Installing Network Performance Insight
Before using this information and the product it supports, read the information in "Notices" on page 33.
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Installing Network Performance Insight

How to install IBM® Network Performance Insight.

Provides a simple and fast installation process that improves your time to value. Network Performance Insight collects data from monitored flow-enabled devices. This version has minimal requirements for the large data that it can manage.

Important: Before you install IBM Network Performance Insight, read the Release Summary. The Release Summary contains information specific to your installation that is not contained in this information. Failure to consult the Release Summary might result in a corrupted, incomplete, or failed installation.


Intended audience

The audience who are network administrators or operations specialist responsible for installing the Network Performance Insight product suite on an enterprise network.

To install Network Performance Insight successfully, you must have a thorough understanding of the following subjects:
- Network Performance Insight 1.1.0 system
- Basic principles of network protocols and network management
- NetFlow concepts
- Administration of the Linux
- Jazz for Service Management

Organization

Read this summary to help you find the information that you need.

• Chapter 1, “Introduction,” on page 1
• Chapter 2, “Requirements,” on page 5
• Chapter 3, “Preparing your environment,” on page 9
• Chapter 4, “Installing Network Performance Insight,” on page 23
• Chapter 5, “Uninstalling Network Performance Insight and related software,” on page 27
• Chapter 6, “Post-installation tasks,” on page 29
• Chapter 7, “Troubleshooting installation,” on page 31
IBM Network Performance Insight is a flow-based network traffic performance monitoring system.

Network Performance Insight provides comprehensive, flexible, and scalable traffic data management with visualization and reporting to support complex, multi-vendor, multi-technology networks. It offers a range of dashboard views with robust security features that are designed to meet the needs of executive management and converging network and IT operations teams.

Network Performance Insight offers near real-time and interactive view on the traffic data that helps in reduced network repair times and optimized network performance.

Network Performance Insight provides IBM Netcool® Operations Insight with network performance monitoring capabilities to address modern network management challenges around application-oriented, software-defined-networks in the enterprise data centers and intranet.

The following diagram shows how data is flowing through the various components in Network Performance Insight:

The flow records that are sent by the configured flow exporters are collected by Collector, segregated, and sent to Inventory or Analytics component based on the information that they contain.

Analytics component performs flow session categorization and aggregation. These results are then stored in Network Performance Insight database.

Additionally, you can control the flow interface to enable collection and perform administrative tasks on the web-based user interface on Jazz for Service Management portal. The dashboards provide up-to-date actionable information to increase insight into network problems and streamline root cause analysis.
The database can be queried to display the results on the Dashboard Application Services Hub portal in the form of specialized report tables, graphs, and charts that are ready for immediate use. The database is designed for high performance.

You can integrate Network Performance Insight with Tivoli Netcool/OMNIbus to take advantage of its fault management capabilities.

Network Performance Insight documentation consists of the following:

- Release summary
- Installing Network Performance Insight
- Configuring Network Performance Insight
- Integrating with Tivoli Netcool/OMNIbus component of Netcool Operations Insight
- Using Network Performance Insight
- Troubleshooting Network Performance Insight
- References
- Technical notes

**Related information:**

[IBM Network Performance Insight on IBM Knowledge Center](https://www.ibm.com/support/knowledgecenter/senj2016/)

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## Service Management Connect

Connect, learn, and share with Service Management professionals: product support technical experts who provide their perspectives and expertise.


- Become involved with transparent development, an ongoing, open engagement between other users and IBM developers of Tivoli products. You can access early designs, sprint demonstrations, product roadmaps, and prerelease code.
- Connect one-on-one with the experts to collaborate and network about Tivoli and the Network and Service Assurance community.
- Read blogs to benefit from the expertise and experience of others.
- Use wikis and forums to collaborate with the broader user community.

**Related information:**


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## Network Performance Insight technical training

For Tivoli technical training information, see the following Network Performance Insight Training website at [https://tnpmsupport.persistentsys.com/updated_trainings](https://tnpmsupport.persistentsys.com/updated_trainings)

---

## Support information

If you have a problem with your IBM Software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:

**Online**

IBM Support Assistant
The IBM Support Assistant is a free local software serviceability workbench that helps you resolve questions and problems with IBM Software products. The Support Assistant provides quick access to support-related information and serviceability tools for problem determination. To install the Support Assistant software, go to [http://www.ibm.com/software/support/isa](http://www.ibm.com/software/support/isa).

Troubleshooting Guide
For more information about resolving problems, see the problem determination information for this product.

Conventions used in this publication
Several conventions are used in this publication for special terms, actions, commands, and paths that are dependent on your operating system.

Typeface conventions
This publication uses the following typeface conventions:

**Bold**
- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets), labels (such as *Tip*, and *Operating system considerations*)
- Keywords and parameters in text

*Italic*
- Citations (examples: titles of publications, diskettes, and CDs)
- Words defined in text (example: a nonswitched line is called a *point-to-point line*)
- Emphasis of words and letters (words as words example: "Use the word *that* to introduce a restrictive clause."); letters as letters example: "The LUN address must start with the letter *L.*"
- New terms in text (except in a definition list): a *view* is a frame in a workspace that contains data.
- Variables and values you must provide: ... where *myname* represents....

**Monospace**
- Examples and code examples
- File names, programming keywords, and other elements that are difficult to distinguish from surrounding text
- Message text and prompts addressed to the user
- Text that the user must type
- Values for arguments or command options

**Bold monospace**
- Command names, and names of macros and utilities that you can type as commands
- Environment variable names in text
- Keywords
• Parameter names in text: API structure parameters, command parameters and arguments, and configuration parameters
• Process names
• Registry variable names in text
• Script names
Installing Network Performance Insight
Chapter 1. Introduction

Provides an overview of the Network Performance Insight product suite and important pre-installation setup information.

Installation of Network Performance Insight is rather simple and does not require many configuration settings thus increasing your time to value.

Network Performance Insight 1.1.0 uses a specially designed database for efficient memory and storage.

**Note:** Currently, installation of Network Performance Insight 1.1.0 is supported on Linux operating system only.

### Installation decision maps

You can use different decision maps to help you plan and decide your options for a Network Performance Insight installation or upgrade.

Installation options that are available to an existing customer to perform an upgrade or installation of all or any component of Network Performance Insight is as shown. A sample two-server topology is presented.

---

**Server 1**

Hosts all the components of Network Performance Insight in a stand-alone installation.

**Server 2**

Hosts Dashboard Application Services Hub for visualizing and customizing the Flow traffic data.

A preferred distributed installation configuration for integration with Tivoli Netcool/OMNibus is as follows:
Server 1
Hosts all the components of Network Performance Insight in a stand-alone installation.

Server 2
Hosts the Tivoli Netcool/OMNIbus 8.1.0.5 core components.

Note: Tivoli Netcool/OMNIbus Object Server is recommended to be installed on a separate server than Network Performance Insight and Tivoli Netcool/OMNIbus Web GUI.

Server 3
Hosts Dashboard Application Services Hub, which is a component of Jazz for Service Management and Tivoli Netcool/OMNIbus Web GUI 8.1.0.4 component.
Platform support

All components of Network Performance Insight can be installed on Linux operating system (RHEL 6.x).

Co-location rules

Currently, a single instance of all the Network Performance Insight components is allowed in a stand-alone installation.
Chapter 2. Requirements

A complete set of requirements for IBM Network Performance Insight 1.1.0.

Lists the configurations and the supported platforms and components of Network Performance Insight.

For requirements of other integrated products, see the related product documentation for them.

Hardware requirements

Hardware specifications for Network Performance Insight.

Network Performance Insight has the following minimum requirements based on the specific default functionality on Linux environment in a stand-alone mode of deployment:

Table 1. Hardware requirements of Network Performance Insight in a stand-alone environment

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Value</th>
<th>Hardware specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flows per second</td>
<td>40000</td>
<td>CPU 16 Core CPU (Intel Xeon E5-2640@2.2 GHz)</td>
</tr>
<tr>
<td>Supported flow formats</td>
<td>• Cisco NetFlow (V1, V5 and V9)</td>
<td>Memory 64 GB RAM</td>
</tr>
<tr>
<td></td>
<td>• Juniper J-Flow (V5 and V9)</td>
<td>Hard disk 7 TB</td>
</tr>
<tr>
<td></td>
<td>• Huawei NetStream (V5 and V9)</td>
<td>Note: In Network Performance Insight environment RAID level 5 must be used.</td>
</tr>
<tr>
<td></td>
<td>• Alcatel CFlow (V9)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• IPFIX</td>
<td></td>
</tr>
<tr>
<td>Supported traffic types</td>
<td>• IPv4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• IPv6</td>
<td></td>
</tr>
<tr>
<td>Supported number of Interfaces</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Supported protocols</td>
<td>• UDP</td>
<td></td>
</tr>
<tr>
<td>Flow retention time</td>
<td>• RAW data = 10 Days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 1 min aggregated data = 1 Month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 30 min aggregated data = 12 Months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 1 day aggregated data = 12 Months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• DNS data = 3 Months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Events data = 6 Weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Logs = 10 Days</td>
<td></td>
</tr>
</tbody>
</table>

Related information:

[Tivoli Netcool/OMNibus 8.1.0 - Sizing your deployment]
Software requirements

The supported operating systems, modules, and third-party applications for Network Performance Insight.

Software requirements for Network Performance Insight.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linux</td>
<td>6.x</td>
</tr>
<tr>
<td><strong>Note:</strong> Network Performance Insight and its related subsystems are supported on Linux operating system only.</td>
<td></td>
</tr>
</tbody>
</table>

*Table 2. Supported web browsers*

<table>
<thead>
<tr>
<th>Web browsers</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Explorer</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Mozilla Firefox ESR</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Google Chrome</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>43</td>
</tr>
</tbody>
</table>

*Table 3. Other supported software*

<table>
<thead>
<tr>
<th>Software</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jazz for Service Management</td>
<td>1.1.2.1</td>
</tr>
<tr>
<td>IBM Tivoli Netcool/OMNIbus v8.1 for Network Performance Insight v1.3.1</td>
<td>8.1.0</td>
</tr>
<tr>
<td><strong>Note:</strong> Required only if you want to integrate Network Performance Insight with Tivoli Netcool/OMNIbus.</td>
<td>Apply Fix Pack 5.</td>
</tr>
<tr>
<td>IBM Tivoli Netcool/OMNIbus Web GUI v8.1 for Network Performance Insight v1.3.1</td>
<td>8.1.0</td>
</tr>
<tr>
<td><strong>Note:</strong> Required only if you want to integrate Network Performance Insight with Tivoli Netcool/OMNIbus.</td>
<td>Apply Fix Pack 4.</td>
</tr>
</tbody>
</table>

*Table 4. Bundled software*

<table>
<thead>
<tr>
<th>Product</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Front End Toolkit</td>
<td>1.5.x</td>
</tr>
<tr>
<td>IBM SDK, Java Technology Edition 64-bit</td>
<td>Version 7, Service refresh 8 fix pack 10</td>
</tr>
</tbody>
</table>

*Table 5. Supported hypervisors*

<table>
<thead>
<tr>
<th>Hypervisors</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Hat KVM</td>
<td>6</td>
</tr>
<tr>
<td>VMware</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>5.1</td>
</tr>
</tbody>
</table>
Related information:

- IBM Netcool Operations Insight: Supported products and components
- Planning for installation or upgrade
Chapter 3. Preparing your environment

Before you run the installation, you must prepare your target environments.

Before you begin

Before you begin the Network Performance Insight installation, install the prerequisite software. You need the following prerequisite software:

Installing Jazz for Service Management

The Jazz™ for Service Management installation supports different installation scenarios, user types, installation modes, and server topologies depending on your organization needs and target server environments. You can use either a launchpad or IBM Installation Manager to install and configure Jazz for Service Management. You can install and configure one or more integration services on a one, two, or three servers. You can optionally install IBM DB2®.

About this task

To plan the Jazz™ for Service Management installation, you must choose your installation scenario. This choice is dependent on different factors, for example, number of integration services to install, by using existing database and application server middleware, installation mode, or user type.

These factors determine your installation scenario that you use to install Jazz for Service Management. You can also use the decision maps. See Installation decision maps.

Important: Do not install Jazz for Service Management 1.1.2.1 on a Solaris machine in a distributed or a stand-alone environment.

Related information:

- Jazz for Service Management Version 1.1.2.1 Readme
- Installing Jazz for Service Management

Summary of Jazz for Service Management installation tasks

Jazz for Service Management version 1.1.1.0 can be installed only along with earlier versions of Jazz for Service Management (1.1, 1.1.0.1, 1.1.0.2, 1.1.0.3). There are two typical installation scenarios for Jazz for Service Management version 1.1.1.0.

Performing a fresh installation

If IBM Installation Manager is not installed in your system, perform the following steps:

1. Download and extract any of the following Jazz for Service Management versions: 1.1, 1.1.0.1, 1.1.0.2 or 1.1.0.3.
2. Download and extract 1.1.1-TIV-JazzSM-multi.zip.
3. Install DB2 9.7 FP5 or above (ESE only).
4. Install only IBM Installation Manager.
a. Invoke Launchpad.
b. Select Tools - Installation Manager. Choose only IBM Installation Manager to install.
c. For Jazz for Service Management 1.1, select Custom and choose only IBM Installation Manager to install.

5. Invoke IBM Installation Manager and select the following:
   a. Any Jazz for Service Management versions: 1.1, 1.1.0.1, 1.1.0.2 or 1.1.0.3.
   b. Select WebSphere repository.
   c. Select Jazz for Service Management version 1.1.1 repository.


If IBM Installation Manager is installed in your system, perform the following steps:
1. Download and extract any of the following Jazz for Service Management versions: 1.1, 1.1.0.1, 1.1.0.2 or 1.1.0.3.
2. Download and extract 1.1.1-TIV-JazzSM-multi.zip.
3. Install DB2 9.7 FP5 or above (ESE only).
4. Invoke IBM Installation Manager and select the following:
   a. Any Jazz for Service Management versions: 1.1, 1.1.0.1, 1.1.0.2 or 1.1.0.3.
   b. Select WebSphere repository.
   c. Select Jazz for Service Management version 1.1.1.0 repository.
5. Proceed with installation of Jazz for Service Management version 1.1.1.0.

Performing an upgrade installation

After you have installed Jazz for Service Management of any previous version, you must download and install the 1.1.1.0 fix pack for Jazz for Service Management:
1. Download the IBM Jazz for Service Management 1.1.1.0 patch installation files from [IBM Support Fix Central](http://www.ibm.com/support/docview.wss?uid=swg21319880).
   To locate the fix pack:
   b. Enter and search using the following keyword, 1.1.1-TIV-JazzSM-multi.
   c. Browse and download the fix pack 1.1.1-TIV-JazzSM-multi.
2. Follow the installation instructions provided with the patch.

Related information:

[Jazz for Service Management Version 1.1.1.0 Readme](http://www.ibm.com/support/docview.wss?uid=swg21319880)

Performing a fresh installation

20 GB of free disk space is required for a fresh installation.

About this task

We recommend that you install all the components of Jazz for Service Management. Alternatively, if you want to install only selected components, use custom installation method. Ensure that you install the following services:

- IBM Dashboard Application Services Hub
- Administration Services
- Administrative Services UI
- Security Services
Registry Services

You must update the installed integration services in the same application server profile to the same fix pack level.

**Note:** If the Security Services are not installed, you might encounter an Authentication Service client error with the following message ID: CTGES0039E

**Procedure**

1. Download and extract `1.1.2-TIV-JazzSM-multi-FP001.zip` file to a different local directory from [Fix Central](#).
   For example, `<JazzSM_FP_Home>`
   
   **Note:** 6 GB of free disk space is needed for a fresh installation.

2. Add the `<JazzSM_FP_Home>/1.1.2-TIV-JazzSM-multi-FP001/ JazzSMFPRepository/disk1/diskTag.inf` file along with the repository locations for any other earlier Jazz for Service Management versions to **Installation Manager > File > Preferences > Add Repository**.

3. Start the launchpad by using the following command:
   `<<JazzSM_FP_Home>>/launchpad.sh`

   **Restriction:** Ensure that the path to the `<JazzSM_FP_Home>` directory does not contain any spaces or special characters, otherwise the launchpad does not start.

   **Important:**
   - It is recommended that you have only one instance of the launchpad open at a time.
   - If DB2, Tivoli Common Reporting, or WebSphere Application Server repository is available on a shared network drive, ensure that you run the launchpad from the local file system to access the repository on the shared drive, and install Jazz for Service Management.

4. Click **Full**.
   The Full Installation window opens.

5. Review the instructions in the Full Installation window, and click **Next**. The **Full Installation > Software License Agreement** window opens.

   **Important:** If your environment already contains DB2, WebSphere Application Server or any Jazz for Service Management services, you cannot proceed with Full Installation. To proceed with Full Installation, you must uninstall them or you must use Custom workflow instead.

6. Review the license agreements and accept the terms, and click **Next**.
   The Installation Images Location window opens.

7. Click **Scan** to run Prerequisite Scanner and scan your environment for the Jazz for Service Management requirements.
   The launchpad runs the convenience script for a full installation and displays the overall result in the Prerequisite Scan window. To view the details, click **Detailed Scan Results**. The results can be as follows:

   **Fail**
If the target environment does not meet any of the prerequisite checks, Prerequisite Scanner returns an overall FAIL result for the environment. The tool displays the scan results for the individual prerequisite properties in the command window.

If Prerequisite Scanner returns this result, take the appropriate actions; for example, install the missing operating system packages, increase disk space for the file systems, or modify the configuration settings of the target environment to match the expected values in the scan results.

**CAUTION:**
You can continue with the full installation without taking appropriate action, but it might fail or install with issues.

**Pass**

If the target environment meets all prerequisite checks, Prerequisite Scanner returns an overall PASS result for the environment.

If Prerequisite Scanner returns this result, you can install Jazz for Service Management.

8. Click Next.

   The Basic Settings window opens.

9. Verify, use, or enter the default values as needed:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User name</strong></td>
<td>The administration user ID for the database, application servers, and Jazz for Service Management integration services. The default value is smadmin. <strong>Restriction:</strong> On Linux systems only: The length of the user ID must be a maximum of 8 characters; otherwise, the installation program cannot create the DB2 instance.</td>
</tr>
<tr>
<td><strong>Password and Confirm password</strong></td>
<td>The password that is associated with any users created by the full installation. The password must have a minimum of 8 alphanumeric characters and must not contain special characters or space.</td>
</tr>
<tr>
<td><strong>Local host name</strong></td>
<td>The fully qualified name or IP address of the local server on which you install the software. The default value is the fully qualified host name that the launchpad retrieves from the local server. If it is not a valid value, you can change the value.</td>
</tr>
<tr>
<td><strong>WebSphere Home</strong></td>
<td>The installation location for IBM WebSphere® Application Server (WAS_HOME). The default location if not specified is /opt/IBM/WebSphere/AppServer on Linux and AIX® systems.</td>
</tr>
<tr>
<td><strong>DB2 Home</strong></td>
<td>The installation location for IBM DB2 (DB2_HOME). The default location if not specified is /opt/ibm/db2 on Linux and AIX systems.</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Jazz for Service Management Home</td>
<td>The installation location for Jazz for Service Management (JazzSM_HOME). The default location if not specified is /opt/IBM/JazzSM on Linux and AIX systems.</td>
</tr>
</tbody>
</table>

10. Click Next.
    The Installation Summary window opens.

11. Click Install.
    After the installation is complete, the launchpad displays the overall result of the installation in the Installation Results window.

Results

The generic and offering specific log files that are generated during the full installation are saved in the following locations:

On UNIX systems: $HOME/jazzsm_launchpad/logs/.

What to do next

- Apply the Dashboard Application Services Hub 3.1.2.1 Cumulative Patch.
- Verify the installation of the integration services. See Verifying Installation.

Related information:

- Download Jazz for Service Management Version 1.1.2.1
- Restarting Jazz for Service Management application servers
- Custom installations by using Installation Manager
- Download Cumulative Patches - UI Services (DASH)

Performing an upgrade installation

Use this installation procedure if you already have an earlier version of Jazz for Service Management on your system. For example, 1.1.0.1, 1.1.0.2, 1.1.0.3, 1.1.1.0, 1.1.2.0.

About this task

Use IBM Installation Manager in GUI or silent modes to first update the Jazz for Service Management extension for IBM WebSphere. Then install Jazz for Service Management Version 1.1.2.1 for the following installed integration services:

- IBM Dashboard Application Services Hub
- Administration Services
- Administration Services UI
- Security Services
- Registry Services

You must update the installed integration services in the same application server profile to the same release level.

Procedure

1. Download and extract 1.1.2-TIV-JazzSM-multi-FP001.zip file to a local directory from Fix Central page.
For example, &lt;JazzSM_FP_Home&gt;

2. On each machine that has an Jazz for Service Management application server, update the Jazz for Service Management extension for IBM WebSphere.

3. In a command window, open the /opt/IBM/InstallationManager/eclipse directory and run the following command:

   ./IBMIM

4. Set up the fix pack repository preference.
   a. Select File > Preferences.
   b. In the Preferences > Repositories pane, click Add Repository.
   c. Click Browse and browse to the following location of the file:
      JazzSM_111_Home/1.1.1-TIV-JazzSM-multi/JazzSMFPRepository/disk1/diskTag.inf
   d. Click Apply.
   e. Click OK.
   f. Click OK to close the Repositories pane.

5. On the Installation Manager home page, click Update. The Update Packages window opens.

6. Select the Jazz for Service Management software package group in which the integration services are installed, and then click Next.

7. Select each check box that is associated with each installed component that you want to update, and click Next.

   The Licenses pane opens.

8. Review the license agreement for the software packages, and accept the terms, and click Next.

   The Features pane opens.

9. Select the features that you want to update, and click Next.

   Important: If you clear any feature for the integration service that you want to update, the configuration for the service might be removed.

10. In the Common Configurations tab, enter password for smadmin user.

11. Click Validate.

12. After the validation completes successfully, click Next.

13. Continue with the installation and specify the configuration details for the integration service that you want to update.

   For more information, see Integration services installation overview

14. In the Summary pane, review the software packages that you want to install and click Update. After Installation Manager updates the fix pack, it displays a message.

15. Click Finish.

What to do next

- Apply the Dashboard Application Services Hub 3.1.2.1 Cumulative Patch.
- Verify the installation of the integration services. See Verifying Installation.

Related information:
Verifying the installation

You can verify the installation of IBM WebSphere Application Server Version 8.5.0.1 and the Jazz for Service Management integration services.

About this task

For more information about this task, see http://www-01.ibm.com/support/knowledgecenter/SSEKCU_1.1.1.0/com.ibm.psc.doc_1.1.1.0/install/psc_t_install_adv_verification.html?lang=en

Procedure

Verify the Dashboard Application Services Hub installation:

1. Log in to the Dashboard Application Services Hub console.
   See Logging in
2. If required, start the Jazz for Service Management application server.
Verify the Registry Services installation
3. Open a browser window and send an HTTP GET request to the provider URL that represents the server and port to which you deployed Registry Services. For example: https://<myserver.mycompanydomain.com>:16311/oslc/pr If this request is successful, it returns 200 (OK) with a response body that contains the provider registry description.
Verify the Administration Services installation:
4. If required, log in to the Dashboard Application Services Hub, and verify that the Administration Services icon is visible in the navigation bar.
5. If the Administration Services icon is not visible, you must assign an Administration Services role to your user ID as follows:
   a. Click Console Settings > User Roles. The User Roles page opens.
   b. In the User ID field, enter your user ID and click Search.
   c. In the table, select your User ID. The User Roles > Available Roles page opens.
   d. In the table, select the Platform Administrator role and click Save.
   e. Log out and then log on again.
6. In the navigation bar, click Administration > Administration. The Administration window opens. Verify if the Applications view displays the managed systems, and that the Application Details view displays the tasks that are associated with the selected managed system.

What to do next

If you cannot access the web page in step 3, restart Jazz for Service Management application server.

Some configuration or administration tasks for an integration service require that you restart the IBM WebSphere Application Server. Stopping a Jazz for Service Management application server impacts all integration services installed in the associated WebSphere Application Server profile.
Related tasks:

Stopping Jazz for Service Management application servers
You can stop any Jazz for Service Management application server by using the IBM WebSphere stopServer command. You might need to restart the application server after you complete a configuration task for an integration service, or stop the application server for maintenance. To start the server again, use the startServer command.

Starting Jazz for Service Management application servers
You can start any Jazz for Service Management virtualization and reporting servers by using the IBM WebSphere startServer command. You might need to restart the application server after you complete a configuration task for an integration service, or after you stop the application server for maintenance.

Related information:

Jazz for Service Management post installation tasks

Starting Jazz for Service Management application servers
You can start any Jazz for Service Management virtualization and reporting servers by using the IBM WebSphere startServer command. You might need to restart the application server after you complete a configuration task for an integration service, or after you stop the application server for maintenance.

About this task
The same procedure applies to any Jazz for Service Management application server.

Procedure
1. On the relevant Jazz for Service Management server, open a command window.
2. Change to the JazzSM_WAS_Profile/bin directory. The default location for <JazzSM_WAS_Profile> is /opt/IBM/JazzSM/profile.
3. Run the following command:

   ```
   ./startServer.sh server_name
   ```

   Where

   `server_name`

   Enter the name of the application server that was specified when the application server profile was created. For example, server1.

Stopping Jazz for Service Management application servers
You can stop any Jazz for Service Management application server by using the IBM WebSphere stopServer command. You might need to restart the application server after you complete a configuration task for an integration service, or stop the application server for maintenance. To start the server again, use the startServer command.

Procedure
1. On the relevant Jazz for Service Management server, open a command window.
2. Change to the JazzSM_WAS_Profile/bin directory. The default location for <JazzSM_WAS_Profile> is /opt/IBM/JazzSM/profile.
3. Run the following command:

   ```
./stopServer.sh <server_name> -username <WAS_admin_user_name> -password <WAS_admin_password>

Where

server_name
Enter the name of the application server that was specified when the application server profile was created. For example, server1.

WAS_admin_user_name
The default user name is smadmin.

WAS_admin_password
This is the password that is specified at the time of installation.

Example

stopServer.sh server1 -username smadmin -password jazzsmpwd

Uninstalling Jazz for Service Management
You can uninstall most integration services and the application server by using Installation Manager GUI mode or silent mode. You might need to clean up your environment after either a successful uninstallation or a failed installation.

Procedure

Use IBM Installation Manager in GUI or silent modes to uninstall Jazz for Service Management Version 1.1.2.1.
See Uninstalling fix packs by using Installation Manager GUI mode
See Uninstalling fix packs by using Installation Manager silent mode

Important: When you revert to the previous version of Jazz for Service Management, Installation Manager does not automatically account for interim fixes. You must manually install interim fixes after you roll back.

Related information:

Uninstalling fix packs
Uninstalling Jazz for Service Management and related software

Common directory locations for Jazz for Service Management
Jazz for Service Management topics use path name variables for paths to common directories, for example, home directories.

Jazz for Service Management home directory

The JazzSM_HOME variable describes the location where Jazz for Service Management is installed. This location can be specified during installation. If not specified, the following default locations are used:

- Root user installations: /opt/IBM/JazzSM
- Non-root user installations: <user_home_directory>/IBM/JazzSM

Jazz for Service Management profile directory

The JazzSM_WAS_Profile variable describes the location of the application server profile that is used for Jazz for Service Management. This location is in the /profile subdirectory of the Jazz for Service Management home directory.
• Root user installations: /opt/IBM/JazzSM/profile
• Non-root user installations: <user_home_directory>IBM/JazzSM/profile

**Jazz for Service Management profile name**

The JazzSM_Profile_Name variable refers to the name assigned to the WebSphere Application Server profile for Jazz for Service Management. The default name is JazzSMProfile.

**Installation images home directory**

The Install_Imgs_Home variable describes the common root directory that contains the extracted contents of the installation images depending on the installation scenario.

**Full installation**

IBM DB2, IBM WebSphere Application Server.

**Attention:** You must extract the contents of the installation media for this software to the same common root directory, otherwise the full installation displays error messages for missing software.

**Custom installation**

IBM WebSphere Application Server, if you do not want to use an existing installation.

**Note:** It is not necessary to extract the contents of the installation media for this software to the same common root directory, but it is preferable to maintain all extracted installation media in a central location.

**Jazz for Service Management installation images home directory**

The JazzSM_Image_Home variable describes the common root directory in which the Jazz for Service Management is extracted. It contains the launchpad, IBM Installation Manager, IBM Prerequisite Scanner, the Installation Manager repository with the software packages for the integration services except Tivoli Common Reporting.

**Tip:** Ensure that the path to the JazzSM_Image_Home directory does not contain any spaces or special characters, otherwise the launchpad does not start.

**IBM DB2 home**

The DB2_HOME variable describes the location where IBM DB2 is installed. This location is specified during installation. If not specified, the following default locations are used:

- **AIX**
  - Root user installations: /opt/ibm/db2
  - Non-root user installations: $HOME/sqllib
  - $HOME represents the non-root user’s home directory.

**WebSphere Application Server home directory**

The WAS_HOME variable describes the location where WebSphere Application Server is installed. This location is specified during installation. If not specified, the following default locations are used:

- **AIX**
- **Linux**
• Root user installations: /opt/IBM/WebSphere/AppServer
• Non-root user installations: <user_home_directory>IBM/WebSphere/AppServer

Administration Services home directory

The ADMIN_HOME variable describes the location where Administration Services is installed. This location can be specified during installation. If not specified, the following default locations are used:

- Root user installations: /opt/IBM/JazzSM/admin
- Non-root user installations: /home/nonrootuser_name/IBM/JazzSM/admin

Administration Services UI home directory

The ADMINUI_HOME variable describes the location where Administration Services UI is installed. This location can be specified during installation. If not specified, the following default locations are used:

- Root user installations: /opt/IBM/JazzSM/adminui
- Non-root user installations: /home/nonrootuser_name/IBM/JazzSM/adminui

Registry Services home directory

The REGISTRY_HOME variable describes the location where Registry Services is installed. This location can be specified during installation. If not specified, the following default locations are used:

- Root user installations: /opt/IBM/JazzSM/registry
- Non-root user installations: /home/nonrootuser_name/IBM/JazzSM/registry

Security Services home directory

The SECURITY_HOME variable describes the location where Security Services is installed. This location can be specified during installation. If not specified, the following default locations are used:

- Root user installations: /opt/IBM/JazzSM/security
- Non-root user installations: /home/nonrootuser_name/IBM/JazzSM/security

Dashboard Application Services Hub home directory

The DASH_HOME variable describes the location where Dashboard Application Services Hub is installed. This location can be specified during installation. If not specified, the following default locations are used:

- Root user installations: /opt/IBM/JazzSM/ui
- Non-root user installations: <user_home_directory>IBM/JazzSM/ui

Dashboard Application Services Hub profile directory

The DASH_Profile variable describes the location of the application server profile that is used for Dashboard Application Services Hub. This location is in the/profiles subdirectory of the Jazz for Service Management home directory.

- Root user installations: /opt/IBM/JazzSM/profile
- Non-root user installations: <user_home_directory>IBM/JazzSM/profile
Full installation log directory

The Simple_install_log_dir directory into which general and offering specific logs are created during full installation:

- On UNIX systems: $HOME/jazzsm_launchpad/logs/

IBM Prerequisite Scanner installation directory

The ips_root directory that contains the contents of the extracted Prerequisite Scanner platform package. If not specified, the default locations are used:

- On UNIX systems: Install_Imgs_Home/PrereqScanner/UNIX_Linux

Related information:

Network Performance Insight installation media

How to get the product distribution.

The installation media can be obtained from two routes:

- Offering DVDs
- Electronic installation images that licensed customers can download from the IBM Passport Advantage website.

If you do not have the DVDs, you can download the electronic images for Network Performance Insight 1.1.0 from IBM Passport Advantage. For more information, see Release Summary.

Required user names

There are two user names that are needed during the installation.

- root
- smadmin

- Users and groups that are required for Tivoli Netcool/OMNIbus integration on Jazz for Service Management.

Setting up a local file system for installation

Copy and extract the contents of the Network Performance Insight installation media to your local file system. You can obtain the installation media in the form of a DVD or an electronic image from IBM Passport Advantage.

About this task

Download the Network Performance Insight installation media that contains the npi-1_1_0_0.tar.gz file to a directory on the host where you want to install the application.

Procedure

1. On the target host, log in as root user.
2. Create a directory to hold the contents of your Network Performance Insight distribution.
For example:
$ mkdir /opt/IBM/NPI

**Note:** Any further references to this directory within the installation are made by using the token `<NPI_Home>`.
Chapter 4. Installing Network Performance Insight

Describes how to install Network Performance Insight for the first time in a fresh, stand-alone environment.

Before you begin

- Ensure that Jazz for Service Management is installed.
- Ensure that single sign-on (SSO) is configured on the Jazz for Service Management server.
- Ensure that required users and groups are created in a repository on Jazz for Service Management.
- Ensure that Security Socket Layer (SSL) communication is configured.

For more information about these tasks, see Configuring Network Performance Insight.

Installing the software

You can install and configure Network Performance Insight on a single server.

About this task

Installation of Network Performance Insight is a simple and fast process.

Procedure

1. Change the Linux kernel parameters as root user by following these steps:
   a. Edit the /etc/sysctl.conf file to add or modify kernel parameters as follows:
      ```
      net.core.rmem_default = 33554432
      net.core.rmem_max = 33554432
      net.core.netdev_max_backlog = 10000
      ```

      Change the /etc/sysctl.conf to ensure that the values are set on a system start. Run `sysctl -p` as root user to refresh with the new configuration in the current environment.
   
   b. Edit the /etc/security/limits.conf file to add or modify the hard and soft limit to at least 20000 for the number of open files as follows:
      ```
      * hard nofile 20000
      * soft nofile 20000
      ```

      Replace the “*” with any specific user name to restrict the change to a single user.
      For example, npiuser.

2. Log out the root user and log in again for the changes to take effect.
3. Extract the npi-1_1_0_0.tar.gz file to <NPI_Home> by using the following command:
   ```
   tar -zxvf npi-1_1_0_0.tar.gz
   ```
   The following directories are created inside the <NPI_Home> directory:
   ```
   lib
   resources
   ```

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Contains these sub directories:

- blaze
- jre
  Bundled IBM JRE is extracted in this folder.
- sigar
- ui
- webgui
  webgui directory contains the npiFlowTvLiC.js file that is needed for Tivoli Netcool/OMNibus integration.

**bin** Contains executable files, the most important being the npi, and npid scripts. It also contains the database backup scripts.

**conf** You can manually create a configuration settings file npi.conf. For more information about npi.conf file settings, see Configuring Network Performance Insight. The /conf/security directory has certificates, keys, and keystore that are needed for communication with Dashboard Application Services Hub.

This folder also contains the template files that are used in configuring the communications with Jazz for Service Management and Tivoli Netcool/OMNibus.

**work** Contains all the data files and other files for running the application. A UNIX administrator can create a bigger mount point with higher disk capacity in this folder.

4. Run the following commands to start the npi script:

```
# cd <NPI_Home>/bin
# ./npid start
```

You see the following message:

Application npi Version <1.1.0.0.084> started (PID: 6773)

After the npi script starts, the following directories are created in `<NPI_Home>`:

**log**

Contains the npid.log and npi.log files for troubleshooting.

**Note:** The log directory also contains the backup and restore logs.

For more information about the log files, see Log files in Network Performance Insight in Troubleshooting Network Performance Insight.

**Important:** You can extract the package and run the npid script as non-root user. Ensure that you use the same user to extract the package and also to run the npid script.

**Related reference:**

“npid command reference” on page 25

Usage for the npid command. Run the npid command to start, stop, and restart Network Performance Insight.
npid command reference

Usage for the npid command. Run the npid command to start, stop, and restart Network Performance Insight.

Location

<NPI_Home>/bin

NPI_Home is the location where Network Performance Insight is installed. For example, /opt/IBM/NPI.

Syntax

npid {start | stop | restart | kill | status | version | help}

Parameters

start
Starts Network Performance Insight application.

stop
Stops Network Performance Insight application.

restart
Stops and starts Network Performance Insight application.

kill
Kills the Network Performance Insight application process by using the command kill -9.

status
Checks if Network Performance Insight pid is running when you use the command ps -eaf.

version
Shows the version of Network Performance Insight that is installed.

help
Displays the usage for npid command.

Controlling Network Performance Insight system

Commands to control the Network Performance Insight application processes.

Procedure

Run the npid command to start, stop, and restart Network Performance Insight by using the following commands:

cd <NPI_Home>/bin
./npid

Usage: {start|stop|restart|kill|status|version|help}

For more information, see npid command reference in Command Line Interface.
Chapter 5. Uninstalling Network Performance Insight and related software

Uninstall Network Performance Insight and the related software from the system.

**Before you begin**

Back up your `<NPI_Home>/work` directory.

**Procedure**

Delete the `<NPI_Home>` folder to uninstall Network Performance Insight. `<NPI_Home>` is the directory where you have extracted the Network Performance Insight software.

Related tasks:

- “Installing the software” on page 23

You can install and configure Network Performance Insight on a single server.

Related information:

- Removing Tivoli Netcool/OMNibus
- Uninstalling Jazz for Service Management and related software
Chapter 6. Post-installation tasks

Perform these post-installation tasks after the installation of Network Performance Insight is complete.

For integrating with IBM Tivoli Netcool/OMNIbus, see Integrating IBM Tivoli Netcool/OMNIbus.

Verifying the installation

You can verify the Network Performance Insight 1.1.0 installation status.

Before you begin

Make sure that the flow exporter is configured and running and sending the flow data to the Collector subsystem.

For more information, see Configuring Flow devices.

Procedure

Run the following npid command to check the status of Network Performance Insight

```
# cd <NPI_Home>/bin
# ./npid status
```

You will see the following message:

Application npi is running on pid 28431

Related reference:

"npid command reference" on page 25

Usage for the npid command. Run the npid command to start, stop, and restart Network Performance Insight.
Chapter 7. Troubleshooting installation

Problems that might occur during an installation and how to resolve them.

About this task

For all troubleshooting issues in installation of Network Performance Insight, see Troubleshooting Network Performance Insight.
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