompt on the vCenter Server and type the following command:

```
nslookup AVE_IP_address DNS_Server_IP_address
```

The nslookup command will return the FQDN for AVE.

2. Type the following command:

```
nslookup AVE_FQDN DNS_Server_IP_address
```

The nslookup command will return the IP address for AVE.

3. Type the following command:

```
nslookup FQDN_of_vCenter DNS_Server_IP_address
```

The nslookup command returns the IP address of the vCenter Server.

4. If the nslookup commands returned the proper information, close the command prompt. If the nslookup commands do not return proper information, resolve the DNS configuration before you install AVE.

Ave virtual disk requirements

The AVE disk layout comprises one operating system disk (126 GB) and several storage partitions (250 GB or 1000 GB depending on the AVE configuration).

The OS disk stores the operating system, Avamar application and log files.

The storage partitions store the backup data. Backup data is evenly distributed across the storage partitions. The primary amount of the disk read, write, and seek usage occurs on the storage partitions. To improve performance in the storage configuration, distribute storage partitions across high performance LUNs.

In addition to the OS partition, the following table defines the number and size of virtual disks required for each AVE configuration.

Table 4 AVE virtual disk requirements

AVE configuration	Number of virtual disks
0.5 TB	3 storage partitions (250 GB each)
1 TB	6 storage partitions (250 GB each)
2 TB	3 storage partitions (1000 GB each)
4 TB	6 storage partitions (1000 GB each)

Note

Because the AVE .ova installation creates three 250 GB storage partitions along with the OS disk, approximately 900 GB of free disk space is required at installation. However, the AVE .ovf installation does not create storage partitions during installation, and therefore only enough disk space for the OS disk is required at installation, and subsequent storage partitions can be created on other datastores.

Software requirements

Before you install AVE, ensure you have the software listed in the following table.

Table 5 Additional AVE software installation requirements

Requirement	Description
Applications	PutTY and WinSCP (not required for .ova deployments)
Files	AVE Package (not required for .ova deployments), operating system security patches (if applicable)

Network requirements

Before you install AVE, gather the following information:

- Hostnames and IP addresses for the AVE virtual machine and the DNS Server
- Gateway, netmask, and domain of the AVE virtual machine
- Firewall openings, if applicable

The *Avamar Product Security Guide* provides client-server data port usage and firewall requirements.

Virtual disk configuration best practices

ESXi supports multiple disk formats. For AVE virtual machines, the initial configuration is Thick Provision Lazy Zeroed.

Note

AVE does not support thin provisioning.

After the initial installation, if you configure the virtual disks for the Thick Provision Eager Zeroed, you will get better initial performance because the first write to the disk will require less operations.

Note

See the VMware documentation for information on converting Lazy zeroed virtual disks to Eager zeroed virtual disks. Converting a disk from Thick Provisioned Lazy Zeroed to Thick Provisioned Eager Zeroed is time consuming and can consume a significant number of storage I/O processes.

A virtual machine running AVE aggressively uses disk I/O and is almost never idle. VMware's recommendations for appropriate resources for high-performance database virtual machines are generally applicable to an AVE virtual machine.

Network Time Protocol (NTP) server best practices

With AVE release 7.3, support for synchronizing the AVE with a Network Time Protocol (NTP) server has been added. Best practice is to identify at least one NTP server to synchronize with the AVE host. If no NTP server is identified, the default behavior is to leave the NTP service disabled and to synchronize with the VMware host. If one or more NTP server is identified during network configuration, synchronization with the VMware host is disabled and the NTP service is enabled.

During network configuration, you can enter one or more optional NTP servers in either IPv4 or IPv6 format or in hostname format.

Upgrade requirements and best practices

The procedures in this document can be used for upgrading Avamar Virtual Edition servers at release level 7.3 and above to newer versions of the AVE. Upgrades of AVE from releases prior to 7.3 must be performed by personnel.

Upgrading other components in your Avamar environment

Information in this document pertain only to the upgrade of the AVE server. Other components in your environment may require upgrades as well to retain compatibility.

after the AVE upgrade. Check appropriate compatibility guides on Online Support (<https://support.EMC.com>) and take any necessary steps to upgrade external components separately. Some external components may require company engagement. External components include, but are not limited to:

- All clients and database plug-ins. Contact Support if more information about client versions is needed.
 - If the Avamar VMware or NDMP plug-in are being used, these should be upgraded to a supported version, if necessary, prior to upgrading the AVE server.
 - If Avamar is being used on conjunction with NetWorker, the NetWorker software should be upgraded to a supported version, if necessary, prior to upgrading the AVE server.
- Tape out applications such as ADT and ATO/ADMe.
If necessary, upgrade these applications as part of your upgrade.
- Avamar Extended Retetion (AER)
The AER software should be shut down prior to upgrading the AVE server. If necessary, contact Support to open a ticket with Remote Proactive to upgrade AER.

Stopping replication tasks prior to upgrade

If replication is running during upgrades, the upgrades will fail. Determine whether replications are running and cancel those tasks if appropriate, prior to upgrading the AVE server. The *Avamar Administration Guide* contains information about monitoring and cancelling replication tasks.

Installation

The following sections are describe how to install an AVE virtual machine.

Preparing the virtual machine

The following instructions use vCenter Server 5.5. Other versions of vCenter Server might have different options.

Procedure

1. Download the AVE virtual appliance file for the appropriate version of AVE you are installing.
Required software can be downloaded from <https://support.emc.com/>.
2. Extract the compressed .7z file.
3. Start a VMware Web Client and connect to the vCenter Server or to the ESXi host that will host the AVE virtual machine.
4. Log in with administrative rights.
5. If you logged into vCenter, select the ESXi server that will host the AVE virtual machine.
6. Select **File > Deploy OVF Template**.

The **Source** page appears.

7. Select **Deploy from a file or URL** and browse to the AVE virtual machine file (OVF extension) and click **Next**.

The **OVF Template Details** page appears.

8. Verify the template details are correct and click **Next**.
The **End User License Agreement** page appears.
9. Click **Accept** to accept the **End User License Agreement** and click **Next**.
The **Name and Location** page appears.
10. Type in the AVE name, select the inventory location, and then click **Next**.
The **Storage** page appears.
11. Select the storage for AVE and click **Next**.
The **Disk Format** page appears.
12. Select **Thick Provision Lazy Zeroed** format and click **Next**.
Thin provisioning is not supported with AVE.
The **Network Mapping** page appears.
13. Select the destination network and click **Next**.
The **Networking Properties** page appears.
14. At the **Networking Properties** page:
 - If the AVE .ovf file will be used to perform installation, click **Next** without completing the information in this window.

Note

When the AVE .ovf file is used to perform the installation, networking properties information is entered using the avenetconfig script, as described in [Configuring network settings](#) on page 22

- If the AVE .ova file will be used to perform the installation, complete the required and optional networking information as described in the **Networking Properties** page and click **Next**.
-

Note

For the **Hostname FQDN** field, the hostname can only include alphanumeric characters (a-z, A-Z, and 0-9), hyphen (-), and period(.). Hyphen and periods are only allowed if surrounded by other characters.

- The **Ready to Complete** page appears.
15. Confirm the deployment settings are correct and click **Finish**.
The installation may take several minutes. A Deployment Completed Successfully message appears when the installation is complete.
 16. Click **Close**.
 17. If the AVE .ova file will be used to perform installation and the system will have 2 or 4 TB AVE configurations, remove existing 250 GB virtual disks.
This step should not be performed for 0.5 and 1.0 TB AVE configurations or if the AVE .ovf file will be used to perform installation.
 - a. Right-click the AVE virtual machine and select **Edit Settings**.
 - b. Select hard disk 2 in the table shown.
 - c. Select **Remove**.
 - d. Click **OK** to confirm drive removal.

- e. Repeat for hard disk 3 and 4.
18. Right-click the AVE virtual machine and select **Edit Settings**.
The **Virtual Machine Properties** window appears.
19. On the **Hardware** tab, select **Memory** and set **Memory Size** based on the size of the AVE license:
 - For 0.5 TB AVE, specify **6 GB**
 - For 1 TB AVE, specify **8 GB**
 - For 2 TB AVE, specify **16 GB**
 - For 4 TB AVE, specify **36 GB**
20. On the **Hardware** tab, select **CPUs** and change the number of virtual CPUs based on the size of the AVE license:
 - For 0.5 TB AVE, specify **2 CPUs**.
 - For 1 TB AVE, specify **2 CPUs**.
 - For 2 TB AVE, specify **2 CPUs**.
 - For 4 TB AVE, specify **4 CPUs**.
21. On the **Hardware** tab, select **Network adapter 1**, choose the **Network Connection** (Network label), and then select the correct network.
22. Create additional virtual hard disks (VMDKs) for the AVE virtual machine based on the specifications from [AVE virtual disk requirements](#) on page 17.
This step applies to 1, 2, and 4 TB AVE configurations. 0.5 TB configurations should not perform this step.
 - a. Click the **Add** button.
The **Add Hardware Wizard** appears.
 - b. Select **Hard Disk**.
 - c. Click **Next**.
 - d. Select **Create a new virtual disk**.
 - e. Click **Next**.
 - f. For **Disk Size**, type **250 GB** (or **1000 GB** if you are implementing a 2 or 4 TB AVE).
 - g. For **Disk Provisioning** select **Thick Provision Lazy Zeroed** format.
Thin provisioning is not supported with AVE. If you select **Thick Provision Eager Zeroed** during the installation, the installation could take several hours. Time-out errors could also occur. See [AVE virtual disk requirements](#) on page 17 for information about disk formatting after the installation process is complete.
 - h. For **Location**, select either **Store with virtual machine** or **Specify a datastore**.
 - i. Click **Next**.
 - j. For **Mode** select **Independent**. Use the default setting for **Persistent**.
 - k. Click **Next**.
 - l. Verify the configuration and select **Finish**.

m. Repeat these steps based on your AVE configuration:

- For 1 TB AVE, repeat five more times (for a total of six 250 GB hard drives; three original drives and three new drives).
- For 2 TB AVE, repeat two more times (for a total of three 1000 GB hard drives).
- For 4 TB AVE repeat five more times (for a total of six 1000 GB hard drives).

23. Finalize virtual machine configuration by completing the following steps:

a. Click **OK**.

b. In the **Recent Tasks** status area (bottom of screen), observe the progress of the hard drive creation.

When the status of the reconfigured Virtual Machine is complete, a Completed message appears.

24. Right-click the virtual machine and select **Power > Power On**. This command boots the virtual machine.

25. Open the **Virtual Console** to monitor installation progress.

An insufficient licensing message at this point might indicate either a shortage of ESXi Server licenses or an inability to connect to a license server. Resolve this problem with the network administrator.

26. On the **Summary** tab, verify the status for **VMware Tools** changes to Running, Unmanaged, or out-of-date.

Configuring network settings

The following procedure is used to configure AVE network configuration for a single IP address or dual stack environment. Use this procedure only if you are using the AVE .ovf file to install the AVE software.

The `avenetconfig` command will run automatically when the virtual machine is first booted, in which case you should proceed to [4](#) on page 22

Procedure

1. In the vSphere client, right-click on the virtual machine and select **Open Console**.
2. Log in as root using the password `changeme`.
3. At the command prompt, type the following command:
`avenetconfig`
4. To enter the **IPv4 IP Configuration**, press 1.
 - a. Press 1 again to enter the **IPv4 Address and Prefix** (for example, 10.6.1.2/24 or 10.6.1.2/255.255.255.0).
 - b. Press 2 to enter the **IPv4 Default Gateway** address.
 - c. Press 4 when complete to return to the main menu.
5. To enter the **IPv6 IP Configuration**, press 2.
 - a. Press 1 to enter the **IPv6 Address and Prefix** (for example, 2000:10A::5/64).

- b. Press **2** to enter the **IPv6 Default Gateway** address.
 - c. Press **4** when complete to return to the main menu.
6. Press **3** to enter the **DNS Settings**.
- a. Press **1** to enter the **Primary Nameserver** IP address. Both IPv4 and IPv6 addresses are supported. Enter additional optional nameservers by pressing **2** and **3**.
 - b. Press appropriate number to enter **Alternative Search Domain(s)** (originally the number is **4**, but increases based on the number of Alternative Search Domains you enter). This is optional and represents a list of domain names that will be added to the DNS search path. By default, only the domain portion of the AVE hostname is added.
 - c. Press the appropriate number to enter the **Hostname/FQDN** (originally the number is **5**, but increases based on the number of Alternative Search Domains you entered above). This is optional and is the Fully Qualified Domain Name to be used as the hostname of this AVE. If not provided, the AVE will attempt to determine its hostname from DNS using the IP addresses provided above.
 - d. Press the appropriate number when complete to return to the main menu.
7. Press **4** to enter or change the **NTP Settings**.
- The **NTP Settings** is optional and can be a single IP address or comma-separated list of IP addresses for Network Time Protocol servers. If left blank, the default behavior is to use the VMware host's timesync. If one or more address is included here, the VMware host's timesync is disabled and the NTP service is enabled.
- a. Press **1** to enter the IP address(s) for the NTP server(s).
 - b. Press **3** to return to the main menu.
8. At the main menu, review your configuration and press **5** to save the changes and exit.

Installing and configuring Avamar software

To install Avamar software on a new AVE virtual machine, follow the instructions included in the help file for the AVE installation workflow on the **SW Releases** page of the **Avamar Installation Manager**.

Procedure

1. Open a web browser and log in to Avamar Installation Manager:

The *Avamar Administration Guide* contains information about the **Avamar Installation Manager**.

- a. Type the following URL:

`https://Avamar-server:7543/avi`

where *Avamar-server* is the IP address or the resolvable hostname of the Avamar server.

The Avamar Installation Manager login page appears.

- b. Type `root` for the username of the Avamar administrator user account in the **User Name** field and `changeme` for the password in the **Password** field.

- c. Click **Login**.
- 2. Click **SW Releases**.
- 3. Click the ? button for the AVE installation package, **ave-config**, to open the help file for the AVE installation workflow.
- 4. Click **Install** next to the AVE installation package, **ave-config**.
- 5. Monitor the installation progress on the **Installation Progress** page and respond to any installation problems:
 - a. Take the appropriate action to resolve the problem.
 - b. After resolving the problem, click **Call Support**.
The **Call Support** dialog box appears.
 - c. Click **Issue resolved, continuing the installation**.
The installation resumes.
 - d. Repeat these steps for all problems that occur during the installation.

Post-installation tasks

The following tasks should be performed after completing the upgrade of the AVE server.

Restart the Backup Scheduler

When performing an upgrade of the AVE server, as part of the pre-upgrade steps, the backup scheduler was suspended prior to the upgrade. Restart the backup scheduler by typing the following command as the admin user:

```
dpnctl start sched
```

Output will look similar to the following:

```
admin@Avamar:~/>: dpnctl start sched
Identity added: /home/admin/.ssh/dpnid
(/home/admin/.ssh/dpnid)
dpnctl: INFO: Resuming backup scheduler...
dpnctl: INFO: Backup scheduler resumed.
```

Restart the Maintenance Scheduler

When performing an upgrade of the AVE server, as part of the pre-upgrade steps, the maintenance scheduler was suspended prior to the upgrade. Restart the maintenance scheduler by typing the following command as the admin user:

```
dpnctl start maint
```

Output will look similar to the following:

```
admin@Avamar:~/>: dpnctl start maint
Identity added: /home/admin/.ssh/dpnid (/home/admin/.ssh/dpnid)
dpnctl: INFO: Resuming maintenance windows scheduler...
dpnctl: INFO: maintenance windows scheduler resumed.
```

Reboot Avamar proxy clients

When performing an upgrade of the AVE server, if Avamar proxy clients are installed, reboot the proxy clients using the following command:

```
sudo mccli mcs reboot-proxy --all=true
```

Output will look similar to the following:

```
0,22357,Initiated request to recycle proxy power.
```

Testing Data Domain integration

If the AVE is being used in conjunction with Data Domain, verify the status of the Data Domain integration and open any necessary service requests with Support if problems occur. The *Avamar and Data Domain System Integration Guide* contains information about performing replication.

Generating new certificates with Data Domain systems

When the AVE is connected to a Data Domain system, is upgraded to Avamar release 7.3 or greater, and session ticket authentication is enabled during upgrade, new certificates must be generated on the Data Domain system. The *Avamar Product Security Guide* contains further information.

Setting the passphrase on Data Domain systems

When the AVE is connected to a Data Domain system and is upgraded to Avamar release 7.3 or greater, the DDBoost user must have a passphrase enabled.

1. Log into the Data Domain system.
2. Enter the following command at the Data Domain CLI:
`system passphrase set`
3. When prompted, enter a passphrase.

Note

The DDBoost user must have admin rights.

Testing replication

If replication was configured prior to upgrading the AVE server, verify the status of replication and open any necessary service requests with Support if problems occur. The *Avamar Administration Guide* contains information about performing replication.

Upgrade Avamar clients downloads

The *Avamar Client Downloads and Client Manager Installer Upgrades* technical note, available on Online Support (<https://support.emc.com>) contains information about how to upgrade client installation packages.

Install the server hotfixes and the Avamar Platform Security Rollup

Periodically, Avamar creates and distributes hotfixes for the server, and also produces a quarterly Platform Security Rollups which should be installed on existing AVE systems. When available, you should install hotfixes and the security rollup on the AVE server. The *Avamar Administration Guide* contains information about installing hotfixes, and the Support KB article <https://support.emc.com/kb/335359> provides instructions for installing the security rollup.

Upgrading Avamar software

To upgrade Avamar software on a new AVE virtual machine, follow the instructions included in the help file for the AVE upgrade workflow on the **SW Releases** page of the **Avamar Installation Manager**.

Procedure

1. Download the AVE virtual appliance file for the appropriate version of AVE you are installing.

Required software can be downloaded from <https://support.emc.com/>. You can also use the Avamar Download Manager to download the software. The *Avamar Administration Guide* contains information about configuring and using the Avamar Download Manager.

2. Open a web browser and log in to Avamar Installation Manager:

The *Avamar Administration Guide* contains information about the **Avamar Installation Manager**.

- a. Type the following URL:

`https://Avamar-server:7543/avi`

where `Avamar-server` is the IP address or the resolvable hostname of the Avamar server.

The Avamar Installation Manager login page appears.

- b. Type `root` for the username of the Avamar administrator user account in the **User Name** field and `changeme` for the password in the **Password** field.

- c. Click **Login**.

3. Upload the AVE virtual appliance file downloaded in 1 on page 26 to the AVE:

- a. Click **Repository**.

The **Repository** tab appears.

- b. For **Package Upload**, click **Browse** and select the package to upload.

Once the package upload completes, it automatically appears in the **Repository** table.

4. Click **SW Upgrade**.

The **SW Upgrade** tab appears.

5. Click the ? button for the AVE installation package, `AvamarUpgrade-version.avp`, to open the help file for the AVE installation workflow.

6. Click **Upgrade** next to the AVE installation package, `AvamarUpgrade-version.avp`.

7. Monitor the installation progress on the **Installation Progress** page and respond to any installation problems:

- a. Take the appropriate action to resolve the problem.

- b. After resolving the problem, click **Call Support**.

The **Call Support** dialog box appears.

- c. Click **Issue resolved, continuing the installation**.

The installation resumes.

- d. Repeat these steps for all problems that occur during the installation.

