Implementing and Administering Services-VM on Avaya Aura® System Platform

Release 2.0.0.9
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Issue 2

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Contents

Chapter 1: Introduction

Purpose of the document

This document provides information about Services-VM Release 2.0.0.9 for Avaya Aura® System Platform 6.4. The document covers:

- Implementation of Services-VM on Avaya Aura® System Platform
- Services-VM upgrade on System Platform
- Administration of Services-VM on System Platform

The scope of this document is limited to describing the implementation and administration of Services-VM. Although the document refers to System Platform and Secure Access Link (SAL) Gateway, the document is not a reference point for implementation and administration of System Platform and SAL Gateway. Always use the appropriate product documentation to obtain information about System Platform and SAL Gateway.

The screenshots used in the document are representative examples of the application user interface (UI) and might change in future releases of System Platform.

Prerequisites for using the document

You must be familiar with the System Platform web console as this document refers to the System Platform web console for administering Services-VM. For more information about the System Platform web console, see *Administering Avaya Aura® System Platform*.

Ensure that you have a valid user ID with the Administrator-level or Advanced Administrator-level permission to log on to the System Platform web console. To know about user roles and access restrictions, see *Administering Avaya Aura® System Platform*.

Services-VM overview

In Avaya Aura® System Platform 6.0 and earlier releases, SAL Gateway was a coresident software on the Console Domain (cdom). In System Platform 6.2 at later releases, an independent virtual machine, *Services Virtual Machine* (Services-VM), on System Platform hosts SAL Gateway. This deployment model eases upgrades of SAL Gateway on System Platform and provides users with faster access to the benefits from enhancements and maintenance releases.

Services-VM provides a platform to host tools and applications that provide the customer a better service experience. Services-VM is bundled with the installer of System Platform 6.2 and later. However, you can upgrade Services-VM independent of System Platform.

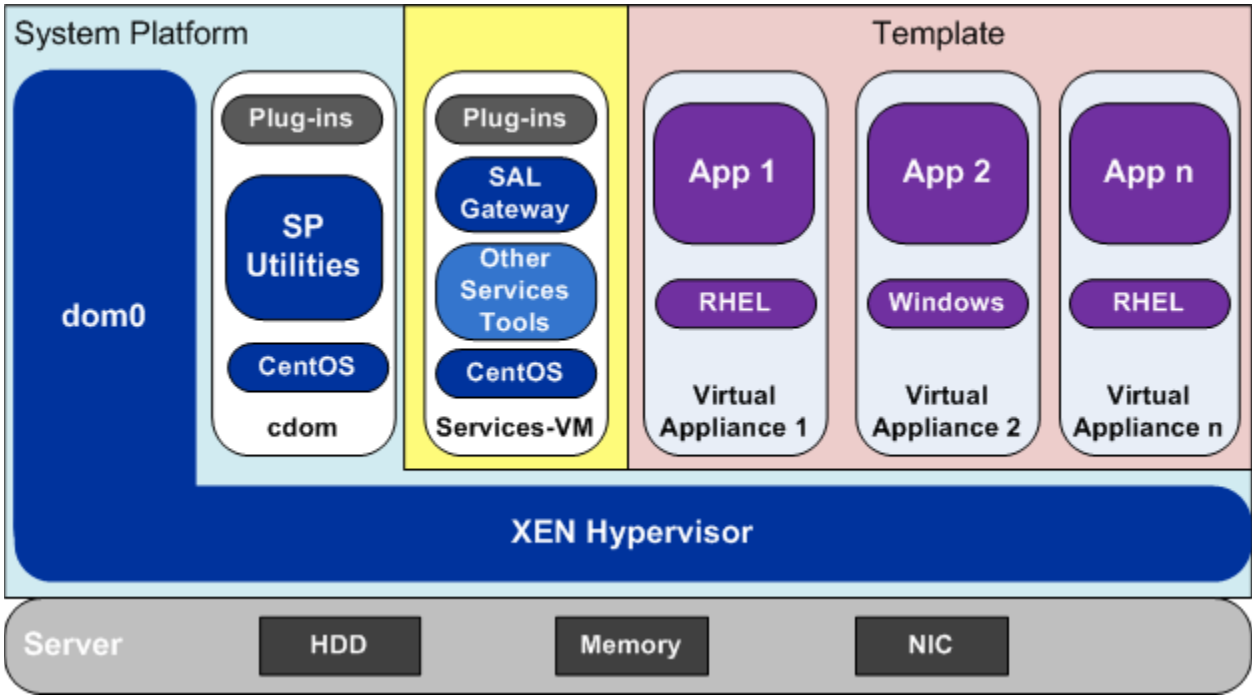
Services-VM 2.0.0.9 is an intermediate virtual machine that is bundled with System Platform 6.4. Unlike other releases of Services-VM, Release 2.0.0.9 does not contain a functional SAL Gateway. Its purpose is to facilitate subsequent upgrade to Services-VM 3.0 or later releases.

Note:

Services-VM is not a *solution template* and is separate from a solution template installed on System Platform. Services-VM is an independent domain on System Platform, similar to Console Domain. However, you must maintain Services-VM in the same way as a solution template

.

Figure 1: Structure of Services-VM on System Platform*



* This diagram depicts the state after Services-VM is upgraded to Release 3.0 or later.

Services-VM resources

For this release of Services-VM, System Platform allocates the following resources to Services-VM. This section is for informational purposes only. The values are set by Avaya and are not user configurable.

Resource	Value
Virtual CPU core	1
Total memory	512 MB
Total disk space	4 GB
Virtual NIC	1

Operating system

In Services-VM Release 2.0.0.9, the operating system is CentOS Release 5.9.

New in this release

Intermediate virtual machine

Services-VM Release 2.0.0.9 is an intermediate virtual machine that is bundled with System Platform 6.4. Unlike other releases of Services-VM, Release 2.0.0.9 does *NOT* contain a functional SAL Gateway. Its purpose is to facilitate subsequent upgrade to Services-VM 3.0 or later releases that have a functional SAL Gateway.

Local root access

The user-provided password for the root user of System Platform is propagated to Services-VM. That is, the root password on Services-VM 2.0.0.9 is the same as that on System Platform.

The root password is preserved when you upgrade from Services-VM 2.0.0.9 to 3.0 or later.

Chapter 2: Implementing Services-VM

Services-VM 2.0.0.9 implementation process

Services-VM 2.0.0.9 is bundled with System Platform 6.4. A separate download is not available.

Services-VM 2.0.0.9 is automatically implemented in the following scenarios:

- Fresh installation of System Platform 6.4
- Platform upgrade of System Platform 6.0.3 to 6.4

After Services-VM 2.0.0.9 is implemented through any of the above scenarios, you must perform an immediate upgrade to Services-VM 3.0 to have a functional SAL Gateway.

Note:

After the first time implementation of Services-VM, you must maintain Services-VM similar to a solution template. If you already have Services-VM on System Platform, You can implement any later releases of Services-VM through the template upgrade process. For more information about upgrading the Services-VM version, see Upgrading Services-VM on System Platform on page 16.

Upgrade paths

If you already have System Platform installed in your environment, the following upgrade paths to Services-VM 2.0.0.9 and subsequently to Services-VM 3.0 are available:

Release	Upgrade path
System Platform 6.0.3.x.x	1. Direct platform upgrade to System Platform 6.4, which implements Services-VM Release 2.0.0.9. 2. Template upgrade to Services-VM 3.0. The configuration data of SAL Gateway on C-Dom is preserved and carried forward to Services-VM 3.0.
System Platform 6.2 or later	1. Platform upgrade to System Platform 6.4. This does not implement Services-VM 2.0.0.9. The existing Services-VM version remains unaffected. 2. Template upgrade to Services-VM 3.0 if the existing Services-VM version is not already 3.0.

Important:
After you upgrade Services-VM to 3.0 on System Platform 6.4, you must complete the following:

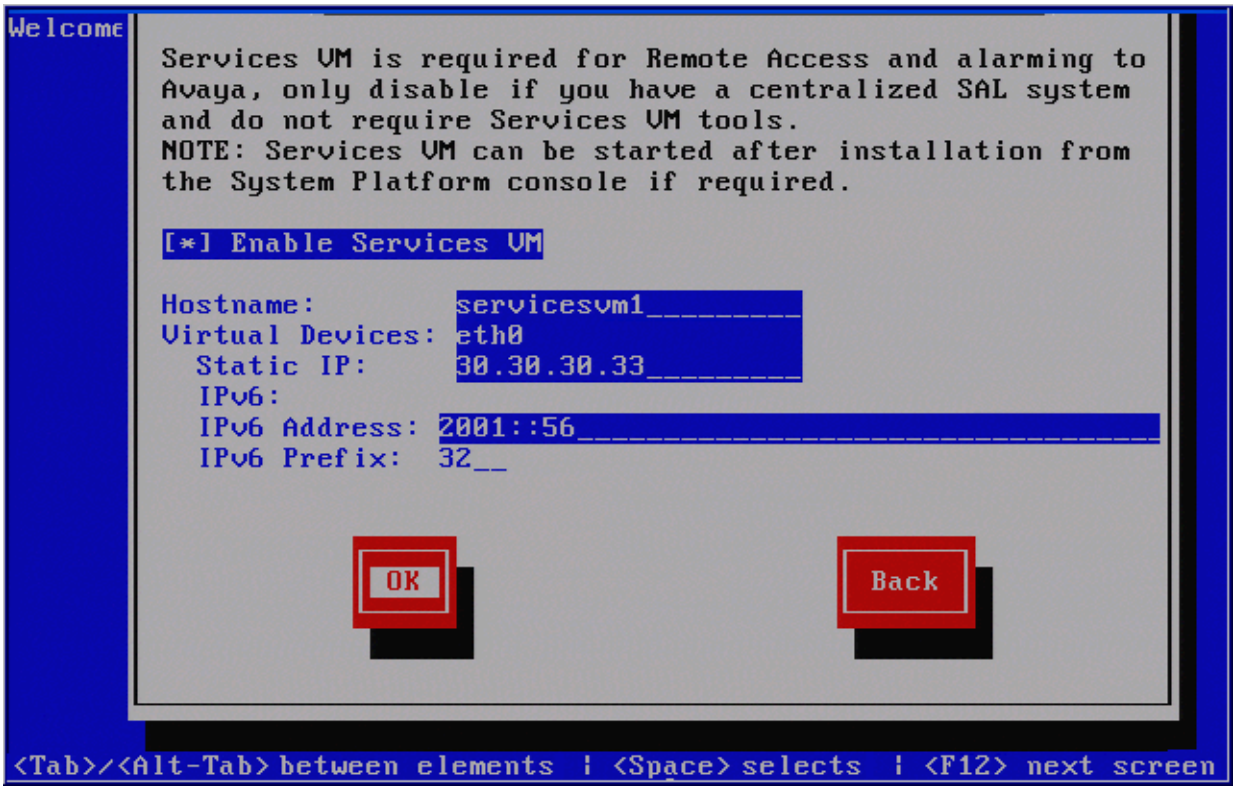
- Apply a sanity patch to Services-VM immediately after you upgrade to Service-VM 3.0. You must apply the sanity patch, PLDS ID ADSSSPT0021, within 15 minutes after you upgrade Services-VM. For more information, see the sanity patch release notes at https://downloads.avaya.com/css/P8/documents/101020834. If you miss applying the sanity patch within the first 15 minutes, try to apply the patch again after 1 hour.
- After you install the sanity patch, apply Services-VM 3.0 Service Pack 1. For more information, see the Services-VM 3.0 Service Pack 1 Release Notes at https://downloads.avaya.com/css/P8/documents/101017085.

Implementation through a fresh installation of System Platform 6.4

When you perform a fresh installation of System Platform 6.4, the system implements Services-VM 2.0.0.9 as part of the installation process.

During the installation of System Platform 6.4, the installer prompts you for the Services-VM configuration parameters. See Figure 2.

Figure 2: Services-VM configuration page during System Platform installation



The installer prompts for the following Services-VM configuration parameters:

- **Enable Services VM**: Select this option to enable the use of Services-VM.
- **Hostname**: Provide a hostname for Services-VM.
- **Static IP**: Provide a static IPv4 address for Services-VM. This field is always mandatory.
- **IPv6 Address** and **IPv6 Prefix**: Provide an IPv6 address and prefix respectively. These fields are optional, and you can leave the fields blank if you do not require IPv6. These fields are available if you select **Enable IPv6** in the previous screens during the System Platform installation.

For more information about installing System Platform, see *Installing and Configuring Avaya Aura® System Platform*.

Note:

Services-VM 2.0.0.9 does not have a functional SAL Gateway. To have a functional SAL Gateway, perform a template upgrade to Services-VM 3.0 or later. See Upgrading Services-VM on System Platform on page 16.

Implementation through a platform upgrade from System Platform 6.0.3 to 6.4

Services-VM 2.0.0.9 gets implemented as part of the platform upgrade from System Platform version 6.0.3.x.x to version 6.4.

Services-VM 2.0.0.9 does not have a functional SAL Gateway. During the platform upgrade from System Platform version 6.0.3.x.x to version 6.4, the configuration data of existing SAL Gateway on C-Dom is backed up. After Services-VM 2.0.0.9 is implemented, you must perform an immediate upgrade to Services-VM 3.0 to have a functional SAL Gateway. The backed up configuration data of SAL Gateway is restored on Services-VM 3.0.

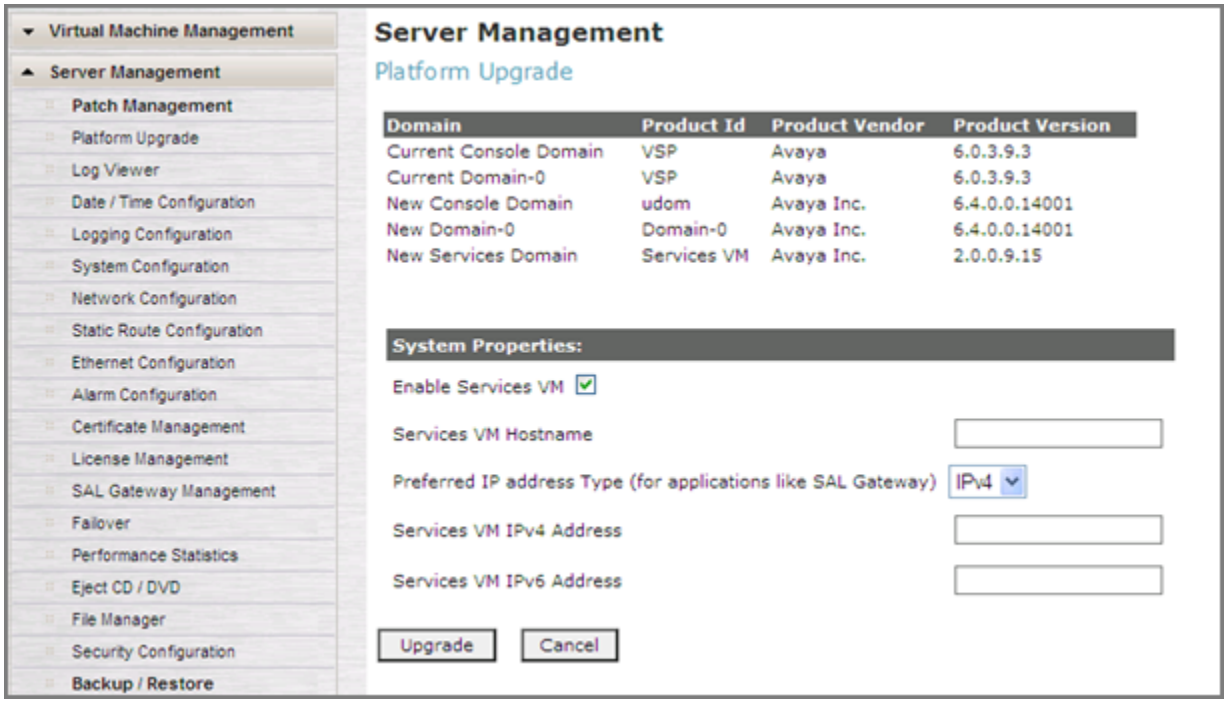
Important:
A platform upgrade from System Platform 6.0.3 to 6.4 terminates the SAL Gateway services running on C-Dom. The termination of the services causes termination of all established connections to SAL Gateway and results in alarms being missed.

Important:
Before proceeding with a platform upgrade to version 6.4 from version 6.0.3.x.x, you must read the instructions in “Reassigning Cdom and Services VM IP addresses,” in “Prerequisites for System Platform upgrades” of *Upgrading Avaya Aura System Platform*. The instructions are important for ensuring a communication restoration between Avaya Data Center and SAL Gateway after Services-VM is upgraded to 3.0 or later. You can re-assign the shared Console Domain and SAL Gateway IP address to Services-VM and assign a new IP address to the Console Domain prior to the upgrade. When you assign the former Console Domain IP address to Services-VM, the managed devices do not need re-administration because SAL Gateway will have the same IP address after the upgrade.

Note:
For a platform upgrade from System Platform 6.0.3.x.x to 6.4, you might require to install a service pack, patch, or both before running the upgrade process. Before proceeding with the platform upgrade, check the relevant release notes for the System Platform version and adhere to upgrade paths and instructions in the release notes for the version from which you are upgrading. See the release notes for System Platform 6.4 on the Avaya Support website at http://support.avaya.com.

During the platform upgrade, the System Platform web console displays a web page where you must provide the Services-VM configuration parameters. See Figure 3.

Figure 3: Platform Upgrade page



You must set up the following Services-VM configuration parameters:

- **Enable Services VM**: Select this option to enable the use of Services-VM.
- **Services VM Hostname**: Provide a hostname for Services-VM.
- **Preferred IP address Type**: Select the IP address type as **IPv4** or **IPv6**. The system uses the selected address type to configure the applications that run on Services-VM.
- **Services VM IPv4 Address**: Enter an IPv4 address for Services-VM in this field. This field is always mandatory even if the preferred IP address type is IPv6.
- **Services VM IPv6 Address**: Enter an IPv6 address for Services-VM in this field. This field is mandatory only if you have selected the **Preferred IP address Type** value as **IPv6**.

For more information about platform upgrade, see *Upgrading Avaya Aura System Platform*.

Note:

When you upgrade from System Platform 6.0.3 to 6.4, the implemented Services-VM 2.0.0.9 does not have a functional SAL Gateway. To have a functional SAL Gateway, perform a template upgrade to Services-VM 3.0 or later. See Upgrading Services-VM on System Platform on page 16.

Upgrading Services-VM on System Platform

After Services-VM 2.0.0.9 is implemented for the first time as part of fresh installation or upgrade to System Platform 6.4, you must maintain Services-VM similar to a solution template. Services-VM follows the same methodology for the announcement, distribution, and installation like a solution template. You must apply the Services-VM upgrades only through the System Platform web console similar to other solution templates on System Platform.

Use this procedure to upgrade Services-VM 2.0.0.9 to 3.0. This section mainly describes the steps that you need to do differently for Services-VM from a template upgrade. For more information about upgrading a solution template, see *Upgrading Avaya Aura System Platform.*

Procedure

1. Log on to the System Platform web console as an administrator.
2. In the left navigation pane, click **Virtual Machine Management** > **Templates**.

   The Search Local and Remote Template page displays the Services-VM version installed on System Platform.
3. Click **Upgrade** that is next to the installed Services-VM version.
4. Select the template for Service-VM upgrade by following the same steps as you do to search and select a template for upgrade in System Platform.

   The Template Details page displays the version and additional information for the current and the new template for Services-VM.
5. If not selected already, select the check box next to the **Normal** configuration, and click **Install**.

   The Template Network Configuration page displays the general network settings for Services-VM.
6. Click **Save**.

   The Template Details page displays the default settings for Services-VM.
7. If required, modify the default settings.
8. Click **Install**.

   At this stage, the upgrade process starts and the Template Installation page displays the progress of the upgrade process.

Note:

The first task in the process, downloading the disk image for Services-VM, might take varied amount of time to complete depending on the location of the server from which the template is downloaded and the network quality such as bandwidth. The rest of the tasks take approximately 20 minutes to complete.

9. Log on to the System Platform web console to check the progress of the upgrade process.

   After the completion of the upgrade tasks, the Template Installation page displays two buttons, **Commit Installation** and **Rollback Installation**.

10. Verify the upgrade and do one of the following:

    - Click **Commit Installation** to commit the newly upgraded Services-VM.
    - Click **Rollback Installation** to cancel the upgrade process and go back to the previous version of Services-VM.

Important:
If you do not log on to the web console within *4 hours (240 minutes)* from the completion of the upgrade tasks and commit the upgrade process, the system cancels the upgrade process and automatically rolls back to the previous version of Services-VM.

Note:
For information on post-upgrade verifications, see Verifying Services-VM installation and upgrade on page 17.

Next steps

On System Platform 6.4, complete the following crucial steps:

- Apply a sanity patch to Services-VM immediately after you upgrade to Service-VM 3.0. You must apply the sanity patch, PLDS ID ADSSSPT0021, within 15 minutes after you upgrade Services-VM. For more information, see the sanity patch release notes at https://downloads.avaya.com/css/P8/documents/101020834.
  If you miss applying the sanity patch within the first 15 minutes, try to apply the patch again after 1 hour.
- After you install the sanity patch, apply Services-VM 3.0 Service Pack 1. For more information, see the Services-VM 3.0 Service Pack 1 Release Notes at https://downloads.avaya.com/css/P8/documents/101017085.

Verifying Services-VM installation and upgrade

After installing or upgrading Services-VM, you can perform the following steps to verify whether the system is functional.

Procedure

1. On the System Platform web console, click **Virtual Machine Management** > **Manage**.
2. On the Virtual Machine List page, verify the following:

- Verify that `services_vm` is displayed in the list of virtual machines.
- Verify that the state for `services_vm` is **Running**.

Chapter 3: Administering Services-VM through System Platform web console

Services-VM administration overview

You can administer Services-VM like a solution template by accessing the System Platform web console. Some of the activities that you can perform include:

- Viewing and updating network configuration information of Services-VM.
- Enabling or disabling Services-VM.
- Checking the status of Services-VM.
- Managing patches for Services-VM.
- Rebooting Services-VM.

Modifying Services-VM configuration

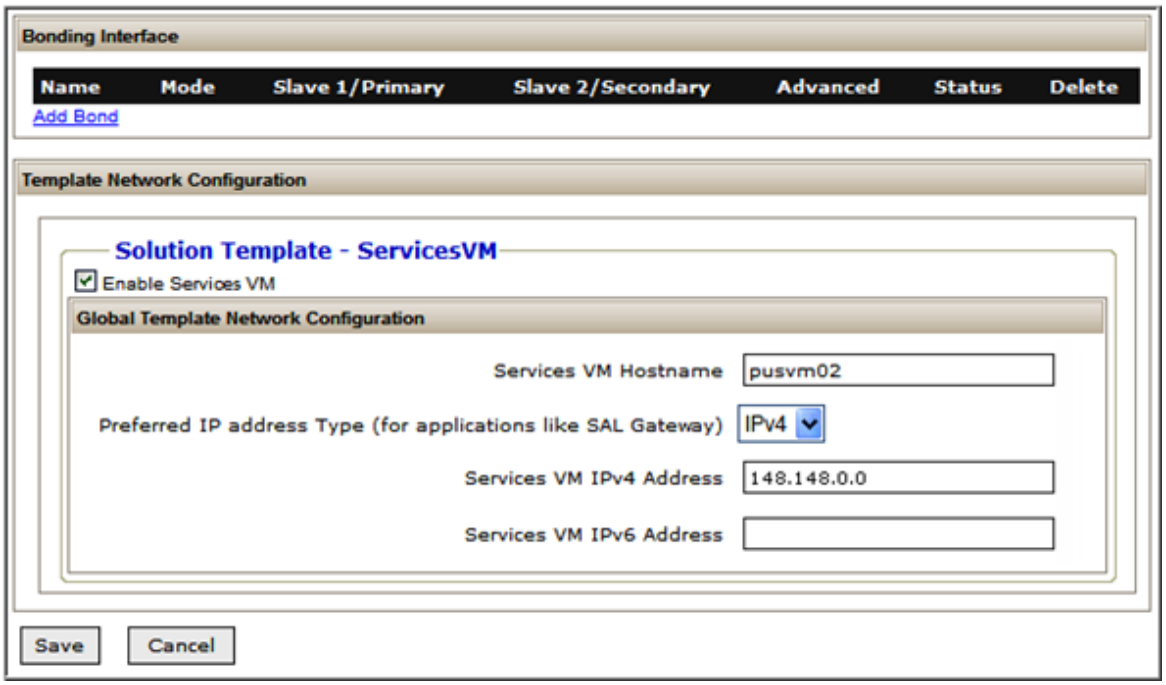
Using the System Platform web console, you can modify the network configuration of Services-VM.

CAUTION:
Do not enable or disable Services-VM while making changes to any network settings on the Network Configuration page. First save the network configuration changes, and then navigate back to the Network Configuration page to enable or disable Services-VM.

Procedure

1. Log on to the System Platform web console as an administrator.
2. On the System Platform web console, click **Server Management** > **Network Configuration**.
3. On the Network Configuration page, navigate to the **Solution Template - ServicesVM** section, which displays the configuration parameters for Services-VM.

Figure 4: Network Configuration page - the Solution Template - ServicesVM section



4. As required, make changes to the following fields to modify the network configuration:
   - **Services VM Hostname**
   - **Preferred IP address Type**
   - **Services VM IPv4 Address** (Mandatory)
   - **Services VM IPv6 Address** (If **Preferred IP address Type** is **IPv6**, then mandatory)
5. Click **Save**.

Note:

For information about other fields on the Network Configuration page, see *Administering Avaya Aura System Platform*.

Enabling Services-VM

If you did not enable Services-VM during a platform upgrade or a fresh installation of System Platform, you can enable Services-VM using the System Platform web console.

Procedure

1. Log on to the System Platform web console as an administrator.

2. In the navigation pane, click **Server Management** > **Network Configuration**.
3. On the Network Configuration page, navigate to the **Solution Template - ServicesVM** section, which displays the configuration parameters for Services-VM.
4. In the **Solution Template - ServicesVM** section, select the **Enable Services VM** check box.

   CAUTION:
   Do not change any network settings on the Network Configuration page while enabling or disabling Services-VM. First save the enabling or disabling action, and then navigate back to the Network Configuration page to make further changes.
5. Click **Save**.

Disabling Services-VM

Using the System Platform web console, you can disable Services-VM.

Procedure

1. Log on to the System Platform web console as an administrator.
2. In the navigation pane, click **Server Management** > **Network Configuration**.
3. On the Network Configuration page, navigate to the **Solution Template - ServicesVM** section, which displays the configuration parameters for Services-VM.
4. In the **Solution Template - ServicesVM** section, clear the **Enable Services VM** check box.

   CAUTION:
   Do not change any network settings on the Network Configuration page while enabling or disabling Services-VM. First save the enabling or disabling action, and then navigate back to the Network Configuration page to make further changes.
5. Click **Save**.

Checking version information of Services-VM

Using this procedure, you can check the version information of Services-VM installed on System Platform.

Procedure

1. Log on to the System Platform web console as an administrator.
2. In the navigation pane, click **Virtual Machine Management** > **Manage**.

   The Virtual Machine List page displays a list of all virtual machines that are currently running on System Platform.
3. Click the version number displayed beside **services_vm**.

   The Detailed Version Information for domain page displays the version information for Services-VM, its operating system, and patches.

Rebooting Services-VM through System Platform web console

As part of troubleshooting activities, sometimes you might need to reboot Services-VM. Using this procedure, you can reboot Services-VM from the System Platform web console.

Procedure

1. Log on to the System Platform web console as a user with the Advanced Administrator role.
2. In the navigation pane, click **Virtual Machine Management** > **Manage**.

   The Virtual Machine List page displays a list of all the virtual machines that are currently running on System Platform.
3. On the Virtual Machine List page, click **services_vm**.
4. On the Virtual Machine Detail page, click **Reboot**.

Managing Services-VM patches

Important:
Apply all service packs or patches for Services-VM through the System Platform web console only.

To install service packs and patches for Services-VM, follow the patch management procedures in *Administering Avaya Aura System Platform*.

Chapter 4: Resources

Documentation

Refer the following documents to obtain information about administering and using System Platform and SAL Gateway:

- *Installing and Configuring Avaya Aura® System Platform*
- *Administering Avaya Aura® System Platform*
- *Upgrading Avaya Aura® System Platform*
- *Secure Access Link Gateway Implementation Guide*
- *Implementing and Administering Services-VM 3.0 on Avaya Aura® System Platform*

Always use the appropriate version of the document to obtain information about System Platform and SAL Gateway. You can download these documents from the Avaya Support website at http://support.avaya.com.

Also check the Avaya Support website for the latest updates and information before you install or upgrade Avaya products.

Finding documents on the Avaya Support website

Use this procedure to find product documentation on the Avaya Support website.

1. Use a browser to navigate to the Avaya Support website at http://support.avaya.com/.
2. At the top of the screen, enter your user name and password, and click **Login**.
3. Put your cursor over **Support by Product**.
4. Click **Documents**.
5. In the **Enter your Product Here** search box, type the product name and then select the product from the drop-down list.
6. If there is more than one release, select the appropriate release number from the **Choose Release** drop-down list.
7. Use the **Content Type** filter on the left to select the type of document you are looking for, or click **Select All** to see a list of all available documents.

   For example, if you are looking for user guides, select **User Guides** in the **Content Type** filter. Only documents in the selected category will appear in the list of documents.

8. Click **Enter**.

Viewing Avaya Mentor videos

Avaya Mentor videos provide technical content on how to install, configure, and troubleshoot Avaya products.

Videos are available on the Avaya Support website, listed under the video document type, and on the Avaya-run channel on YouTube.

Procedure

- To find videos on the Avaya Support website, go to http://support.avaya.com and perform one of the following actions:
  - In **Search**, type `Avaya Mentor Videos` to see a list of the available videos.
  - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.
- To find the Avaya Mentor videos on YouTube, go to www.youtube.com/AvayaMentor and perform one of the following actions:
  - Enter a key word or key words in the **Search Channel** to search for a specific product or topic.
  - - Scroll down Playlists, and click the name of a topic to see the available list of videos posted on the website.

Note:

Videos are not available for all products.

Support

Visit the Avaya Support website at http://support.avaya.com for the most up-to-date documentation, product notices, and knowledge articles. You can also search for notices, release notes, downloads, user guides, and resolutions to issues. Use the web service request system to create a service request. Chat with live agents to get answers to questions. If an issue requires additional expertise, agents can quickly connect you to a support team.