

HP Server Automation

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Whitepaper: Managed OS Platforms as Content

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Introducing Managed OS Platforms as Content in SA

Managed platform support provides a simplified way to add platforms to the SA. Managed platform support allows you to perform changes on the entire SA Core automatically and reduce the need to restart core components.

For each new managed platform, a program APX called the Platform Installer will be made available through HP Live Network (HPLN). The Platform Installer will perform necessary operations on the SA Core to add support for each new platform.

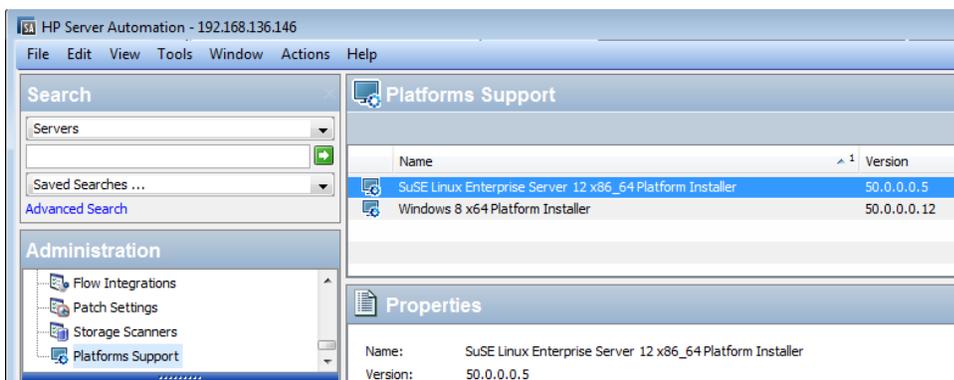


Figure: Managed Platform Support: New Platform Package

This document describes how to import the new platform package and deploy the new platform on the SA Core.

Note: For product support and compatibility information, see the support matrix for the relevant product release. You can download the *HP Server Automation Support and Compatibility Matrix* for any release from the HP Software Support Online Product Manuals website: <http://h20230.www2.hp.com/selfsolve/manuals>

SA Patch Updates—Post-Installation/Upgrade Step

During SA patch updates, the latest platform packages available at the time the patch is released are installed. This installation overwrites existing platform installations. Downloaded platform content from the HPLN is updated frequently and may contain more current packages than what is delivered in the SA patch update. This means that the HPLN may have more recent platform packages than the SA patch, which can result in additional functionality.

To avoid any loss of platform functionality resulting from an older package installation, review the Platform Support at Administration > Platforms Support after performing an SA patch upgrade. If the platform update version number is higher than the SA release build number at Help > About HP Server Automation, reinstall the platform from the newer content provided on the HPLN.

Retrieving Platform Content

Server Automation (SA) platform installers are delivered as content on the HP Live Network (HPLN) community. The Live Network connector (LNC) is used to connect directly to the HPLN from SA to retrieve content. The LNC is installed on both the SA Standard (a.k.a. SAVA) and SA Enterprise editions by default; however the methods to access the LNC are different in each edition.

The method you use to retrieve platform content depends on your edition of Server Automation (SA Enterprise or SAVA) and environment (direct or proxy access to internet or air-gapped). Choose the method that best suits your SA environment.

In this section:

- [Retrieving Content for SA Standard Edition \(SAVA\)](#)
- [Retrieving Content for SA Enterprise Using the Live Network Connector \(LNC\)](#)
- [Retrieving Content for SA Enterprise without the LNC \(air-gapped environment support\)](#)

Retrieving Content for SA Standard Edition (SAVA)

This section describes how to access the HPLN community using the LNC in SA Standard Edition (a.k.a. SAVA) environments. It then describes how to download and import the SA platform content from the HPLN to your SAVA Core.

In this section:

- [Accessing the HPLN Using the LNC via the SAVA Command-line Web Utility](#)
- [Downloading and Importing HPLN Content to the SAVA Core Using the LNC](#)

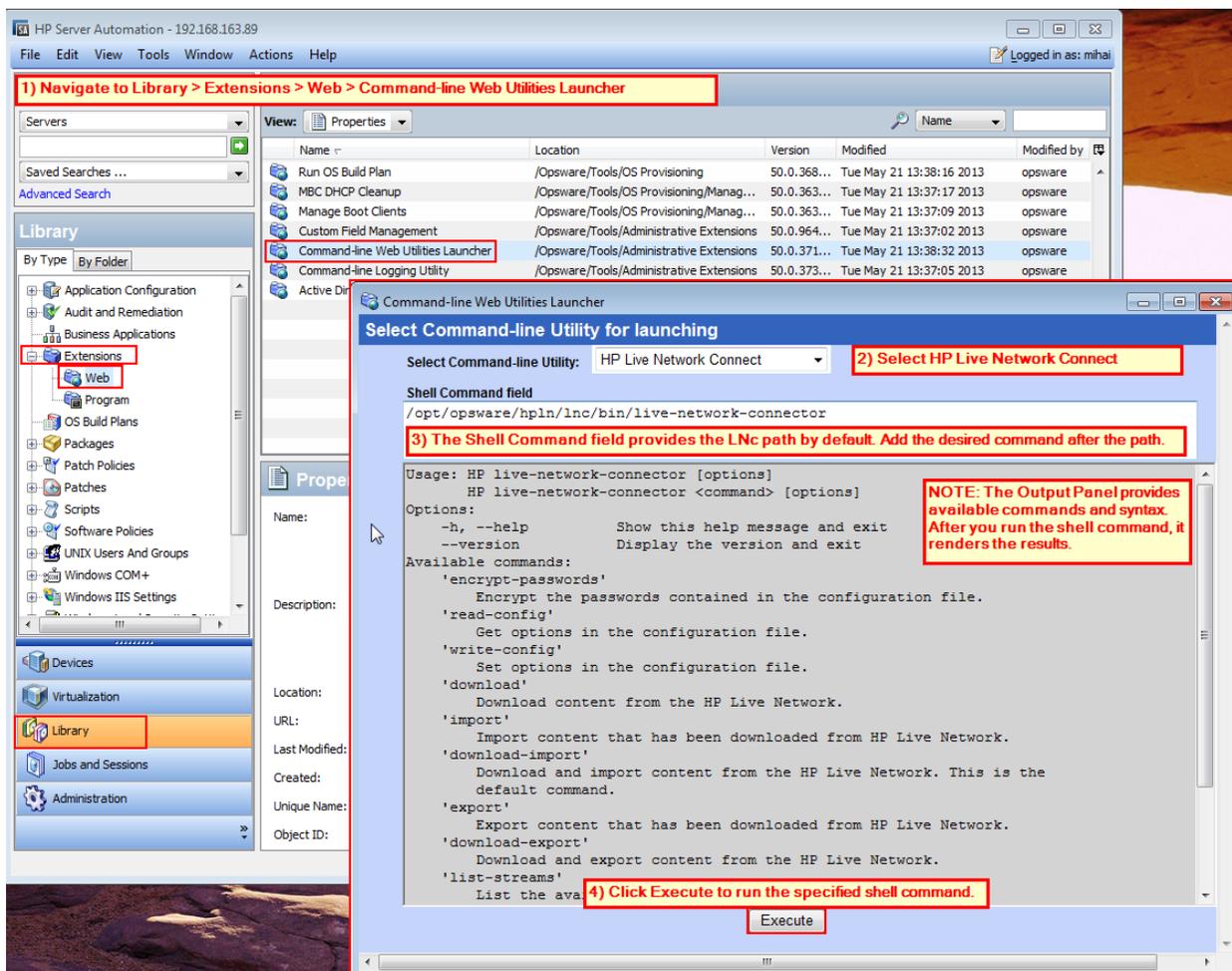


Figure: LNC workflow via SAVA Command-line Web Utility

Accessing the HPLN Using the LNC via the SAVA Command-line Web Utility

You can access the HP Live Network (HPLN) using the Live Network connector (LNC) via the SAVA Command-line Web Utility on the SA Core. The LNC is installed and preconfigured with SAVA. This section describes how to access the LNC and run commands using the SAVA Command-line Web Utility.

1. From the SAVA Client, navigate to the Web Extensions and select Command-line Web Utilities Launcher:

Library > Extensions > Web > Command-line Web Utilities Launcher

Note: The Command-line Web Utility is used instead of console command-line access in SAVA. When launched, this utility provides a list of command-line utilities to select.

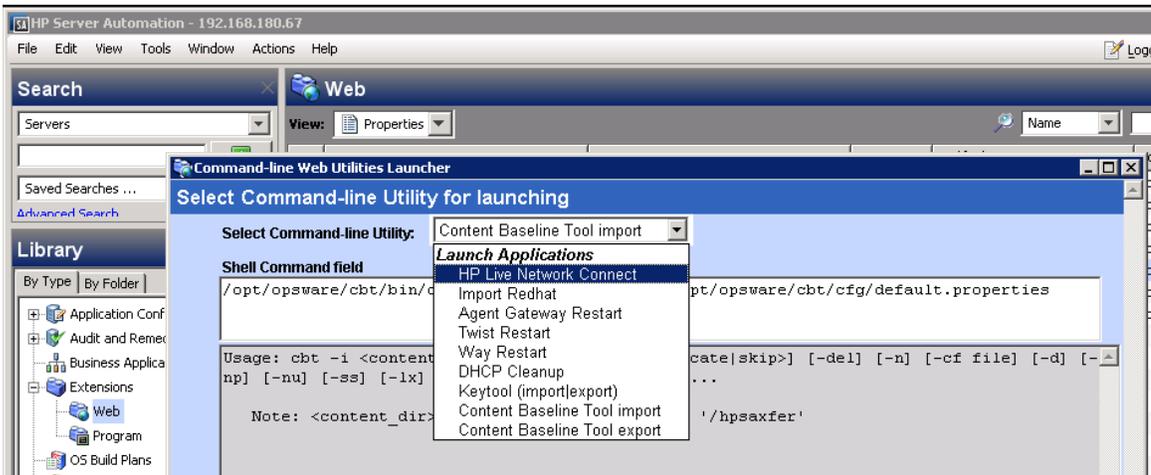


Figure: Command-line Web Utilities Launcher in SAVA

2. To run the Live Network connector, select: **HP Live Network connector**.
3. The Shell Command field provides the path to the executable file on the core:

```
/opt/opsware/hpIn/lnc/bin/live-network-connector
```

Edit the shell command by entering the command after the path. For example:

```
/opt/opsware/hpIn/lnc/bin/live-network-connector list-streams
```

Note: See the output panel for a list of available commands.

4. Click **Execute** to run the specified command.
- Review the shell command results in the output panel.

Note: See [Downloading and Importing HPLN Content to the SAVA Core Using the LNC](#) for additional instructions.

Downloading and Importing HPLN Content to the SAVA Core Using the LNC

To download and import HPLN-provided platform content to the SAVA Core, access the LNC from the SAVA Command-line Web Utility and execute the following commands:

1. Access the LNC from the SAVA Command-line Web Utility.

Note: See [Accessing the HPLN Using the LNC via the SAVA Command-line Web Utility](#) for instructions.

2. Set the username and password:

```
/opt/opsware/hpIn/lnc/bin/live-network-connector write-config --username=<> --password=<>
```

where '<>' is replaced by the respective HPLN admin login credentials. For example:

```
/opt/opsware/hpIn/lnc/bin/live-network-connector write-config --username=hpInadminusername --password=hpInadminpassword
```

3. (Optional) Set the proxy, as well as the proxy username and password:

```
/opt/opsware/hpln/lnc/bin/live-network-connector write-config --http-proxy=<> -  
-http-proxy-user=<> --http-proxy-pass=<>
```

Note: Set the proxy if your corporate network requires a proxy to access the internet. This configures the LNC to go through the specified proxy to get streamed content.

4. View available streams:

```
/opt/opsware/hpln/lnc/bin/live-network-connector list-streams
```

5. Enable streams:

```
/opt/opsware/hpln/lnc/bin/live-network-connector write-config --  
stream=content.platform_windows --enable
```

6. Download and import the platform content stream:

```
/opt/opsware/hpln/lnc/bin/live-network-connector download-import
```

After importing the platform content APX, you are ready to deploy the platform. See [Deploying Support for the New Platform](#) in this guide for instructions.

Note: You can download the *HP Live Network connector (LNC) User Guide* from the LNC community on the HP Live Network (HPLN) at: <https://hpln.hp.com/group/hp-live-network-connector>

Retrieving Content for SA Enterprise Using the Live Network Connector (LNC)

This section describes how to access the HPLN community using the LNC in SA Enterprise Edition environments. It then describes how to download and import the SA platform content from the HPLN to your SA Core.

In this section:

- [Accessing the HPLN Using the LNC Command-line Tool](#)
- [Downloading and Importing HPLN Content to the SA Core Using the LNC](#)

Accessing the HPLN Using the LNC Command-line Tool

You can access the HP Live Network (HPLN) using the Live Network connector (LNC) command-line tool on the SA Core. The LNC is installed and preconfigured with SA Enterprise. This section describes how to access the LNC and run commands from a command-line console on the SA Core.

1. Login to the command-line console for the SA Core as 'root'.

You can use any secure shell (ssh)/telnet program, such as Putty, to open a command-line console.

To use the LNC, you must point to the IP address of the SA Core where the Slice Component Bundle is installed.

2. Change directory to the HPLN Live Network connector bin directory:

```
cd /opt/opsware/hpln/lnc/bin/
```

From this point, you can perform the LNC commands to download and import content.

Note: See [Downloading and Importing HPLN Content to the SA Core Using the LNC](#) for additional instructions.

Downloading and Importing HPLN Content to the SA Core Using the LNC

To download and import HPLN-provided platform content to the SA Core, access the LNC from a command-line console on the SA Core and execute the following commands:

1. Access the LNC directory in an SA Core command-line console.

Note: See [Accessing the HPLN Using the LNC Command-line Tool](#) for instructions.

2. Set the LNC username and password:

```
./live-network-connector write-config --username=<> --password=<>
```

3. Set the proxy (optional), as well as the proxy username and password:

```
./live-network-connector write-config --http-proxy=<> --http-proxy-user=<> --  
http-proxy-pass=<>
```

Note: Set the proxy if your corporate network requires a proxy to access the internet. This configures the LNC to go through the specified proxy to get streamed content.

4. To set the product as SA Enterprise:

```
./live-network-connector write-config --product=sas
```

5. To set the username and password to connect to SA Enterprise:

```
./live-network-connector write-config --add --setting=sas.sas_user=<user> --  
setting=sas.sas_pass=<pass>
```

6. To view available streams:

```
./live-network-connector list-streams
```

7. Enable streams:

```
./live-network-connector write-config --stream=content.platform_windows --  
enable
```

where 'content.platform_windows' is the stream for Windows platform support.

Note: Choose the content stream for the platform support you wish to configure in SA.

8. Download and import the stream:

```
./live-network-connector download-import
```

Note: You can download the *HP Live Network connector (LNC) User Guide* from the LNC community on the HP Live Network (HPLN) at: <https://hpln.hp.com/group/hp-live-network-connector>

Retrieving Content for SA Enterprise without the LNC (air-gapped environment support)

This section describes how to retrieve HPLN platform content into an SA Enterprise Core *without* using the LNC to connect SA directly to the HPLN community. This procedure is particularly useful if you run SA in an air-gapped environment that is isolated from internet access. You may also use this procedure if you want to access platform content but do not want to use the LNC to connect SA to the HPLN for any reason.

Downloading and Importing HPLN Content to the SA Core without the LNC

To download platform packages from HPLN individually and import them to an SA Core:

1. Enter the following URL, which takes you to the HPLN portal:
<https://hpln.hp.com/group/managed-platform-content-server-automation>
2. A list of installers appears. Download one installer on the SA Core file system.
3. Because the installer is an APX, import it to the SA Core using the following command:

```
/opt/opsware/bin/apxtool import <Platform Installer Filename>
```

4. Run the platform installer.

Note: Importing a platform installer on an SA Core does not deploy support for the new platform automatically. The platform installer must be run by an SA user to implement updated information and changes. The next section describes deploying support for the newly installed platform.

Deploying Support for the New Platform

This section describes actions you must take to deploy the newly imported platform.

In this section:

- [Required Manage Platforms Permission](#)
- [Using the Platform Installer](#)
- [Running a Platform Installer](#)
- [Deleting a Platform Installer](#)

Required Managed Platforms Permissions

To see the SA Client platform support feature and its list of platform installers and to run one of the installers, the SA User Group must have the Manage Platforms permission.

To assign this permission to an SA User Group:

1. Open the user group in SA Client, and go to the Action Permissions node.
2. In the right panel, search for Manage Platforms under the System Administration category.
3. Set Manage Platforms to **Yes**, and save.

Using the Platform Installer

After you have the Managed Platforms permission, the Platform Support entry under the Administration tab is visible in the SA Client.

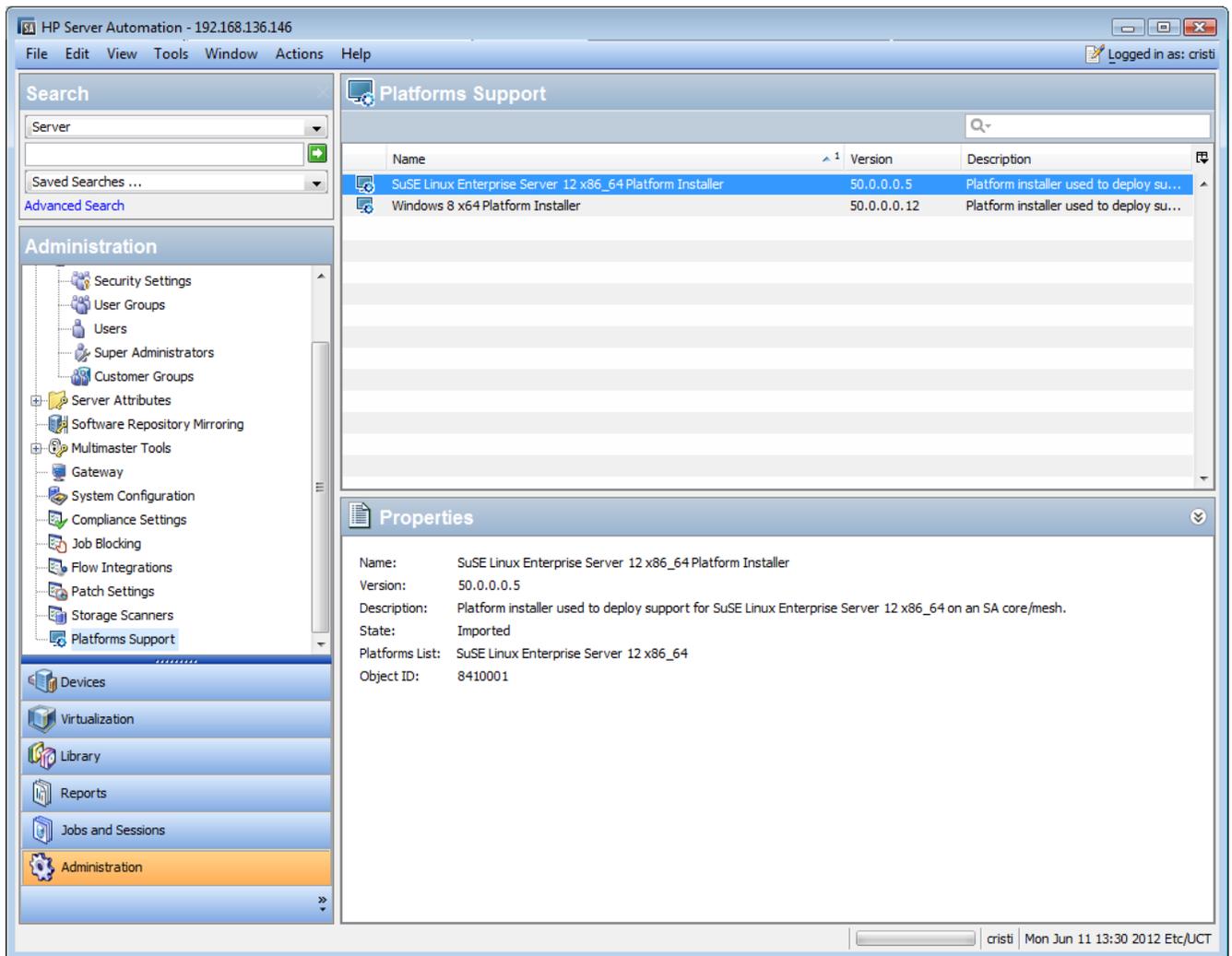


Figure: Platforms Support Window

This window lists the platform installers imported on the SA Core. Each installer has the following attributes:

- Name
- Description
- Version
- List of platforms that it will deploy
- State

States of the platform installer, as follows:

- NOT RUN—Installer was imported on the SA Core but was not yet run, so support for that OS is not available.

- FAILED—Installer was imported on the SA Core and run, but it failed. In this case, support for the new OS is only partially deployed, and the new OS cannot be used until the installer is run successfully.
- INSTALLED—Installer was imported on the SA Core and run successfully. Support for the new OS was deployed successfully as well, and the new platform can be used by SA.
- UNKNOWN—Installer status could not be determined.

Running a Platform Installer

To run an installer, you can:

- Right-click on the installer, and choose **Run...**
- or
- Select one installer and choose **Actions > Run...** from the main menu

The Run Platform Installer job window will appear. This window provides the option to schedule the task to run at a specified time with no recurrence and to set up email notifications.

After the job is started, the installer determines what changes must occur in your mesh and creates a series of steps.

Some steps can be executed only once (such as 'Add the new platform to the Truth'), and other steps must be run on multiple machines in your mesh/core configuration (such as 'Add support to the Agent Deployment Tool').

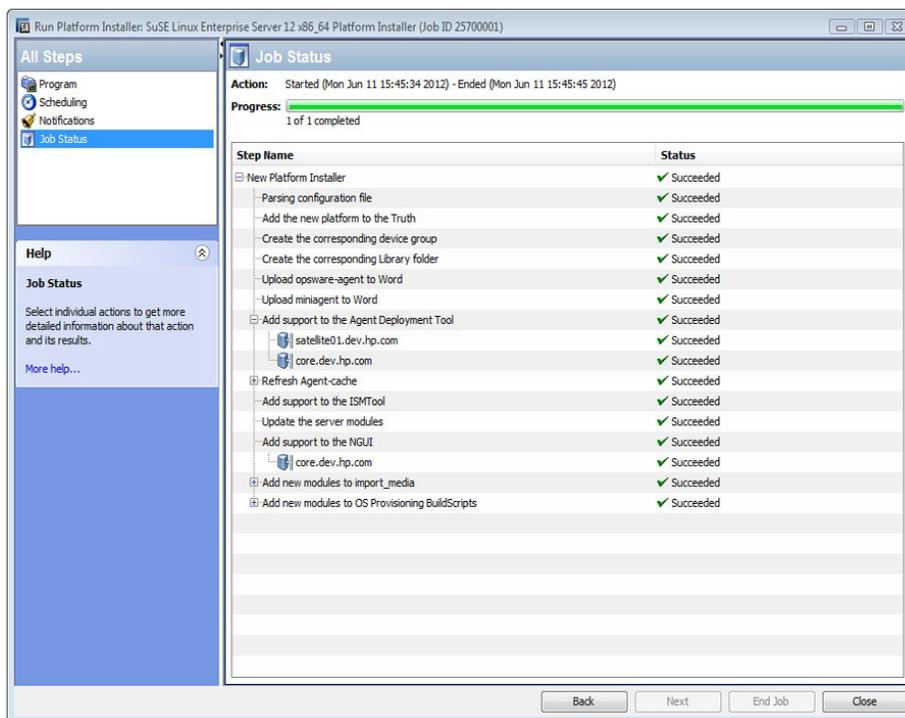


Figure: Run Platform Installer Job Status Window

- By selecting each step, you will be able to see the captured **stdout** and **stderr** files. If a step must be run on multiple machines, its corresponding node in the job result window will have one child for each machine.
- By selecting that child node, you will be able to see the **stdout** and **stderr** files that resulted by running the step on that particular machine.

Note: After the Run Platform Installer job has completed successfully, any open SA Client must be restarted to make the new platform support and content available.

Deleting a Platform Installer

To delete an installer, you can:

- Right-click on the installer, and choose **Delete**
- or
- Select one installer and choose **Actions > Delete** from the main menu

Deleting an installer does not mean removing the support for that OS if it was deployed on the SA Core. So, after importing and running a platform installer, you can safely delete it without losing the support for the new OS in SA.