# Upgrading Avaya Breeze® platform

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# Chapter 1: Introduction

## Purpose

This document provides procedures for upgrading Avaya Breeze® platform. It includes checklists, upgrade procedures, and verification procedures for each supported upgrade path.

## Required permissions

To upgrade Avaya Breeze® platform, you must have permissions to:

- Log in to a craft or customer account.

  When you log in to your customer account for the first time, you must change the password. For information about changing your customer account password, see *Deploying Avaya Breeze® platform*.

- Administer the Avaya Breeze® platform element on System Manager.

## Change history

| Issue | Date | Summary of changes |
|---|---|---|
| 2 | November 2021 | • Updated interoperability information and release number references.<br>• Updated the upgrade path release numbers in Supported upgrade paths on page 13.<br>• Minor rephrasing to the actions in Checklist for Method 1 upgrades on page 14.<br>• Edited the steps for clarity in Adding Avaya Breeze platform servers to the cluster after upgrading on page 40.<br>• Added About this task information in Editing cluster attributes on page 42.<br>• Updated the Solution Deployment Manager upgrade sections for method 2 and 3 upgrades.<br>• Updated Deploying Avaya Breeze platform OVA with VMware vSphere Web Client on page 30 with steps for importing older OVA/OVFs into vCenter 7.0 U2 or later.<br>• Updated Checklist for Method 1 upgrades on page 14, Checklist for Method 2 upgrades on page 54, and Checklist for Method 3 upgrades on page 74.<br>• Updated the “Resources” chapter.<br>• Added clarification in VMware snapshots on page 107. |
| 1 | September 2020 | • Moved permission information to the “Introduction” chapter.<br>• Updated Required permissions on page 8 to indicate that you need to change your customer account password when logging in for the first time.<br>• Updated Avaya Aura Media Server selection algorithm on page 11 to indicate that you can enable the three selection algorithm rules on the Cluster Editor screen.<br>• Consolidated general upgrade preparation information into a new chapter.<br>• Updated release number and interoperability information.<br>• Minor updates to upgrade method information and checklists.<br>• Updated Customer configuration information for OVA upgrades on page 20.<br>• Updated Training on page 103.<br>• Minor editing and rephrasing. |

# Chapter 2: Upgrade preparation guidelines

Before upgrading Avaya Breeze® platform, first upgrade Avaya Aura® Media Server, System Manager, and other Avaya Aura® components as needed.

For information about upgrading Avaya Aura® Media Server, see *Deploying and Updating Avaya Aura® Media Server Appliance*. For more information about System Manager upgrades, see *Upgrading Avaya Aura® System Manager*.

## Upgrade compatibility and system interactions

Avaya Breeze® platform can interwork with the latest System Manager Release 8.0.1.x, 8.1.3, and 10.1. For more information, see Avaya Aura System Manager compatibility on page 10.

For snap-ins that process calls, Avaya Breeze® platform requires Session Manager Release 6.3.8 or above.

For snap-ins that use the Avaya Aura® Media Server, Avaya Breeze® platform requires Avaya Aura® Media Server Release 8.0 or above.

Avaya Breeze® platform supports snap-ins built with SDK Release 3.0 and above. Contact your snap-in vendor for your specific combination or for any other concerns related to your snap-in. For more information about known issues that might impact your snap-in, see *Avaya Breeze® platform Release Notes*.

For more information about interoperability, see *Avaya Breeze® platform Overview and Specification*. You can also go to https://support.avaya.com/CompatibilityMatrix/Index.aspx.

## Avaya Aura® System Manager compatibility

Avaya Breeze® platform can be deployed with System Manager:

- Release 8.0.1.2 by installing the latest Avaya Breeze® platform 3.8.1 Element Manager using the new upgradeSolution utility provided in the latest hot fix release of System Manager.
- Release 8.1.3 or 10.1. The latest releases already contain the latest Avaya Breeze® platform Element Manager.

If you are running System Manager Release 8.0.x, you must update your system to Release 8.0.1.2 with the latest published hot fix from https://support.avaya.com. If you are running System Manager Release 8.1.x, you must update your system to Release 8.1.3 with the latest published hot fix from https://support.avaya.com. If you are running an earlier version of System Manager, you must update to System Manager 8.1.3 or above.

Deployment of Avaya Breeze® platform Release 3.8.x with System Manager Release 8.0.1.2 allows you to avoid a full System Manager upgrade. Instead, this deployment requires that you run a special script to install the latest Avaya Breeze® platform Element Manager with the older System Manager. For more information about how to deploy this configuration, see *Deploying Avaya Breeze® platform*.

**Important:**

When you have applied the latest Avaya Breeze® platform Element Manager to System Manager Release 8.0.1.2, subsequent integrated patches and hot fixes will leave the Element Manager intact and no further action is required to work with Avaya Breeze® platform 3.8.x.

# Upgrade licensing

Upgrading Avaya Breeze® platform to Release 3.8.1 does not require a new Avaya Breeze® platform license file. However, if you need to perform an OVA upgrade for System Manager, you must install a new Avaya Breeze® platform license during that upgrade, unless you use the Solution Deployment Manager (SDM) client for the System Manager upgrade. For more information about System Manager upgrades, see *Upgrading Avaya Aura® System Manager*.

Avaya Breeze® platform uses the Avaya Product Licensing and Delivery System (PLDS) to manage license entitlement and generate license files. License files are downloadable from PLDS and are installed on System Manager WebLM. In a network with multiple Avaya Breeze® platform servers and clusters, only a single license file installed on System Manager WebLM is needed to license all of the Avaya Breeze® platform servers.

# Avaya Aura® Media Server selection algorithm

Avaya Breeze® platform supports a rich algorithm for selecting Avaya Aura® Media Server to use for a call. The algorithm depends on the use of locations defined in System Manager routing. Locations can be assigned in one of the following ways:

- Locations can explicitly be assigned to a SIP entity, such as Avaya Breeze® platform.
- IP address patterns can be specified for locations. If an endpoint or SIP entity IP address matches a pattern for a location, the location is associated with the endpoint or the entity.

The selection algorithm includes the following rules that are evaluated in order. Each of them can be independently enabled or disabled from the Cluster Attributes area of the Cluster Editor screen,

which is displayed when you click **New** or **Edit** on the Cluster Administration page. For more information, see “Cluster Editor field descriptions” in *Administering Avaya Breeze® platform*.

1. If enabled, the first rule is to check the location of the caller. If the caller's SIP endpoint or SIP entity, such as a trunk gateway, matches an assigned location, Avaya Breeze® platform attempts to assign the Avaya Aura® Media Server that is in the same location.
2. If enabled, the second rule is to check the location of the Avaya Breeze® platform server. If a location has been assigned to the Avaya Breeze® platform server that is handling a call, Avaya Breeze® platform attempts to assign the Avaya Aura® Media Server that is in the same location.
3. If enabled, the third rule is to select a lightly-loaded Avaya Aura® Media Server from any location.

If none of these rules match, the call fails. Any new clusters that are created have all the rules enabled by default. To preserve backward compatible behavior, any existing clusters will not have the first rule enabled by default. You should enable the rule after the upgrade.

# Chapter 3: Upgrading Avaya Breeze® platform

## Supported upgrade paths

Select your upgrade method from the following table.

| Release | Upgrade procedure |
|---|---|
| 3.0.x to 3.8.1 | See Method 1 overview on page 14. |
| 3.1.x to 3.8.1 | See Method 1 overview on page 14. |
| 3.2.x to 3.8.1 | See Method 1 overview on page 14. |
| 3.3.x to 3.8.1 | See Method 2 overview on page 54. |
| 3.4.x to 3.8.1 | See Method 2 overview on page 54. |
| 3.5.x to 3.8.1 | See Method 2 overview on page 54. |
| 3.6.x to 3.8.1 | See Method 2 overview on page 54. |
| 3.7.x to 3.8.1 | See Method 2 overview on page 54. |

**Note:**

Do not add Release 3.3 or earlier nodes to an upgraded Release 3.8.x cluster.

## GDPR compliance

All the data to and from Avaya Breeze® platform nodes is encrypted using TLS in transit.

You can choose to encrypt your Avaya Breeze® platform virtual machine (VM) for General Data Protection Regulation (GDPR) compliance using VMware provided encryption. You can encrypt an existing VM or encrypt a new one you are deploying. The procedure requires a Key Management Server (KMS). Follow the vCenter virtual machine encryption instructions in your VMware documentation.

Encrypting your VM will reduce the capacity of your server. How much depends on the resources used by the installed snap-ins. Snap-ins that use the system storage (including the local cluster database) will notice a greater capacity decrease.

For additional information about GDPR compliance, see *Avaya Breeze® platform Overview and Specification*.

# Upgrading with Method 1

## Method 1 overview

The OVA upgrade requires the reinstallation of the Avaya Breeze® platform OVA on each server in the cluster after all nodes are removed from the cluster. Cluster database and data grid data are not preserved. The upgrade is service impacting. Complete upgrades during a maintenance window.

After upgrading and using Avaya Aura® Media Server, you must configure the new REST-based configuration. If not using Avaya Engagement Assistant Snap-in, then remove the existing Avaya Aura® Media Server SIP version of the configuration. If using Avaya Engagement Assistant Snap-in, then leave the existing Avaya Aura® Media Server SIP version configuration.

## Checklist for Method 1 upgrades

Upgrades using an OVA file are service-impacting. Complete upgrades during a maintenance window.

**Important:**

Consider prerequisites and post-upgrade tasks for snap-ins before you proceed with this upgrade. For more information, see your snap-in documentation.

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 1 | Access and record information for the existing Avaya Breeze® platform servers that you will require for OVA deployment.<br>Run the **`ceconfig`** command and record the information. | See:<br>• Customer configuration information for OVA upgrades on page 20<br>• Recording configuration information on page 19 | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 2 | Before upgrading Avaya Breeze® platform, upgrade the following in this order as needed:<br>1. System Manager<br>2. Session Manager | For more information, see *Upgrading Avaya Aura® System Manager* and *Upgrading Avaya Aura® Session Manager*.<br>If only upgrading Avaya Breeze® platform Element Manager, see the "Running the **`upgradeSolution`** script for System Manager" section in *Deploying Avaya Breeze® platform*. | |
| 3 | Upgrade Avaya Aura® Media Server. | See *Deploying and Updating Avaya Aura® Media Server Appliance*. | |
| 4 | Enroll Avaya Aura® Media Server on System Manager.<br>Before enrolling, ensure to follow the pre-enrollment checklist included in *Implementing and Administering Avaya Aura® Media Server*. | See the "System Manager enrollment" section in *Implementing and Administering Avaya Aura® Media Server*.<br>**Note:**<br>Consider the following during enrollment:<br>• The element and cluster names must not contain the following special characters: "[^<>\\^%$@*#]*").<br>• The Avaya Aura® Media Server FQDN and the System Manager FQDN must be registered in DNS or must have an entry in `/etc/hosts`.<br>• System Manager and Avaya Aura® Media Server must be on the same domain. | |
| 5 | Administer Avaya Aura® Media Server for REST. | See Administering Avaya Aura Media Server for REST on page 23 | |
| 6 | Assign Avaya Aura® Media Server for use with Avaya Breeze® platform. | See Assigning Avaya Aura Media Server for use with Avaya Breeze platform on page 24 | |
| 7 | If the cluster database is enabled and you want to keep the data that is stored in the cluster database, take a backup. | See *Administering Avaya Breeze® platform*. | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 8 | Download the Avaya Breeze® platform OVA and patch file (if required) from PLDS. Place the OVA on a shared network drive connected to vCenter or vSphere. After deploying the OVA, copy the patch file to each server you will be upgrading. | See Downloading software from PLDS on page 24. | |
| 9 | Verify that the enrollment password is not expired. | See Verifying enrollment password status on page 25. | |
| 10 | Change the state of the cluster you are upgrading to Deny New Service. | See Denying new service on page 26. | |
| 11 | Verify that the cluster **Activity** field is set to 0. | See Verifying activity on page 26. | |
| 12 | Clear the **Enable Database Auto Switchover** field from **Elements** > **Avaya Breeze®** > **Cluster Administration**. | This step is only required for multi-node clusters with a cluster database. | |
| 13 | Uninstall the Analytics Collector Snap-in and Engagement Call Control from the cluster. | See the “Uninstalling a snap-in from a cluster” section in *Administering Avaya Breeze® platform*. | |
| 14 | Remove all Avaya Breeze® platform servers from the cluster. | See Removing Avaya Breeze platform servers from the cluster for upgrading on page 26 | |
| 15 | Remove solution snap-ins as required. | See the solution documentation for guidance on snap-ins that must be removed before upgrading Avaya Breeze® platform. | |
| 16 | Shut down all servers in the cluster before deploying the OVA on the first server. | See Shutting down servers on page 28.<br>**Note:**<br>Rename and retain the original image if resources allow until the upgrade is complete. | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 17 | Deploy the Avaya Breeze® platform OVA.<br><br>Upgrade the mandatory snap-ins and connector snap-ins. For more information, see your snap-in documentation. | You can deploy the OVA sequentially for each server in the cluster, or for all servers simultaneously.<br><br>For more information, see:<br><br>• Deploying Avaya Breeze platform OVA with VMware vSphere Client connected to vCenter on page 28<br>• Deploying Avaya Breeze platform OVA with VMware vSphere Web Client on page 30<br>• Deploying Avaya Breeze platform OVA with VMware vSphere Client connected to ESXi host on page 32<br>• Deploying Avaya Breeze platform OVA with Solution Deployment Manager on page 36<br><br>**Note:**<br><br>You must configure all customized disk sizes again after you install the Avaya Breeze® platform OVA. If you use the cluster database, ensure that the disk size configuration is appropriate for the snap-in that uses the database. | |
| 18 | Configure the virtual machine automatic startup settings. | See Configure virtual machine automatic startup settings on page 38. | |
| 19 | Change the customer password on first login. | For more information, see *Deploying Avaya Breeze® platform*. | |
| 20 | Create multiple privileged user accounts. | See Creating multiple privileged user accounts on page 40. | |
| 21 | Install the patch file if required. | See Patching Avaya Breeze platform on page 97. | |
| 22 | Edit the cluster and clear the **Pre-3.8.1 Cluster** cluster attribute. | See Editing cluster attributes on page 42.<br><br>You must perform all backups before changing the **Pre-3.8.1 Cluster** option. | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 23 | Add all Avaya Breeze® platform servers to the cluster. | See Adding Avaya Breeze platform servers to the cluster after upgrading on page 40 | |
| 24 | Select the **Enable Database Auto Switchover** field from **Elements** > **Avaya Breeze®** > **Cluster Administration**. | This step is only required for multi-node clusters with a cluster database. | |
| 25 | Verify data replication between System Manager and Avaya Breeze® platform. | See Verifying replication status on page 41. | |
| 26 | Run Avaya Breeze® platform maintenance tests for each server in the cluster. | See Running maintenance tests on page 41. Resolve errors before proceeding. For information, see *Maintaining and Troubleshooting Avaya Breeze® platform*. | |
| 27 | On the Server Administration page verify the following for each upgraded server:<br>• **Service Install Status** shows a green checkmark<br>• Security module is running<br>• **License mode** shows a green checkmark<br>• The correct version information is displayed | See Verifying server status on page 42. | |
| 28 | Add trust certificates. | For information, see *Certificate administration* in *Deploying Avaya Breeze® platform*. | |
| 29 | Edit cluster attributes. | See Editing cluster attributes on page 42. | |
| 30 | Install new snap-ins. | See Installing new snap-ins on page 51. | |
| 31 | Set the preferred version for each snap-in. | See Setting preferred snap-in version on page 52. | |
| 32 | Change the state to Accept New Service for the upgraded Avaya Breeze® platform cluster. | See Accepting new service on page 53. | |
| 33 | Verify the Avaya Breeze® platform SIP entity link with Session Manager. | See Verifying the Avaya Breeze platform entity link connection on page 53. | |
| 34 | Test Avaya Breeze® platform snap-ins to verify that they are functioning correctly. | -- | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 35 | After a successful upgrade, delete the previous Avaya Breeze® platform VMware image. | -- | |
| 36 | If you are using Avaya Aura® Media Server and not Engagement Assistant, remove the obsolete Avaya Aura® Media Server configuration before upgrading Avaya Breeze® platform. | See Checklist for removing obsolete Avaya Aura Media Server configuration in System Manager on page 109. | |
| 37 | Configure System Manager to receive Avaya Breeze® platform alarms. | See the SNMP support information in *Maintaining and Troubleshooting Avaya Breeze® platform*. | |

# Recording configuration information

## About this task

Use the procedures in this task to access the system information to record for configuring the Avaya Breeze® platform OVA upgrade. Record this information in Customer configuration information for OVA upgrades on page 20.

## Procedure

1. Log in to Avaya Breeze® platform CLI interface.
2. Run the `ceconfig` command.

   The `ceconfig` command displays the following information:

   - IP address
   - Short hostname
   - Network domain
   - Netmask
   - Default gateway
   - DNS servers
   - Time zone
   - NTP servers
   - Primary System Manager IP address
   - Primary System Manager FQDN
3. Record this information.
4. Record the HTTP Proxy settings for the server on vCenter.

   Alternatively, you can run the `CEnetSetup` command to obtain the HTTP Proxy settings.

# Customer configuration information for OVA upgrades

You require the following information to upgrade Avaya Breeze® platform with an OVA. Ensure that you have this information before you begin the upgrade.

## Network Settings

| Field | Information to enter | Notes |
|---|---|---|
| **IP Address** | Enter the server's IP address. | Management IP address to be assigned to Avaya Breeze® platform. |
| **Short Hostname** | Enter the server's host name. | The hostname must match the one for the server that is being upgraded. |
| **Network Domain** | Enter the network domain or type `none`. | The network domain must match the one for the server that is being upgraded. |
| **Netmask** | Enter netmask information. | — |
| **Default gateway** | Enter the IP address for the gateway. | Default gateway for Avaya Breeze® platform management network interface. |
| **DNS servers** | Enter the primary, secondary, and tertiary DNS server IP address. | You can have up to three DNS servers.<br>Avaya recommends provisioning at least two DNS servers that are resilient in case of power or network failure. |
| **Cluster IP address** | Enter a unique IP address. | This value is required after deployment. |

## Proxy settings

| Field | Information to enter |
|---|---|
| **HTTP Proxy Server** | Enter the IP address or FQDN of the HTTP proxy server. |
| **HTTP Proxy Port** | Enter the HTTP proxy port. |
| **HTTPS Proxy Server** | Enter the IP address or FQDN of the HTTPS proxy server. |
| **HTTPS Proxy Port** | Enter the HTTPS proxy port. |
| **HTTP Proxy exclusion list** | Enter the HTTPS proxy servers with a delimiter of "\|". For example: `*ca.avaya.com\|*.us.avaya.com\|135.9.95.*`<br>By default, the customer domain will be added to the proxy exclusion list. The proxy exclusion list can be added with the **`CEnetSetup`** command or using the OVA properties during deployment. If the destination for the HTTP request matches any address in the exclusion list, the HTTP request will be sent directly to the destination instead of the proxy. |

## System Time Settings

| Field | Information to enter | Notes |
|---|---|---|
| **Timezone** | Select the timezone from this field. | This configuration is mandatory for Avaya Breeze® platform to function. The timezone configured on Avaya Breeze® platform must match the timezone on System Manager. |
| **NTP Servers** | Enter the IP address or FQDN of the primary NTP server. | You can have up to three NTP servers.<br>Enter a value in this field only when the VMware host does not synchronize on its own. |

## User access

| Field | Information to enter | Notes |
|---|---|---|
| **Enhanced Access Security Gateway (EASG)** | Enter one of the following:<br>• `1` to enable EASG.<br>• `2` to disable EASG.<br>Avaya recommends that you enable EASG. | By disabling EASG, you are denying Avaya access to the system. This setting is not recommended as it can impact Avaya's ability to provide support for the product. Unless the customer can manage the product, Avaya Services Logins should not be disabled. |

## Customer Login Settings

| Field | Information to enter | Notes |
|---|---|---|
| **Login Name** | Enter the login ID to use for the customer account (cust). | Login ID and password for customer account you will create during OVA deployment. |
| **Password** | Enter the customer account password. | This password will change after first customer login. |
| **Customer Root Password** | Enter the customer account root password. | Optional. Available only with SDM upgrades. |
| **Additional user accounts** | | Record information here that is required to recreate additional user accounts.<br>**Note:**<br>Only one customer account can be created during OVA deployment. These additional accounts may be created post deployment using the `custAccounts` script. |

## System Manager Settings

| Field | Information to enter | Notes |
|---|---|---|
| **Primary System Manager IP** | Enter the IP address of the primary System Manager that will be used to manage this Avaya Breeze® platform server. | |
| **Enrollment Password** | Enter the enrollment password that matches the value in System Manager administration. | You must know the enrollment password, and the password must not have expired.<br>The password is set on System Manager at **Services** > **Security** > **Certificates** > **Enrollment Password**.<br>On this page, verify that the **Time Remaining** value is greater than zero.<br>If you do not know the password, create a new one. |

## Footprint values

Consult your Avaya Breeze® platform snap-in reference documents for specific profile and disk sizing requirements for the snap-ins you intend to install. Some snap-ins require higher disk space provisioning than the default of 50 GB. You must make this modification manually in the VM settings.

| Profile | CPU (cores) | Available Memory (GB) | Disk Storage (GB) | Notes |
|---|---|---|---|---|
| 2 | 4 | 8 | 50 GB | Maximum active SIP application sessions: 29,900 sessions. This deployment requires 4 vCPUs, 8 GB Memory, and 50 GB disk space. |
| 3 | 6 | 10 | 50 GB | Maximum active SIP application sessions: 44,880 sessions. This deployment requires 6 vCPUs, 10 GB Memory, and 50 GB disk space. |
| 4 | 8 | 16 | 50 GB<br>For Solution Deployment Manager deployments, this increases to 150 GB. | Maximum active SIP application sessions: 59,840 sessions. This deployment requires 8 vCPUs, 16 GB Memory, and 150 GB disk space. |

*Table continues…*

| Profile | CPU (cores) | Available Memory (GB) | Disk Storage (GB) | Notes |
|---|---|---|---|---|
| 5 | 12 | 27 | 50 GB<br>For Solution Deployment Manager deployments, this increases to 150 GB. | This deployment requires 12 vCPUs, 27 GB Memory, and 300 GB disk space. |

### Virtual machine

The Avaya Breeze® platform profile you select has default values, which can be adjusted, for these settings.

| Setting | Information to enter |
|---|---|
| CPU/Memory allocation and reservations | Consult your snap-in reference document for specific sizing requirements. |
| DataStore location | Select the datastore location to store the virtual machine files. |
| Host networking assignments | |

## Administering Avaya Aura® Media Server for REST

### About this task

Use this procedure to configure Avaya Aura® Media Server to allow REST access using HTTP.

For more information, see *Implementing and Administering Avaya Aura® Media Server*.

### Procedure

1. Log on to the Avaya Aura® Media Server web console.
2. Navigate to **System Configuration** > **Signaling Protocols** > **REST** > **General Settings**.
3. To enable TLS for REST services, select the **Enable TLS Transport** check box.
4. To enable two-way authentication for an extra level of security, select the **Enable TLS Mutual Authentication** check box.
5. To use plaintext usernames and passwords, select **Basic Authentication**. Alternatively, to include an authentication realm and encrypt the credentials before sending them over the network, select **Digest Authentication**.
   a. Enter the required username and password credentials in the **Authentication Username** and **Authentication Password** fields.
   b. If you selected **Digest Authentication**, then enter the name of the required authentication realm in the **Authentication Realm** field.

6. Click **Save**.

   Changes to the transport settings require a restart to take effect.
7. Navigate to **System Configuration** > **Network Settings** > **General Settings** > **Connection Security**.
8. Select the **Verify Host Name of TLS Client Connections** check box.
9. Click **Save**.
10. Navigate to **Security** > **Certificate Management** > **Key Store**.
11. Assign System Manager signed certificate to all service profiles.
12. Click **Save**.
13. Restart Avaya Aura® Media Server:
    a. Navigate to **System Status** > **Element Status**.
    b. Click **Restart**.

## Assigning Avaya Aura® Media Server for use with Avaya Breeze® platform

### Procedure

1. On System Manager, click **Elements** > **Media Server** > **Application Assignment**.
2. Select the check box next to Avaya Breeze® platform, and click **Edit**.
3. Select the check box next to Avaya Aura® Media Server and click **Commit**.

   The system can take up to two minutes to update Avaya Breeze® platform.

   You cannot assign Avaya Aura® Media Server to multiple applications.

## Downloading software from PLDS

### Procedure

1. In your web browser, type http://plds.avaya.com to go to the Avaya PLDS website.
2. On the PLDS website, enter your Login ID and password.
3. On the Home page, select **Assets**.
4. Select **View Downloads**.
5. Click the search icon ( ) for Company Name.
6. In the Search Companies dialog box, do the following:
   a. In the **%Name** field, type `Avaya` or the Partner company name.

   b. Click **Search Companies**.
   c. Locate the correct entry and click the **Select** link.
7. Search for the available downloads by using one of the following:
   - In **Download Pub ID**, type the download pub ID.
   - In the **Application** field, click the application name.
8. Click **Search Downloads**.
9. Scroll down to the entry for the download file, and click the **Download** link.
10. Select a location where you want to save the file, and click **Save**.
11. **(Optional)** If you receive an error message, click the message, install Active X, and continue with the download.
12. **(Optional)** When the system displays the security warning, click **Install**.

    When the installation is complete, PLDS displays the downloads again with a check mark next to the downloads that have completed successfully.

## Verifying enrollment password status

Avaya Breeze® platform requires an Enrollment Password during the initial installation and deployment process. Enrolling a password establishes trust between System Manager and Avaya Breeze® platform. The enrollment password is also known as the certificate enrollment password.

If the enrollment password has expired, renew the existing password.

If the **Time Remaining** value is not zero, the password is valid. Verify that the time remaining is sufficient.

### Procedure

1. On System Manager, click **Services** > **Security** > **Certificates** > **Enrollment Password**.
2. If the value of the **Time Remaining** field is zero, renew the password:
   a. In the **Password expires in** field, select a value from the drop-down menu for the time when the password must expire.
   b. Enter the password in the **Password** field.
   c. Reenter the password in the **Confirm Password** field.
   d. Click **Commit**.

   The system updates the **Time Remaining** field.

## Denying new service

### About this task

Place the cluster in the Denying New Service state before you edit the cluster attributes.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®**.
2. In the navigation pane, click **Cluster Administration**.
3. Select the cluster that you want to upgrade.
4. From the **Cluster State** drop-down menu, select **Deny New Service**.
5. Verify that the system displays **Denying** in the **Cluster State** column.

## Verifying activity

### About this task

Verify that currently there is no activity on the Avaya Breeze® platform servers in the cluster you are upgrading.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®**.
2. In the navigation pane, click **Cluster Administration**.
3. In the row for the cluster you are upgrading, look at the **Activity** column.
4. Verify that the **Activity** is 0.

   You can view the **Activity** for individual servers in the cluster by clicking **Show** in the **Details** column.

   Even after new service is stopped, it can take a couple of hours for activity to reach zero. If activity has not stopped in a reasonable time, you can choose to proceed with the upgrade. Active calls will continue, but Avaya Breeze® platform snap-in call control for those calls will be lost.

## Removing Avaya Breeze® platform servers from the cluster for upgrading

### About this task

You can skip this procedure when upgrading from Release 3.0.x, 3.1.x or 3.2.x to Release 3.8.1 for a Presence cluster that only runs Presence Services Snap-in.

This procedure is service impacting for the targeted cluster and scheduling a maintenance window will be required.

### Before you begin

Change the state of the cluster to Deny New Service.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®**.
2. Click **Cluster Administration**.
3. Select the targeted cluster and click **Edit**.
4. Navigate to the Servers tab.
5. For a single node cluster, select the Avaya Breeze® platform server by selecting the blue **X** next to the assigned server and click **Commit**.
6. For a two-node cluster:
   a. Verify that the load balancer is disabled (if applicable) on the General tab.
   b. If using the cluster database feature:
      a. On the General tab, disable **Database Auto Switchover** (if applicable).
      b. Remove the Standby server instance first by choosing the blue **X** next to the assigned server.
      c. Remove the Active server instance next by choosing the blue **X** next to the assigned server
      d. Click **Commit**.
7. For a cluster with more than three nodes:
   a. Verify that the load balancer is disabled (if applicable) on the General tab.
   b. If using the cluster database feature:
      a. On the General tab, disable **Database Auto Switchover** (if applicable).
      b. Remove the assigned server instances without an **A** or **S** designation by choosing the blue **X** next to the assigned server.
      c. Remove the Standby server instance first by choosing the blue **X** next to the assigned server.
      d. Remove the Active server instance next by choosing the blue **X** next to the assigned server
      e. Click **Commit**.
8. Confirm the warnings presented regarding the service disrupting actions that will follow.
9. Wait until all services are successfully uninstalled.

### Next steps

Shut down the servers.

## Shutting down servers

### About this task

You must shut down all the servers in the cluster before beginning the OVA deployment on any single server.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. Click the button in front of a server in the cluster.
3. From the **Shutdown System** drop-down menu, select **Shutdown**.
4. Repeat for every server in the cluster.

## Deploying Avaya Breeze® platform OVA with VMware vSphere Client connected to vCenter

### Before you begin

The steps in this procedure use the vSphere Client connected to VMware vCenter.

This method of deployment is available if vCenter version is 6.0 or earlier.

Get the Avaya Breeze® platform OVA file, and save it on the workstation where you will be running the vSphere Client to configure the new virtual machine (VM).

Use the *Customer Configuration Information* to get the required network settings for deployment. You can obtain the settings from an existing system if you are redeploying the OVA.

Verify that the Enrollment Password is administered and not expired.

If you are redeploying an instance of Avaya Breeze® platform, ensure that you deny new service to and power off the instance that is being redeployed.

### Procedure

1. Log in to the vCenter using the VMware vSphere Client.
2. Click **File** > **Deploy OVF Template**
3. Click **Browse** and find the Avaya Breeze® platform OVA. Click **Next**.
4. Verify that the details displayed match the version of the Avaya Breeze® platform that you are expecting to deploy.
   - If the details do not match, you may have chosen the wrong OVA. Click **Back** and choose the correct OVA.
   - If the details match, click **Next**.
5. If you wish to accept the End User License Agreement click **Accept**, then click **Next**.

6. On the Name and Location page, enter a name for the Avaya Breeze® platform Virtual Machine (VM). Select the inventory location for your VM , then click **Next**.
7. On the Deployment Configuration page, select the configuration profile that best fits the deployment, then click **Next**.
8. On the Host/Cluster page, select the specific host on which you want to deploy this VM, and click **Next**.
9. On the Disk Format page, select the disk provisioning format you want, then click **Next**.
10. On the Network Mapping page, select the destination network for each Avaya Breeze® platform interface, and click **Next**.

    **Important:**

    During OVA deployments do not enter the IPv6 address, IPv6 network prefix, or IPv6 gateway for eth0 unless the latest Avaya Breeze® platform patches already have been applied. For more information about configuring IPv6, see “Enabling IPv6 on the management interface of an Avaya Breeze platform server” in *Deploying Avaya Breeze® platform*.

    We recommend that you use different physical networks for each of the Avaya Breeze® platform interfaces.

    - Public (eth1) - Asset/security module
    - Out of band management (eth0) - management NIC
11. On the Properties page, enter the configuration details for your VM. Click **Next**.

    See the *Customer Configuration Information* you collected for the values to enter in these fields.
12. On the Ready to Complete page, verify the listed properties.
    - If the values are incorrect, click **Back** to modify the values.
    - If the values are correct, click **Finish**.

    **Tip:**

    To alter the configuration settings later, see *Maintaining and Troubleshooting Avaya Breeze® platform*.

    A status window pops up after clicking **Finish**. Wait for the deployment to complete. The time this takes depends on the speed of your network connection. Once completed, you can close the window.
13. Locate your new VM in the inventory list in the vSphere Client window, right click and click **Virtual Machine** > **Power** > **Power On**.
14. (Optional) To open a console window to your VM, right-click the VM and click **Open Console**.

# Deploying Avaya Breeze® platform OVA with VMware vSphere Web Client

## Before you begin

The steps in this procedure use vSphere Web Client connected to vCenter. It runs in a web browser.

Download the Avaya Breeze® platform OVA file, and save it on the workstation where you will be running the vSphere web client to configure the new virtual machine (VM).

Use the *Customer Configuration Information* to get the required network settings for deployment. You can obtain the settings from an existing system if you are redeploying the OVA.

If you are redeploying an instance of Avaya Breeze® platform, ensure that you deny new service to and power off the instance that is being redeployed.

Verify that the Enrollment Password is administered and not expired.

## Procedure

1. **(Optional)** If using vCenter 7.0 U2 or later, do the following.

   For more information about these substeps, see the VMware article at https://kb.vmware.com/s/article/84240.

   a. Download the OVF/OVA signing certificate chain from https://web.entrust.com/root-certificates/entrust_g2_ca.cer?_ga=2.204957712.1460439918.1633458407-705405935.1632328263.

      The following steps add the intermediate and root certificates to VECS store.

   b. Log in to vCenter as administrator.

   c. Click **Administration** > **Certificates** > **Certificate Management**.

   d. Click **Add** next to Trusted Root Certificates.

   e. Browse and select the certificates file downloaded in the first substep.

   f. Select the **Start Root certificate push to vCenter Hosts** check box.

2. Log in to the vCenter using the VMware vSphere Web Client.

   The format is `https://<IP Address:9443>/vsphere-client`

3. In the navigation pane, click **vCenter**.

4. Click **Inventory Trees** > **Hosts and Clusters**.

5. Expand **Hosts and Clusters** to locate and select the target deployment host.

6. Right-click the on the host and select **Deploy OVF Template**.

7. On the Select Source page, enter the **URL** or path for installing the OVA, and click **Next**.

8. On the Review Details page, confirm the properties of the OVA file you selected and click **Next**.

If using vCenter 7.0 U2 or later and you performed the optional first step, you can ignore “invalid certificate” in the Publisher field.

If using vCenter 7.0 U2 or later and you did not perform the optional first step, click **Ignore** next to the warning “The certificate is not trusted”.

9. To accept the End User License Agreement, click **Accept**.
10. Click **Next**.
11. Enter a name for the Avaya Breeze® platform VM and select the required datacenter folder for the VM.
12. Click **Next**.
13. On the Select a resource page, select the location to run the deployed template and click **Next**.
14. Select the configuration profile that best fits the deployment, and click **Next**.
15. Select the virtual disk format you want and click **Next**.
16. Select the destination network for each Avaya Breeze® platform interface and click **Next**.
17. On the Setup networks page, configure the network settings for your VM and click **Next**.

    **Important:**

    During OVA deployments do not enter the IPv6 address, IPv6 network prefix, or IPv6 gateway for eth0 unless the latest Avaya Breeze® platform patches already have been applied. For more information about configuring IPv6, see “Enabling IPv6 on the management interface of an Avaya Breeze platform server” in *Deploying Avaya Breeze® platform*.

18. On the Customize template page, enter the configuration details for your VM and click **Next**.
19. On the Ready to Complete page, verify the options for the VM:
    - If the values are incorrect, click **Back** to make the changes.
    - If the values are correct, click **Finish**.

    **Tip:**

    To alter the configuration settings later, see *Maintaining and Troubleshooting Avaya Breeze® platform*.

    Wait for the deployment to complete. The time taken depends on the speed of your network connection.

    After the deployment is complete, the system updates the Inventory list and displays the new VM.

20. Select the new VM and click the **Summary** tab.
21. Click **Actions** > **Power On**.
22. Click **Summary** > **Launch Console** to open a new console.

The system displays the progress of the VM system initialization.

23. After the VM initialization is complete, log in by using the customer account that you set up earlier.

## Deploying Avaya Breeze® platform OVA with VMware vSphere Client connected to ESXi host

### Before you begin

The steps in this procedure use the VMware vSphere Client connected to the ESXi host.

Get the Avaya Breeze® platform OVA file, and save it on the workstation where you will be running the VMware vSphere client to configure the new virtual machine (VM).

Use the *Customer Configuration Information* to get the required network settings for deployment. You can obtain the settings from an existing system if you are redeploying the OVA.

Verify that the Enrollment Password is administered and not expired.

If you are redeploying an instance of Avaya Breeze® platform, ensure that you deny new service to and power off the instance that is being redeployed.

### Procedure

1. Log in to the VMware host using the VMware vSphere client.
2. Click **File** > **Deploy OVF Template**
3. Click **Browse** and find the Avaya Breeze® platform OVA.
4. Click **Next**.
5. Verify that the details displayed match the version of the Avaya Breeze® platform that you are expecting to deploy.
   - If the details do not match, you may have chosen the wrong OVA. Click **Back** and find the correct OVA.
   - If the details do match, click **Next**.
6. If you accept the End User License Agreement click **Accept**, and click **Next**.
7. Enter a name for the Avaya Breeze® platform Virtual Machine (VM) on the Name and Location page, and click **Next**.
8. On the Deployment Configuration page, select the configuration profile that best fits the deployment, then click **Next**.
9. On the Disk Format page, select the disk provisioning format you want, then click **Next**.

   While Avaya Breeze® platform works with either thick or thin provisioned disk, Avaya recommends using a **Thick Provision Lazy Zeroed** disk.
10. On the Network Mapping page, select the destination network for each Avaya Breeze® platform interface, then click **Next**.

We recommend that you use different physical networks for each of the Avaya Breeze® platform interfaces.

- Public (eth1) - Asset/security module
- Out of band management (eth0) - management NIC

11. On the Ready to Complete page, verify the options listed.
    - If the values are incorrect, click **Back** to modify the values.
    - If the values are correct, click **Finish**.

    A status window pops up after clicking **Finish**. Wait for the deployment to complete. The time this takes depends on the speed of your network connection. Once completed, you can close the window.
12. Locate your new VM in the **inventory list** in the vSphere Client window.
13. Right-click to go to **Power** > **Power On**.
14. To open a console window to your VM, right-click the VM and click **Open Console**.
15. During the boot, you will see the End User License Agreement. Scroll down through this document using the spacebar. At the bottom, enter `yes` if you agree to the terms.

    The VM continues to boot.
16. Towards the end of the boot sequence you are prompted to configure the VM. Enter `y` to proceed.
17. When the system prompts, enter the management interface network parameters, date and time information, customer user information, and System Manager information.

    **Important:**

    During OVA deployments do not enter the IPv6 address, IPv6 network prefix, or IPv6 gateway for eth0 unless the latest Avaya Breeze® platform patches already have been applied. For more information about configuring IPv6, see “Enabling IPv6 on the management interface of an Avaya Breeze platform server” in *Deploying Avaya Breeze® platform*.

    See the *Customer Configuration Information* you collected for the values to enter in these fields.

    **Tip:**

    To alter the configuration settings later, see *Maintaining and Troubleshooting Avaya Breeze® platform*.

    Refer to the following screenshots.

```
##########################################################################
Avaya Breeze Server Configuration - Management Network

Current setting is found enclosed in '[]'
Press ENTER to retain current setting
##########################################################################

Enter server's hostname
[avaya-breeze]:
```

```
##########################################################################
Avaya Breeze Server Configuration - DNS

Current setting is found enclosed in '[]'
Press ENTER to retain current setting
##########################################################################

Enter Primary DNS server IP address or 'none'
[]:

Is the above information correct? (Y/n) _
```

```
##########################################################################
Avaya Breeze Server Configuration - PROXY

Current setting is found enclosed in '[]'
Press ENTER to retain current setting
##########################################################################

Would you like to configure an HTTP proxy? (Y/n) _
```

```
Avaya Timezone Selection

                                                    America/Belem
                                                   America/Belize
                                             America/Blanc-Sablon
                                               America/Boa_Vista
                                                America/Bogota
                                                 America/Boise
                                             America/Buenos_Aires
                                             America/Cambridge_Bay
                                             America/Campo_Grande
                                                America/Cancun
                                                America/Caracas
                                               America/Catamarca
                                                America/Cayenne
                                                America/Cayman
                                                America/Chicago
                                               America/Chihuahua
                                             America/Coral_Harbour
```

```
##########################################################################
Avaya Breeze Server Configuration - Date/Time

Current setting is found enclosed in '[]'
Press ENTER to retain current setting
##########################################################################

Select Timezone
[America/Denver]: America/Denver

Enter Date in MM/DD/YYYY format (i.e. 12/25/2008)
[08/25/2016]:

Enter Time in HH:MM 24 hour clock format (i.e. 13:30)
[02:12]:


Is the above information correct? (Y/n) _
```

```
Checking network connections...
VFQDN supplied: doctsmgr.doctsmgr.avaya.com
No network changes.
Reconfiguring platform                                  [  OK  ]
Reconfiguring jboss                                     [  OK  ]
Reconfiguring trust                                     [  OK  ]
Reconfiguring WebSphere                                 [  OK  ]
Reconfiguring DRS                                       [  OK  ]
Reconfiguring arbiter                                   [  OK  ]
Reconfiguring SAL                                       [  OK  ]
Reconfiguring ISMBus                                    [  OK  ]
Reconfiguring misc                                      [  OK  ]


Enter the Enrollment Password that matches the value in System
Manager administration (Security -> Certificates --> Enrollment Password).
Enrollment Password:
```

18. Run the `CEnetSetup` command to change the value of any OVA property specified during deployment.

**Important:**

During OVA deployments do not enter the IPv6 address, IPv6 network prefix, or IPv6 gateway for eth0 unless the latest Avaya Breeze® platform patches already have been applied. For more information about configuring IPv6, see “Enabling IPv6 on the

management interface of an Avaya Breeze platform server" in *Deploying Avaya Breeze® platform*.

## Deploying Avaya Breeze® platform OVA with Solution Deployment Manager

### Before you begin

Install the Avaya Aura® Appliance Virtualization Platform if necessary.

The steps in this procedure use the Solution Deployment Manager.

Use the *Customer Configuration Information* to get the required network settings for deployment. You can obtain the settings from an existing system if you are redeploying the OVA.

Download the Avaya Breeze® platform Open Virtual Appliance (OVA).

Verify that the Enrollment Password is administered and not expired.

### Procedure

1. Copy the previously downloaded Avaya Breeze® platform OVA file to the System Manager `/swlibrary/staging/sync/` directory. (If necessary, add the `staging/sync` folders to the directory structure.)
2. On System Manager, click **Services** > **Solution Deployment Manager** > **Software Library Management**.
3. Click **Manage Files**.
4. In the list of Sync Files from directory, enter the SHA256 checksum and select a software library.
5. In **Product Family**, select **Avaya Breeze**.
6. In **Device Type** and **Software Type**, select **OVA**.
7. Click **Sync** and wait for the operation to complete.
8. Verify completion of the file sync to the library.
   a. Navigate to **Home** > **Services** > **Scheduler** > **Completed Jobs**.
   b. Observe for Job Name = IUM_syncFiles, and Job Status = SUCCESSFUL.
9. Navigate to **Home** > **Services** > **Solution Deployment Manager** > **Software Library Management**.
10. Check SMGR_DEFAULT_LOCAL, click **Manage Files**, and confirm that the OVA file appears in the list of files under Software Library Files.
11. Add a location to Solution Deployment Manager.

    There might be an existing location if adding a second or later Virtual Machine.

    a. On System Manager, click **Services** > **Solution Deployment Manager**.

   b. Click **Application Management**.
   c. Select **New** under **Locations**.
   d. Populate the location properties and click **Save**.

12. Add a host to a location. The VMware host or AVP must be accessible to the System Manager to perform this step.
    a. In the **Application Management Tree**, select the location to add the host to.
    b. Click the **Platforms** tab.
    c. Click **Add**.
    d. Populate the **Host Name**, **Host FQDN or IP**, **User Name**, and **Password** fields. Use the same information that was used during installation of the Appliance Virtualization Platform.

       **Note:**

       For the **Host FQDN or IP** field, use the FQDN of the VMware host or the FQDN of the Appliance Virtual Platform.
13. Navigate to **Home** > **Services** > **Solution Deployment Manager** > **Application Management**.
14. Expand the **Application Management Tree** and expand the **Location**. Click the platform on which you want to deploy the Avaya Breeze instance.
15. On the **Applications** tab, and click **New**.
16. In the Select Location and Platform section, perform the following steps:
    a. In **Select Location**, select a location.
    b. In **Select Host**, select a host.
    c. Select a data store.

    Alternatively, in Step 12a, you can pre-select the location and platform in the **Application Management Tree**.
17. Click **Next**.
18. In the Deploy OVA section, perform the following steps:
    a. Select the **Select from software library** field.
    b. In the **Select Software Library** field, select the local and remote library where the OVA file is available. To deploy the OVA file using Solution Deployment Manager client, use the default software library that is set during client installation.
    c. In **Select OVAs**, select the OVA file that you want to deploy.
    d. In **Flexi Footprint**, select a footprint.

       For more information, refer to the Flexi Footprint values in the “Key customer configuration information” section.

19. Click the **Network Parameters** tab and select appropriate networks.
    - Select the network that provides the subnet that Avaya Breeze® platform needs for SIP traffic (security module).
    - Select the network that provides the subnet that Avaya Breeze® platform needs for the management interface (Avaya Breeze® platform instance).
20. Click the **Configuration Parameters** tab and populate the Configuration Parameters fields.

    **Note:**

    The SIP entity name must match the VM name when deploying with Solution Deployment Manager.
21. Optionally on the **Configuration Parameters** tab, set up a customer root access account.
    a. Click the box to **Enable Customer Root Account for this Application**.
    b. Click **Accept** to accept the Root Access Acceptance Statement.
    c. Enter the **Customer Root Password**.
22. Click **Deploy** to begin the OVA deployment.
23. Click **Accept** to accept the license terms.
24. Click the Virtual Machines tab.
25. Click the Status Details link to display the VM deploy Status window.

    When all status points display green check marks, deployment is complete and the VM is started.

# Configure virtual machine automatic startup settings

You do not need to configure the virtual machine automatic startup settings if you deploy the OVA using Solution Deployment Manager. With Solution Deployment Manager the automatic startup configuration is part of the VM deployment.

With other OVA deployment methods, all virtual machines must be configured to start automatically when the vSphere ESXi host starts. Complete the procedure that corresponds to your OVA deployment method.

In high availability (HA) clusters, the VMware HA software ignores the startup selections.

## Configuring virtual machine automatic startup settings using vSphere desktop client

### Before you begin

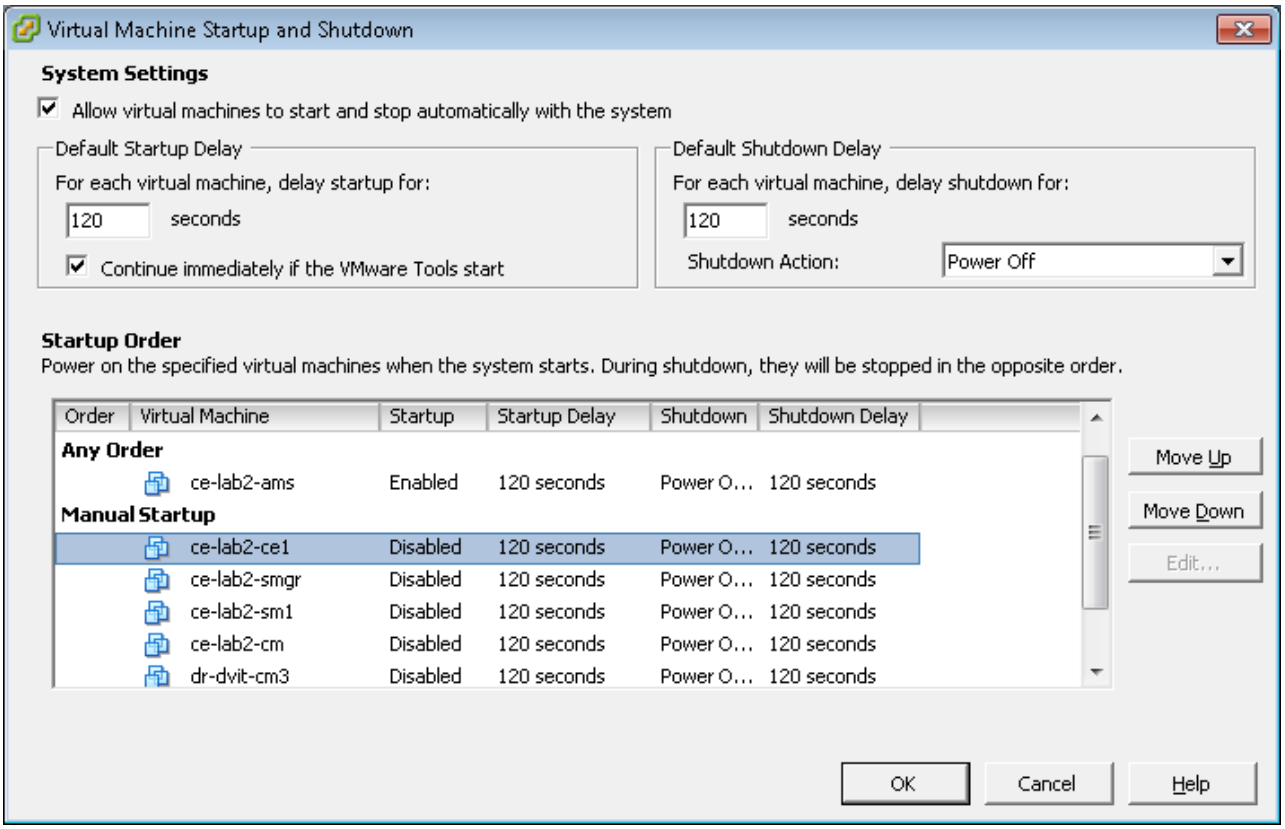
Confirm that you have the proper level of permissions to configure the automatic startup settings. If you do not have the proper level of permissions, contact your system administrator.

### Procedure

1. In the vSphere Client inventory, select the host where the virtual machine is located.
2. Click the **Configuration** tab.
3. In the **Software** section, click **Virtual Machine Startup/Shutdown**.
4. Click **Properties** in the upper right corner of the screen.
5. In the **System Settings** section, select **Allow virtual machines to start and stop automatically with the system**.
6. In the **Manual Startup** section, select the virtual machine.
7. Use the **Move up** button to move the virtual machine under **Automatic Startup**.
8. Click **OK**.

### Example

The following is an example of the **Virtual Machine Startup/Shutdown** screen.



## Configuring virtual machine automatic startup settings using vSphere Web Client

### Before you begin

Confirm that you have the proper level of permissions to configure the automatic startup settings. If you do not have the proper level of permissions, contact your system administrator.

### Procedure

1. Select the host where the virtual machine is located.
2. Click **Manage** > **Settings**.
3. Click **Virtual Machine Startup/Shutdown**.
4. Click **Edit**.
5. In the **System Settings** section, select **Allow virtual machines to start and stop automatically with the system**.
6. In the **Manual Startup** section, select the virtual machine.
7. Move the Avaya Breeze® platform VM to be included for Automatic Startup.

# Creating multiple privileged user accounts

### Procedure

1. Log in to Avaya Breeze® platform with the login credentials created during the OVA deployment.
2. Type the **`custAccounts -a`** command.

   The system prompts you to add this user as an EASG administrator. Accept the default value, or enter `y`. Selecting y enables the user to run the EASG commands. The system prompts you to enter the login credentials for a new customer user account you are creating.
3. Enter the user name and password for the new customer user account you are creating.

   This password is a temporary password that you must change at the first login attempt for the new account.
4. Reenter the password for confirmation.

# Adding Avaya Breeze® platform servers to the cluster after upgrading

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®**.

2. Click **Cluster Administration**.
3. Select the targeted cluster and click **Edit**.
   a. Navigate to the Servers tab.
   b. To add the Avaya Breeze® platform servers to the cluster, click **+** next to each unassigned server.
   c. **(Optional)** Re-enable HTTP load balancing if applicable.
   d. Click **Commit**.
4. Wait until all services have been installed successfully.

# Running maintenance tests

## Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®**.
2. In the navigation pane, click **System Tools And Monitoring** > **Maintenance Tests**.
3. In the **Select Avaya Breeze® to test** field, select an Avaya Breeze® platform server from the drop-down menu.
4. To run all the tests, click **Execute All Tests**.
5. To run specific tests:
   a. Select the test or tests that you want to run.
   b. Click **Execute Selected Tests**.

# Verifying replication status

## About this task

Complete this task to verify that the System Manager database replicated to Avaya Breeze® platform.

## Procedure

1. On System Manager, click **Services** > **Replication**.
2. Locate the Avaya Breeze® platform in the **Replica Group** list.
3. In the **Synchronization Status** column, verify that the Avaya Breeze® platform status is `Synchronized`.

   Depending on the amount of data, the replication might take some time to complete. Refresh the page or periodically recheck the status.

   If the status is not `Synchronized`, for more information, see *Maintaining and Troubleshooting Avaya Breeze® platform*.

# Verifying server status

### About this task

Verify that the Avaya Breeze® platform servers have been upgraded and are functioning correctly.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. In the row for each Avaya Breeze® platform server in the cluster you are upgrading, verify the following information:
   - **Service Install Status** displays a green checkmark.
   - **Security Module** is Up.
   - **License mode** displays a green checkmark.
   - **Version** is set to the appropriate release number..

# Editing cluster attributes

### About this task

You can modify cluster attributes on the Cluster Editor page.

By default, HTTP traffic is blocked. To allow HTTP traffic in additional to HTTPS, you must uncheck the **Only allow secure web communications** box when configuring cluster attributes.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Cluster Administration**.
2. On the Cluster Administration page, select the upgraded cluster and click **Edit**.
3. On the Cluster Editor page, click the **General** tab.
4. **(Optional)** Change the cluster name and IP address if required.
   a. Type a new cluster name.
   b. For load balancing, type a unique IP address for the cluster in the **Cluster IP** field.

      The Cluster IP address is required if load balancing is used. It must be a unique IP address on the same subnet as the Avaya Breeze® platform servers in the cluster.
5. Configure the cluster attributes.
6. Click **Commit**.

## Cluster Editor page field descriptions

When you click **New** or **Edit** on the Cluster Administration screen, the Cluster Editor screen opens. You can edit the cluster attributes only when all reachable nodes in the cluster are in the Deny New Service mode.

## General tab

| Name | Description |
|---|---|
| **Cluster Profile** | The types of clusters. The options are:<br>• **Context Store**: Product-specific cluster profile for Context Store Snap-in. This profile requires at least two Avaya Breeze® platform servers.<br>• **Core Platform**: Closed cluster that supports up to 10 Avaya Breeze® platform servers. Snap-ins that might be installed on this cluster profile include Presence Services and Call Park and Page.<br>• **Engagement Assistant Speech**: Product-specific cluster profile for Engagement Assistant Snap-in.<br>• **General Purpose**: General purpose cluster profile. This profile requires at least one Avaya Breeze® platform server.<br>• **General Purpose Large**: Open cluster that supports up to five Avaya Breeze® platform servers. This cluster profile mainly supports the Engagement Call Control solution.<br>• **Work Assignment**: Deprecated. Do not use this option.<br>• **Customer Engagement**: A cluster profile for Avaya contact center snap-ins. Use when instructed by the appropriate Avaya product installation guides. |
| **Cluster Name** | The unique name that you assign to the cluster.<br>The cluster name is case sensitive. You can create clusters with the same name but different casing. |
| **Cluster Group** | The cluster group number that you assign to the cluster. You can enter a value from 1 to 10.<br>This optional field is only used to configure attributes for multiple snap-ins. |
| **Cluster IPv4** | The unique IPv4 address assigned to the cluster. The IP address is used for HTTP load balancing. This field is mandatory if you select the **Load balancer** check box.<br>Leave this field blank for a single-node cluster. |

*Table continues…*

| Name | Description |
|---|---|
| **Cluster IPv6** | The unique IPv6 address assigned to the cluster. The IP address is used for HTTP load balancing. This field is mandatory if you select the **Load balancer** check box.<br><br>Leave this field blank for a single-node cluster. |
| **Cluster Fully Qualified Domain Name** | The unique FQDN that you assign to the cluster. |
| **Enable Cluster Database** | The check box to enable a cluster database.<br><br>**Note:**<br><br>You cannot clear the check box if snap-ins are installed on the cluster that require a cluster database. |
| **Enable Database Auto Switchover** | The check box to enable automatic switchover of clusters with two or more servers in a high availability database scenario.<br><br>If you do not select this check box, you must manually enable the standby server to take over whenever the active server is down. |
| **Description** | The cluster description. |

## Cluster Attributes

| Name | Description |
|---|---|
| **Pre-3.8.1 Cluster** | Clear this attribute if the cluster has Avaya Breeze® platform R3.8.1 or later installed. Select this attribute only if the cluster has an earlier version of Avaya Breeze® platform installed. |
| **Authorization Service Address** | The FQDN or IP address of the cluster on which the Authorization Service is running. |
| **Use secure connection for centralized logging** | Check box to ensure that connections to the Centralized Logging destination are secure. This field is only available for the Customer Engagement profile. |
| **Centralized logging destination** | The destination for centralized logging: **Breeze Cluster** or **External Server**. This field is only available for the Customer Engagement profile. |
| **Breeze cluster as destination for centralized logging** | The Avaya Breeze® platform cluster on which you installed the centralized logging snap-in.<br><br>This field is only available for the Customer Engagement profile. Configure this field if you set **Breeze Cluster** as the value for **Centralized logging destination**. |

*Table continues…*

| Name | Description |
|---|---|
| **External destination for centralized logging** | The IP address or FQDN of the destination server on which you configured centralized logging.<br>This field is only available for the Customer Engagement profile. Configure this field if you set **External Server** as the value for **Centralized logging destination**. |
| **Default SMS Connector Service** | The default SMS connector when multiple SMS connectors are installed in a cluster.<br>You can override the default by creating an implicit user pattern that matches the sending SMS number and assigning an SMS connector to that implicit user. |
| **The URL of the announcement to play during failover** | The URL of the announcement that is played during a failover. |
| **Additional Java options used by GSC** | The additional Java options used by GSC. This option is only available for the Customer Engagement profile. |
| **Grid Heap Size** | The size of the grid heap. This option is only available for the Customer Engagement profile. |
| **Grid Heap Size for LU** | The size of the grid heap for LU. This option is only available for the Customer Engagement profile. |
| **Grid LRMI Selector Threads** | The grid LRMI selector threads. This option is only available for the Customer Engagement profile. |
| **Grid Password** | The internal grid password. |
| **Cluster requires a grid** | The check box to specify whether the cluster requires a grid.<br>This field is only available for the Core Platform profile.<br>When you edit this attribute, Avaya Breeze® platform displays the following warning message: `Ensure that all Avaya Breeze® server restarts are complete before placing the cluster into Accept New Service state.` |
| **Use secure grid?** | The check box to secure grid communication. |
| **Grid Thread Stack Size** | The size of the grid thread stack. This option is only available for the Customer Engagement profile. |
| **Http or Https limit on connections per client** | The maximum number of HTTP or HTTPS connections at a given time per client.<br>For General Purpose Large clusters, this value must be greater than 3. |

*Table continues…*

| Name | Description |
|---|---|
| **Http or Https traffic rate limit in bytes/sec per client** | The rate limit on the HTTP or HTTPS traffic served per connection.<br>For General Purpose Large clusters, this value must be greater than 300,000 bytes per second. |
| **HTTP Load Balancer backend server max failure response timeout period (seconds)** | The maximum timeout period of the failure response of the HTTP Load Balancer backend server. The default value is 15 seconds. |
| **Max number of failure responses from HTTP Load Balancer backend server** | The maximum number of failure responses from the HTTP Load Balancer backend server. The default value is 2. |
| **Network connection timeout to HTTP Load Balancer backend server (seconds)** | The network connection timeout period from the HTTP Load Balancer backend server. The default value is 10 seconds. |
| **Only allow secure web communications** | The check box to enable only HTTPS requests. By default, this check box is selected. |
| **Hung Thread Detection Threshold (seconds)** | Available only with the Customer Engagement cluster profile. Causes a Java core to be generated when a thread has been running longer than the administered value. The default value should be sufficient in most cases. When an application causes a thread to be in use for a longer period of time, such as a complex database request, and the expected completion time is expected to be long, then changing this value will reduce or eliminate the Java Cores. Increasing this value will mask any hung threads that would have been detected at a lower interval. Modification of this value requires a cluster reboot for the change to take effect. |
| **Is load balancer enabled** | The check box to enable load balancing for the cluster. Use load balancing if you want to scale the HTTP services without targeting a particular Avaya Breeze® platform server. |
| **Is session affinity enabled** | The check box to enable session affinity for the cluster. With session affinity, a particular client is always served by the same backend server. |
| **Trusted addresses for converting to use X-Real-IP for session affinity** | Trusted addresses that are known to send correct replacement addresses. With this, Avaya Breeze® platform load balancer can use the real client IP when an HTTP request traverses through reverse proxies such as Avaya Session Border Controller for Enterprise. The header that is used to identify the real client IP address is X-Real-IP. |

*Table continues…*

| Name | Description |
|---|---|
| **Default call provider for Make Call** | The call provider used for Make Call, a call that is initiated (Make Call) from an Avaya Breeze® platform snap-in. The default value is **SIP**, which corresponds to using SIP to connect to Avaya Aura® for call processing. If ZangCallConnector is loaded, you can install and use ZangCallConnector for making or initiating calls. |
| **Default Identity for special make call cases** | The default identity that is used for calls generating from Avaya Breeze® platform. If a user does not specify an identity, then Breeze uses the value in this field. |
| **The maximum number of Avaya Breeze Servers allowed in Cluster** | The maximum number of Avaya Breeze® platform servers that you can add to a cluster. |
| **Media server monitoring period (seconds)** | The period of polling. Each Avaya Aura® Media Server is periodically polled from each Avaya Breeze® platform that communicates with the Avaya Aura® Media Server to determine active status and normal function. When certain interactions with an Avaya Aura® Media Server are not functioning normally, the polling period is approximately 1/3 of this value. |
| **Media server shuffle out timer (seconds)** | The duration that Avaya Breeze® platform waits after all media operations are complete before shuffling Avaya Aura® Media Server out of the media path. All cluster profiles that support SIP call processing display this cluster attribute. The default value is 3 seconds. |
| **Select AAMS by caller location - Priority 1** | The check box to configure the cluster to select Avaya Aura® Media Server based on the caller location as the first priority. |
| **Select AAMS by Breeze server location - Priority 2** | The check box to configure the cluster to select Avaya Aura® Media Server based on the Avaya Breeze® platform location if the Priority 1 criterion is not met or the **Select AAMS by caller location - Priority 1** check box is disabled. |
| **Select any AAMS - Priority 3** | The check box to configure the cluster to select any Avaya Aura® Media Server if the Priority 1 or Priority 2 criteria are not met or the following check boxes are disabled:<br>• **Select AAMS by caller location - Priority 1**<br>• **Select AAMS by Breeze server location - Priority 2** |

*Table continues…*

| Name | Description |
|---|---|
| **Avaya Aura® Media Server - Media Preservation Time (minutes)** | The amount of time that Avaya Aura® Media Server should wait before terminating an audio or video stream after a failure is detected in the call signaling path. |
| **Media IP version to retry in case of ANAT failure** | Select an option from the drop-down list. |
| **Retry IPv4 media in case of IPv6 failure** | Check box to try IPv4 media if IPv6 fails. |
| **Retry IPv6 media in case of IPv4 failure** | Check box to try IPv6 media if IPv4 fails. |
| **H.264 Video profile_idc** | The H.264 video profile:<br>• **CB(Constrained Baseline profile-42)**<br>• **H(High profile-64)** |
| **Avaya Aura® Media Server - User Id for RESTful TLS authentication** | The user ID configured on the Avaya Aura® Media Server for basic authentication for REST signaling. |
| **Avaya Aura® Media Server - Password for RESTful TLS authentication** | The password configured on the Avaya Aura® Media Server for basic authentication of REST signaling. |
| **Minimum TLS Version for Non-SIP Traffic** | The TLS version that is used for incoming HTTP requests to Avaya Breeze® platform.<br>By default, Avaya Breeze® platform uses the value of the **Minimum TLS version** field set in the System Manager configuration. If the value of the **Minimum TLS Version** field is TLSv1.1, Avaya Breeze® platform uses TLSv1.2. If the value of the **Minimum TLS Version** field is SSLv3, Avaya Breeze® platform uses TLSv1.0. |
| **Minimum TLS Version for SIP Call Traffic** | The TLS version that is used for SIP calls intercepting Avaya Breeze® platform.<br>By default, Avaya Breeze® platform uses the value of the **Minimum TLS version** field set in the System Manager configuration. If the value of the **Minimum TLS Version** field is TLSv1.1, Avaya Breeze® platform uses TLSv1.2. If the value of the **Minimum TLS Version** field is SSLv3, Avaya Breeze® platform uses TLSv1.0. |
| **Platform Space Container Heap Size (MB)** | The size of the platform space container heap in MB. This option is only available for the Customer Engagement profile. |
| **List of optional snap-ins including version** | The list of optional snap-ins for a specific cluster profile type. The version of each optional snap-in is also included.<br>This attribute applies to the Core Platform and Work Assignment cluster profiles only. |

*Table continues…*

| Name | Description |
|---|---|
| **List of required snap-ins including minimum version** | The list of required snap-ins for a specific cluster profile type. The minimum required version of each snap-in is also included. |
| **Reverse Proxy URL (protocol://FQDN) used to access the cluster** | Use this field to specify the URL of a reverse proxy deployed in front of the Avaya Breeze® platform cluster. Login-related redirections from adopting services or snap-ins use the URL specified in this field instead of the default Avaya Breeze® platform cluster FQDN.<br><br>Currently, a limitation exists. When this field is configured, if a user attempts to log in using the cluster FQDN, further redirections are forced to happen through the proxy URL instead of the cluster FQDN. |
| **Default SIP Domain** | The default SIP domain for the cluster. If an Avaya Breeze® platform snap-in does not include a domain in the addresses that the snap-in sends to the Call Manipulation API, the snap-in appends this domain to the address. |
| **Use secure signaling for platform initiated SIP calls** | The check box to use secure signaling to initiate WebRTC Connect calls, calls from snap-ins to individuals for playing announcements, and for snap-ins that initiate two-party calls.<br><br>This attribute is not applicable for call intercept scenarios. |
| **Preferred Minimum Session Refresh Interval (secs)** | The minimum periodic refresh interval for the SIP session. |
| **Use early pre-answer media?** | The cluster attribute that defines the pre-answer media mode. Select the check box to use *the Early* pre-answer mode. Choose this setting to send a 183 session progress response in the early media phase.<br><br>If you do not select this check box, Avaya Breeze® platform selects the *Connected* pre-answer mode. This is the default setting. *Connected* setting sends a 200 OK SIP response in the early media phase.<br><br>This field is applicable for the General Purpose and General Purpose Large clusters only. |
| **Use short replication interval?** | The check box to use a short replication interval. |
| **Work Flow Engine name** | The name of the Engagement Designer snap-in Workflow Engine. This field is applicable only for the **General Purpose** cluster. |

*Table continues…*

| Name | Description |
|---|---|
| **Limit on the memory (GB) to allocate for base processes** | The field to set a limit on the memory allocated for base processes.<br>**Note:**<br>Do not change the value of this field unless recommended by snap-ins. |
| **Percent of memory to allocate base processes** | The percentage of memory to allocate for base processes.<br>**Note:**<br>Do not change the value of this field unless recommended by snap-ins. |
| **Percent of memory to allocate for WAS** | The percentage of memory to allocate for WAS.<br>**Note:**<br>Do not change the value of this field unless recommended by snap-ins. |
| **Limit on the memory (GB) to allocate for WAS** | The field to set a limit on the memory allocated for WAS.<br>**Note:**<br>Do not change the value of this field unless recommended by snap-ins. |

## Servers tab

This tab has the following columns in two tables: **Assigned Servers** and **Unassigned Servers**. When you add a server to a cluster, the system displays the server in the **Assigned Servers** table for that cluster.

| Name | Description |
|---|---|
| **Name** | The name of the Avaya Breeze® platform server. |
| **Version** | The version of the Avaya Breeze® platform server. |
| **Description** | The description of the Avaya Breeze® platform server. |

## Services tab

| Name | Description |
|---|---|
| **Name** | The name of the snap-in that might already be installed in a cluster, or available in the database. |
| **Version** | The snap-in version. |
| **Action Pending** | The actions that are pending for the snap-in. If no actions are pending, the system displays **None**. |

*Table continues…*

| Name | Description |
|---|---|
| **Uninstall** | If you select a snap-in and click **Uninstall**, then the snap-in is removed from the cluster after all activity ceases. |
| **Force Uninstall** | If you select a snap-in and click **Force Uninstall**, the snap-in is forcefully removed from the cluster without waiting to complete any pending actions. |
| **TLS Version** | The TLS version of the snap-in. |

| Button | Description |
|---|---|
| **Select TLS Version for Selected Snap-in** | Selects the TLS version of the snap-in. The acceptable values are:<br>• **Default**<br>• **TLS v1.0**<br>• **TLS v1.2**<br>If you select **Default**, Avaya Breeze® platform uses the value of the **Minimum TLS Version** field set in the System Manager global configuration.<br>You can change the TLS version of multiple snap-ins at a time. |

### Reliable Eventing Groups tab

| Name | Description |
|---|---|
| **Group** | The name of the Reliable Eventing group available in the database. |

| Button | Description |
|---|---|
| **Commit** | Adds the cluster or saves the changes to the cluster attributes. |
| **Cancel** | Cancels your action and displays the previous page. |

## Installing new snap-ins

### About this task

Complete this procedure to install new snap-ins on the upgraded cluster and to optionally install new versions of updated snap-ins. Be sure to install the newest versions of connector snap-ins and the snap-ins that are mandatory for your cluster profile. Mandatory services for a cluster profile are listed on the Cluster Editor page. For a list of connector snap-ins, see *Avaya Breeze® platform Overview and Specification*.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Service Management**.
2. Load the snap-in.
   a. Click **Load**.
   b. In the Load Service window, click **Choose file**, browse to select your snap-in and click **Open**.
   c. Click **Load** in the Load Service window.
   d. For licensed snap-ins, if you agree to the Avaya End User License Agreement (EULA), click **Accept**.

      Your snap-in displays on the Service Management page with a **State** of **Loaded**.
3. Install the snap-in.
   a. Select the snap-in you want to install.
   b. Click **Install**.
   c. Select the clusters where you want the snap-in to reside, and click **Commit**.
   d. To see the status of the snap-in installation, click the Refresh Table icon located in the upper-left corner of the **All Services** list.

      **Installed** with a green check mark indicates that the snap-in has completed installation on all Avaya Breeze® platform servers in the cluster. **Installing** with a yellow exclamation mark enclosed in a triangle indicates that the snap-in has not completed installation on all servers.

## Setting preferred snap-in version

### About this task

It is possible to set a preferred version of a snap-in. This designation can then be used in a service profile to indicate the version of the snap-in to provide to a group of users. You must first designate the version of the snap-in that you want to be the preferred version. Then, change the version designation for the snap-in in the service profile. For more information about service profiles and version designations, see *Administering Avaya Breeze® platform*.

Non-call-intercept snap-ins automatically use the preferred version. If a preferred version is not specified for a non-call-intercept snap-in, by default the latest version of the snap-in is used. Non-call-intercept snap-ins are not included in a service profile.

### Procedure

1. Designate the preferred version.
   a. On System Manager,click **Elements** > **Avaya Breeze®** > **Service Management**.
   b. From the **All Services** list, select the version of the snap-in that you want to be the preferred version.

c. Click **Set Preferred Version**.

d. Select the clusters for which you want this to be the preferred version and click **Commit**.

**Note:**

You can set the preferred version for multiple snap-ins in a single transaction.

2. Edit the service profile.

a. On System Manager,click **Elements** > **Avaya Breeze®** > **Configuration** > **Service Profiles**.

b. Select the service profile and click **Edit**.

c. Remove the snap-in from the service profile by clicking the **X** next to the snap-in name.

d. In the list of **Available Service to Add to this Service Profile** click **Advanced** next to the snap-in name.

e. For **Service Version** select **Preferred** and click **Add**.

f. Click **Commit** to save the service profile.

## Accepting new service

### About this task

You must return the servers to service as a cluster from the Cluster Administration page after you have upgraded all the servers. Do not return them to service individually from the Server Administration page.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Cluster Administration**.
2. Click the checkbox in front of the upgraded cluster.
3. From the **Cluster State** drop-down menu, select **Accept New Service**.
4. Verify that the **Cluster State** column for the cluster changed to **Accepting**.

## Verifying the Avaya Breeze® platform entity link connection

### About this task

Use this procedure to verify that Session Manager can connect with Avaya Breeze® platform using the SIP entity link. You must verify the status of SIP link monitoring on the Session Manager instance.

### Procedure

1. On System Manager, click **Elements** > **Session Manager** > **System Status** > **SIP Entity Monitoring**.
2. Click the name of the Session Manager instance that you linked to Avaya Breeze® platform.

   The system displays a list with the status of all entity links for the selected Session Manager.
3. Locate the Avaya Breeze® platform SIP entity and check **Conn. Status**.

   If you see `UP`, the link to Session Manager is successful. Otherwise, use the troubleshooting information in *Maintaining and Troubleshooting Avaya Breeze® platform*.

# Upgrading with Method 2

## Method 2 overview

Use Method 2 to simultaneously upgrade all nodes within a cluster within five minutes of each other. The upgrade is service impacting. Complete the upgrade during a maintenance window.

You can upgrade using one of the following methods:

- ISO file
- System Manager SDM

## Checklist for Method 2 upgrades

An ISO upgrade might fail due to networking issues and other problems outside the control of Avaya Breeze® platform. When this happens, and the ISO was complete and not truncated by the SFTP file transfer to the VM, you might be able to redo the upgrade.

**Important:**

Consider prerequisites and post-upgrade tasks for snap-ins before you proceed with this upgrade. For more information, see your snap-in documentation.

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 1 | Before upgrading Avaya Breeze® platform, upgrade the following in this order to the required release:<br>1. System Manager<br>2. Session Manager | For more information, see *Upgrading Avaya Aura® System Manager* and *Upgrading Avaya Aura® Session Manager*.<br>If only upgrading Avaya Breeze® platform Element Manager, see the "Running the **`upgradeSolution`** script for System Manager" section in *Deploying Avaya Breeze® platform*. | |
| 2 | Upgrade Avaya Aura® Media Server. | See *Deploying and Updating Avaya Aura® Media Server Appliance*.<br>Upgrade Avaya Aura® Media Server within the same maintenance window as the Avaya Breeze® platform upgrade. | |
| 3 | If you have a cluster database enabled, take a backup. | See *Administering Avaya Breeze® platform*. | |
| 4 | To upgrade using the ISO file method, download the ISO file and patch file (if required) from PLDS. Confirm the files are complete by running checksum comparisons and then compare to the value on PLDS. If the file is correct, copy the ISO file and the patch file to each Avaya Breeze® platform server you will be upgrading.<br>For upgrades using SDM:<br>• Download the OVA file and patch file (if required) from PLDS. Confirm the files are complete by running checksum comparisons and then compare to the value on PLDS.<br>• Download the versions*.xml file. | See Downloading software from PLDS on page 58 and Downloading the version_edp.xml file on page 64. | |
| 5 | Verify that the enrollment password is not expired. | Verifying enrollment password status on page 59. | |
| 6 | Change the state of the cluster you are upgrading to Deny New Service. | Denying new service on page 60. | |
| 7 | Verify that the cluster **Activity** field is set to 0. | Verify activity on page 60. | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 8 | Clear the **Enable Database Auto Switchover** field from **Elements** > **Avaya Breeze®** > **Cluster Administration**. | This step is only required for multi-node clusters with Cluster database. | |
| 9 | Take a snapshot of the current VM to enable reverting if necessary. | This task is not required if you are using SDM for the upgrade. | |
| 10 | Uninstall the Analytics Collector Snap-in and Engagement Call Control from the cluster. | See the "Uninstalling a snap-in from a cluster" section in *Administering Avaya Breeze® platform*. | |
| 11 | Edit the cluster and clear the **Pre-3.8.1 Cluster** cluster attribute. | See Editing cluster attributes on page 42.<br>You must perform all backups before changing the **Pre-3.8.1 Cluster** option. | |
| 12 | Upgrade the Avaya Breeze® platform software. | To upgrade using the ISO file method, see Upgrading the Avaya Breeze platform server on page 60.<br>To upgrade using SDM, see Upgrades using Solution Deployment Manager on page 61.<br>The server reboots automatically when the upgrade script completes.<br>Upgrade all nodes within the cluster simultaneously. | |
| 13 | Install the patch file (if required) . | See Patching Avaya Breeze platform on page 97. | |
| 14 | Upgrade the mandatory snap-ins and connector snap-ins. | For more information, see your snap-in documentation. | |
| 15 | Select the **Enable Database Auto Switchover** field from **Elements** > **Avaya Breeze®** > **Cluster Administration**. | This step is only required for multi-node clusters with a cluster database. | |
| 16 | Verify data replication between System Manager and Avaya Breeze® platform. | See Verifying replication status on page 70. | |
| 17 | Run Avaya Breeze® platform maintenance tests for the server. | See Running maintenance tests on page 70. Resolve errors before proceeding. For information, see *Maintaining and Troubleshooting Avaya Breeze® platform*. | |
| 18 | Install new snap-ins. | See Installing new snap-ins on page 72. | |
| 19 | Set the preferred version for each snap-in. | See Setting preferred snap-in version on page 73. | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 20 | Reboot the cluster. | Before the reboot, verify that **Service Install Status** shows a green checkmark for the cluster. | |
| 21 | On the Server Administration page verify the following for the upgraded server:<br>• **Service Install Status** shows a green checkmark<br>• Security module is running<br>• **License mode** shows a green checkmark<br>• The correct version information is displayed<br>If using Reliable Eventing Framework, verify that the state of the node changes from Electing to Slave. | For more information, see Verifying server status on page 71. | |
| 22 | Change the state to Accept New Service for the upgraded Avaya Breeze® platform cluster. | See Accepting new service on page 71. | |
| 23 | Verify the Avaya Breeze® platform SIP entity link with Session Manager. | See Verifying the Avaya Breeze platform entity link connection on page 71. | |
| 24 | Repeat steps 6 through 23 for each cluster that you are upgrading. | — | |
| 25 | Test Avaya Breeze® platform snap-ins to verify that they are functioning correctly.<br>Delete any snapshots that you no longer need. | It is important to delete snapshots you no longer need within 12–24 hours. For more information, see VMware snapshots on page 107. | |
| 26 | Run a test alarm. | See the “Generating test alarms in System Manager” section in *Maintaining and Troubleshooting Avaya Breeze® platform*. | |

## Customer configuration information for ISO upgrades

You require the following information to upgrade Avaya Breeze® platform with an ISO file. Have this information before you begin the upgrade.

| Customer login settings | Information to enter |
|---|---|
| Login Name | Enter the login ID to use for the customer account. |
| Enter Password | Enter the customer account password. |

## Downloading software from PLDS

### About this task

**Note:**

You can download product software from http://support.avaya.com also.

### Procedure

1. In your web browser, type http://plds.avaya.com to go to the Avaya PLDS website.
2. On the PLDS website, enter your Login ID and password.
3. On the Home page, select **Assets**.
4. Select **View Downloads**.
5. Click the search icon ( ) for Company Name.
6. In the Search Companies dialog box, do the following:
   a. In the **%Name** field, type `Avaya` or the Partner company name.
   b. Click **Search Companies**.
   c. Locate the correct entry and click the **Select** link.
7. Search for the available downloads by using one of the following:
   - In **Download Pub ID**, type the download pub ID.
   - In the **Application** field, click the application name.
8. Click **Search Downloads**.
9. Scroll down to the entry for the download file, and click the **Download** link.
10. Select a location where you want to save the file, and click **Save**.
11. On the PLDS page, get the md5sum and sha1sum.
    a. In the directory where the ISO was downloaded, run the command: `md5sum aus-installer-correct version.iso`.
    b. Confirm that the checksum generated by this command matches the value on the PLDS page.
    c. If the values do not match, there was a network failure during transmission, and it is recommended to retry.
    d. If it fails again, contact Avaya Support.
12. **(Optional)** If you receive an error message, click the message, install Active X, and continue with the download.
13. **(Optional)** When the system displays the security warning, click **Install**.

    When the installation is complete, PLDS displays the downloads again with a check mark next to the downloads that have completed successfully.

## Disabling the secure grid

### About this task

Complete this procedure only if you have enabled the secure grid for a cluster. This procedure is service impacting.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Cluster Administration**.
2. Select the cluster that contains the servers you want to upgrade.
3. From the **Cluster State** drop-down menu, select **Deny New Service**.
4. Verify that the system displays **Denying** in the **Cluster State** column.
5. Select the cluster that contains the servers you want to upgrade and click **Edit**.
6. Under Cluster Attributes uncheck **Use secure grid?**
7. Click **Commit**.
8. Select the cluster that contains the servers you want to upgrade.
9. From the **Cluster State** drop-down menu, select **Accept New Service**.

## Verifying enrollment password status

Avaya Breeze® platform requires an Enrollment Password during the initial installation and deployment process. Enrolling a password establishes trust between System Manager and Avaya Breeze® platform. The enrollment password is also known as the certificate enrollment password.

If the enrollment password has expired, renew the existing password.

If the **Time Remaining** value is not zero, the password is valid. Verify that the time remaining is sufficient.

### Procedure

1. On System Manager, click **Services** > **Security** > **Certificates** > **Enrollment Password**.
2. If the value of the **Time Remaining** field is zero, renew the password:
   a. In the **Password expires in** field, select a value from the drop-down menu for the time when the password must expire.
   b. Enter the password in the **Password** field.
   c. Reenter the password in the **Confirm Password** field.
   d. Click **Commit**.

   The system updates the **Time Remaining** field.

## Denying new service

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. Select the server that you want to upgrade.
3. From the **System State** drop-down menu, select **Deny New Service**.
4. Verify that the system displays **Denying** in the **System State** column.

## Verify activity

### About this task

Verify that currently there is no activity on the Avaya Breeze® platform server you are upgrading.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. In the row for the server you are upgrading, look in the **Activity** column.
3. Verify that the Activity is 0.

   Even after new service is stopped, it can take a couple of hours for activity to reach zero. If activity has not stopped in a reasonable time, you can choose to proceed with the upgrade. Active calls will continue, but Avaya Breeze® platform snap-in call control for those calls will be lost.

## Upgrading the Avaya Breeze® platform server

### Before you begin

1. Verify that you have copied the ISO upgrade file to the server that you are upgrading.
2. Take a snapshot of the current VM to enable reverting if necessary.

### Procedure

1. Log on to the Avaya Breeze® platform server.
2. Enter the command **`upgradeCE`** <*iso filename*>.
3. Step through prompts until the upgrade is installed.

# Upgrades using Solution Deployment Manager

System Manager Solution Deployment Manager is a centralized upgrade solution, which you can use to upgrade Avaya Breeze® platform. You can upgrade from Avaya Breeze® platform Release 3.3 or higher to the latest release.

Solution Deployment Manager accesses the OVA file in the System Manager software library.

See the following documents for more information:

- *Upgrading and Migrating Avaya Aura® applications from System Manager*
- *Administering Avaya Aura® System Manager*
- *Avaya Aura® System Manager Solution Deployment Manager Job-Aid*

### Prerequisites

- To use the Solution Deployment Manager upgrde process, you must have Avaya Breeze® platform Release 3.3 or later.
- The VMware host or Appliance Virtualization Platform and the Avaya Breeze® platform virtual machine are administered in Solution Deployment Manager Application Management. For more information, see *Administering Avaya Aura® System Manager*.

## Checklist for upgrading Avaya Breeze® platform using Solution Deployment Manager

This checklist outlines the process to upgrade Avaya Breeze® platform using Solution Deployment Manager.

| # | Task | ✔ |
|---|---|---|
| 1 | Complete items 1 to 13 in Checklist for Method 2 upgrades on page 54. | |
| 2 | Ensure that you install Solution Deployment Manager. | |
| 3 | Install the OVA file into the System Manager software library. | |
| 4 | Upload the `versions_edp.xml` file to Solution Deployment Manager.<br>For more information, see *Avaya Aura® System Manager Solution Deployment Manager Job-Aid*. | |
| 5 | Re-establish the trust connection when upgrading applications that were not deployed from Solution Deployment Manager. | |
| 6 | Refresh the host status. | |
| 7 | Refresh the elements.<br>You can either run the job schedule immediately or schedule it for a later time. | |

*Table continues…*

| # | Task | ✔ |
|---|---|---|
| 8 | Analyze the software library inventory. | |
| 9 | Perform the pre-upgrade check. | |
| 10 | Perform the upgrade using Solution Deployment Manager. | |
| 11 | Commit the upgrade of Avaya Breeze® platform. | |
| 12 | Copy the patch file to the Avaya Breeze® platform server. | |
| 13 | Return to item 15 in Checklist for Method 2 upgrades on page 54. | |

## Installing the Solution Deployment Manager client

### Procedure

1. Download the `Avaya_SDMClient_win64_8.1.3.0.1035538_49.zip` file from the Avaya Support website at http://support.avaya.com or from the Avaya PLDS website, at https://plds.avaya.com/.
2. On the Avaya Support website, click **Support by Products** > **Downloads**, and type the product name as **System Manager**, and Release as **8.0.x**.
3. Click the **Avaya Aura® System Manager Release 8.0.x SDM Client Downloads, 8.0.x** link. Save the zip file, and extract to a location on your computer by using the WinZip application.

   You can also copy the zip file to your software library directory, for example, `c:/tmp/Aura`.
4. Right click on the executable, and select **Run as administrator** to run the `Avaya_SDMClient_win64_8.1.3.0.1035538_49.exe` file.

   The system displays the Avaya Solution Deployment Manager screen.
5. On the Welcome page, click **Next**.
6. On the License Agreement page, read the License Agreement, and if you agree to its terms, click **I accept the terms of the license agreement** and click **Next**.
7. On the Install Location page, perform one of the following:
   - To install the Solution Deployment Manager client in the system-defined folder, leave the default settings, and click **Next**.
   - To specify a different location for installing the Solution Deployment Manager client, click **Choose**, and browse to an empty folder. Click **Next**.

     To restore the path of the default directory, click **Restore Default Folder**.

   The default installation directory of the Solution Deployment Manager client is `C:\Program Files\Avaya\AvayaSDMClient`.
8. Click **Next**.

9. On the Pre-Installation Summary page, review the information, and click **Next**.
10. On the User Input page, perform the following:
    a. To start the Solution Deployment Manager client at the start of the system, select the **Automatically start SDM service at startup** check box.
    b. To change the default directory, in Select Location of Software Library Directory, click **Choose** and select a directory.

       The default software library of the Solution Deployment Manager client is `C:\Program Files\Avaya\AvayaSDMClient\Default_Artifacts`.

       You can save the artifacts in the specified directory.
    c. In **Data Port No**, select the appropriate data port.

       The default data port is 1527. The data port range is from 1527 through 1627.
    d. In **Application Port No**, select the appropriate application port.

       The default application port is 443. If this port is already in use by any of your application on your system, then the system does not allow you to continue the installation. You must assign a different port number from the defined range. The application port range is from 443 through 543.

       **Note:**

       After installing the Solution Deployment Manager client in the defined range of ports, you cannot change the port after the installation.
    e. **(Optional)** Click **Reset All to Default**.
11. Click **Next**.
12. On the Summary and Validation page, verify the product information and the system requirements.

    The system performs the feasibility checks, such as disk space and memory. If the requirements are not met, the system displays an error message. To continue with the installation, make the disk space, memory, and the ports available.
13. Click **Install**.
14. To exit the installer, on the Install Complete page, click **Done**.

    The installer creates a shortcut on the desktop.
15. To start the client, click the Solution Deployment Manager client icon.

## Next steps

- Configure the laptop to get connected to the services port if you are using the services port to install.
- Connect the Solution Deployment Manager client to Appliance Virtualization Platform through the customer network or services port.

  For information about “Methods to connect the Solution Deployment Manager client to Appliance Virtualization Platform”, see *Using the Solution Deployment Manager client*.

## Installing the OVA file into the software library

### Procedure

1. Copy the previously downloaded Avaya Breeze® platform OVA file to the System Manager `/swlibrary/staging/sync/` directory.

   If necessary, add the `staging/sync` folders to the directory structure.

2. Navigate to **Home** > **Services** > **Solution Deployment Manager** > **Software Library Management** and click **Manage Files**.
3. In the Sync Files from directory list, enter the SHA256 checksum and select a software library.

   For **Product Family**, **Device Type**, and **Software Type**, select **others**.

4. Click **Sync** and wait for the operation to complete.
5. Verify the completion of the file sync to the library.
   a. Navigate to **Home** > **Services** > **Scheduler** > **Completed Jobs**.
   b. Look for Job Name = IUM_syncFiles, and Job Status = SUCCESSFUL.
6. Navigate to **Home** > **Services** > **Solution Deployment Manager** > **Software Library Management**.
7. To check SMGR_DEFAULT_LOCAL, click **Manage Files** and confirm that the OVA file appears in the list of files under Software Library Files.

## Downloading the version_edp.xml file

### About this task

This file provides information about your software entitlements.

### Procedure

1. Log in to https://plds.avaya.com.
2. Search for the `smgr-versionsxmls.zip` using PLDS ID SMGRSUM0001:
   a. Click the **Assets** tab.
   b. Click **View Downloads**.
   c. Select **Search by Download**.
   d. In the **Download pub ID** field, enter `SMGRSUM0001`.
   e. Click **Search Downloads**.
3. Download the zip file.
4. Extract the zip file.

## Re-establishing a trust connection

### About this task

Use this procedure to upgrade an application that was not deployed from Solution Deployment Manager.

### Procedure

1. On the System Manager web console, click **Services** > **Solution Deployment Manager**.
2. In the navigation pane, click **Application Management**.
3. Select the virtual machine.
4. To establish trust, click **More actions** > **Re-establish connection**.
5. In the Select Version pane, select `others`.
6. Type the credentials and click **Reestablish Connection**.

   The **Current Action Status** column displays the status of the virtual machine reestablishment.

## Refreshing the host status

### Procedure

1. On System Manager, click **Services** > **Solution Deployment Manager** > **Application Management**.
2. On **Application Management Tree**, click the required location.
3. Click the **Platforms** tab.

   The system displays the list of hosts for the selected location.
4. Select the required host.
5. Click **Refresh**.

   The **Current Action Status** column displays the status of the host.

## Refreshing elements

### About this task

Before upgrading, refresh elements on the Upgrade Management page.

### Before you begin

On the User Settings page, configure the user settings.

### Procedure

1. On the System Manager web console, click **Services** > **Solution Deployment Manager**.
2. In the navigation pane, click **Upgrade Management**.

3. On the Upgrade Management page, do the following:
   a. Select one or more devices.
   b. Click **Pre-upgrade Actions** > **Refresh Element(s)**.
4. On the Job Schedule page, click one of the following:
   - **Run Immediately**: To perform the job.
   - **Schedule later**: To perform the job at a scheduled time.
5. If you selected **Schedule later**, select the date, time, and timezone.
6. Click **Schedule**.

   The **Last Action Status** column displays ✓ and the **Current Version** column displays the current version of the element.

## Analyzing software

### About this task

Analyze OVA, service pack, and feature pack files uploaded to the software library. To get the correct entitlement upgrade version, the **Version** field must contain the appropriate value. You can get the version values from the `version_edp.xml` file you downloaded from PLDS.

This analyze operation is not required for custom patching.

### Before you begin

- On the Roles page, set the Software Management Infrastructure permission.
- Refresh elements.

### Procedure

1. On the System Manager web console, click **Services** > **Solution Deployment Manager**.
2. In the navigation pane, click **Upgrade Management**.
3. On the Upgrade Management page, do the following:
   a. Select a device that you want to analyze.
   b. Click **Pre-upgrade Actions** > **Analyze**.
4. On the Job Schedule page, click one of the following:
   - **Run Immediately**: To perform the job.
   - **Schedule later**: To perform the job at a scheduled time.
5. If you select **Schedule later**, select the date, time, and timezone.
6. Click **Schedule**.

   The **Last Action Status** column displays a ✓, the Current Version column displays the current version of the element, and the Entitled Upgrade Version column displays the next version of the element which you can upgrade to.

## Performing the preupgrade check

### Procedure

1. On the System Manager web console, click **Services** > **Solution Deployment Manager**.
2. In the navigation pane, click **Upgrade Management**.
3. On the Upgrade Management page, do the following:
   a. Select an application to upgrade.
   b. Click **Pre-upgrade Actions** > **Pre-upgrade Check**.
4. On the Pre-upgrade Configuration page, fill in the required information.

   To migrate to an ESXi host from the old server, in **Target Host**, select the ESXi host.
5. On the Job Schedule page, click one of the following:
   - **Run Immediately**: To perform the job.
   - **Schedule later**: To perform the job at a scheduled time.
6. Click **Schedule**.

   On the Upgrade Management page, the status of the **Last Action Status** and **Pre-upgrade Check Status** columns display a ✓.

## Upgrading Avaya Breeze® platform using Solution Deployment Manager

### About this task

Use this procedure to upgrade Avaya Breeze® platform usingSolution Deployment Manager.

### Before you begin

Install the Solution Deployment Manager client.

### Procedure

1. Do one of the following to access Solution Deployment Manager:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager**.
   - Navigate to **Avaya** > **Avaya SDM Client** from the Windows **Start** menu.
   - Click the Solution Deployment Manager client icon (SDM) on your desktop.
2. In the navigation pane, click **Upgrade Management**.
3. Click the Avaya Breeze® platform application to upgrade.
4. Click **Upgrade Actions** > **Upgrade/Update**.
5. On the Upgrade Configuration page, to view the devices associated with the application that you want to upgrade, do the following:
   a. Click **Details** and review the dependent devices.

b. Click **Done**.

6. To continue with upgrade when the recommended checks fail during the pre-upgrade check, select the **Override preupgrade check** check box.
7. To provide the upgrade configuration details, click **Edit**.
8. To upgrade:
   a. Select the appropriate ESXi host.
   b. In the **Upgrade Source** field, select **SMGR_DEFAULT_LOCAL**.
   c. In the **Upgrade To** field, select the OVA file.
   d. In **Existing Administrative User**, type the customer login name.
   e. In **Existing Administrative Password**, type the customer login password.
   f. Click **Pre-populate Data**.

      The system populates the data for the following fields:

      - **IP Address**
      - **Short Hostname**
      - **Network Domain**
      - **Netmask**
      - **Default Gateway**
      - **DNS server(s)**
      - **Timezone**
      - **NTP server(s)**
      - **Login Name**
      - **Enter Customer Account Password**
      - **Primary System Manager IP**
      - **Enrollment Password**
      - **Accept the License Agreement**

   g. In the **Flexi Footprint** field, select the footprint based on the user requirement.
   h. Do one of the following in the **EASG User Access** field:
      - Type `1` to enable EASG.

        Avaya recommends that you enable EASG.
      - Type `2` to disable EASG.

   i. In the **Public** field, select the network that will support the Avaya Breeze® platform security module network.
   j. In the **Out of Band Management** field, select the network that supports the Avaya Breeze® platform management network.

k. In the **Datastore** field, select the datastore that supports the Avaya Breeze® platform server.

l. Click **Save**.

9. On the Upgrade Configuration page, ensure that the **Configuration Status** field displays ✓.

   If the field displays ✗, review the information on the Edit Upgrade Configuration page.

10. On the Upgrade Configuration page, click **Upgrade**.
11. On the Job Schedule page, click one of the following:
    - **Run Immediately**: To perform the job.
    - **Schedule later**: To perform the job at a scheduled time.
12. Click **Schedule**.
13. Click **Upgrade**.
14. To view the upgrade status, do the following:
    a. In the navigation pane, click **Upgrade Job Status**.
    b. In the **Job Type** field, click **Upgrade**.
    c. Click the upgrade job that you want to view.
15. Verify that the upgrade of the application is successful.

## Committing the upgrade of Avaya Breeze® platform

### Procedure

1. On System Manager, click **Services** > **Solution Deployment Manager** > **Upgrade Management**.
2. Select the Avaya Breeze® platform by selecting the check box to the left of the **Name** column.
3. In the **Upgrade Actions** menu, click **Commit/Rolback Upgrade**.

   The system displays the Job Schedule page.
4. Select **Commit** in the **Upgrade Actions** column.
5. Click **Run Immediately** to perform the job now or click **Schedule later** to perform the job at a scheduled time.
6. Click **Schedule**.

   The system returns to the Upgrade Management page.
7. Click **Enable Auto Refresh**.

   The system updates the **Last Action** and **Last Action Status** fields when the Commit job is complete.

8. Click the icon in the **Last Action Status** field.

   The system displays the Element Check Status dialog box.
9. Click **Done**.
10. To view the Commit job status, perform the following:
    a. In the navigation pane, click **Upgrade Jobs Status**.

       The system displays the Upgrade Jobs Status page.
    b. In the **Job Type** menu, click **Commit/Rollback Upgrade**.
    c. In the **Job Name** column, click the job that you want to view.
    d. Click **Done**.

# Verifying replication status

## About this task

Complete this task to verify that the System Manager database replicated to Avaya Breeze® platform.

## Procedure

1. On System Manager, click **Services** > **Replication**.
2. Locate the Avaya Breeze® platform in the **Replica Group** list.
3. In the **Synchronization Status** column, verify that the Avaya Breeze® platform status is `Synchronized`.

   Depending on the amount of data, the replication might take some time to complete. Refresh the page or periodically recheck the status.

   If the status is not `Synchronized`, for more information, see *Maintaining and Troubleshooting Avaya Breeze® platform*.

# Running maintenance tests

## Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®**.
2. In the navigation pane, click **System Tools And Monitoring** > **Maintenance Tests**.
3. In the **Select Avaya Breeze® to test** field, select an Avaya Breeze® platform server from the drop-down menu.
4. To run all the tests, click **Execute All Tests**.

5. To run specific tests:
   a. Select the test or tests that you want to run.
   b. Click **Execute Selected Tests**.

## Verifying server status

### About this task

Verify that the Avaya Breeze® platform server has upgraded to Release 3.8.1 and is functioning correctly.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. In the row for the Avaya Breeze® platform server you are upgrading, verify the following information:
   - The **Service Install Status** is a green checkmark.
   - The **Security Module** is Up.
   - The **License mode** is a green checkmark.
   - The **Version** displays the new release.

## Accepting new service

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. Select the server and click **System State** > **Accept New Service**.
3. Verify that the **System State** column for the server changes to **Accepting**.

## Verifying the Avaya Breeze® platform entity link connection

### About this task

Use this procedure to verify that Session Manager can connect with Avaya Breeze® platform using the SIP entity link. You must verify the status of SIP link monitoring on the Session Manager instance.

### Procedure

1. On System Manager, click **Elements** > **Session Manager** > **System Status** > **SIP Entity Monitoring**.
2. Click the name of the Session Manager instance that you linked to Avaya Breeze® platform.

The system displays a list with the status of all entity links for the selected Session Manager.

3. Locate the Avaya Breeze® platform SIP entity and check **Conn. Status**.

   If you see `UP`, the link to Session Manager is successful. Otherwise, use the troubleshooting information in *Maintaining and Troubleshooting Avaya Breeze® platform*.

# Installing new snap-ins

## About this task

Complete this procedure to install new snap-ins on the upgraded cluster and to optionally install new versions of updated snap-ins. Be sure to install the newest versions of connector snap-ins and the snap-ins that are mandatory for your cluster profile. Mandatory services for a cluster profile are listed on the Cluster Editor page. For a list of connector snap-ins, see *Avaya Breeze® platform Overview and Specification*.

## Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Service Management**.
2. Load the snap-in.
   a. Click **Load**.
   b. In the Load Service window, click **Choose file**, browse to select your snap-in and click **Open**.
   c. Click **Load** in the Load Service window.
   d. For licensed snap-ins, if you agree to the Avaya End User License Agreement (EULA), click **Accept**.

      Your snap-in displays on the Service Management page with a **State** of **Loaded**.
3. Install the snap-in.
   a. Select the snap-in you want to install.
   b. Click **Install**.
   c. Select the clusters where you want the snap-in to reside, and click **Commit**.
   d. To see the status of the snap-in installation, click the Refresh Table icon located in the upper-left corner of the **All Services** list.

      **Installed** with a green check mark indicates that the snap-in has completed installation on all Avaya Breeze® platform servers in the cluster. **Installing** with a yellow exclamation mark enclosed in a triangle indicates that the snap-in has not completed installation on all servers.

## Setting preferred snap-in version

### About this task

It is possible to set a preferred version of a snap-in. This designation can then be used in a service profile to indicate the version of the snap-in to provide to a group of users. You must first designate the version of the snap-in that you want to be the preferred version. Then, change the version designation for the snap-in in the service profile. For more information about service profiles and version designations, see *Administering Avaya Breeze® platform*.

Non-call-intercept snap-ins automatically use the preferred version. If a preferred version is not specified for a non-call-intercept snap-in, by default the latest version of the snap-in is used. Non-call-intercept snap-ins are not included in a service profile.

### Procedure

1. Designate the preferred version.
   a. On System Manager,click **Elements** > **Avaya Breeze®** > **Service Management**.
   b. From the **All Services** list, select the version of the snap-in that you want to be the preferred version.
   c. Click **Set Preferred Version**.
   d. Select the clusters for which you want this to be the preferred version and click **Commit**.

      **Note:**

      You can set the preferred version for multiple snap-ins in a single transaction.
2. Edit the service profile.
   a. On System Manager,click **Elements** > **Avaya Breeze®** > **Configuration** > **Service Profiles**.
   b. Select the service profile and click **Edit**.
   c. Remove the snap-in from the service profile by clicking the **X** next to the snap-in name.
   d. In the list of **Available Service to Add to this Service Profile** click **Advanced** next to the snap-in name.
   e. For **Service Version** select **Preferred** and click **Add**.
   f. Click **Commit** to save the service profile.

# Upgrading with Method 3

## Method 3 overview

Use Method 3 for a rolling upgrade where each node is upgraded individually and the upgrade is not service impacting.

You can upgrade using one of the following methods:

- ISO file
- System Manager SDM

## Checklist for Method 3 upgrades

An ISO upgrade might fail due to networking issues and other problems outside the control of Avaya Breeze® platform. When this happens, and the ISO was complete and not truncated by the SFTP file transfer to the VM, you might be able to redo the upgrade.

**Note:**

This method is not supported for upgrades to Avaya Breeze® platform R3.8.1 from earlier releases.

Snap-ins may have prerequisite activity and post-upgrade activity that needs consideration before proceeding with the Platform upgrade. For information, refer to the snap-in documentation.

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 1 | Before upgrading Avaya Breeze® platform, upgrade the following in this order to the required release:<br>1. System Manager<br>2. Session Manager | For more information, see *Upgrading Avaya Aura® System Manager* and *Upgrading Avaya Aura® Session Manager*.<br>If only upgrading Avaya Breeze® platform Element Manager, see the "Running the **`upgradeSolution`** script for System Manager" section in *Deploying Avaya Breeze® platform*. | |
| 2 | Upgrade Avaya Aura® Media Server. | See *Deploying and Updating Avaya Aura® Media Server Appliance*.<br>Upgrade Avaya Aura® Media Server within the same maintenance window as the Avaya Breeze® platform upgrade. | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 3 | If you have a cluster database enabled, take a backup. | See *Administering Avaya Breeze® platform*. | |
| 4 | On the Cluster Administration page, identify the cluster you want to upgrade. For clusters with multiple servers, determine the sequence in which you want to upgrade the servers. | See Viewing and changing server cluster database status on page 78 and Server upgrade sequence on page 77.<br>This step is for upgrading Avaya Breeze® platform nodes with snap-ins that support non-service impacting upgrades.<br>Check your snap-in documentation for specific upgrade considerations. | |
| 5 | To upgrade using the ISO file method, download the ISO file and patch file (if required) from PLDS. Confirm the files are complete by running checksum comparisons and then compare to the value on PLDS. If the file is correct, copy the ISO file and the patch file to each Avaya Breeze® platform server you will be upgrading.<br>For upgrades using SDM:<br>• Download the OVA file and patch file (if required) from PLDS. Confirm the files are complete by running checksum comparisons and then compare to the value on PLDS.<br>• Download the versions*.xml file. | See Downloading software from PLDS on page 78.<br>For more information about SDM upgrades, see Checklist for upgrading Avaya Breeze platform using Solution Deployment Manager on page 81. | |
| 6 | Verify that the enrollment password is not expired. | See Verifying enrollment password status on page 80. | |
| 7 | Change the state of the cluster you are upgrading to Deny New Service. | See Denying new service on page 80. | |
| 8 | If a cluster database is enabled and the next node is an active node, change the status of the active node to Standby. | See Viewing and changing server cluster database status on page 78. | |
| 9 | Verify that the server **Activity** field is set to 0. | See Verify activity on page 80. | |
| 10 | Take a snapshot of the current VM to enable reverting if necessary. | This task is not required if you are using the SDM upgrade option. | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 11 | Upgrade the Avaya Breeze® platform software. | To upgrade using the ISO file method, see Upgrading the Avaya Breeze platform server on page 81.<br>For more information about SDM upgrades, see Checklist for upgrading Avaya Breeze platform using Solution Deployment Manager on page 81.<br>The server reboots automatically when the upgrade script completes. | |
| 12 | Install the patch file (if required) . | See Patching Avaya Breeze platform on page 97. | |
| 13 | Upgrade the mandatory snap-ins and connector snap-ins. | For more information, see your snap-in documentation. | |
| 14 | Verify data replication between System Manager and Avaya Breeze® platform. | See Verifying replication status on page 90. | |
| 15 | Run Avaya Breeze® platform maintenance tests for the server. | See Running maintenance tests on page 91. Resolve errors before proceeding. For information, see *Maintaining and Troubleshooting Avaya Breeze® platform*. | |
| 16 | On the Server Administration page verify the following for the upgraded server:<br>• **Service Install Status** shows a green checkmark<br>• Security module is running<br>• **License mode** shows a green checkmark<br>• The correct version information is displayed<br>If using Reliable Eventing Framework, verify that the state of the node changes from Electing to Slave. | See Verifying server status on page 91. | Complete this procedure only if you have disabled secure grid for the cluster that contains the servers you are upgrading. This procedure is service impacting. |
| 17 | Change the state to Accept New Service for the upgraded Avaya Breeze® platform node. | See Accepting new service on page 91. | |

*Table continues…*

| # | Action | Link/Notes | ✔ |
|---|---|---|---|
| 18 | Verify the Avaya Breeze® platform SIP entity link with Session Manager. | See Verifying the Avaya Breeze platform entity link connection on page 92. | |
| 19 | Repeat steps 7 through 17 for each cluster you are upgrading. | — | |
| 20 | Install new snap-ins. | See Installing new snap-ins on page 92. | |
| 21 | Set the preferred version for each snap-in. | See Setting preferred snap-in version on page 93. | |
| 22 | Test Avaya Breeze® platform snap-ins to verify that they are functioning correctly.<br>Delete any snapshots that you no longer need. | It is important to delete snapshots you no longer need within 12–24 hours. For more information, see VMware snapshots on page 107. | |
| 23 | Run a test alarm. | — | |

## Customer configuration information for ISO upgrades

You require the following information to upgrade Avaya Breeze® platform with an ISO file. Have this information before you begin the upgrade.

### Customer Login Settings

| Field | Information to enter | Notes |
|---|---|---|
| Login Name | `Enter Login ID to use for the customer account.` | Login ID and password for customer account you will use during deployment |
| Enter Password | `Enter the customer account password.` | |

## Server upgrade sequence

If you have multiple servers in a cluster and have snap-ins that use the cluster database, you must upgrade the servers in the correct sequence to avoid customer impact. The sequence depends on the active, standby, or idle status of the server. View the status on the System Manager Avaya Breeze® platform Cluster Administration page.

### Upgrade sequence

1. Upgrade all idle servers one at a time.
2. Upgrade the standby server.
3. Switch the active server to be the standby server. (The standby server becomes the new active server.)

4. Upgrade the new standby server.

If using Reliable Eventing Framework, you can upgrade the broker nodes in any sequence.

## Viewing and changing server cluster database status

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Cluster Administration**.
2. Click **Show** in front of the cluster that contains the servers you are upgrading.
3. In the Cluster Database column, identify the Active, Standby, and Idle servers.
4. To change the server cluster database status, put the cluster in **Deny New State** and click the status in the Cluster Database column.
   - Active status changes to standby
   - Standby status changes to active
   - Idle status changes to standby

## Downloading software from PLDS

### About this task

**Note:**

You can download product software from http://support.avaya.com also.

### Procedure

1. In your web browser, type http://plds.avaya.com to go to the Avaya PLDS website.
2. On the PLDS website, enter your Login ID and password.
3. On the Home page, select **Assets**.
4. Select **View Downloads**.
5. Click the search icon ( ) for Company Name.
6. In the Search Companies dialog box, do the following:
   a. In the **%Name** field, type `Avaya` or the Partner company name.
   b. Click **Search Companies**.
   c. Locate the correct entry and click the **Select** link.
7. Search for the available downloads by using one of the following:
   - In **Download Pub ID**, type the download pub ID.
   - In the **Application** field, click the application name.

8. Click **Search Downloads**.
9. Scroll down to the entry for the download file, and click the **Download** link.
10. Select a location where you want to save the file, and click **Save**.
11. On the PLDS page, get the md5sum and sha1sum.
    a. In the directory where the ISO was downloaded, run the command: `md5sum aus-installer-correct version.iso`.
    b. Confirm that the checksum generated by this command matches the value on the PLDS page.
    c. If the values do not match, there was a network failure during transmission, and it is recommended to retry.
    d. If it fails again, contact Avaya Support.
12. **(Optional)** If you receive an error message, click the message, install Active X, and continue with the download.
13. **(Optional)** When the system displays the security warning, click **Install**.

    When the installation is complete, PLDS displays the downloads again with a check mark next to the downloads that have completed successfully.

# Disabling the secure grid

## About this task

Complete this procedure only if you have enabled the secure grid for a cluster. This procedure is service impacting.

## Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Cluster Administration**.
2. Select the cluster that contains the servers you want to upgrade.
3. From the **Cluster State** drop-down menu, select **Deny New Service**.
4. Verify that the system displays **Denying** in the **Cluster State** column.
5. Select the cluster that contains the servers you want to upgrade and click **Edit**.
6. Under Cluster Attributes uncheck **Use secure grid?**
7. Click **Commit**.
8. Select the cluster that contains the servers you want to upgrade.
9. From the **Cluster State** drop-down menu, select **Accept New Service**.

## Verifying enrollment password status

Avaya Breeze® platform requires an Enrollment Password during the initial installation and deployment process. Enrolling a password establishes trust between System Manager and Avaya Breeze® platform. The enrollment password is also known as the certificate enrollment password.

If the enrollment password has expired, renew the existing password.

If the **Time Remaining** value is not zero, the password is valid. Verify that the time remaining is sufficient.

### Procedure

1. On System Manager, click **Services** > **Security** > **Certificates** > **Enrollment Password**.
2. If the value of the **Time Remaining** field is zero, renew the password:
   a. In the **Password expires in** field, select a value from the drop-down menu for the time when the password must expire.
   b. Enter the password in the **Password** field.
   c. Reenter the password in the **Confirm Password** field.
   d. Click **Commit**.

   The system updates the **Time Remaining** field.

## Denying new service

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. Select the server that you want to upgrade.
3. From the **System State** drop-down menu, select **Deny New Service**.
4. Verify that the system displays **Denying** in the **System State** column.

## Verify activity

### About this task

Verify that currently there is no activity on the Avaya Breeze® platform server you are upgrading.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. In the row for the server you are upgrading, look in the **Activity** column.
3. Verify that the Activity is 0.

Even after new service is stopped, it can take a couple of hours for activity to reach zero. If activity has not stopped in a reasonable time, you can choose to proceed with the upgrade. Active calls will continue, but Avaya Breeze® platform snap-in call control for those calls will be lost.

## Upgrading the Avaya Breeze® platform server

### Before you begin

1. Verify that you have copied the ISO upgrade file to the server that you are upgrading.
2. Take a snapshot of the current VM to enable reverting if necessary.

### Procedure

1. Log on to the Avaya Breeze® platform server.
2. Enter the command **`upgradeCE`** <*iso filename*>.
3. Step through prompts until the upgrade is installed.

## Upgrades using Solution Deployment Manager

System Manager Solution Deployment Manager is a centralized upgrade solution, which you can use to upgrade Avaya Breeze® platform. You can upgrade from Avaya Breeze® platform Release 3.3 or higher to the latest release.

Solution Deployment Manager accesses the OVA file in the System Manager software library.

See the following documents for more information:

- *Upgrading and Migrating Avaya Aura® applications from System Manager*
- *Administering Avaya Aura® System Manager*
- *Avaya Aura® System Manager Solution Deployment Manager Job-Aid*

### Prerequisites

- To use the Solution Deployment Manager upgrde process, you must have Avaya Breeze® platform Release 3.3 or later.
- The VMware host or Appliance Virtualization Platform and the Avaya Breeze® platform virtual machine are administered in Solution Deployment Manager Application Management. For more information, see *Administering Avaya Aura® System Manager*.

## Checklist for upgrading Avaya Breeze® platform using Solution Deployment Manager

After completing this checklist, return to the checklist for Method 3 upgrades.

If you are using Solution Deployment Manager in a simultaneous upgrade model, you must perform the restore operation after the upgrade is complete if you want to keep your data. Backing up the data is necessary to do the restore after the upgrade.

| # | Task | ✔ |
|---|---|---|
| 1 | Complete items 1 to 11 in Checklist for Method 3 upgrades on page 74. | |
| 2 | Ensure that you install Solution Deployment Manager. | |
| 3 | Install the OVA file into the System Manager software library. | |
| 4 | Upload the `versions_edp.xml` file to Solution Deployment Manager.<br>For more information, see *Avaya Aura® System Manager Solution Deployment Manager Job-Aid*. | |
| 5 | Re-establish the trust connection when upgrading applications that were not deployed from Solution Deployment Manager. | |
| 6 | Refresh the host status. | |
| 7 | Refresh the elements.<br>You can either run the job schedule immediately or schedule it for a later time. | |
| 8 | Analyze the software library inventory. | |
| 9 | Perform the pre-upgrade check. | |
| 10 | Perform the upgrade using Solution Deployment Manager. | |
| 11 | Commit the upgrade of Avaya Breeze® platform. | |
| 12 | Copy the patch file to the Avaya Breeze® platform server. | |
| 13 | Return to item 13 in Checklist for Method 3 upgrades on page 74. | |

## Installing the Solution Deployment Manager client

### Procedure

1. Download the `Avaya_SDMClient_win64_8.1.3.0.1035538_49.zip` file from the Avaya Support website at http://support.avaya.com or from the Avaya PLDS website, at https://plds.avaya.com/.
2. On the Avaya Support website, click **Support by Products** > **Downloads**, and type the product name as **System Manager**, and Release as **8.0.x**.
3. Click the **Avaya Aura® System Manager Release 8.0.x SDM Client Downloads, 8.0.x** link. Save the zip file, and extract to a location on your computer by using the WinZip application.

   You can also copy the zip file to your software library directory, for example, `c:/tmp/Aura`.
4. Right click on the executable, and select **Run as administrator** to run the `Avaya_SDMClient_win64_8.1.3.0.1035538_49.exe` file.

   The system displays the Avaya Solution Deployment Manager screen.
5. On the Welcome page, click **Next**.

6. On the License Agreement page, read the License Agreement, and if you agree to its terms, click **I accept the terms of the license agreement** and click **Next**.
7. On the Install Location page, perform one of the following:
   - To install the Solution Deployment Manager client in the system-defined folder, leave the default settings, and click **Next**.
   - To specify a different location for installing the Solution Deployment Manager client, click **Choose**, and browse to an empty folder. Click **Next**.

     To restore the path of the default directory, click **Restore Default Folder**.

   The default installation directory of the Solution Deployment Manager client is `C:\Program Files\Avaya\AvayaSDMClient`.
8. Click **Next**.
9. On the Pre-Installation Summary page, review the information, and click **Next**.
10. On the User Input page, perform the following:
    a. To start the Solution Deployment Manager client at the start of the system, select the **Automatically start SDM service at startup** check box.
    b. To change the default directory, in Select Location of Software Library Directory, click **Choose** and select a directory.

       The default software library of the Solution Deployment Manager client is `C:\Program Files\Avaya\AvayaSDMClient\Default_Artifacts`.

       You can save the artifacts in the specified directory.
    c. In **Data Port No**, select the appropriate data port.

       The default data port is 1527. The data port range is from 1527 through 1627.
    d. In **Application Port No**, select the appropriate application port.

       The default application port is 443. If this port is already in use by any of your application on your system, then the system does not allow you to continue the installation. You must assign a different port number from the defined range. The application port range is from 443 through 543.

       **Note:**

       After installing the Solution Deployment Manager client in the defined range of ports, you cannot change the port after the installation.
    e. **(Optional)** Click **Reset All to Default**.
11. Click **Next**.
12. On the Summary and Validation page, verify the product information and the system requirements.

    The system performs the feasibility checks, such as disk space and memory. If the requirements are not met, the system displays an error message. To continue with the installation, make the disk space, memory, and the ports available.

13. Click **Install**.
14. To exit the installer, on the Install Complete page, click **Done**.

    The installer creates a shortcut on the desktop.
15. To start the client, click the Solution Deployment Manager client icon,.

### Next steps

- Configure the laptop to get connected to the services port if you are using the services port to install.
- Connect the Solution Deployment Manager client to Appliance Virtualization Platform through the customer network or services port.

  For information about “Methods to connect the Solution Deployment Manager client to Appliance Virtualization Platform”, see *Using the Solution Deployment Manager client*.

## Installing the OVA file into the software library

### Procedure

1. Copy the previously downloaded Avaya Breeze® platform OVA file to the System Manager `/swlibrary/staging/sync/` directory.

   If necessary, add the `staging/sync` folders to the directory structure.
2. Navigate to **Home** > **Services** > **Solution Deployment Manager** > **Software Library Management** and click **Manage Files**.
3. In the Sync Files from directory list, enter the SHA256 checksum and select a software library.

   For **Product Family**, **Device Type**, and **Software Type**, select **others**.
4. Click **Sync** and wait for the operation to complete.
5. Verify the completion of the file sync to the library.
   a. Navigate to **Home** > **Services** > **Scheduler** > **Completed Jobs**.
   b. Look for Job Name = IUM_syncFiles, and Job Status = SUCCESSFUL.
6. Navigate to **Home** > **Services** > **Solution Deployment Manager** > **Software Library Management**.
7. To check SMGR_DEFAULT_LOCAL, click **Manage Files** and confirm that the OVA file appears in the list of files under Software Library Files.

## Downloading the version_edp.xml file

### About this task

This file provides information about your software entitlements.

### Procedure

1. Log in to https://plds.avaya.com.

2. Search for the `smgr-versionsxmls.zip` using PLDS ID SMGRSUM0001:
   a. Click the **Assets** tab.
   b. Click **View Downloads**.
   c. Select **Search by Download**.
   d. In the **Download pub ID** field, enter `SMGRSUM0001`.
   e. Click **Search Downloads**.
3. Download the zip file.
4. Extract the zip file.

## Re-establishing a trust connection

### About this task

Use this procedure to upgrade an application that was not deployed from Solution Deployment Manager.

### Procedure

1. On the System Manager web console, click **Services** > **Solution Deployment Manager**.
2. In the navigation pane, click **Application Management**.
3. Select the virtual machine.
4. To establish trust, click **More actions** > **Re-establish connection**.
5. In the Select Version pane, select `others`.
6. Type the credentials and click **Reestablish Connection**.

   The **Current Action Status** column displays the status of the virtual machine reestablishment.

## Refreshing the host status

### Procedure

1. On System Manager, click **Services** > **Solution Deployment Manager** > **Application Management**.
2. On **Application Management Tree**, click the required location.
3. Click the **Platforms** tab.

   The system displays the list of hosts for the selected location.
4. Select the required host.
5. Click **Refresh**.

   The **Current Action Status** column displays the status of the host.

## Refreshing elements

### About this task

Before upgrading, refresh elements on the Upgrade Management page.

### Before you begin

On the User Settings page, configure the user settings.

### Procedure

1. On the System Manager web console, click **Services** > **Solution Deployment Manager**.
2. In the navigation pane, click **Upgrade Management**.
3. On the Upgrade Management page, do the following:
   a. Select one or more devices.
   b. Click **Pre-upgrade Actions** > **Refresh Element(s)**.
4. On the Job Schedule page, click one of the following:
   - **Run Immediately**: To perform the job.
   - **Schedule later**: To perform the job at a scheduled time.
5. If you selected **Schedule later**, select the date, time, and timezone.
6. Click **Schedule**.

   The **Last Action Status** column displays ✓ and the **Current Version** column displays the current version of the element.

## Analyzing software

### About this task

Analyze OVA, service pack, and feature pack files uploaded to the software library. To get the correct entitlement upgrade version, the **Version** field must contain the appropriate value. You can get the version values from the `version_edp.xml` file you downloaded from PLDS.

This analyze operation is not required for custom patching.

### Before you begin

- On the Roles page, set the Software Management Infrastructure permission.
- Refresh elements.

### Procedure

1. On the System Manager web console, click **Services** > **Solution Deployment Manager**.
2. In the navigation pane, click **Upgrade Management**.
3. On the Upgrade Management page, do the following:
   a. Select a device that you want to analyze.
   b. Click **Pre-upgrade Actions** > **Analyze**.

4. On the Job Schedule page, click one of the following:
   - **Run Immediately**: To perform the job.
   - **Schedule later**: To perform the job at a scheduled time.
5. If you select **Schedule later**, select the date, time, and timezone.
6. Click **Schedule**.

   The **Last Action Status** column displays a ✓, the Current Version column displays the current version of the element, and the Entitled Upgrade Version column displays the next version of the element which you can upgrade to.

## Performing the preupgrade check

### Procedure

1. On the System Manager web console, click **Services** > **Solution Deployment Manager**.
2. In the navigation pane, click **Upgrade Management**.
3. On the Upgrade Management page, do the following:
   a. Select an application to upgrade.
   b. Click **Pre-upgrade Actions** > **Pre-upgrade Check**.
4. On the Pre-upgrade Configuration page, fill in the required information.

   To migrate to an ESXi host from the old server, in **Target Host**, select the ESXi host.
5. On the Job Schedule page, click one of the following:
   - **Run Immediately**: To perform the job.
   - **Schedule later**: To perform the job at a scheduled time.
6. Click **Schedule**.

   On the Upgrade Management page, the status of the **Last Action Status** and **Pre-upgrade Check Status** columns display a ✓.

## Upgrading Avaya Breeze® platform using Solution Deployment Manager

### About this task

Use this procedure to upgrade Avaya Breeze® platform usingSolution Deployment Manager.

### Before you begin

Install the Solution Deployment Manager client.

### Procedure

1. Do one of the following to access Solution Deployment Manager:
   - On the System Manager web console, click **Services** > **Solution Deployment Manager**.
   - Navigate to **Avaya** > **Avaya SDM Client** from the Windows **Start** menu.

- Click the Solution Deployment Manager client icon ( ) on your desktop.

2. In the navigation pane, click **Upgrade Management**.
3. Click the Avaya Breeze® platform application to upgrade.
4. Click **Upgrade Actions** > **Upgrade/Update**.
5. On the Upgrade Configuration page, to view the devices associated with the application that you want to upgrade, do the following:
   a. Click **Details** and review the dependent devices.
   b. Click **Done**.
6. To continue with upgrade when the recommended checks fail during the pre-upgrade check, select the **Override preupgrade check** check box.
7. To provide the upgrade configuration details, click **Edit**.
8. To upgrade:
   a. Select the appropriate ESXi host.
   b. In the **Upgrade Source** field, select **SMGR_DEFAULT_LOCAL**.
   c. In the **Upgrade To** field, select the OVA file.
   d. In **Existing Administrative User**, type the customer login name.
   e. In **Existing Administrative Password**, type the customer login password.
   f. Click **Pre-populate Data**.

      The system populates the data for the following fields:

      - **IP Address**
      - **Short Hostname**
      - **Network Domain**
      - **Netmask**
      - **Default Gateway**
      - **DNS server(s)**
      - **Timezone**
      - **NTP server(s)**
      - **Login Name**
      - **Enter Customer Account Password**
      - **Primary System Manager IP**
      - **Enrollment Password**
      - **Accept the License Agreement**

g. In the **Flexi Footprint** field, select the footprint based on the user requirement.

h. Do one of the following in the **EASG User Access** field:

- Type `1` to enable EASG.

  Avaya recommends that you enable EASG.

- Type `2` to disable EASG.

i. In the **Public** field, select the network that will support the Avaya Breeze® platform security module network.

j. In the **Out of Band Management** field, select the network that supports the Avaya Breeze® platform management network.

k. In the **Datastore** field, select the datastore that supports the Avaya Breeze® platform server.

l. Click **Save**.

9. On the Upgrade Configuration page, ensure that the **Configuration Status** field displays ✅.

   If the field displays ❌, review the information on the Edit Upgrade Configuration page.

10. On the Upgrade Configuration page, click **Upgrade**.
11. On the Job Schedule page, click one of the following:
    - **Run Immediately**: To perform the job.
    - **Schedule later**: To perform the job at a scheduled time.
12. Click **Schedule**.
13. Click **Upgrade**.
14. To view the upgrade status, do the following:

    a. In the navigation pane, click **Upgrade Job Status**.

    b. In the **Job Type** field, click **Upgrade**.

    c. Click the upgrade job that you want to view.

15. Verify that the upgrade of the application is successful.

## Committing the upgrade of Avaya Breeze® platform

### Procedure

1. On System Manager, click **Services** > **Solution Deployment Manager** > **Upgrade Management**.
2. Select the Avaya Breeze® platform by selecting the check box to the left of the **Name** column.
3. In the **Upgrade Actions** menu, click **Commit/Rolback Upgrade**.

   The system displays the Job Schedule page.

4. Select **Commit** in the **Upgrade Actions** column.
5. Click **Run Immediately** to perform the job now or click **Schedule later** to perform the job at a scheduled time.
6. Click **Schedule**.

   The system returns to the Upgrade Management page.
7. Click **Enable Auto Refresh**.

   The system updates the **Last Action** and **Last Action Status** fields when the Commit job is complete.
8. Click the icon in the **Last Action Status** field.

   The system displays the Element Check Status dialog box.
9. Click **Done**.
10. To view the Commit job status, perform the following:
    a. In the navigation pane, click **Upgrade Jobs Status**.

       The system displays the Upgrade Jobs Status page.
    b. In the **Job Type** menu, click **Commit/Rollback Upgrade**.
    c. In the **Job Name** column, click the job that you want to view.
    d. Click **Done**.

# Verifying replication status

## About this task

Complete this task to verify that the System Manager database replicated to Avaya Breeze® platform.

## Procedure

1. On System Manager, click **Services** > **Replication**.
2. Locate the Avaya Breeze® platform in the **Replica Group** list.
3. In the **Synchronization Status** column, verify that the Avaya Breeze® platform status is `Synchronized`.

   Depending on the amount of data, the replication might take some time to complete. Refresh the page or periodically recheck the status.

   If the status is not `Synchronized`, for more information, see *Maintaining and Troubleshooting Avaya Breeze® platform*.

## Running maintenance tests

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®**.
2. In the navigation pane, click **System Tools And Monitoring** > **Maintenance Tests**.
3. In the **Select Avaya Breeze® to test** field, select an Avaya Breeze® platform server from the drop-down menu.
4. To run all the tests, click **Execute All Tests**.
5. To run specific tests:
   a. Select the test or tests that you want to run.
   b. Click **Execute Selected Tests**.

## Verifying server status

### About this task

Verify that the Avaya Breeze® platform server has upgraded to Release 3.8.1 and is functioning correctly.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. In the row for the Avaya Breeze® platform server you are upgrading, verify the following information:
   - The **Service Install Status** is a green checkmark.
   - The **Security Module** is Up.
   - The **License mode** is a green checkmark.
   - The **Version** displays the new release.

## Accepting new service

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
2. Select the server and click **System State** > **Accept New Service**.
3. Verify that the **System State** column for the server changes to **Accepting**.

## Verifying the Avaya Breeze® platform entity link connection

### About this task

Use this procedure to verify that Session Manager can connect with Avaya Breeze® platform using the SIP entity link. You must verify the status of SIP link monitoring on the Session Manager instance.

### Procedure

1. On System Manager, click **Elements** > **Session Manager** > **System Status** > **SIP Entity Monitoring**.
2. Click the name of the Session Manager instance that you linked to Avaya Breeze® platform.

   The system displays a list with the status of all entity links for the selected Session Manager.
3. Locate the Avaya Breeze® platform SIP entity and check **Conn. Status**.

   If you see `UP`, the link to Session Manager is successful. Otherwise, use the troubleshooting information in *Maintaining and Troubleshooting Avaya Breeze® platform*.

## Installing new snap-ins

### About this task

Complete this procedure to install new snap-ins on the upgraded cluster and to optionally install new versions of updated snap-ins. Be sure to install the newest versions of connector snap-ins and the snap-ins that are mandatory for your cluster profile. Mandatory services for a cluster profile are listed on the Cluster Editor page. For a list of connector snap-ins, see *Avaya Breeze® platform Overview and Specification*.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®** > **Service Management**.
2. Load the snap-in.
   a. Click **Load**.
   b. In the Load Service window, click **Choose file**, browse to select your snap-in and click **Open**.
   c. Click **Load** in the Load Service window.
   d. For licensed snap-ins, if you agree to the Avaya End User License Agreement (EULA), click **Accept**.

      Your snap-in displays on the Service Management page with a **State** of **Loaded**.

3. Install the snap-in.
   a. Select the snap-in you want to install.
   b. Click **Install**.
   c. Select the clusters where you want the snap-in to reside, and click **Commit**.
   d. To see the status of the snap-in installation, click the Refresh Table icon located in the upper-left corner of the **All Services** list.

      **Installed** with a green check mark indicates that the snap-in has completed installation on all Avaya Breeze® platform servers in the cluster. **Installing** with a yellow exclamation mark enclosed in a triangle indicates that the snap-in has not completed installation on all servers.

## Setting preferred snap-in version

### About this task

It is possible to set a preferred version of a snap-in. This designation can then be used in a service profile to indicate the version of the snap-in to provide to a group of users. You must first designate the version of the snap-in that you want to be the preferred version. Then, change the version designation for the snap-in in the service profile. For more information about service profiles and version designations, see *Administering Avaya Breeze® platform*.

Non-call-intercept snap-ins automatically use the preferred version. If a preferred version is not specified for a non-call-intercept snap-in, by default the latest version of the snap-in is used. Non-call-intercept snap-ins are not included in a service profile.

### Procedure

1. Designate the preferred version.
   a. On System Manager,click **Elements** > **Avaya Breeze®** > **Service Management**.
   b. From the **All Services** list, select the version of the snap-in that you want to be the preferred version.
   c. Click **Set Preferred Version**.
   d. Select the clusters for which you want this to be the preferred version and click **Commit**.

      **Note:**

      You can set the preferred version for multiple snap-ins in a single transaction.
2. Edit the service profile.
   a. On System Manager,click **Elements** > **Avaya Breeze®** > **Configuration** > **Service Profiles**.
   b. Select the service profile and click **Edit**.
   c. Remove the snap-in from the service profile by clicking the **X** next to the snap-in name.

d. In the list of **Available Service to Add to this Service Profile** click **Advanced** next to the snap-in name.

e. For **Service Version** select **Preferred** and click **Add**.

f. Click **Commit** to save the service profile.

# Enhanced Access Security Gateway

Avaya Breeze® platform supports Enhanced Access Security Gateway (EASG). EASG is a certificate-based, challenge-response authentication and authorization solution.

EASG provides a secure method for Avaya services personnel to:

- Access Avaya Breeze® platform remotely and onsite. As the customer, you can enable or disable access at any time.
- Perform tasks necessary for the ongoing support, management, and optimization of the solution.
- Enable remote proactive support tools such as Avaya Expert Systems® and Avaya Healthcheck.
- Perform the required maintenance tasks.

EASG only supports Avaya services logins, such as init, inads, and craft.

## Enabling and disabling EASG

### About this task

By enabling Avaya Services logins, you are granting Avaya access to your system. This setting is required to maximize the performance and value of your Avaya support entitlements, allowing Avaya to resolve product issues in a timely manner. The product must be registered using the Avaya Global Registration Tool (GRT) at https://grt.avaya.com for Avaya remote connectivity. See the Avaya support site https://support.avaya.com/registration for additional information for registering products and establishing remote access and alarming. By disabling Avaya Services logins, you are denying Avaya access to your system. This setting is not recommended, as it can impact Avaya's ability to provide support for the product.

### Procedure

1. Log in to the Avaya Breeze® platform CLI interface using your customer account.
2. To check the status of EASG, run the following command: `EASGStatus`.
3. To enable EASG, run the following command: `EASGManage --enableEASG`.
4. To disable EASG, run the following command: `EASGManage --disableEASG`.

# Viewing the EASG certificate information

### About this task

Use this procedure to view information about the product certificate, which includes information about when the certificate expires.

### Procedure

1. Log in to the Avaya Breeze® platform CLI interface using customer account.
2. Run the following command: `EASGProductCert --certInfo`.

# EASG site certificate

EASG site certificates are used by the onsite Avaya technicians who do not have access to the Avaya network to generate a response to the EASG challenge. The technician will generate and provide the EASG site certificate to the customer. The customer loads this EASG site certificate on each Avaya Breeze® platform server to which the customer has granted the technician access. The EASG site certificate will only allow access to systems on which it has been installed, and will only allow access to the given Avaya technician and cannot be used by anyone else to access the system including other Avaya technicians. Once this is done, the technician logs in with the EASG challenge and response. After the technician is done, the customer can remove the EASG site certificate from the server or it will be removed by the EASG software after the site certificate expires.

## Managing site certificates

### Before you begin

Obtain the site certificate from the Avaya support technician and install it to Avaya Breeze® platform. Note the location of this file and use it in place of *installed_pkcs7_name* in the following commands.

### Procedure

1. Log in to the Avaya Breeze® platform CLI interface using customer account.
2. To install the site certificate:
   a. Run the following command: `EASGSiteCertManage –add <installed_pkcs7_name>`.
   b. Save the Site Authentication Factor to share with the technician once on site.
3. To view information about a particular certificate: run the following command:
   - `EASGSiteCertManage --list`: To list all the site certificates that are currently installed on the system.
   - `EASGSiteCertManage --show <installed_pkcs7_name>`: To display detailed information about the specified site certificate.

4. To delete the site certificate, run the following command:
   - `EASGSiteCertManage --delete <installed_pkcs7_name>`: To delete the specified site certificate.
   - `EASGSiteCertManage --delete all`: To delete all the site certificates that are currently installed on the system.

# Chapter 4: Patching

## Determining patching sequence

### About this task

If you do not have snap-ins that use the cluster database, patch the servers in any sequence one at a time. See Patching Avaya Breeze platform on page 97. If you have multiple servers in a cluster and have snap-ins that use the cluster database, you must patch the servers in the correct sequence to avoid customer impact. The sequence depends on the active, standby, or idle status of the server. Follow the sequence in this procedure to patch your servers.

### Procedure

1. On System Manager, click **Elements** > **Avaya Breeze®**.
2. In the navigation pane, click **Cluster Administration**.
3. Click **Show** in front of the cluster you are patching to see the servers in the cluster.
4. In the Cluster Database column, identify the Active, Standby and idle servers.
5. Patch all Idle servers one at a time.
6. Patch the server with the Standby cluster database.
7. Click **Active** in the **Cluster Database** column of the Active server to switch it to Standby.
8. Click **Continue** to complete the switch to Standby.
9. Patch the server that now is the Standby.

## Patching Avaya Breeze® platform

### About this task

This procedure provides general patching steps. For more information about specific patches, see *Avaya Breeze® platform Release Notes*.

**Caution:**

You cannot remove a patch after it is installed. This includes recovery from a patch install failing due to intermittent network issues. To enable recovery, you must take a snapshot of Avaya Breeze® platform before installing the patch. Verify that the system is running correctly

after the patch is installed. When verified, remove the snapshot within 12–24 hours. See VMware snapshots on page 107 for special considerations when using snapshots.

### Before you begin

- The server must be in the Deny New Service state.
- Ensure that the activity count is 0 for a cluster database.
- Download the patch file and copy it to the Avaya Breeze® platform server.
- The patch should have the following Linux permissions: `rw-r--r--`.

### Procedure

1. Log in to Avaya Breeze® platform using the customer account.
2. Execute the `patchCE` command.

   For example: `$ patchCE –i /home/cust/<patchname>.bin`
3. When prompted that the patch is service interrupting, answer **Yes** and press `Enter`.

   The patch installs. Wait for the patch installation to complete. Depending on the patch, Avaya Breeze® platform may reboot.
4. Verify the version of the installed patch. The version can be viewed in one of the following ways:
   - Log in to Avaya Breeze® platform and execute the command `patchCE -s`.
   - Log in to Avaya Breeze® platform and execute the command `swversion`.
   - On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
5. On System Manager, click **Elements** > **Avaya Breeze®** > **Server Administration**.
6. Identify the row for the Avaya Breeze® platform server you are patching and verify the following information:

## Patch command options

**`patchCE [i|s|v] [patch file]`**

```
- i<patch file>: install patch
<patch file>: install patch
- s [patch file]: show patch information for binary or installed patch
- v <patch file>: verify patch can be installed
```

# Chapter 5: Resources

## Documentation

See the following related documents at https://support.avaya.com. Many documents are also available at https://documentation.avaya.com.

| Title | Use this document to: | Audience |
|---|---|---|
| Overview | | |
| *Avaya Breeze® platform Overview and Specification* | Understand the Avaya Breeze® platform platform, customer requirements, and design considerations. | Sales engineers<br>Programmers<br>System administrators<br>Services and support personnel |
| *Avaya Aura® System Manager Overview and Specification* | Understand System Manager customer requirements and design considerations. | Sales engineers<br>Programmers<br>System administrators<br>Services and support personnel |
| *Avaya Aura® Media Server Overview and Specification* | Understand Avaya Aura® Media Server customer requirements and design considerations. | Sales engineers<br>Programmers<br>System administrators<br>Services and support personnel |
| Deploying | | |
| *Deploying Avaya Breeze® platform* | Deploy and configure Avaya Breeze® platform. This is the main deployment document for Avaya Breeze® platform. The deployment documents for other environments are listed below. | Implementation engineers<br>Support personnel<br>System administrators |

*Table continues…*

| Title | Use this document to: | Audience |
|---|---|---|
| *Deploying Avaya OneCloud™ CPaaS-enabled Avaya Breeze® platform* | Deploy Avaya OneCloud™ CPaaS-enabled Avaya Breeze® platform. | Implementation engineers<br>Support personnel<br>System administrators |
| *Deploying Avaya Breeze® platform on AWS for Avaya Aura®* | Deploy Avaya Breeze® platform in an AWS environment. | Implementation engineers<br>Support personnel<br>System administrators |
| *Quick Start to deploying the HelloWorld Snap-in* | Install, configure, and test an Avaya Breeze® platform snap-in service, specifically the HelloWorld call intercept snap-in. | Programmers<br>System administrators |
| *Deploying Avaya Breeze® platform on Kernel-based Virtual Machine for Avaya Aura®* | Deploy Avaya Breeze® platform on KVM.<br>**Note:**<br>This document was last updated for Avaya Breeze® platform Release 3.7. | Implementation engineers<br>Support personnel<br>System administrators |
| *Planning for Deploying Avaya Aura® applications* | Understand deployment options for various Avaya Aura® applications. | Services and support personnel<br>System administrators |
| *Deploying and Updating Avaya Aura® Media Server Appliance* | Deploy and configure Avaya Aura® Media Server when it is installed on customer-provided servers. | System administrators<br>Services and support personnel |
| *Deploying Avaya Aura® System Manager in Infrastructure as a Service Environment* | Deploy and configure Avaya Aura® System Manager in an IaaS environment.<br>A separate document is also available for deploying System Managerin a virtualized environment. | System administrators<br>Services and support personnel |
| Administering | | |
| *Administering Avaya Breeze® platform* | Administer Avaya Breeze® platform and snap-ins. | System Administrators<br>Services and Support personnel |

*Table continues…*

| Title | Use this document to: | Audience |
|---|---|---|
| *Implementing and Administering Avaya Aura® Media Server* | Deploy and configure Avaya Aura® Media Server. | System administrators<br>Services and support personnel |
| *Administering Avaya Aura® System Manager* | Administer Avaya Aura® System Manager. | System Administrators<br>Services and support personnel |
| *Administering Avaya Aura® Session Manager* | Administer Avaya Aura® Session Manager. | System Administrators<br>Services and support personnel |
| *Administering Avaya Session Border Controller for Enterprise* | Administer Avaya SBCE. | System Administrators<br>Services and support personnel |
| Upgrading | | |
| *Upgrading Avaya Breeze® platform* | Upgrade Avaya Breeze® platform. | Services and support personnel |
| Maintaining and troubleshooting | | |
| *Maintaining and Troubleshooting Avaya Breeze® platform* | Troubleshoot Avaya Breeze® platform. | Services and support personnel<br>System administrators |
| *Troubleshooting Avaya Aura® System Manager* | Troubleshoot System Manager. | Services and support personnel |
| *Troubleshooting Avaya Aura® Session Manager* | Troubleshoot Avaya Aura® Session Manager. | Services and support personnel |

## Programmer guides

The following developer documents are available on Avaya DevConnect .

| Title | Use this document to: | Audience |
|---|---|---|
| *Getting Started with the Avaya Breeze® platform SDK* | Deploy and configure the Eclipse IDE, Apache Maven, and the Avaya Breeze® platform SDK. | Programmers |
| *Avaya Breeze® platform Snap-in Development Guide* | Understand the key concepts needed to develop the different types of Avaya Breeze® platform snap-ins. | Programmers |

*Table continues…*

| Title | Use this document to: | Audience |
|---|---|---|
| *Avaya Breeze® platform FAQ and Troubleshooting for Snap-in Developers* | Troubleshoot Avaya Breeze® platform snap-in developer issues. | Programmers |
| *Avaya Breeze® platform API Javadocs* | Understand API classes and uses. | Programmers |

## Finding documents on the Avaya Support website

### Procedure

1. Go to https://support.avaya.com.
2. At the top of the screen, type your username and password and click **Login**.
3. Click **Support by Product** > **Documents**.
4. In **Enter your Product Here**, type the product name and then select the product from the list.
5. In **Choose Release**, select the appropriate release number.

   The **Choose Release** field is not available if there is only one release for the product.
6. In the **Content Type** filter, click a document type, or click **Select All** to see a list of all available documents.

   For example, for user guides, click **User Guides** in the **Content Type** filter. The list only displays the documents for the selected category.
7. Click **Enter**.

## Avaya Documentation Center navigation

For some programs, the latest customer documentation is now available on the Avaya Documentation Center website at https://documentation.avaya.com.

**Important:**

For documents that are not available on Avaya Documentation Center, click **More Sites** > **Support** on the top menu to open https://support.avaya.com.

Using the Avaya Documentation Center, you can:

- Search for keywords.

  To filter by product, click **Filters** and select a product.
- Search for documents.

  From **Products & Solutions**, select a solution category and product, and then select the appropriate document from the list.

- Sort documents on the search results page.
- Click **Languages** ( ) to change the display language and view localized documents.
- Publish a PDF of the current section in a document, the section and its subsections, or the entire document.
- Add content to your collection using **My Docs** ( ).

  Navigate to the **Manage Content** > **My Docs** menu, and do any of the following:

  - Create, rename, and delete a collection.
  - Add topics from various documents to a collection.
  - Save a PDF of the selected content in a collection and download it to your computer.
  - Share content in a collection with others through email.
  - Receive collection that others have shared with you.
- Add yourself as a watcher using the **Watch** icon ( ).

  Navigate to the **Manage Content** > **Watchlist** menu, and do the following:

  - Enable **Include in email notification** to receive email alerts.
  - Unwatch selected content, all content in a document, or all content on the Watch list page.

  As a watcher, you are notified when content is updated or deleted from a document, or the document is removed from the website.
- Share a section on social media platforms, such as Facebook, LinkedIn, and Twitter.
- Send feedback on a section and rate the content.

**Note:**

Some functionality is only available when you log in to the website. The available functionality depends on your role.

# Training

The following courses are available on the Avaya Learning website at http://www.avaya-learning.com. After logging in to the website, enter the course code or the course title in the **Search** field, and click **Go** to search for the course.

| Course code | Course title |
|---|---|
| 43750W | Selling Avaya Custom and Integration Solutions |
| 30210W | Avaya Breeze® platform Overview for Design |
| 30810W | Designing the Avaya Breeze® Solution Part 1 of 2 |

*Table continues…*

| Course code | Course title |
|---|---|
| 30820W | Designing the Avaya Breeze® Solution Part 2 of 2 |
| 39220W | Avaya Breeze® Release 3.8 Details for Pre-Sales |
| 39240W | Avaya Breeze® UC Snap-ins Release 3.8 Details for Pre-Sales |
| 2016W | Avaya Breeze® platform Fundamentals |
| 20240W | Programming Avaya Breeze® platform Snap-ins Using Java SDK |
| 20250W | Creating Avaya Breeze® platform Workflows Using Engagement Designer |
| 20260W | Creating Advanced Avaya Breeze® platform Workflows Using Engagement Designer |
| 7016W | Avaya Breeze® platform Implementation and Support |
| 71300V | Integrating Avaya Aura® Communication Applications |
| 72300V | Supporting Avaya Aura® Communication Applications |

# Avaya Breeze® platform videos

Avaya Breeze® platform provides the following videos to help in the development and deployment of snap-ins. Access these videos at http://www.avaya.com/breezedeveloper.

| Title | Audience |
|---|---|
| Getting Started with the Avaya Breeze® platform SDK: Windows | Programmers |
| Getting Started with the Avaya Breeze® platform SDK: Linux | Programmers |
| Creating Your First Service — Part 1 | Programmers |
| Creating Your First Service — Part 2 | Programmers |
| Server Installation and Configuration with vCenter | System Administrators, Services, and Support personnel |
| Server Installation and Configuration without vCenter | System Administrators, Services, and Support personnel |
| Service Installation, Configuration, and Test | Programmers |
| Understanding the Hello Sample Service | Programmers |
| Understanding the Multi-Channel Broadcast Sample Service | Programmers |
| Understanding the Whitelist Sample Service | Programmers |

# Support

### Platform support

Go to the Avaya Support website at https://support.avaya.com/ for the most up-to-date documentation and product notices. You can also search for release notes, service packs, and patches. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Product documentation is also available on the Avaya Documentation Center at https://documentation.avaya.com.

### Developer support

Go to the Avaya DevConnect website at http://www.avaya.com/breezedeveloper to access the Avaya Breeze® platform API, SDK, sample applications, developer-oriented technical documentation, and training materials.

**Related links**

Using the Avaya InSite Knowledge Base on page 105

# Using the Avaya InSite Knowledge Base

The Avaya InSite Knowledge Base is a web-based search engine that provides:

- Up-to-date troubleshooting procedures and technical tips
- Information about service packs
- Access to customer and technical documentation
- Information about training and certification programs
- Links to other pertinent information

If you are an authorized Avaya Partner or a current Avaya customer with a support contract, you can access the Knowledge Base without extra cost. You must have a login account and a valid Sold-To number.

Use the Avaya InSite Knowledge Base for any potential solutions to problems.

1. Go to http://www.avaya.com/support.
2. Log on to the Avaya website with a valid Avaya user ID and password.

   The system displays the Avaya Support page.
3. Click **Support by Product** > **Product-specific Support**.
4. In **Enter Product Name**, enter the product, and press `Enter`.
5. Select the product from the list, and select a release.
6. Click the **Technical Solutions** tab to see articles.
7. Select relevant articles.

**Related links**

Support on page 105

# Appendix A: VMware snapshots

A snapshot preserves the state and data of a virtual machine at a specific point in time. You can create a snapshot before upgrading or installing a patch.

The best time to take a snapshot is when no applications in the virtual machine are communicating with other computers. The potential for problems is greatest if the virtual machine is communicating with another computer. For example, if you take a snapshot while the virtual machine is downloading a file from a server on the network, the virtual machine continues downloading the file and communicating its progress to the server. If you revert to the snapshot, communications between the virtual machine and the server are confused and the file transfer fails.

**Caution:**

Snapshot operations can adversely affect service. Before performing a snapshot operation, you must stop the application that is running on the virtual machine or place the application out-of-service. When the snapshot operation is complete, start or bring the application back into service.

Only take snapshots during a maintenance window.

Snapshots can:

- Consume large amounts of data resources.
- Increase CPU loads on the host.
- Affect performance.
- Affect service.

To prevent adverse behaviors, consider the following recommendations when using the Snapshot feature:

- Do not rely on VMware snapshots as a robust backup and recovery method. Snapshots are not backups. The snapshot file is only a change log of the original virtual disk.
- Do not run a virtual machine from a snapshot. Do not use a single snapshot for more than 24 to 72 hours.

  If your virtual machine contains snapshots that are more than 72 hours old, system performance might be impacted. When you no longer need a snapshot, remember to delete it.
- Take the snapshot, make the changes to the virtual machine, and delete or commit the snapshot after you verify the virtual machine is working properly. These actions prevent

snapshots from growing so large as to cause issues when deleting or committing the snapshots to the original virtual machine disks.

- When taking a snapshot, do not save the memory of the virtual machine. The time that the host takes to write the memory to the disk is relative to the amount of memory that the virtual machine is configured to use. Saving the memory can add several minutes to the time taken to complete the operation. If the snapshot is active, saving memory can make calls appear to be active or in progress and can cause confusion to the user. To create a clean snapshot image from which to boot, do the following when you create a snapshot:
  - In the Take Virtual Machine Snapshot window, clear the **Snapshot the virtual machine's memory** check box.
  - Select the **Quiesce guest file system (Needs VMware Tools installed)** check box to ensure that all write instructions to the disks are complete. You have a better chance of creating a clean snapshot image from which to boot.
- If you are going to use snapshots for a long time, you must consolidate the snapshot files regularly to improve performance and reduce disk usage. Before merging the snapshot delta disks back into the base disk of the virtual machine, you must first delete stored snapshots.

  **Note:**

  If a consolidation failure occurs, end-users can use the actual Consolidate option without opening a service request with VMware. If a commit or delete operation does not merge the snapshot deltas into the base disk of the virtual machine, the system displays a warning on the user interface.

## Related resources

| Title | Link |
|---|---|
| Best practices for virtual machine snapshots in the VMware environment | Best Practices for virtual machine snapshots in the VMware environment |
| Understanding virtual machine snapshots in VMware ESXi and ESX | Understanding virtual machine snapshots in VMware ESXi and ESX |
| Working with snapshots | Working with snapshots |
| Configuring VMware vCenter Server to send alarms when virtual machines are running from snapshots | Send alarms when virtual machines are running from snapshots |

# Appendix B: Removing obsolete Avaya Aura® Media Server configuration

## Checklist for removing obsolete Avaya Aura® Media Server configuration in System Manager

| No. | Task | Reference | ✔ |
|---|---|---|---|
| 1 | Remove the Avaya Aura® Media Server routing pattern. | See Removing the Avaya Aura Media Server routing pattern on page 109 | |
| 2 | Remove the SIP entity links for Avaya Aura® Media Server. | See Removing SIP entity links for Avaya Aura Media Server on page 110 | |
| 3 | Remove the SIP entities for each Avaya Aura® Media Server. | See Removing the SIP entity for each Avaya Aura Media Server on page 110 | |
| 4 | Remove the Avaya Aura® Media Server host name resolution. | See Removing the Avaya Aura Media Server host name resolution on page 110 | |

## Removing the Avaya Aura® Media Server routing pattern

### Procedure

1. On System Manager, click **Elements** > **Routing** > **Routing Policies**.
2. Select the routing pattern created for Avaya Aura® Media Server.
3. Click **Delete**.
4. In the navigation pane, click **Regular Expressions**.
5. Select the regular expression created for Avaya Aura® Media Server.
6. Click **Delete**.

# Removing SIP entity links for Avaya Aura® Media Server

### Procedure

1. On System Manager, click **Elements** > **Routing** > **Entity Links**.
2. Select the entity link created for Avaya Aura® Media Server.
3. Click **Delete**.

# Removing the SIP entity for each Avaya Aura® Media Server

### Procedure

1. On System Manager, click **Elements** > **Routing** > **SIP Entities**.
2. Select the SIP entity created for each Avaya Aura® Media Server.
3. Click **Delete**.

# Removing the Avaya Aura® Media Server host name resolution

### Procedure

1. On System Manager, click **Elements** > **Session Manager** > **Network Configuration** > **Local Host Name Resolution**.
2. Select the FQDN host name created for Avaya Aura® Media Server.
3. Click **Delete**.

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