

JP1 Version 11

**Performance Management: Getting Started  
(Operation and Performance Management)**

3021-3-A36-20(E)

## Notices

### ■ Relevant program products

- JP1/Performance Management - Manager (for Windows Server 2008 R2, Windows Server 2012, Windows Server 2016)

P-2A2C-AABL JP1/Performance Management - Manager 11-10

List of products and product names:

P-CC2A2C-5ABL JP1/Performance Management - Manager 11-10

P-CC2A2C-5RBL JP1/Performance Management - Web Console 11-10

- JP1/Performance Management - Manager (for CentOS 6 (x64), CentOS 7, Linux 6 (x64), Linux 7, Oracle Linux 6 (x64), Oracle Linux 7, SUSE Linux 12)

P-812C-AABL JP1/Performance Management - Manager 11-10

List of products and product names:

P-CC812C-5ABL JP1/Performance Management - Manager 11-10

P-CC812C-5RBL JP1/Performance Management - Web Console 11-10

- JP1/Performance Management - Manager (for AIX V6.1, AIX V7.1, AIX V7.2)

P-1M2C-AABL JP1/Performance Management - Manager 11-10

List of products and product names:

P-CC1M2C-5ABL JP1/Performance Management - Manager 11-10

P-CC1M2C-5RBL JP1/Performance Management - Web Console 11-10

- JP1/Performance Management - Agent Option for Platform (for Windows Server 2008 R2, Windows Server 2012, Windows Server 2016)

P-2A2C-ACBL JP1/Performance Management - Agent Option for Platform 11-10

List of products and product names:

P-CC2A2C-FCBL JP1/Performance Management - Agent Option for Platform 11-10

P-CC2A2C-AJBL JP1/Performance Management - Base 11-10

- JP1/Performance Management - Agent Option for Platform (for HP-UX 11i V3 (IPF))

P-1J2C-ACBL JP1/Performance Management - Agent Option for Platform 11-10

List of products and product names:

P-CC1J2C-FCBL JP1/Performance Management - Agent Option for Platform 11-10

P-CC1J2C-AJBL JP1/Performance Management - Base 11-10

- JP1/Performance Management - Agent Option for Platform (for CentOS 6 (x64), CentOS 7, Linux 6 (x64), Linux 7, Oracle Linux 6 (x64), Oracle Linux 7, SUSE Linux 12)

P-812C-ACBL JP1/Performance Management - Agent Option for Platform 11-10

List of products and product names:

P-CC812C-FCBL JP1/Performance Management - Agent Option for Platform 11-10

P-CC812C-AJBL JP1/Performance Management - Base 11-10

- JP1/Performance Management - Agent Option for Platform (for Solaris 10, Solaris 11)
- P-9D2C-ACBL JP1/Performance Management - Agent Option for Platform 11-10

List of products and product names:

P-CC9D2C-FCBL JP1/Performance Management - Agent Option for Platform 11-10

P-CC9D2C-AJBL JP1/Performance Management - Base 11-10

- JP1/Performance Management - Agent Option for Platform (for AIX V6.1, AIX V7.1, AIX V7.2)
- P-1M2C-ACBL JP1/Performance Management - Agent Option for Platform 11-10

List of products and product names:

P-CC1M2C-FCBL JP1/Performance Management - Agent Option for Platform 11-10

P-CC1M2C-AJBL JP1/Performance Management - Base 11-10

This manual is applicable to JP1/Performance Management agent products that are based on JP1/Performance Management - Base in addition to the above products. These products include some parts that have been developed under licenses from other companies

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## ■ Microsoft product screen shots

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## ■ Microsoft product name abbreviations

This manual uses the following abbreviations for Microsoft product names.

Abbreviation	Full name or meaning
Internet Explorer	Microsoft <sup>(R)</sup> Internet Explorer <sup>(R)</sup>
	Windows <sup>(R)</sup> Internet Explorer <sup>(R)</sup>
SQL Server	Microsoft <sup>(R)</sup> SQL Server 2005 Enterprise Edition
	Microsoft <sup>(R)</sup> SQL Server 2005 Standard Edition
	Microsoft <sup>(R)</sup> SQL Server 2008 Enterprise
	Microsoft <sup>(R)</sup> SQL Server 2008 Enterprise R2
	Microsoft <sup>(R)</sup> SQL Server 2008 Standard
	Microsoft <sup>(R)</sup> SQL Server 2008 Standard R2
	Microsoft <sup>(R)</sup> SQL Server 2012 Business Intelligence Edition
	Microsoft <sup>(R)</sup> SQL Server 2012 Enterprise Edition
	Microsoft <sup>(R)</sup> SQL Server 2012 Standard Edition
Windows Server 2003	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2003, Enterprise x64 Edition
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2003, Standard x64 Edition
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2003 R2, Enterprise x64 Edition
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2003 R2, Standard x64 Edition
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2003, Enterprise Edition
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2003, Standard Edition
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2003 R2, Enterprise Edition
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2003 R2, Standard Edition
Windows Server 2008	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2008 Enterprise
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2008 Enterprise without Hyper-V <sup>(R)</sup>
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2008 Standard
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2008 Standard without Hyper-V <sup>(R)</sup>

Abbreviation	Full name or meaning
Windows Server 2008	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2008 R2 Datacenter
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2008 R2 Enterprise
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2008 R2 Standard
Windows Server 2012	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2012 Datacenter
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2012 Standard
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2012 R2 Datacenter
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2012 R2 Standard
Windows Server 2016	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2016 Datacenter
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2016 Standard

The generic term Windows might be used to refer to Windows Server 2003, Windows Server 2008, Windows Server 2012, and Windows Server 2016.

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## Summary of amendments

The following table lists changes in this manual (3021-3-A36-20(E)) and product changes related to this manual.

Changes	Location
The following OSs are now supported: <ul style="list-style-type: none"><li data-bbox="129 517 252 544">• AIX V7.2</li><li data-bbox="129 551 536 577">• Microsoft(R) Windows Server(R) 2016</li></ul>	--

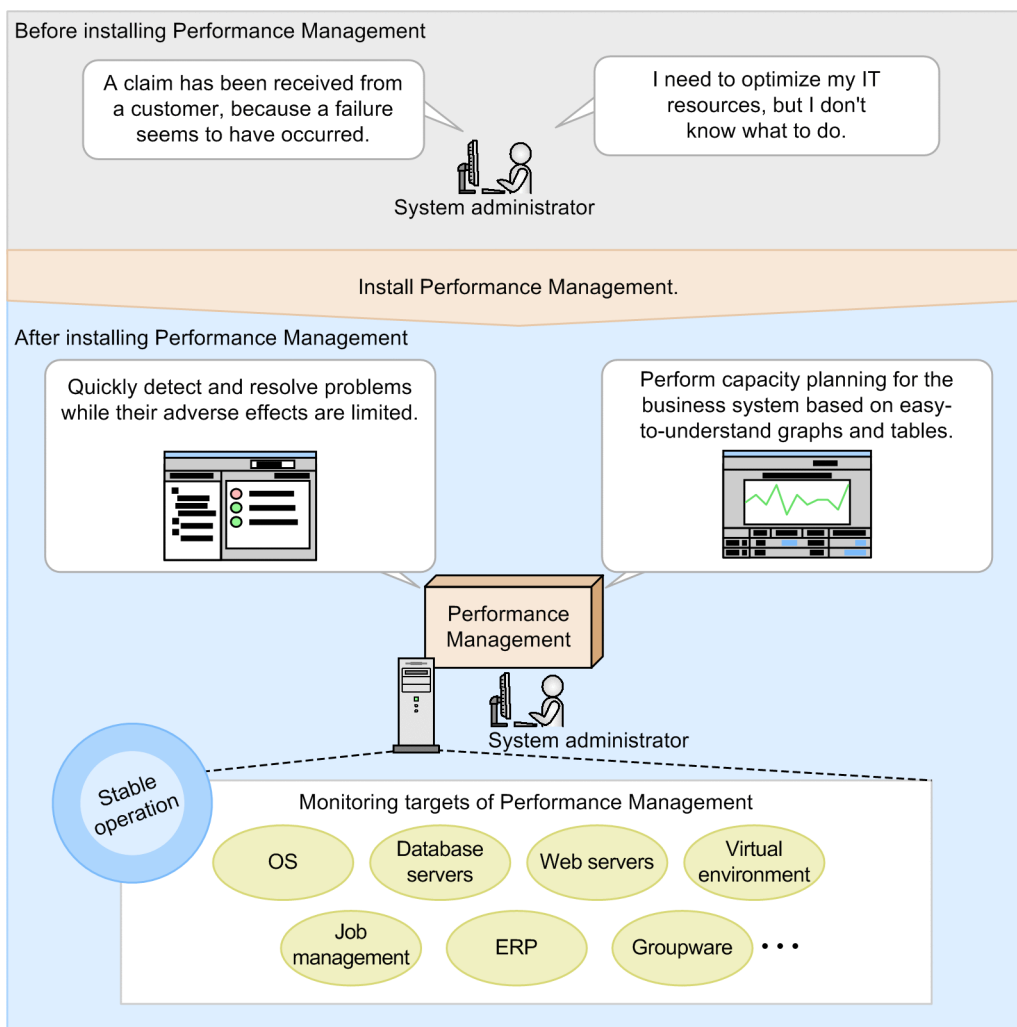
In addition to the above changes, minor editorial corrections were made.

# Preface

## ■ What you can do with Performance Management

The IT system is now an indispensable element in any business. Uninterrupted operation of the IT system provides around-the-clock support for conducting the business. While the costs of running such systems are trending downwards, it is also becoming more and more challenging to make changes in the system environment. Coping with such a situation makes it important to have the capability to quickly grasp your system's current status and to be able to respond proactively to the need to make changes.

Performance Management helps you to detect current problems in a timely manner and to obtain the information you will need to resolve problems. By checking the system's status regularly, you can also perform capacity planning for your system.

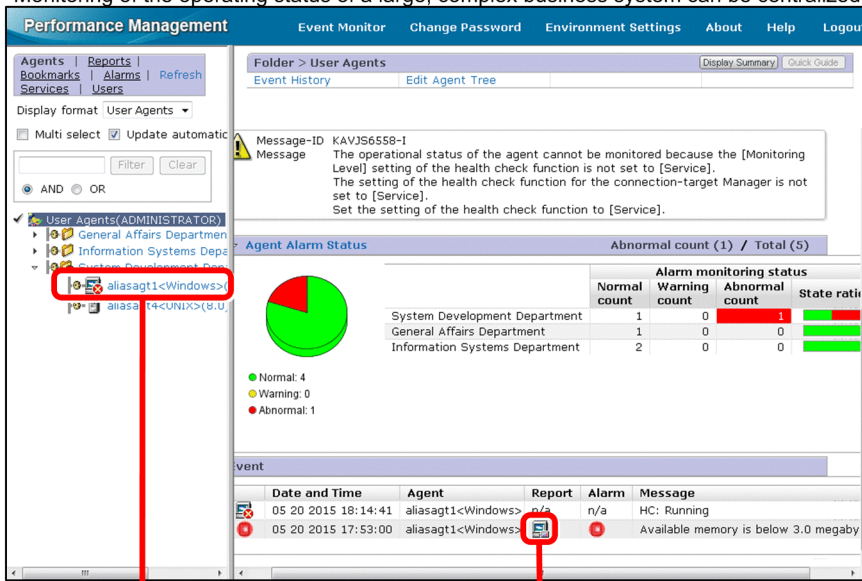


Performance Management provides a variety of windows that support your capability to monitor the applications running in your business system.



Checking the system status at a glance

Monitoring of the operating status of a large, complex business system can be centralized.

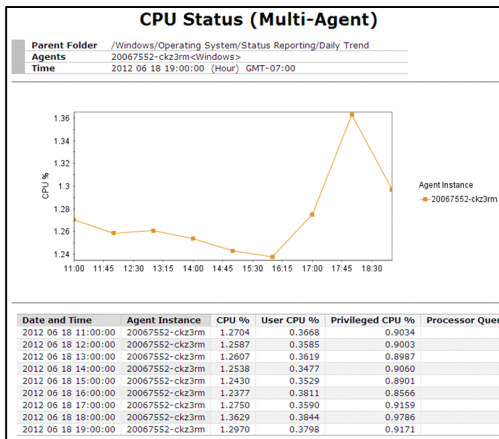
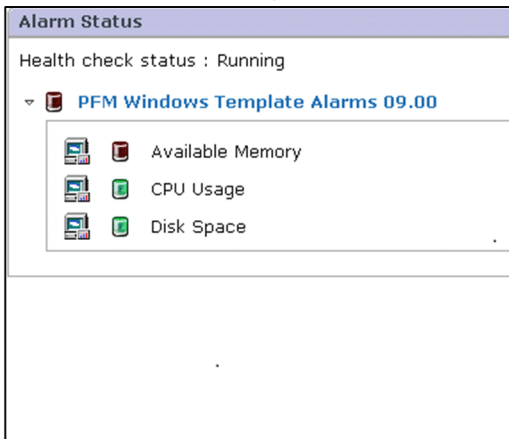


Using alarms for fast notification of system problems

Performance Management can be used in mission-critical systems that require high reliability and high availability because it reports system problems to the administrator before they affect the operation.

Displaying a variety of reports

Performance Management helps you determine whether the users are comfortable using the system and identify bottlenecks in the system.



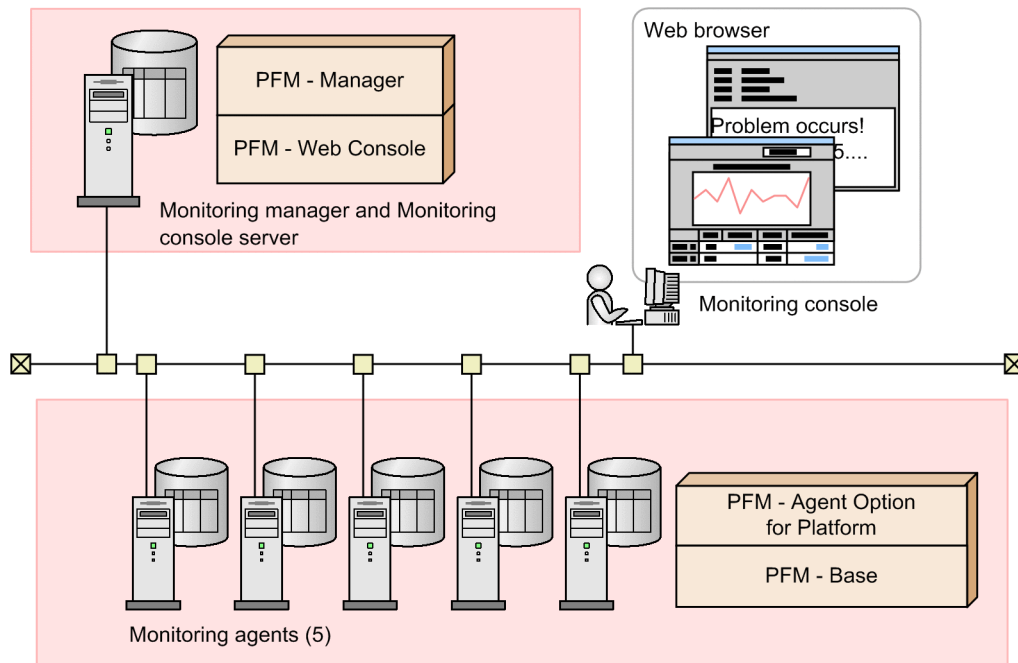
■ What is explained in this manual

This manual describes the basic procedures for configuring and running Performance Management. Its purpose is to help the reader understand the concepts and principal functions of Performance Management.

This manual is intended for the following users:

- Users who will be evaluating the installation of Performance Management
- Users who want to understand the concepts of Performance Management and to obtain in a short time an overview from configuration to operation

This manual assumes that the system configuration shown below is used. For details about operation with any other configuration, see the manuals listed in *E.1 Related publications*.



In the above, *Performance Management* is abbreviated as *PFM*.

### Monitoring manager

Performs central management of the monitoring agents. PFM - Manager is installed on the host that will be used as the monitoring manager.

### Monitoring console server

Displays performance data collected from monitoring targets by the monitoring agents and Performance Management's configuration windows on the monitoring console. PFM - Web Console is installed on the host that will be used as the monitoring console server. In this manual, it is assumed that PFM - Web Console is installed on the host that is also configured as the monitoring manager.

### Monitoring console

Checks the performance data collected from monitoring targets by the monitoring agents and changes Performance Management settings. The monitoring console can be displayed by connecting to the monitoring console server from a Web browser.

### Monitoring agents

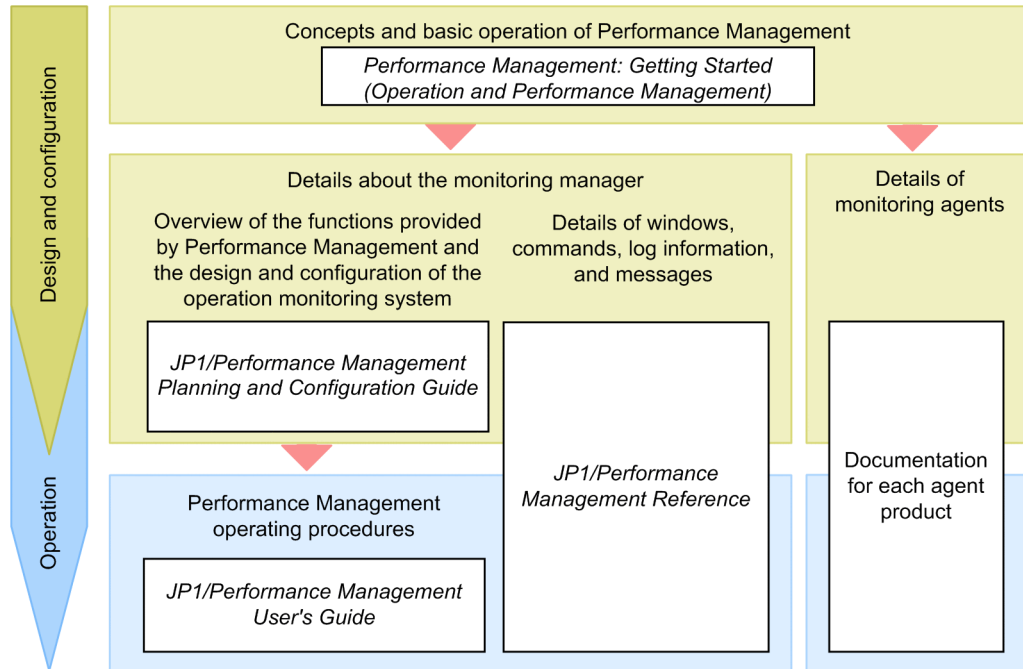
Collect performance data from monitoring targets. PFM - Base (the monitoring base program) and agent products for the monitoring targets are installed on the hosts that will be used as monitoring agents. In this manual, it is assumed that PFM - Agent Option for Platform is used as the agent products.

#### Note

- You can also install PFM - Manager and PFM - Web Console on separate hosts, thus configuring one host as the monitoring manager and the other host as the monitoring console server.
- You can install an agent product on the host on which PFM - Manager is installed to use this host also as a monitoring agent. In this case, there is no need to install PFM - Base.

## ■ How to read this manual

In addition to this manual, Performance Management publications include *JP1/Performance Management Planning and Configuration Guide*, *JP1/Performance Management User's Guide*, *JP1/Performance Management Reference*, and related agent product manuals. Depending on your objectives, we recommend that you read these manuals in the manner indicated below:



A reference to another manual is written as follows: For details about *something*, see *topic-title* in the *manual-name*. Using topic-title as a keyword, search for the relevant section in the target manual.

Operation in each window assumes the following environment.

### Monitoring manager operation

Environment in which Windows Server 2012 or Linux 6 (x64) is used

### Monitoring console operation

Environment in which Internet Explorer 11 is used

Some windows in this manual might differ from the windows of your product because of improvements made without prior notice.

## ■ Conventions: Fonts and symbols

The following table explains the text formatting conventions used in this manual:

Text formatting	Convention
<b>Bold</b>	<p>Bold characters indicate text in a window, other than the window title. Such text includes menus, menu options, buttons, radio box options, or explanatory labels. For example:</p> <ul style="list-style-type: none"> <li>• From the <b>File</b> menu, choose <b>Open</b>.</li> <li>• Click the <b>Cancel</b> button.</li> <li>• In the <b>Enter name</b> entry box, type your name.</li> </ul>

Text formatting	Convention
<i>Italic</i>	<p>Italic characters indicate a placeholder for some actual text to be provided by the user or system. For example:</p> <ul style="list-style-type: none"> <li>Write the command as follows: <code>copy source-file target-file</code></li> <li>The following message appears: A file was not found. (file = <i>file-name</i>)</li> </ul> <p>Italic characters are also used for emphasis. For example:</p> <ul style="list-style-type: none"> <li>Do <i>not</i> delete the configuration file.</li> </ul>
Monospace	<p>Monospace characters indicate text that the user enters without change, or text (such as messages) output by the system. For example:</p> <ul style="list-style-type: none"> <li>At the prompt, enter <code>dir</code>.</li> <li>Use the <code>send</code> command to send mail.</li> <li>The following message is displayed: <code>The password is incorrect.</code></li> </ul>

The following table explains the symbols used in this manual:

Symbol	Convention
	<p>In syntax explanations, a vertical bar separates multiple items, and has the meaning of OR. For example: A   B   C means A, or B, or C.</p>
{ }	<p>In syntax explanations, curly brackets indicate that only one of the enclosed items is to be selected. For example: { A   B   C } means only one of A, or B, or C.</p>
[ ]	<p>In syntax explanations, square brackets indicate that the enclosed item or items are optional. For example: [ A ] means that you can specify A or nothing. [ B   C ] means that you can specify B, or C, or nothing.</p>
. . .	<p>In coding, an ellipsis (...) indicates that one or more lines of coding have been omitted. In syntax explanations, an ellipsis indicates that the immediately preceding item can be repeated as many times as necessary. For example: A, B, B, . . . means that, after you specify A, B, you can specify B as many times as necessary.</p>

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# 1

## Configuring an Operation Monitoring System

To begin, we will use Performance Management to configure an operation monitoring system and start monitoring a business system.



## 1.1 General procedure for configuring an operation monitoring system

Configuration of an operation monitoring system involves preparations before installation, configuration of the monitoring manager, and configuration of the monitoring agents.

The tasks for configuring the monitoring manager and the monitoring agents depend on whether the target is a Windows host or a Linux host. See the configuration procedure for the OS running on your host.

The following table shows the tasks in the general procedure for configuring an operation monitoring system and the sections to be referenced:

Overview of task	No.	Task	Section	
			Windows	Linux
Preparations before installation	1	Evaluate monitored items.	1.2	
	2	Verify the prerequisite OS, and the required memory and disk space.		
	3	Verify the language settings of the prerequisite OS.		
	4	Verify the prerequisite network environment.		
	5	Verify the Web browser and its settings required for the monitoring console.		
Configuration of a monitoring manager	6	Install PFM - Manager.	1.3	1.4
	7	Set up PFM - Manager.		
	8	Install PFM - Web Console.		
	9	Set up PFM - Web Console.		
	10	Start the Performance Management services on the monitoring manager.		
Configuration of the monitoring agents	11 <sup>#</sup>	Install PFM - Base.	1.5	1.6
	12 <sup>#</sup>	Install PFM - Agent Option for Platform.		
	13 <sup>#</sup>	Set up PFM - Base and PFM - Agent Option for Platform.		
	14 <sup>#</sup>	Start the Performance Management services at the monitoring agent.		
	15	Verify that the monitoring manager and the monitoring agents can communicate with each other.		
	16	Display the monitoring agents on the monitoring console.		

#

Perform these tasks for each monitoring agent.

### Related topics

- [1.2 Preparations before installation](#)
- [1.3 Configuration of a monitoring manager \(Windows\)](#)
- [1.4 Configuration of a monitoring manager \(Linux\)](#)
- [1.5 Configuration of monitoring agents \(Windows\)](#)
- [1.6 Configuration of monitoring agents \(Linux\)](#)

## 1.2 Preparations before installation

This section explains the preparations before Performance Management is installed.

### 1.2.1 Evaluating monitored items

Before you install Performance Management, determine the performance data you want to monitor (monitored items). Evaluate monitored items based on your purpose for using operation monitoring. Use the results of this evaluation to determine specific items for when you start running Performance Management, such as the items to be monitored and the monitoring conditions.

#### Purposes of operation monitoring and its implementation with Performance Management

In general, there are two principal purposes of operation monitoring. One is *monitoring the operation of the business system and responding to problems*, and the other is *capacity planning for the business system*. The following explains the implementation methods using Performance Management for each purpose.

- **Monitoring the operation of the business system and responding to problems**  
Performance Management enables you to monitor the operation of the business system by using an alarm function to send notification reports when performance data reaches threshold values. You can use the report function to display reported alarm-related data in table and graph formats for the purpose of determining the causes of problems.
- **Capacity planning for the business system**  
By using a report function, Performance Management enables you to display in table and graph formats information that is useful for analyzing trends in the business system. Evaluating the information displayed in such reports enables you to perform capacity planning for your business system based on actual conditions.

#### Example of evaluating monitored items

The following is an example of evaluating monitored items according to the purpose of operation monitoring:

Purpose	Requirement	Evaluation result (monitored items)
Monitoring the business system and responding to problems	Monitoring basic items to determine the overall condition of the business system's OS	<ul style="list-style-type: none"><li>• CPU usage</li><li>• Amount of unused physical memory area</li><li>• Ratio of free space on the logical disk</li></ul>
Capacity planning for the business system	Monitoring items related to server performance to plan for when to replace a server	<ul style="list-style-type: none"><li>• CPU usage</li><li>• Amount of unused physical memory area</li></ul> <p>(The amount of free space on a logical disk is not included here because a shortage here can be handled without having to replace the server.)</p>

This example shows only monitoring of the performance of the OS on a server. Performance Management supports many other monitored items. The monitored items that are supported depend on the agent product. For details about the supported monitored items and example operations for each agent product, see the documentation for the applicable agent products.



#### Note

Performance Management provides templates that contain definitions for frequently monitored items and monitoring conditions. If there is a monitoring template that is appropriate for the monitored items evaluated

before installation, you can use it to specify definitions more quickly when starting Performance Management operation.

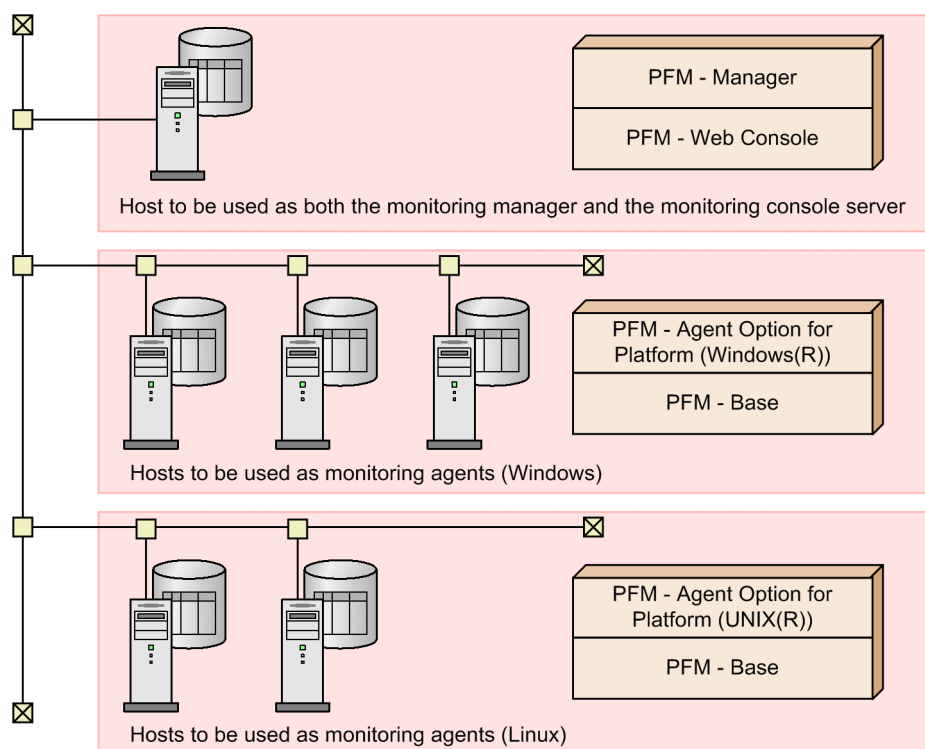
## Related topics

- [2. Monitoring the Business System and Responding to Problems](#)
- [3. Capacity Planning for the Business System](#)

## 1.2.2 Verifying the prerequisite OS, and the required memory and disk space

Verify the OS, amount of memory, and amount of disk space that are required to operate Performance Management for each host. These prerequisites differ depending on the product to be installed.

A host on which multiple products are to be installed must fulfill the prerequisites for all of those products. Note that the required memory and disk space is the total for all products. See the example system configuration below. In this case, the host to be used as both the monitoring manager and monitoring console server must have the total amount of memory and disk space required by PFM - Manager and PFM - Web Console. A host to be used as a monitoring agent must have the total amount of memory and disk space required by PFM - Base and PFM - Agent Option for Platform.



Legend:  : Verification target

## Compatible OS

OS		PFM - Manager	PFM - Web Console	PFM - Base	PFM - Agent Option for Platform
Windows	<ul style="list-style-type: none"> <li>• Windows Server 2008 R2</li> <li>• Windows Server 2012</li> </ul>	Y	Y	Y	Y

OS		PFM - Manager	PFM - Web Console	PFM - Base	PFM - Agent Option for Platform
Windows	<ul style="list-style-type: none"> <li>Windows Server 2016</li> </ul>	Y	Y	Y	Y
AIX	<ul style="list-style-type: none"> <li>AIX V6.1</li> <li>AIX V7.1</li> <li>AIX V7.2</li> </ul>	Y	Y	Y	Y
HP-UX	<ul style="list-style-type: none"> <li>HP-UX 11i V3 (IPF)</li> </ul>	--	--	Y	Y
Linux	<ul style="list-style-type: none"> <li>CentOS 6 (x64)</li> <li>CentOS 7</li> <li>Linux 6 (x64)</li> <li>Linux 7</li> <li>Oracle Linux 6 (x64)</li> <li>Oracle Linux 7</li> <li>SUSE Linux 12</li> </ul>	Y	Y	Y	Y
Solaris	<ul style="list-style-type: none"> <li>Solaris 10</li> <li>Solaris 11</li> </ul>	--	--	Y	Y

Legend:

Y: Compatible. --: Not compatible.

Note that this manual shows the procedures for configuring Windows and Linux systems.

### Required memory (GB)

OS	PFM - Manager	PFM - Web Console	PFM - Base	PFM - Agent Option for Platform
Windows	3.5	4.0	2.0	0.5
Linux	7.0			

### Required disk space (GB)

OS	PFM - Manager	PFM - Web Console	PFM - Base	PFM - Agent Option for Platform
Windows	1.5	2.0	0.5	3.0
Linux				

Note:

The disk space shown above is the minimum necessary for performing the operations described in this manual. Before you start actual operation, use the applicable estimation formula to calculate the required amount of disk space. For details about estimation formulas, see the Release Notes.

## 1.2.3 Verifying the language settings of the prerequisite OS

Verify that the language settings of the OSs on the hosts on which to install PFM - Manager, PFM - Web Console, PFM - Base, and PFM - Agent Option for Platform are specified appropriately. Perform verification on each host.

The following table shows the OS settings for English, Japanese, and Chinese. Do not omit verifying the settings because incorrect settings might cause characters to be corrupted or definition data to be changed.

OS	Relevant item	Value to be set		
		English	Japanese	Chinese
Windows	Settings of Control Panel	English	Japanese	Chinese (simplified)
Linux	Value of the LANG environment variable	C	ja_JP.SJIS#, ja_JP.sjis#, ja_JP.UTF-8, or ja_JP.utf8	zh_CN.gb18030, zh_CN.UTF-8, or zh_CN.utf8

#: This value can be set in SUSE Linux only.

### Important

If the OS of a host on which to install PFM - Manager is Linux, check whether the `LC_ALL` environment variable has been set. If the environment variable has been set and its value is different from the value of the `LANG` environment variable, you must perform either of the following operations when starting Performance Management services or executing commands:

- Clear the `LC_ALL` environment variable.
- Change the value of the `LC_ALL` environment variable to the same value that is set for the `LANG` environment variable.

The change of the environment variable is required by the relevant shell only. You do not need to change the environment variable throughout the entire system.

## 1.2.4 Verifying the prerequisite network environment

To use Performance Management, you must evaluate the naming of the monitoring hosts and specify name resolution settings and port numbers.

### (1) Evaluating monitoring host names

Monitoring host names are used to identify individual hosts on the Performance Management system. If you evaluate the types and values of the names used as the monitoring host names before you install Performance Management, it will be easier to specify monitoring host names and name resolution settings that will be required after installation of Performance Management.

There are two types of monitoring host names. One type is aliases (any names you choose), and the other type is the real host names (host names that can be checked with the `hostname` or `uname -n` command). You must first evaluate which type is to be used, and then you must evaluate the actual values that will be used as the monitoring host names.

Note that the default is the real host names, but we recommend that you change them to aliases for the following reasons:

- When aliases are used, there will be no need to change the host name settings if the real host names are changed after Performance Management operation has begun.
- Aliases support an environment in which multiple hosts can have the same real host name.

This manual assumes that aliases are used as the monitoring host names in anticipation of the possibility that real host names will be changed. The following aliases are used in this manual for the monitoring manager and for five monitoring agents:

- Alias for the monitoring manager: `aliasmgr`
- Aliases for monitoring agents: `aliasagt1`, `aliasagt2`, `aliasagt3`, `aliasagt4`, and `aliasagt5`

## (2) Evaluating how to resolve monitoring host names

You must specify settings so that monitoring host names can be resolved between the monitoring manager and the monitoring agents. For example, if aliases are used as the monitoring host names, names must be resolvable by using aliases.

The following methods can be used to resolve names:

### Using a DNS or the hosts files

Use this method if you use names that are common to other applications.

### Using Performance Management's settings file (`jpchosts` file)

Use this method if you use the names only in the Performance Management system. After the program is installed, the `jpchosts` file will be used to resolve names on the monitoring manager host and on each monitoring agent host.

For both methods, specify a loopback address as `localhost` in the `host` file.

### Related topics

- [1.3.2\(3\) Using aliases to resolve names](#)

## (3) Evaluating port numbers

You must evaluate the port numbers to be used by Performance Management on the monitoring manager host and the monitoring agent hosts. The protocol used is TCP/IP. If a default port number used by Performance Management is available, use that port number as is. If a default port number is already in use, change to an available port number.

If you must change a port number, make the change after you have installed Performance Management. Because port numbers for the same service must match between the monitoring manager host and the monitoring agent hosts, we recommend that you make a list of the port numbers that are not being used on each host before you install Performance Management.

The port numbers shown in the following table are set as the Performance Management default port numbers:

Role of service	Service name	Port number	Program that uses the service			
			PFM - Manager	PFM - Web Console	PFM - Base	PFM - Agent Option for Platform
Service configuration information management	Name Server	22285	Y	Y	Y	Y
Service status management	Status Server	22350	Y	--	Y	--
Monitoring console communication	View Server	22286	Y	--	--	--
Communication between Web browser and the PFM - Web Console host	Web Service	20358	--	Y	--	--
AJP communication	Web Console	20359	--	Y	--	--

Role of service	Service name	Port number	Program that uses the service			
			PFM - Manager	PFM - Web Console	PFM - Base	PFM - Agent Option for Platform
Component container management	Web Console	20360	--	Y	--	--

Legend:

Y: Used.

--: Not used.

For any other service or program, a port number that is available on the host is assigned automatically each time the service is started. However, if Performance Management is used in a firewall environment, all port numbers must be fixed and passage through the firewall must be permitted.

## Related topics

- [1.3.2\(1\) Specifying the port numbers to be used by PFM - Manager](#)
- [A. Firewall passage directions](#)

## 1.2.5 Verifying the Web browser and its settings required for the monitoring console

A Web browser must be installed on the monitoring console host for the purpose of checking the operation monitoring data collected by Performance Management and for changing Performance Management settings. For smooth startup of Performance Management operation, we recommend that you verify the information provided here before you install Performance Management. If Performance Management has already been installed, you can still verify the information before you log in to Performance Management from the monitoring console.

### Required Web browser

Either Internet Explorer or Firefox is required on the monitoring console host. For details about the versions of these Web browsers that are supported by Performance Management, see the *Release Notes*.

### Required Web browser settings

You need to configure the Web browser to use the monitoring console as follows:

- Page cache can be checked by page or automatically.
- The language to be displayed is set.
- JavaScript is enabled.
- Files can be downloaded.
- Images (GIF data) can be displayed.
- Cookies are enabled.
- The font size is appropriate.

The following example settings are for when the OS is Windows Server 2012 R2 and the Web browser is Internet Explorer 11.

Menu	Tab	Button	Setting
<b>Tools - Internet Options</b>	<b>General</b>	<b>Browsing history - Settings</b>	<b>Check for newer versions of stored pages - Automatically</b>
		<b>Languages</b>	The language that has the highest priority in the <b>Change your language preferences</b> list will be used. To view the <b>Change your language preferences</b> list, click the <b>Set Language Preferences</b> button. If the language you want to use is not in the list, click <b>Add a language</b> , select the language you want to add, and assign it the highest priority.
	<b>Security</b>	<b>Custom level</b>	<ul style="list-style-type: none"> <li>• <b>Scripting - Active scripting - Enable</b></li> <li>• <b>Downloads - File download - Enable</b></li> </ul>
	<b>Privacy</b>	<b>Advanced</b>	<ul style="list-style-type: none"> <li>• <b>Override automatic cookie handling</b></li> <li>• <b>First-party Cookies - Accept<sup>#</sup></b></li> </ul>
	<b>Advanced</b>	--	<ul style="list-style-type: none"> <li>• <b>Multimedia - Play animations in webpages*</b></li> <li>• <b>Multimedia - Show pictures</b></li> </ul>
<b>View - Text size</b>	--	--	<b>Medium</b>

Legend: --: Not applicable.

#

There are different methods that can be used to enable cookies. Select a method that is appropriate to your Web browser.



## 1.3 Configuration of a monitoring manager (Windows)

---

Install and set up PFM - Manager and PFM - Web Console to configure the monitoring manager.

### 1.3.1 Newly installing PFM - Manager (Windows)

You use a wizard to newly install PFM - Manager.

#### Procedure

1. Log in with Administrator permissions to the host on which you intend to install PFM - Manager.

2. Insert the distribution media and run the installer.

Install the program according to the installer's instructions.

- **User information**

Enter a user name and an organization name.

- **Destination Folder**

Specify the folder where the program is to be installed.



#### Important

An installation folder is created when you specify a folder in the Change Current Destination Folder dialog box and click the **OK** button. If you inadvertently create the wrong folder, delete it after the installation has finished.

3. Check the displayed information that you have specified in the wizard.

If necessary, click the **Back** button to change settings.

4. Click the **Install** button to start installation of PFM - Manager.

If the OS's User Account Control (UAC) function is enabled, the User Account Control dialog box might appear during installation. If this dialog box appears, click the **Continue** button to continue installation. If you click the **Cancel** button, the installation is aborted.

#### Postrequisites

Set up PFM - Manager.

#### Related topics

- [1.3.2 Setting up PFM - Manager \(Windows\)](#)

### 1.3.2 Setting up PFM - Manager (Windows)

After you have finished installing PFM - Manager, change port numbers and change monitoring host names to aliases, if necessary. If you have changed monitoring host names to aliases, specify settings so that the monitoring manager host can resolve names by using aliases.

# (1) Specifying the port numbers to be used by PFM - Manager

If you want to change port numbers that will be used by PFM - Manager or fix port numbers to permit firewall passage, specify the port number settings again. This task is not needed if you use the default port numbers.

## Prerequisites

The commands used for this task are stored at the following location.

Windows:

```
PFM-Manager-installation-folder\tools
```

Linux:

```
/opt/jp1pc/tools
```

## Procedure

1. Log in to the host on which PFM - Manager is installed.  
In Windows, log in as a member of the Administrators group.  
In Linux, log in as a root user or use the `su` command to change the user account to a root user.

2. Execute the `jpccconf port define` command.

Example of command execution:

```
jpccconf port define -key all
```

You can execute the `jpccconf port define` command to display the port numbers that are set currently. For example, if the current port number for the Name Server service is 22285, the following is displayed:

```
Component [Name Server]
ServiceID [PN1001]
Port [22285]
:
```

3. Set port numbers for the individual services.

The action depends on how you are setting the port number. The table below lists and describes the settings and actions. As long as there will not be any duplication of a port number in the host, use the port numbers displayed by the `jpccconf port define` command as is.

Setting	Action
To use the displayed number as the fixed port number for a service	Press the <b>Enter</b> key.
To change the displayed port number to another number	Enter a port number between 1024 and 65535. Do not specify a port number that is already being used by the system.
Port number that is not to be fixed	Enter 0. You cannot fix port numbers for the following services; you must enter 0 to set the default value: <ul style="list-style-type: none"><li>• Name Server service</li><li>• View Server service (between PFM - Web Console and View Server service)</li><li>• Status Server service</li></ul>

4. Execute the `jpccconf port list` command to check if the port numbers have been set correctly.

Example of command execution:

```
jpccconf port list -key all
```

If `<error>` is displayed in the Service area or the Port area, port numbers have not been set correctly. Set the port numbers again. One of the following could be the cause of the error:

- A port number is not set.
  - The same port number is already set.
5. In a firewall environment, specify the settings so that communication using the port numbers set in steps 2 through 4 is permitted.

## Postrequisites

If you will not be using the real host names as the monitoring manager's monitoring host names, change the monitoring host names to aliases. Otherwise, install PFM - Web Console.

## Related topics

- [E.3 Conventions: Folders and directories for Performance Management](#)
- [jpccconf port define](#) in the manual *JPI/Performance Management Reference*
- [jpccconf port list](#) in the manual *JPI/Performance Management Reference*
- [A. Firewall passage directions](#)
- [1.3.2\(2\) Changing the monitoring manager's monitoring host names to aliases](#)
- [1.3.3 Newly installing PFM - Web Console \(Windows\)](#)

## (2) Changing the monitoring manager's monitoring host names to aliases

You can change the monitoring manager's monitoring host names from the real host names to aliases. To use aliases for the monitoring host names, change the type of monitoring host names and the monitoring host name settings.

## Prerequisites

The commands used for this task are stored at the following location.

Windows:

```
PFM-Manager-installation-folder\tools
```

Linux:

```
/opt/jp1pc/tools
```

## Procedure

1. Log in to the host on which PFM - Manager is installed.  
In Windows, log in as a member of the Administrators group.  
In Linux, log in as a root user or use the `su` command to change the user account to a root user.
2. Create a backup directory to save the definition information before host names are changed.

Example of directory creation

```
d:\backup
```

- Execute the `jpccconf host hostmode` command to change the type of monitoring host names and the monitoring host names.

Example of command execution:

```
jpccconf host hostmode -mode alias -aliasname aliasmgr -d d:\backup
```

- The `-mode` option specifies the type of monitoring host names. If you specify `alias`, you can set aliases.
- The `-aliasname` option specifies monitoring host names. You can specify any names.
- The `-d` option specifies the name of the directory created in step 2 (the directory to which definition information is to be backed up before host names are changed). Specify 1 to 130 bytes of single-byte alphanumeric characters, single-byte symbols, and the space character. Note that `;`, `,`, `*`, `?`, `'`, `"`, `<`, `>`, and `|` cannot be specified.

### Important

The `jpccconf host hostmode` command cannot be executed while Performance Management services are running. If an attempt is made to execute the command while Performance Management services are running, an error occurs and the processing is terminated. If that happens, execute the `jpccspm stop` command as follows to stop PFM - Manager services:

```
jpccspm stop -key all
```

- Re-execute the `jpccconf host hostmode` command to check whether the settings have been specified correctly.

Example of command execution:

```
jpccconf host hostmode -display
```

The `jpccconf host hostmode` command displays the monitoring host name type that is set currently and the current monitoring host names in the format shown below. Check whether the displayed information matches the settings specified in step 3.

```
hostmode: Type of monitoring host name  
hostname: Monitoring host name
```

## Postrequisites

Specifying settings so that aliases can resolve to IP addresses.

## Related topics

- [E.3 Conventions: Folders and directories for Performance Management](#)
- [jpccconf host hostmode](#) in the manual *JP1/Performance Management Reference*
- [1.3.2\(3\) Using aliases to resolve names](#)

## (3) Using aliases to resolve names

If the monitoring host names are changed to aliases, the monitoring manager host and each monitoring agent host must be able to use those aliases to resolve names. This subsection explains how to edit the Performance Management's settings file (`jpchosts` file) to resolve names. This task is not needed if name resolution has already been set up by using a method such as DNS.

## Prerequisites

The commands used for this task are stored at the following location.

Windows:

*PFM-Manager-installation-folder-or-PFM-Base-installation-folderr\tools*

Linux:

*/opt/jp1pc/tools*

## Procedure

1. Use a text editor or a similar tool to open the `jpchosts` file.

The `jpchosts` file is stored in the PFM - Manager installation folder or the PFM - Base installation folder.

2. Enter the aliases and IP addresses in the `jpchosts` file.

Enter this information for all hosts whose monitoring host name is changed to an alias in the Performance Management system.

The following table shows an example of aliases and the corresponding IP addresses:

Role in the Performance Management system	Alias	IP address
Monitoring manager	<code>aliasmgr</code>	<code>20.108.41.1</code>
Monitoring agent (Windows)	<code>aliasagt1</code>	<code>20.108.41.2</code>
	<code>aliasagt2</code>	<code>20.108.41.3</code>
	<code>aliasagt3</code>	<code>20.108.41.4</code>
Monitoring agent (Linux)	<code>aliasagt4</code>	<code>20.108.41.5</code>
	<code>aliasagt5</code>	<code>20.108.41.6 and 20.108.41.7</code>

In this example, the following information is entered in the `jpchosts` file:

```
aliasmgr 20.108.41.1
aliasagt1 20.108.41.2
aliasagt2 20.108.41.3
aliasagt3 20.108.41.4
aliasagt4 20.108.41.5
aliasagt5 20.108.41.6,20.108.41.7
```



### Important

A loopback address cannot be specified as the IP address of a host name that is to be resolved.



### Tip

You can specify multiple IP addresses for a single alias by separating them with a comma (,).

A definition of one alias cannot be specified over multiple lines. If there is more than one line that defines the same alias, only the definition on the first line is used.

3. Save the `jpchosts` file.

4. Execute the `jpccspm start` command and verify that PFM - Manager services have started.

Example of command execution:

```
jpcspm start -key all
```

## Postrequisites

Install PFM - Web Console.

## Related topics

- [E.3 Conventions: Folders and directories for Performance Management](#)
- [1.2.4\(1\) Evaluating monitoring host names](#)
- [jpcspm start](#) in the manual *JPI/Performance Management Reference*
- [jpcspm stop](#) in the manual *JPI/Performance Management Reference*
- [1.3.3 Newly installing PFM - Web Console \(Windows\)](#)

## 1.3.3 Newly installing PFM - Web Console (Windows)

You use a wizard to newly install PFM - Web Console.

### Prerequisites

The commands used for this task are stored at the following location:

*PFM-Manager-installation-folder*\tools

### Procedure

1. Log in with Administrator permissions to the host on which you intend to install PFM - Web Console.
2. Execute the `jpcspm stop` command to stop the PFM - Manager services.

Example of command execution:

```
jpcspm stop -key all
```

3. Insert the distribution media and run the installer.  
Install the program according to the installer's instructions.

- **User information**

Enter a user name and an organization name.

- **Destination Folder**

Specify the folder where the program is to be installed.

### Important

An installation folder is created when you specify a folder in the Change Current Destination Folder dialog box and click the **OK** button. If you inadvertently create the wrong folder, delete it after the installation has finished.

4. Check the displayed information that you have specified in the wizard.  
If necessary, click the **Back** button to change settings.
5. Click the **Install** button to start installation of PFM - Web Console.

If the OS's User Account Control (UAC) function is enabled, the User Account Control dialog box might appear during installation. If this dialog box appears, click the **Continue** button to continue installation. If you click the **Cancel** button, the installation is aborted.

## Postrequisites

Set up PFM - Web Console.

## Related topics

- [E.3 Conventions: Folders and directories for Performance Management](#)
- [jpcspm stop](#) in the manual *JPI/Performance Management Reference*
- [1.3.4 Setting up PFM - Web Console \(Windows\)](#)

## 1.3.4 Setting up PFM - Web Console (Windows)

After you have finished installing PFM - Web Console, you might need to specify some port number settings again. You will also create user accounts and an authentication key file for PFM - Web Console.

### (1) Specifying the port number to be used by the Web Service in PFM - Web Console

If the default port number for the Web Service in PFM - Web Console is already in use, you must specify the port number again. This task is not needed if you use the default port number.

#### Procedure

1. Change the port number in Performance Management's settings file (`httpsd.conf` file) on the host on which PFM - Web Console is installed.

The `httpsd.conf` file is stored in the following folder.

Windows:

```
PFM-Web-Console-installation-folder\CPSB\httpsd\conf
```

Linux:

```
/opt/jplpcwebcon/CPSB/httpsd/conf
```

In the `httpsd.conf` file, change the value on the following line:

```
LISTEN 20358
```

2. Execute the `jpcwstart` command and verify that PFM - Web Console services have started.

Command storage location:

```
PFM-Web-Console-installation-folder\tools
```

Example of command execution:

```
jpcwstart
```

If PFM - Web Console services have already been running, stop them and then start them again.

## Postrequisites

If you want to change the port number that will be used by another PFM - Web Console service, set that port number. Otherwise, log in to Performance Management from the monitoring console.

## Related topics

- *E.3 Conventions: Folders and directories for Performance Management*
- *jpcwstart* in the manual *JPI/Performance Management Reference*
- *1.3.4(2) Specifying the port number (AJP communication port) to be used by the Web Console service in PFM - Web Console*
- *1.3.4(3) Specifying the port number (component container management port) to be used by the Web Console service in PFM - Web Console*
- *1.3.4(4) Logging in to Performance Management from the monitoring console*

## (2) Specifying the port number (AJP communication port) to be used by the Web Console service in PFM - Web Console

If the default port number (AJP communication port) for the Web Console service in PFM - Web Console is already in use, you must specify the port number again. This task is not needed if you use the default port number.

### Procedure

1. Change the port number in Performance Management's settings file (`usrconf.properties` file) on the host on which PFM - Web Console is installed.

The `usrconf.properties` file is stored in the following folder.

Windows:

```
PFM-Web-Console-installation-folder\CPSB\CC\web\containers\PFMWebConsole\usrconf
```

Linux:

```
/opt/jplpcwebcon/CPSB/CC/web/containers/PFMWebConsole/usrconf
```

In the `usrconf.properties` file, change the value on the following line (value following the equal sign (=)):

```
webserver.connector.ajp13.port=20359
```

2. Change the port number in Performance Management's settings file (`workers.properties` file).

The `workers.properties` file is stored in the following folder.

Windows:

```
PFM-Web-Console-installation-folder\CPSB\CC\web\redirector
```

Linux:

```
/opt/jplpcwebcon/CPSB/CC/web/redirector
```

In the `workers.properties` file, change the value on the following line (value following the equal sign (=)):

```
worker.worker1.port=20359
```

3. Execute the `jpcwstart` command and verify that PFM - Web Console services have started.

Command storage location:

```
PFM-Web-Console-installation-folder\tools
```

Example of command execution:



```
jpcwstart
```

If PFM - Web Console services have already been running, stop them and then start them again.

## Postrequisites

If you want to change the port number that will be used by another PFM - Web Console service, set that port number. Otherwise, log in to Performance Management from the monitoring console.

## Related topics

- *E.3 Conventions: Folders and directories for Performance Management*
- *jpcwstart* in the manual *JPI/Performance Management Reference*
- *1.3.4(1) Specifying the port number to be used by the Web Service in PFM - Web Console*
- *1.3.4(3) Specifying the port number (component container management port) to be used by the Web Console service in PFM - Web Console*
- *1.3.4(4) Logging in to Performance Management from the monitoring console*

## (3) Specifying the port number (component container management port) to be used by the Web Console service in PFM - Web Console

If the default port number (component container management port) for the Web Console service in PFM - Web Console is already in use, you must specify the port number again. This task is not needed if you use the default port number.

## Procedure

1. Change the port number in Performance Management's settings file (`usrconf.properties` file) on the host on which PFM - Web Console is installed.

The `usrconf.properties` file is stored in the following folder.

Windows:

```
PFM-Web-Console-installation-folder\CPSB\CC\web\containers\PFMWebConsole\usrconf\usrconf.properties
```

Linux:

```
/opt/jplpcwebcon/CPSB/CC/web/containers/PFMWebConsole/usrconf
```

In the `usrconf.properties` file, change the value on the following line (value following the equal sign (=)):

```
webserver.shutdown.port=20360
```

2. Execute the `jpcwstart` command and verify that PFM - Web Console services have started.

Command storage location:

```
PFM-Web-Console-installation-folder\tools
```

Example of command execution:

```
jpcwstart
```

If PFM - Web Console services have already been running, stop them and then start them again.

## Postrequisites

If you want to change the port number that will be used by another PFM - Web Console service, set that port number. Otherwise, log in to Performance Management from the monitoring console.

## Related topics

- *E.3 Conventions: Folders and directories for Performance Management*
- *jpcwstart* in the manual *JPI/Performance Management Reference*
- *1.3.4(1) Specifying the port number to be used by the Web Service in PFM - Web Console*
- *1.3.4(2) Specifying the port number (AJP communication port) to be used by the Web Console service in PFM - Web Console*
- *1.3.4(4) Logging in to Performance Management from the monitoring console*

## (4) Logging in to Performance Management from the monitoring console

Log in to Performance Management by specifying its URL in the Web browser.

### Procedure

1. In the Web browser, specify the following URL:

```
http://name-of-the-host-on-which-PFM-Web-Console-is-installed:port-number-of-Web-Service-service/PMWebConsole/login.do
```

The Login window is displayed. If the Login window is not displayed, PFM - Manager and PFM - Web Console might not be set up correctly. Check and correct their settings as necessary.



#### Note

20358 is the default the port number for the Web Service service.



#### Important

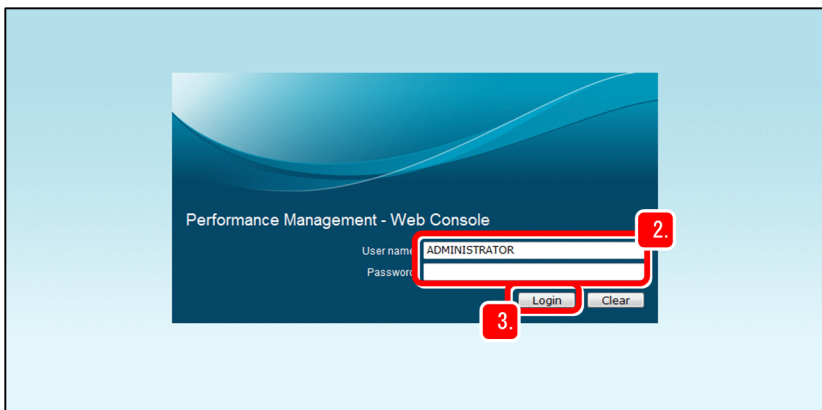
Do not log in more than once on the same host. If you log in again, the session that has already started might be disabled.

2. In the Login window, enter the login credentials for **User Name** and **Password**.

By default, the following user account is set:

**User Name:** ADMINISTRATOR

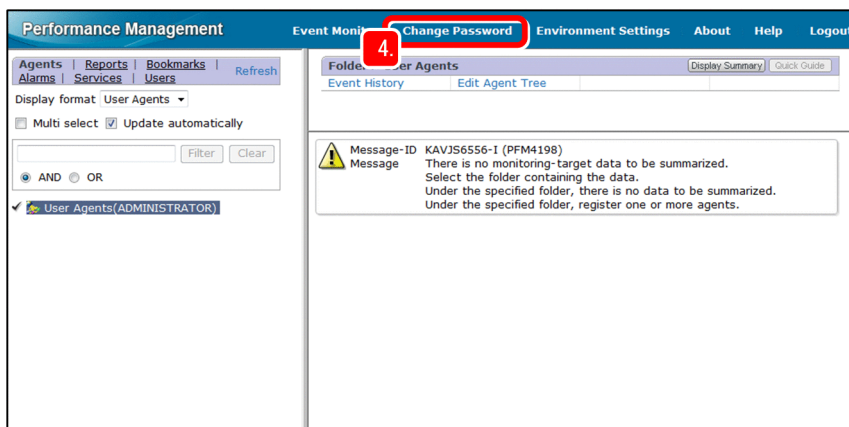
**Password:** None



3. Click the **Login** button.

You are now logged in to Performance Management, and the Main window is displayed.

4. If this is the first time you have logged in, use the **Change Password** menu to change the password.



Specify a password in **Password**, and then enter it again in **Confirm password**. Specify the password by taking into account the following:

Specify the password as 1 to 16 single-byte characters. The permitted characters include alphabetic characters (uppercase and lowercase), numeric characters, and symbols (! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | } ~ space). Alphabetic characters are case sensitive.

Any single-byte space entered before or after an input character string is deleted.

### Postrequisites

Create user accounts.

### Related topics

- [1.3.4\(5\) Creating user accounts](#)

## (5) Creating user accounts

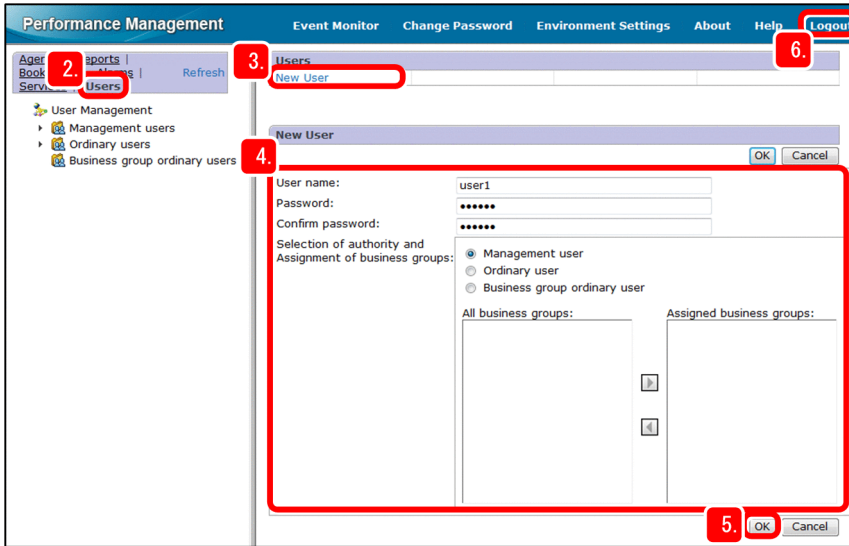
To run the operation monitoring system securely, create the ADMINISTRATOR user that is set by default and the user accounts that will be used during operation.

### Background

Performance Management supports two user account management methods. One is the PFM authentication mode for managing user accounts only within the Performance Management system. The other is the JP1 authentication mode, in which JP1/Base is used to achieve central management of user accounts. The setup procedure explained in this manual is based on use of the PFM authentication mode. For details about the setup method when the JP1 authentication mode is used, see the topic *Tasks involved in user account setup* in the *JP1/Performance Management User's Guide*.

### Procedure

1. Log in to Performance Management from the monitoring console.
2. In the Main window, select the **Users** tab.



3. In the Users window, select **New User**.

4. In the New User window, specify information about the user account.  
Specify the following items:

#### User name

Specify a user name as 1 to 16 single-byte characters. The permitted characters include alphabetic characters (uppercase and lowercase), numeric characters, and symbols (! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | } ~ space). Alphabetic characters are not case sensitive.

Any single-byte space entered before or after the input character string is deleted.

#### Password and Confirm password

Specify a password as 1 to 16 single-byte characters. The permitted characters include alphabetic characters (uppercase and lowercase), numeric characters, and symbols (! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | } ~ space). Alphabetic characters are case sensitive.

Any single-byte space entered before or after the input character string is deleted.



#### Tip

We recommend that you specify a password that satisfies the following conditions:

- Consists of at least six characters.
- Includes at least one alphabetic character, numeric character, and symbol.
- Is not the same as the user name.

#### Selection of authority and Assignment of business groups

Select one of the following authorities:

**Management user:** This authority can reference and manage the entire system.

**Ordinary user:** This authority can reference the entire system.

**Business group ordinary user:** This authority can reference only the monitoring agents in the business group.



#### Note

If you configure business groups, you can limit the users who are permitted to reference performance data for each business system. You use business groups so that multiple system administrators

monitor specific systems assigned to them or for monitoring of very large systems. For details, see *Functions monitored in a business group* in the *JPI/Performance Management Planning and Configuration Guide*.

5. Click the **OK** button.

The user name is displayed in the tree for the created user account.

6. Click the **Logout** menu to log out from the monitoring console.

7. Check if the created user account can be used to log in.

### Postrequisites

Create an authentication key file for PFM - Web Console.

### Related topics

- [1.3.4\(6\) Creating an authentication key file for PFM - Web Console](#)

## (6) Creating an authentication key file for PFM - Web Console

Create an authentication key file that can be used during command execution so that the PFM - Web Console commands can be executed once Performance Management operation has begun. The PFM - Web Console commands include commands for specifying definitions of the database recording methods and for specifying report definition information.

### Prerequisites

The user accounts that will be used for running Performance Management must have already been created.

### Procedure

1. Execute the `jpctool service list` command on the host on which PFM - Manager is installed and verify that the View Server service is running.

Command storage location:

Windows:

```
PFM-Manager-installation-folder\tools
```

Linux:

```
/opt/jplpc/tools
```

Example of command execution:

```
jpctool service list -id * -host *
```

In Linux, wildcards might be analyzed by the shell, resulting in a command execution error. If this happens, enclose wildcards in double-quotation marks ("), such as "\*" .

The service is running if `Active` is displayed for `Status` in the execution results, as shown in the following:

Host Name	ServiceID	Service Name	PID	Port	Status
aliasmgr	PN1001	Name Server	484	8204	Active
aliasmgr	PM1001	Master Manager	1388	1104	Active
aliasmgr	PS1001	Master Store	632	1109	Active
aliasmgr	PE1001	Correlator	1420	1114	Active
aliasmgr	PC1aliasmgr	Trap Generator	1468	1134	Active
aliasmgr	PPlaliasmgr	View Server	1504	1155	Active
aliasmgr	PH1aliasmgr	Action Handler	872	1116	Active

2. If the View Server service is stopped, execute the `jpcspm start` command to start the View Server service.

Command storage location:

Windows:

*PFM-Manager-installation-folder*\tools

Linux:

/opt/jplpc/tools

Example of command execution:

```
jpcspm start -key all
```

3. Log in to the host on which PFM - Web Console is installed.

In Windows, log in as a member of the Administrators group.

In Linux, log in as a root user or use the `su` command to change the user account to a root user.

4. Execute the `jpcmkkey` command and specify the user name and password for the user account that will be used for Performance Management operation.

Command storage location:

Windows:

*PFM-Web-Console-installation-folder*\tools

Linux:

/opt/jplpcwebcon/tools

Example of command execution:

```
jpcmkkey -user "ADMINISTRATOR" -password "xxxxxx"
```

- In the `-user` option, specify the user name.  
To include a single-byte space in the user name, enclose the user name in double quotation marks ("). To specify a single-byte symbol, use the escape representation supported by the OS, if necessary. To specify a backslash (\) at the end of the entry string, specify \\.\.
- In the `-password` option, specify the password.  
If this option is omitted, Performance Management assumes that there is no password. To include a single-byte space in the user name, enclose the user name in double quotation marks ("). To specify a single-byte symbol, use the escape representation supported by the OS, if necessary. To specify a backslash (\) at the end of the entry string, specify \\.\.

The authentication key file used for executing PFM - Web Console commands is created.

## Postrequisites

Start the Performance Management services on the monitoring manager.

## Related topics

- *jpctool service list* in the manual *JPI/Performance Management Reference*
- *E.3 Conventions: Folders and directories for Performance Management*
- *jpccspm start* in the manual *JPI/Performance Management Reference*
- *jpccmkkey* in the manual *JPI/Performance Management Reference*
- *1.3.5 Starting the Performance Management services on the monitoring manager (Windows)*

## 1.3.5 Starting the Performance Management services on the monitoring manager (Windows)

Start each service to activate the settings for the PFM - Manager and PFM - Web Console setup. The procedure described here is not needed for a service that is already running. In Windows, the services are set by default to start automatically when the OS starts. Skip this task when you have restarted the OS after having already installed the programs.

### Procedure

1. Log in with Administrator permissions to the host on which PFM - Manager and PFM - Web Console are installed.
2. Execute the `jpccspm start` command to start the PFM - Manager services.

Command storage location:

*PFM-Manager-installation-folder*\tools

Example of command execution:

```
jpccspm start -key all
```

3. Execute the `jpccwstart` command to start the PFM - Web Console services.

Command storage location:

*PFM-Web-Console-installation-folder*\tools

Example of command execution:

```
jpccwstart
```



### Note

If PFM - Manager and PFM - Web Console are installed on the same host and starting or stopping their services is linked, you can start or stop the services of both PFM - Manager and PFM - Web Console simultaneously by executing the `jpccspm` command. For details about how to specify the linkage settings, see the topic *Synchronizing the starting and stopping of PFM - Manager or PFM - Base and PFM - Web Console* in the *JPI/Performance Management User's Guide*.

### Postrequisites

Configure the monitoring agents.

## Related topics

- *jpccspm start* in the manual *JPI/Performance Management Reference*
- *E.3 Conventions: Folders and directories for Performance Management*

- *jpcwstart* in the manual *JPI/Performance Management Reference*
- *1.5 Configuration of monitoring agents (Windows)*
- *1.6 Configuration of monitoring agents (Linux)*



## 1.4 Configuration of a monitoring manager (Linux)

---

Install and set up PFM - Manager and PFM - Web Console to configure the monitoring manager.

### 1.4.1 Newly installing PFM - Manager (Linux)

You use a wizard to newly install PFM - Manager.

#### Procedure

1. Log in as the root user to the host on which you intend to install PFM - Manager, or use the `su` command to assume root user privileges.
2. Insert the distribution media.
3. Execute the following command to start Hitachi Program Product Installer:

```
/distribution-media-mount-directory-name/X64LIN/setup /distribution-media-mount-directory-name
```

Hitachi Program Product Installer starts, and the initial window appears.



#### Important

Depending on the machine environment, directory and file names might differ from those indicated in the manuals. Use the `ls` command to check the correct directory and file names in your environment. When you execute the command that starts Hitachi PP Installer, specify the directory and file names displayed by the `ls` command.

4. From the initial window, enter `I`.  
A list of programs that can be installed is displayed.
5. Select **Performance Management - Manager**.  
To select a program, move the cursor to it and press the space bar.
6. Enter `I`.
7. If installation is successful, enter `Q`.  
The Hitachi Program Product Installer's initial window is displayed again.

#### Postrequisites

Set up PFM - Manager.

#### Related topics

- [1.4.2 Setting up PFM - Manager \(Linux\)](#)

## 1.4.2 Setting up PFM - Manager (Linux)

After you have finished installing PFM - Manager, change port numbers and change monitoring host names to aliases, if necessary. The procedures for specifying port numbers and monitoring host names are the same as for Windows.

- Changing port numbers that will be used by PFM - Manager  
If you want to change port numbers that will be used by PFM - Manager or fix all port numbers, specify the port number settings again. This task is not needed if you use the default port numbers.
- Changing the monitoring manager's monitoring host names to aliases  
You can change the monitoring manager's monitoring host names to aliases. If you do not want to have to change the monitoring host names whenever the real host names are changed or if there are multiple hosts with the same host name in the environment, you need to change the monitoring host names to aliases. Perform this task on each host where PFM - Manager is installed.
- Specify settings so that the monitoring manager host can resolve names by using aliases.  
If you change the monitoring host names to aliases, you need to set the monitoring manager host and each monitoring agent host to be able to use those aliases to resolve names. In this step, specify the settings on the monitoring manager's host (host on which PFM - Manager is installed). This task is not needed if name resolution has already been set up by using a method such as DNS.

### Related topics

- [1.3.2 Setting up PFM - Manager \(Windows\)](#)

## 1.4.3 Newly installing PFM - Web Console (Linux)

You use a wizard to newly install PFM - Web Console.

### Procedure

1. Log in as the root user to the host on which you intend to install PFM - Web Console, or use the `su` command to assume root user privileges.
2. Insert the distribution media.
3. Execute the following command to start Hitachi Program Product Installer:

```
/distribution-media-mount-directory-name/X64LIN/setup /distribution-media-mount-directory-name
```

Hitachi Program Product Installer starts, and the initial window appears.

4. From the initial window, enter `I`.  
A list of programs that can be installed is displayed.
5. Select **Performance Management - Web Console**.  
To select a program, move the cursor to it and press the space bar.
6. Enter `I`.
7. If installation is successful, enter `Q`.  
The Hitachi Program Product Installer's is displayed again.

## Postrequisites

Set up PFM - Web Console.

## Related topics

- [1.4.4 Setting up PFM - Web Console \(Linux\)](#)

## 1.4.4 Setting up PFM - Web Console (Linux)

After you have finished installing PFM - Web Console, create user accounts and an authentication key file for PFM - Web Console. The setup procedure is the same as it is for Windows.

- Changing port numbers that will be used by PFM - Web Console services  
If any default port numbers that will be used by PFM - Web Console services are already in use, you need to specify those port numbers again. This task is not needed if you use the default port numbers.
- Logging in to Performance Management from the monitoring console  
To verify that PFM - Manager and PFM - Web Console have been set up correctly, specify the URL in the Web browser and log in to Performance Management.
- Creating user accounts  
To run the operation monitoring system securely, create the ADMINISTRATOR user that is set by default and the user accounts that will be used during operation.
- Creating an authentication key file for PFM - Web Console  
Create an authentication key file that can be used during command execution so that the PFM - Web Console commands can be executed once Performance Management operation has begun. The PFM - Web Console commands include commands for specifying definitions of the database recording methods and for specifying report definition information.

## Related topics

- [1.3.4 Setting up PFM - Web Console \(Windows\)](#)

## 1.4.5 Starting the Performance Management services on the monitoring manager (Linux)

Start each service to activate the settings for the PFM - Manager and PFM - Web Console setup. The procedure described here is not needed for a service that is already running.

### Procedure

1. Log in as the root user to the host on which PFM - Manager and PFM - Web Console are installed, or use the `su` command to assume root user privileges.
2. Execute the `jpcspm start` command to start the PFM - Manager services.

Command storage location:

`/opt/jp1pc/tools/`

Example of command execution:

```
jpcspm start -key all
```

3. Execute the `jpcwstart` command to start the PFM - Web Console services.

Command storage location:

`/opt/jp1pcwebcon/tools/`

Example of command execution:

```
jpcwstart
```



### Note

If PFM - Manager and PFM - Web Console are installed on the same host and starting or stopping their services is linked, you can start or stop the services of both PFM - Manager and PFM - Web Console simultaneously by executing the `jpcspm` command. For details about how to specify the linkage settings, see the topic *Synchronizing the starting and stopping of PFM - Manager or PFM - Base and PFM - Web Console* in the *JPI/Performance Management User's Guide*.

### Postrequisites

Configure the monitoring agents.

### Related topics

- *jpcspm start* in the manual *JPI/Performance Management Reference*
- *jpcwstart* in the manual *JPI/Performance Management Reference*
- *1.5 Configuration of monitoring agents (Windows)*
- *1.6 Configuration of monitoring agents (Linux)*

## 1.5 Configuration of monitoring agents (Windows)

---

Install and set up PFM - Base and PFM - Agent Option for Platform to configure monitoring agents.

### 1.5.1 Newly installing PFM - Base (Windows)

You use a wizard to newly install PFM - Base.

#### Procedure

1. Log in with Administrator permissions to the host on which you intend to install PFM - Web Base.
2. Insert the distribution media and run the installer.

Install the program according to the installer's instructions.

- **User information**

Enter a user name and an organization name.

- **Destination Folder**

Specify the folder where the program is to be installed.



#### Important

An installation folder is created when you specify a folder in the Change Current Destination Folder dialog box and click the **OK** button. If you inadvertently create the wrong folder, delete it after installation has finished.

- **Configuring PFM - Manager for the connection destination**

Enter the monitoring host name of the PFM - Manager for the connection destination.

You can skip this task during installation and configure PFM - Manager for the connection destination later. If you skip this step, `localhost` is set as the host name during installation. After you have finished the installation, change the PFM - Manager for the connection destination on the PFM - Base host.

3. Check the displayed information that you have specified in the wizard.

If necessary, click the **Back** button to change settings.

4. Click the **Install** button to start installation of PFM - Base.

If the OS's User Account Control (UAC) function is enabled, the User Account Control dialog box might appear during installation. If this dialog box appears, click the **Continue** button to continue the installation. If you click the **Cancel** button, the installation is aborted.

#### Postrequisites

Install PFM - Agent Option for Platform.

#### Related topics

- [1.5.2 Newly installing PFM - Agent Option for Platform \(Windows\)](#)

## 1.5.2 Newly installing PFM - Agent Option for Platform (Windows)

You use a wizard to newly install PFM - Agent Option for Platform.

### Prerequisites

The commands used for this task are stored at the following location:

*PFM-Base-installation-folder\tools*

#### Note

If you install PFM - Manager and PFM - Agent Option for Platform on the same host, interpret PFM - Base as PFM - Manager.

### Procedure

1. Log in with Administrator permissions to the host on which you intend to install PFM - Agent Option for Platform.
2. Execute the `jpcspm stop` command to stop the PFM - Base services.

Example of command execution:

```
jpcspm stop -key all
```

3. Insert the distribution media and run the installer.

Install the program according to the installer's instructions.

The following items that were specified when PFM - Base was installed are displayed for verification:

- User information
  - Destination folder
  - Program Folder
4. Click the **Install** button to start installation of PFM - Agent Option for Platform.  
If the OS's User Account Control (UAC) function is enabled, the User Account Control dialog box might appear during installation. If this dialog box appears, click the **Continue** button to continue the installation. If you click the **Cancel** button, the installation is aborted.

### Postrequisites

Set up PFM - Base and PFM - Agent Option for Platform.

### Related topics

- [E.3 Conventions: Folders and directories for Performance Management](#)
- `jpcspm stop` in the manual *JP1/Performance Management Reference*
- [1.5.3 Setting up PFM - Base and PFM - Agent Option for Platform \(Windows\)](#)

## 1.5.3 Setting up PFM - Base and PFM - Agent Option for Platform (Windows)

After you have finished installing PFM - Base and PFM - Agent Option for Platform, change port numbers and change monitoring host names, if necessary. The setup procedure is the same as for PFM - Manager.

- Changing port numbers that will be used by PFM - Base and PFM - Agent Option for Platform  
If you want to change port numbers that will be used by PFM - Base and PFM - Agent Option for Platform or fix all port numbers, specify the port number settings again. This task is not needed if you use the default port numbers.
- Changing the monitoring agents' monitoring host names to aliases  
You can change the monitoring agents' monitoring host names to aliases. If you do not want to have to change the monitoring host names whenever the real host names are changed or if there are multiple hosts with the same host name in the environment, you need to change the monitoring host names to aliases. Perform this task on each host where PFM - Base is installed.
- Specifying settings so that a monitoring agent host can resolve names by using aliases  
If you change the monitoring host names to aliases, you need to set the monitoring manager host and each monitoring agent host to be able to use those aliases to resolve names. Perform this step on each host on which PFM - Base is installed. This task is not needed if name resolution has already been set up by using a method such as DNS.

### Related topics

- [1.3.2 Setting up PFM - Manager \(Windows\)](#)

## 1.5.4 Starting the Performance Management services at a monitoring agent (Windows)

Start the services to activate the monitoring agent settings. Skip this task if the services are already running. In Windows, the services are set by default to started automatically when the OS starts. Skip this task when you have restarted the OS.

### Prerequisites

The commands used for this task are stored at the following location:

*PFM-Base-installation-folder\tools*

#### Note

If you have installed PFM - Manager and PFM - Agent Option for Platform on the same host, interpret PFM - Base as PFM - Manager.

### Procedure

1. Log in with Administrator permissions to the host on which PFM - Agent Option for Platform is installed.
2. Execute the `jpcspm start` command to start the services of PFM - Base and PFM - Agent Option for Platform.  
Example of command execution:

```
jpcspm start -key all
```

## Postrequisites

Verify that the monitoring manager and the monitoring agent can communicate with each other.

## Related topics

- [E.3 Conventions: Folders and directories for Performance Management](#)
- [jpcspm start](#) in the manual *JPI/Performance Management Reference*
- [1.5.5 Verifying that the monitoring manager and the monitoring agents can communicate with each other \(Windows\)](#)

## 1.5.5 Verifying that the monitoring manager and the monitoring agents can communicate with each other (Windows)

Check the statuses of the monitoring agent services on the monitoring manager to verify that the monitoring manager and all monitoring agents can communicate with each other. If the status of every monitoring agent service is `Active`, the monitoring agents are communicating with the monitoring manager successfully.

## Prerequisites

The commands used for this task are stored at the following location:

`PFM-Manager-installation-folder\tools`

## Procedure

1. Log in with Administrator permissions to the host on which PFM - Manager is installed.
2. Execute the `jpctool service list` command to verify that the following services are running:
  - Action Handler service
  - Agent Collector service
  - Agent Store service

Example of command execution:

```
jpctool service list -id * -host *
```

In Linux, wildcards might be analyzed by the shell, resulting in a command execution error. If this happens, enclose wildcards in double-quotation marks (""), such as `"*"`.

The service is running if `Active` is displayed for `Status` in the execution results, as shown in the following:

Host Name	ServiceID	Service Name	PID	Port	Status
aliasmgr	PN1001	Name Server	484	8204	Active
aliasmgr	PM1001	Master Manager	1388	1104	Active
aliasmgr	PS1001	Master Store	632	1109	Active
aliasmgr	PE1001	Correlator	1420	1114	Active
aliasmgr	PC1aliasmgr	Trap Generator	1468	1134	Active
aliasmgr	PP1aliasmgr	View Server	1504	1155	Active
aliasmgr	PH1aliasmgr	Action Handler	872	1116	Active
aliasagt1	PH1aliasagt1	Action Handler	872	1116	Active
aliasagt1	TALaliasagt1	Agent Collector	51	1053	Active
aliasagt1	TSLaliasagt1	Agent Store	250	1057	Active



3. If `Inactive` or `Sactive` is displayed for `Status` in the execution results, check and revise the settings as necessary.

### Tip

The following are possible reasons why `Inactive` is displayed for `Status`:

- PFM - Base services or PFM - Agent Option for Platform services are stopped.
- The host name of the monitoring manager or the monitoring agent was not resolved.
- The monitoring manager or monitoring agent is installed in a firewall environment and port numbers used by Performance Management are not permitted for communication.

The following are possible reasons why `Sactive` is displayed for `Status`:

- PFM - Manager services are stopped.
- Port numbers do not match between the monitoring manager and the monitoring agent.
- The monitoring manager or monitoring agent is installed in a firewall environment and port numbers used by Performance Management are not permitted for communication.

To permit communication in a firewall environment, the port numbers used by Performance Management must be fixed.

## Postrequisites

Display monitoring agents on the monitoring console.

## Related topics

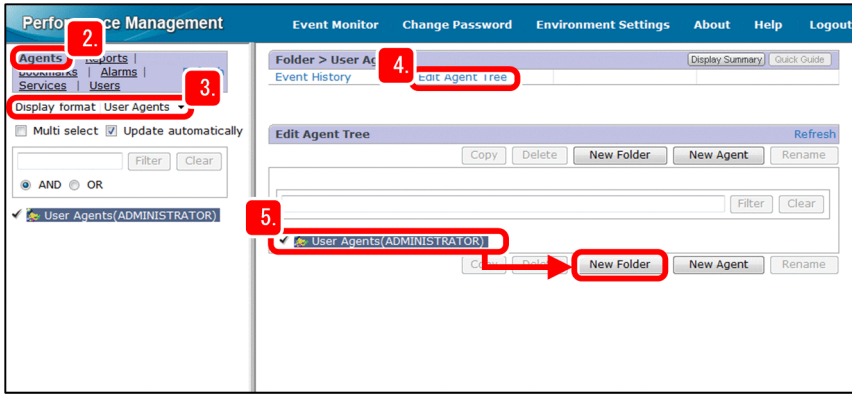
- [E.3 Conventions: Folders and directories for Performance Management](#)
- [jpc tool service list](#) in the manual *JPI/Performance Management Reference*
- [1.5.4 Starting the Performance Management services at a monitoring agent \(Windows\)](#)
- [1.3.2\(3\) Using aliases to resolve names](#)
- [1.3.2\(1\) Specifying the port numbers to be used by PFM - Manager](#)
- [A. Firewall passage directions](#)
- [1.5.6 Displaying monitoring agents on the monitoring console \(Windows\)](#)

## 1.5.6 Displaying monitoring agents on the monitoring console (Windows)

Create a folder in the Agents tree on the monitoring console and place monitoring agents in that folder. If you create a folder for each unit of operation monitoring, you can display target monitoring agents by folder, facilitating smooth application of your day-to-day monitoring operation. For example, if you create a separate folder for each group, the groups and servers handled by the individual monitoring agents can be identified at a glance.

### Procedure

1. Log in to Performance Management from the monitoring console.
2. Verify that the **Agents** tab is selected in the Main window.  
If any other tab is selected, select the **Agents** tab.



3. Verify that the display format is **User Agents**.



### Note

The display format is set to **User Agents** immediately after a login. If you change the display format to **Products**, the monitoring agents are displayed by type of agent product.

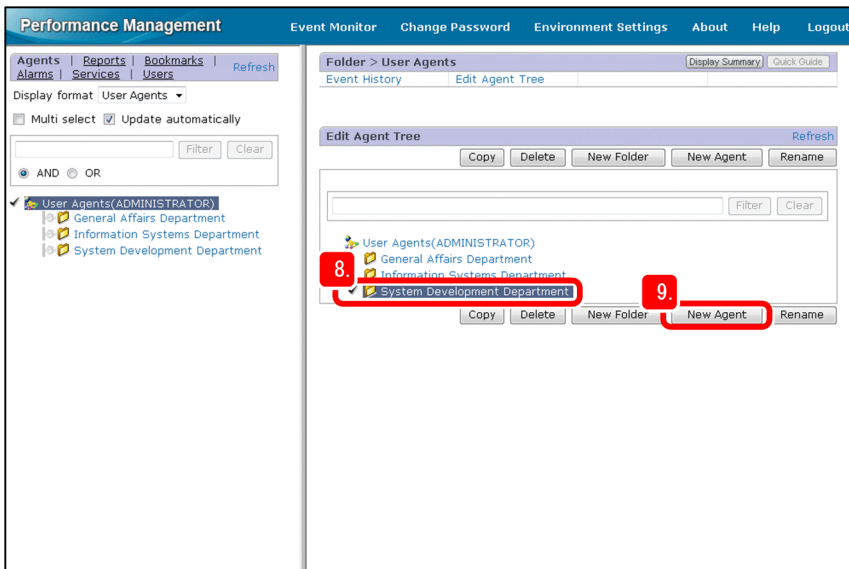
4. In the Agents window, select **Edit Agent Tree**.

5. Select **User Agents** (*login-user-name*) and click the **New Folder** button.

6. In **New folder name**, enter any name for the folder to be created, and then click the **OK** button.  
The created folder is displayed under **User Agents** (*login-user-name*).

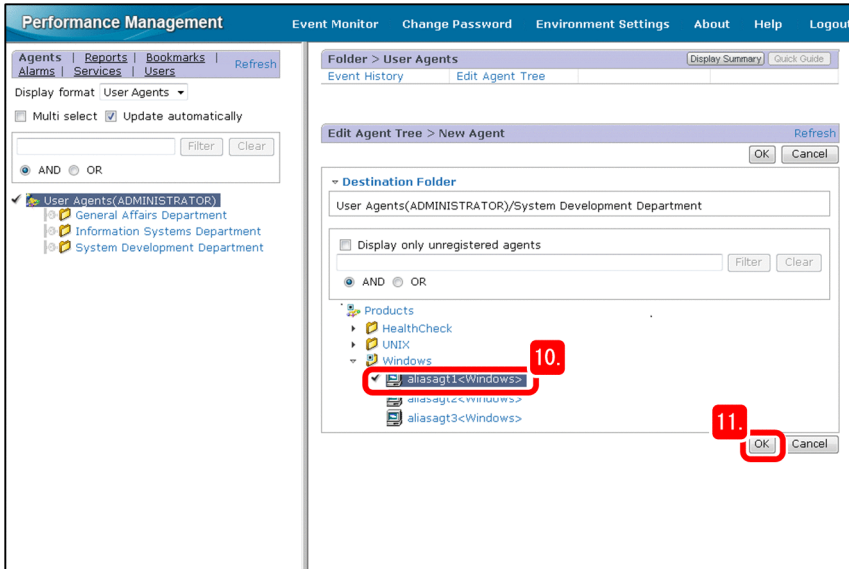
7. Repeat steps 4 through 6 for each folder you wish to create.

8. Select a folder to which you want to add agents.



9. Click the **New Agent** button.

10. Click the ► symbol for the **Windows** folder to expand the folder, and then select the *monitoring-host-name*<**Windows**> agent.



### Note

The PFM - Agents that are connected to PFM - Manager are displayed in the Edit Agent Tree > New Agent window. The **Windows** folder displays a list of the PFM - Agent Option for Platform (Windows) monitoring agents. The monitoring agents are displayed in the format *monitoring-host-name<Windows>*.

11. Click the **OK** button.

You can verify that the monitoring agents have been added to the created folder.



### Note

The number displayed to the right of *monitoring-host-name<Windows>* is the data model version number. For details about data models, see the topic *Compatibility among data model versions* in the *JPI/Performance Management Planning and Configuration Guide*.

## Postrequisites

Configuration of the operation monitoring system using Performance Management is now complete. Start operation with the configured system.

## Related topics

- [2. Monitoring the Business System and Responding to Problems](#)
- [3. Capacity Planning for the Business System](#)

## 1.6 Configuration of monitoring agents (Linux)

---

Install and set up PFM - Base and PFM - Agent Option for Platform to configure monitoring agents.

### 1.6.1 Newly installing PFM - Base (Linux)

You use a wizard to newly install PFM - Base.

#### Procedure

1. Log in as the root user to the host on which you intend to install PFM - Base, or use the `su` command to assume root user privileges.
2. Insert the distribution media.
3. Execute the following command to start Hitachi Program Product Installer:

```
/distribution-media-mount-directory-name/X64LIN/setup /distribution-media-mount-directory-name
```

Hitachi Program Product Installer starts, and the initial window appears.

4. From the initial window, enter `I`.  
A list of programs that can be installed is displayed.
5. Select **Performance Management - Base**.  
To select a program, move the cursor to it and press the space bar.
6. Enter `I`.  
The setting window of PFM - Manager for the connection destination is displayed.
7. Enter the host name of the PFM - Manager to be connected.  
You do not have to set PFM - Manager for the connection destination during installation. You can set it later. If you do not set PFM - Manager for the connection destination during installation, the physical host name of the PFM - Agent host or the PFM - RM host is used. After you have finished the installation, change the PFM - Manager for the connection destination on the PFM - Base host.
8. If installation is successful, enter `Q`.  
The Hitachi Program Product Installer's initial window is displayed again.

#### Postrequisites

Install PFM - Agent Option for Platform.

#### Related topics

- [1.6.2 Newly installing PFM - Agent Option for Platform \(Linux\)](#)

### 1.6.2 Newly installing PFM - Agent Option for Platform (Linux)

You use a wizard to newly install PFM - Agent Option for Platform.

## Prerequisites

The commands used for this task are stored at the following location:

```
/opt/jplpc/tools
```



### Note

If you install PFM - Manager and PFM - Agent Option for Platform on the same host, interpret PFM - Base as PFM - Manager.

## Procedure

1. Log in as the root user to the host on which you intend to install PFM - Agent Option for Platform, or use the `su` command to assume root user privileges.

2. Execute the `jpcspm stop` command to stop the PFM - Base services.

Example of command execution:

```
jpcspm stop -key all
```

3. Insert the distribution media.

4. Execute the following command to start Hitachi Program Product Installer:

```
/distribution-media-mount-directory-name/X64LIN/setup /distribution-media-mount-directory-name
```

Hitachi Program Product Installer starts, and the initial window appears.

5. From the initial window, enter `I`.

A list of programs that can be installed is displayed.

6. Select **Performance Management - Agent Option for Platform**.

To select a program, move the cursor to it and press the space bar.

7. Enter `I`.

8. If installation is successful, enter `Q`.

The Hitachi Program Product Installer's initial window is displayed again.

## Postrequisites

Set up PFM - Base and PFM - Agent Option for Platform.

## Related topics

- *jpcspm stop* in the manual *JPI/Performance Management Reference*
- *1.6.3 Setting up PFM - Base and PFM - Agent Option for Platform (Linux)*

## 1.6.3 Setting up PFM - Base and PFM - Agent Option for Platform (Linux)

After you have finished installing PFM - Base and PFM - Agent Option for Platform, change port numbers and change monitoring host names, if necessary. The setup procedure is the same as for a Windows monitoring manager.

- Changing port numbers that will be used by PFM - Base and PFM - Agent Option for Platform  
If you want to change port numbers that will be used by PFM - Base and PFM - Agent Option for Platform or fix all port numbers, specify the port number settings again. This task is not needed if you use the default port numbers.
- Changing the monitoring agents' monitoring host names to aliases  
You can change the monitoring agents' monitoring host names to aliases. If you do not want to have to change the monitoring host names whenever the real host names are changed or if there are multiple hosts with the same host name in the environment, you need to change the monitoring host names to aliases. Perform this task on each host where PFM - Base is installed.
- Specifying settings so that a monitoring agent host can resolve names by using aliases  
If you change the monitoring host names to aliases, you need to set the monitoring manager host and each monitoring agent host to be able to use those aliases to resolve names. Perform this step on each host on which PFM - Base is installed. This task is not needed if name resolution has already been set up by using a method such as DNS.

### Related topics

- [1.3.2 Setting up PFM - Manager \(Windows\)](#)

## 1.6.4 Starting the Performance Management services at the monitoring agent (Linux)

Start the services to activate the monitoring agent settings. Skip this task if the services are already running.

### Prerequisites

The commands used for this task are stored at the following location:

`/opt/jplpc/tools`



#### Note

If you have installed PFM - Manager and PFM - Agent Option for Platform on the same host, interpret PFM - Base as PFM - Manager.

### Procedure

1. Log in to the host on which PFM - Agent Option for Platform is installed. Note that if you are not logged in as a root user, use the `su` command to change the user account to a root user.
2. Execute the `jpcspm start` command to start the services of PFM - Base and PFM - Agent Option for Platform.  
Example of command execution:

```
jpcspm start -key all
```

### Postrequisites

Verify that the monitoring manager and the monitoring agents can communicate with each other.

## Related topics

- *jpcspm start* in the manual *JP1/Performance Management Reference*
- *1.6.5 Verifying that the monitoring manager and the monitoring agents can communicate with each other (Linux)*

## 1.6.5 Verifying that the monitoring manager and the monitoring agents can communicate with each other (Linux)

Check the statuses of the monitoring agent services on the monitoring manager to verify that the monitoring manager and all monitoring agents can communicate with each other. If the status of every monitoring agent service is `Active`, the monitoring agents are communicating with the monitoring manager successfully.

The procedure for checking the statuses of services is the same as for Windows.

## Postrequisites

Display monitoring agents on the monitoring console.

## Related topics

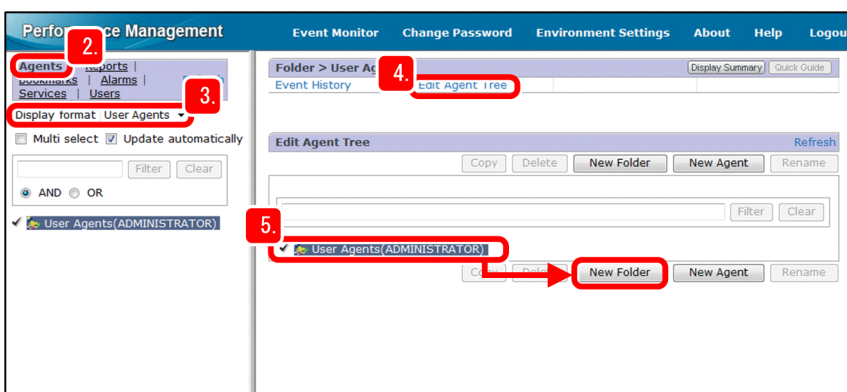
- *1.5.5 Verifying that the monitoring manager and the monitoring agents can communicate with each other (Windows)*
- *1.6.6 Displaying monitoring agents on the monitoring console (Linux)*

## 1.6.6 Displaying monitoring agents on the monitoring console (Linux)

Create a folder in the Agents tree on the monitoring console and place monitoring agents in that folder. If you create a folder for each unit of operation monitoring, you can display target monitoring agents by folder, facilitating smooth application of your day-to-day monitoring operation. For example, if you create a separate folder for each group, the groups and servers handled by individual monitoring agents can be identified at a glance.

## Procedure

1. Log in to Performance Management from the monitoring console.
2. Verify that the **Agents** tab is selected in the Main window.  
If any other tab is selected, select the **Agents** tab.



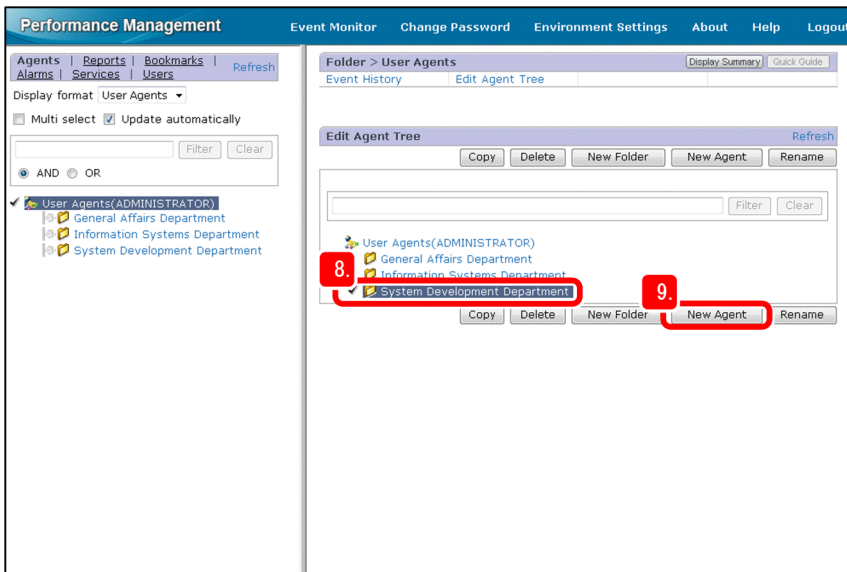
3. Verify that the display format is **User Agents**.



## Note

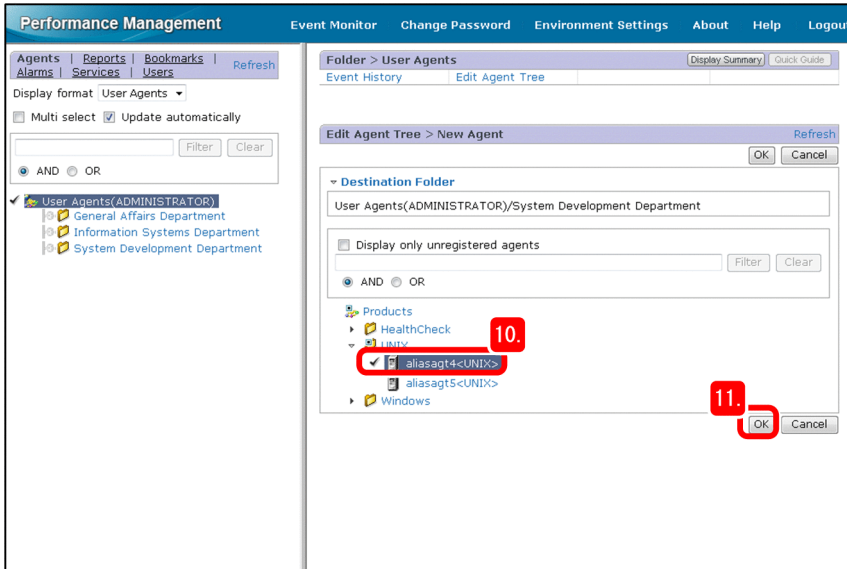
The display format is set to **User Agents** immediately after a login. If you change the display format to **Products**, the monitoring agents are displayed by type of agent product.

4. In the Agents window, select **Edit Agent Tree**.
5. Select **User Agents** (*login-user-name*) and click the **New Folder** button.
6. In **New folder name**, enter any name for the folder to be created, and then click the **OK** button.  
The created folder is displayed under **User Agents** (*login-user-name*).
7. Repeat steps 4 through 6 for each folder you wish to create.
8. Select a folder to which you want to add agents.



9. Click the **New Agent** button.
10. Click the ► symbol for the **UNIX** folder to expand the folder, and then select the *monitoring-host-name<UNIX>* agent.





### Note

The PFM - Agents that are connected to PFM - Manager are displayed in the Edit Agent Tree > New Agent window. The **UNIX** folder displays a list of PFM - Agent Option for Platform (UNIX) monitoring agents. The monitoring agents are displayed in the format *monitoring-host-name<UNIX>*.

11. Click the **OK** button.

You can verify that monitoring agents have been added to the created folder.



### Note

The number displayed to the right of *monitoring-host-name<UNIX>* is the data model version number. For details about data models, see the topic *Compatibility among data model versions* in the *JPI/Performance Management Planning and Configuration Guide*.

## Postrequisites

Configuration of the operation monitoring system using Performance Management is now complete. Start operation with the configured system.

## Related topics

- [2. Monitoring the Business System and Responding to Problems](#)
- [3. Capacity Planning for the Business System](#)

# 2

## Monitoring the Business System and Responding to Problems

In this chapter, we will use Performance Management to monitor the business system. We will identify current problems and prevent failures by taking corrective actions while the effects of the problems are still limited.

## 2.1 Performance Management functions to be used (monitoring the business system and responding to problems)

The alarm function and the report function are used to monitor the business system and respond to problems. Performance Management uses performance data collected from monitoring targets by the monitoring agents to implement the alarm and report functions.

### 2.1.1 Management of performance data by Performance Management

In Performance Management, monitoring agents collect from and manage performance data for the monitoring targets in units of records and fields.

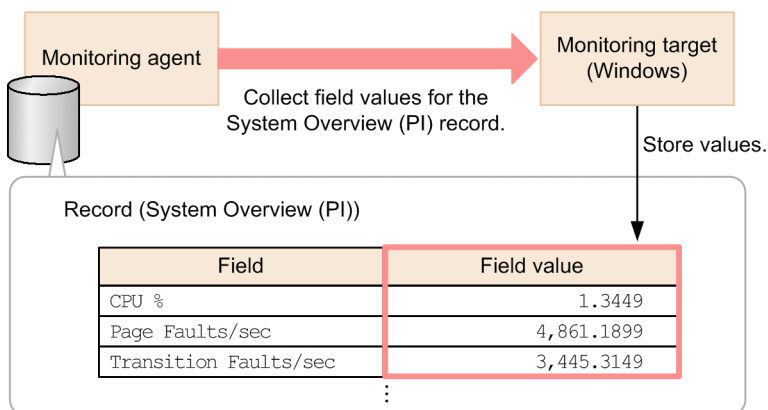
#### Record

A record is a group of monitored items organized by purpose. For example, the System Overview (PI) record consists of a group of monitored items, such as the CPU usage and the amount of unused physical memory, that are used to provide an overview of the system. The monitoring agents collect performance data in records. The records that can be collected depend on the agent product.

#### Field

Fields are the individual monitored items contained in a record. In the System Overview (PI) record, CPU % and Page Faults/sec are examples of fields.

The following figure provides an overview of records and fields using the System Overview (PI) record as an example:



For details about the records and fields that can be collected by each agent product, see the topic *Records* in the applicable agent product's documentation.

### 2.1.2 Alarm function

The alarm function sends a notification to the user if the value of a monitored item (field) exceeds a value that has been set as a threshold. For example, you can set the alarm function to send a warning whenever the CPU usage exceeds 80%. A monitored item whose value has exceeded its threshold is indicated by a change in an icon on the monitoring console.

#### Approach to the alarm function

Performance Management uses the alarm function to provide monitoring capabilities on the basis of definition information consisting of alarms and alarm tables.

## Alarms

An alarm is a definition of monitoring conditions specified for a field, such as the value of the monitored item that is to trigger a notification.

Monitoring conditions can be specified at two levels, an abnormal condition and a warning condition. For example, you might want to issue a warning whenever the CPU usage exceeds 80% and detect an error whenever the CPU usage reaches 90%. For this, you would define the conditional expressions `CPU % > 80` and `CPU % >= 90` as the warning condition and the abnormal condition, respectively.



### Note

You can specify actions, such as sending the notification as an email, execution of a command, issuance of a JPI event, or transmission of an SNMP trap. For details about the actions, see the topic *Setting the actions* in the *JPI/Performance Management User's Guide*.

## Alarm table

An alarm table contains information about a set of several alarms. Multiple alarms of a similar nature are grouped together in one alarm table.

## Binding

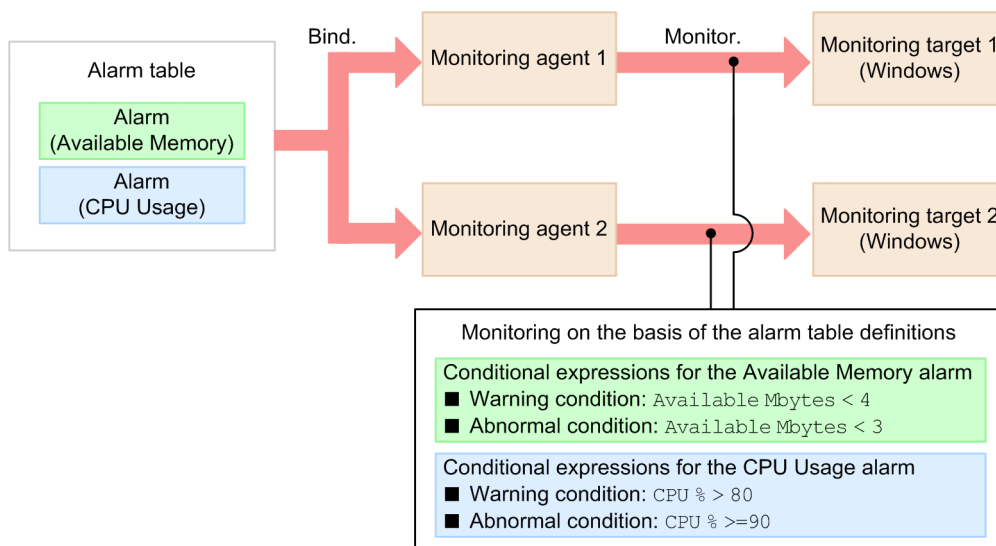
Associating alarm tables with monitoring agents is called binding. When an alarm table is bound, Performance Management starts monitoring the system on the basis of the definitions in the alarm table.



### Note

If you bind the same alarm table to multiple monitoring agents, all those monitoring agents can be monitored under the same conditions.

The following figure shows the relationships among alarms, alarm tables, and monitoring agents:



## Methods for defining alarms and alarm tables

The following methods are provided for defining alarms and alarm tables:

- Using a monitoring template (an alarm table in which required items have been predefined)
- Customizing a monitoring template by copying and editing it
- Defining alarms and alarm tables

This manual explains the method that uses a monitoring template as is. For details about the other methods, see the topic *Setting up and operating alarms* in the *JPI/Performance Management User's Guide*.

## Related topics

- [2.1.4 Monitoring templates](#)

## 2.1.3 Report function

The report function displays the performance data (records or fields) collected from a monitoring target in the form of easy-to-understand graphs and tables based on settings. For example, one month's worth of CPU usage at a server might be displayed as a line graph.

### Report types

The two types of reports are historical reports and real-time reports.

#### Historical reports

This type of report displays the changes in the data for a monitoring target over a period of time. You create this type of report so that you can analyze trends at the monitoring target.

#### Real-time reports

This type of report displays the current status of the monitored target. You create this type to check the current status of a monitored item for which a history of performance data is not being collected. You can set such reports to continuously display the most recent data by automatically refreshing at a specified interval.

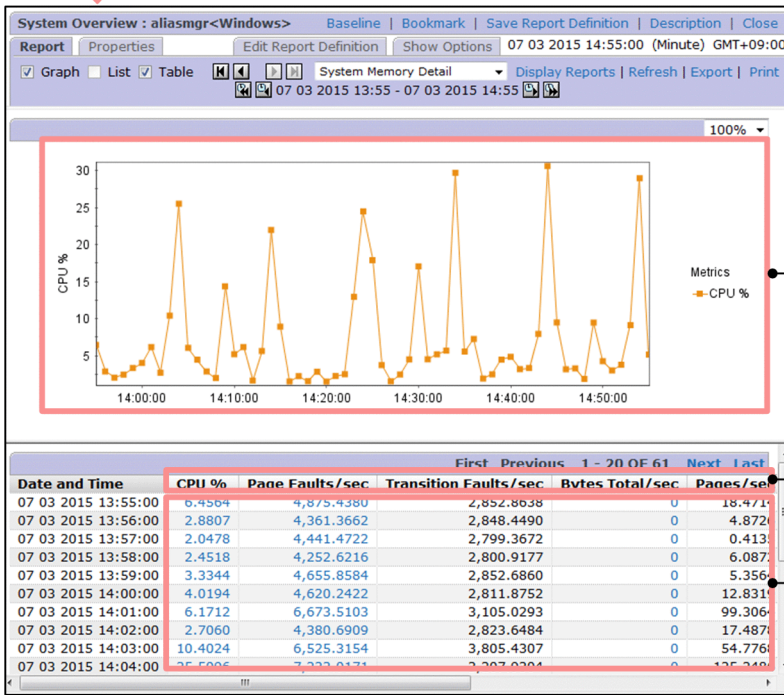
### Approach to the report function

The report function displays the information stored in records and fields as easy-to-understand graphs and tables. Each report is defined as one record.

The following figure shows the relationships among records, fields, and a report using System Overview (historical report) as an example:

Data collected in System Overview (PI) records			
Collection date and time	Field values		
	CPU %	Page Faults/sec	Transition Faults/sec
2014 05 15 16:47	1.3449	4,861.1899	3,278.1816
2014 05 15 16:48	1.6897	5,045.9092	3,312.6082
2014 05 15 16:49	2.4880	5,392.2441	3,313.5503

Display a System Overview report (historical report).



Values of CPU % field displayed as a graph

Fields

Field values

## Methods for defining reports

The following methods are provided for defining reports:

- Using a monitoring template (report in which required items are predefined)
- Customizing a monitoring template by copying and editing it
- Defining reports

This manual explains the method that uses a monitoring template as is. For details about the other methods, see the topic *Overview and procedure for report creation* in the *JPI/Performance Management User's Guide*.

## Related topics

- [2.1.4 Monitoring templates](#)

## 2.1.4 Monitoring templates

Monitoring templates include an alarm table and a report that consist of predefined monitored items and monitoring conditions that are used frequently. A monitoring template used by the alarm function is called an *alarm template*, and a monitoring template used by the report function is called a *report template*.

Because monitoring templates contain pre-defined information, you can use them as is or customize them by copying and editing their contents to suit the environment. Using monitoring templates eliminates the need to define information from the beginning, thus reducing the time required to specify definitions before you can start using Performance Management.

## 2.2 General procedure for using Performance Management to monitor the business system and respond to problems

---

Performance Management uses the alarm function and the report function to monitor the business system. Monitoring of the business system involves preparations for monitoring, checking the monitoring status and troubleshooting, and taking actions based on the troubleshooting results.

The table below describes the general procedure for using Performance Management to monitor the business system and respond to problems. Performance Management supports tasks 1 through 7.

Overview of tasks	No.	Task
Preparations for monitoring	1	Select the monitoring templates to be used.
	2	Bind alarm tables to monitoring agents.
	3	Check whether the monitoring operation started successfully.
Checking the monitoring status and troubleshooting	4	Periodically check the overall condition of the system.
	5	If a problem in the overall condition of the system is detected, check the statuses of the monitoring agent alarms.
	6	Display reports associated with the alarms and determine the causes of problems.
	7	Display drilldown reports and determine the details of the cause of a problem.
Problem response based on the troubleshooting results	8	Use reports to respond to problems based on the troubleshooting results.

### Related topics

- [2.3.1 General procedure for selecting the monitoring templates to be used \(monitoring the business system and responding to problems\)](#)
- [2.3.2 Binding alarm tables to monitoring agents](#)
- [2.3.3 Checking whether the monitoring operation started successfully](#)
- [2.4.1 Checking the overall condition of the system](#)
- [2.4.2 Checking the status of alarms](#)
- [2.4.3 Displaying the reports associated with alarms](#)
- [2.4.4 Displaying drilldown reports](#)



## 2.3 Preparations for monitoring

To use Performance Management to monitor the business system, you must select the monitoring templates to be used and bind alarm tables to monitoring agents.

### 2.3.1 General procedure for selecting the monitoring templates to be used (monitoring the business system and responding to problems)

Based on the monitoring items evaluated before you installed Performance Management, select the monitoring templates that satisfy your evaluation results. The two types of monitoring templates are alarm templates and report templates. Select a template for each.

The following table shows the general procedure for selecting the monitoring templates to be used:

No.	Task
1	See the agent product's documentation and select from the list of alarm templates an alarm template that contains the items you want to monitor.
2	On the monitoring console, view the definitions in the alarm template (conditional expressions for alarms and associated report templates) and determine whether the intended monitoring operation can be achieved with this alarm template.
3	On the monitoring console, view the definitions in the report template (items to be displayed in each report) and determine whether the intended monitoring operation can be achieved with this report template.

If there are no drawbacks with the definitions in the alarm template and the report template, use those templates.



#### Note

If the intended monitoring operation cannot be achieved with the selected monitoring templates based on the definitions in the templates, you will have to either edit the monitoring templates or create your own alarm tables and reports. For details, see the topics *Setting up and operating alarms* and *Overview and procedure for report creation* in the *JPI/Performance Management User's Guide*.

#### Related topics

- [E.1 Related publications](#)
- [2.3.1\(1\) Selecting from the list of alarm templates an alarm template that contains the items you want to monitor](#)
- [2.3.1\(2\) Checking the definitions in the alarm template](#)
- [2.3.1\(3\) Checking the definitions in the report template](#)

### (1) Selecting from the list of alarm templates an alarm template that contains the items you want to monitor

See the agent product's documentation and select from the list of alarm templates an alarm template that contains the items you want to monitor. Select the appropriate alarm template based on the monitoring items evaluated before you installed Performance Management.

## Procedure

1. See the topic *List of alarms* in each agent product's documentation and look for an alarm template that includes the items you want to monitor.

The following alarm templates are listed in PFM - Agent Option for Platform (for Windows):

Alarm template name	Alarms included in the alarm template	Items that can be monitored
PFM Windows Template Alarms 09.00	Available Memory	Amount of unused physical memory area (megabytes)
	CPU Usage	Processor usage (%)
	Disk Space	Ratio of free space on the logical disk to the total size of the available area (%)
PFM Windows Template Alarms [CPU] 09.00	CPU Usage	Processor usage (%)
	Processor Queue	Number of requests in the processor queue
	SVR Processor Queue	
PFM Windows Template Alarms [MEM] 09.00	Available Memory	Amount of unused physical memory area (megabytes)
	Committed Mbytes	Size of virtual memory area used (megabytes)
	Page Faults/sec	Number of page faults (per second)
	Pages/sec	Number of pages (per second) that were being paged when a page fault occurred

If the items you want to monitor are CPU usage, amount of unused physical memory area, and ratio of free space on the logical disk, you would select the PFM Windows Template Alarms 09.00 alarm template.

## Postrequisites

Check the definitions in the alarm template and determine the report template that is associated with the alarm conditional expressions.

## Related topics

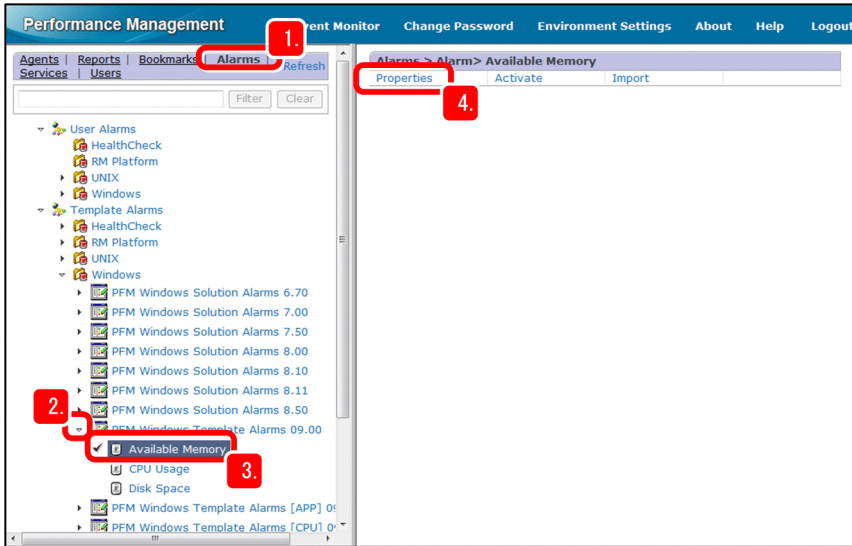
- *List of alarms* in each agent product's documentation
- *E.1 Related publications*
- *1.2.1 Evaluating monitored items*
- *2.3.1(2) Checking the definitions in the alarm template*

## (2) Checking the definitions in the alarm template

View on the monitoring console the definitions in the selected alarm template (conditional expressions for alarms and associated report templates) and determine whether the intended monitoring operation can be achieved with this alarm template.

## Procedure

1. In the Main window, select the **Alarms** tab.



2. Click the ▶ symbol under the **Template Alarms** folder to expand the alarm template.

For the PFM Windows Template Alarms 09.00 alarm template, expand **PFM Windows Template Alarms 09.00** under the **Template Alarms - Windows** folder.

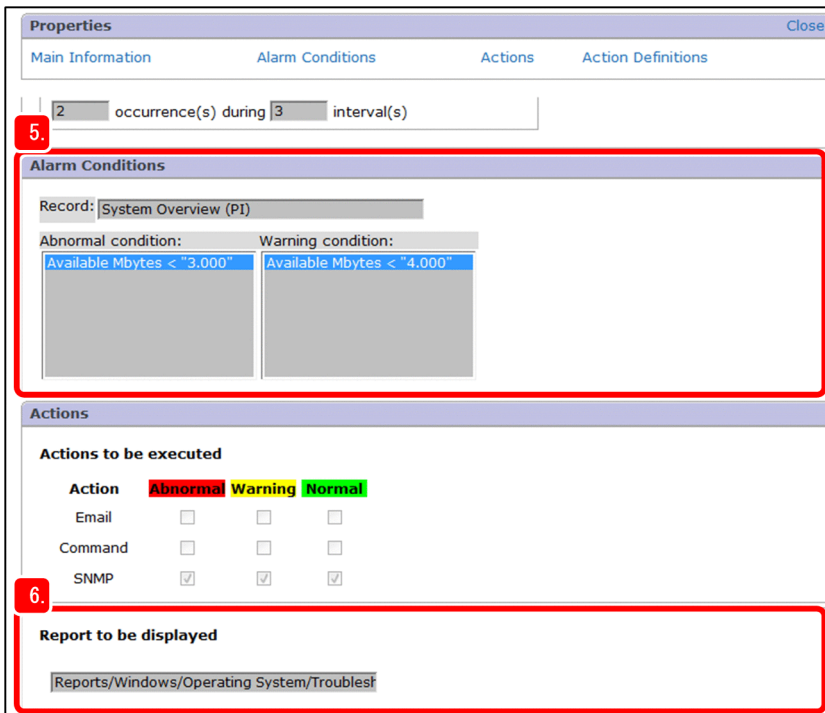
The alarms included in this alarm template are displayed.

3. Select a displayed alarm.

4. Click **Properties**.

The alarm's definition is displayed in the Properties window.

5. Check in **Conditional Expression** the conditional expressions defined for the alarm.



The following conditional expressions are defined for the alarms included in PFM Windows Template Alarms 09.00:

Alarm included in PFM Windows Template Alarms 09.00	Alarm conditional expression
Available Memory	<ul style="list-style-type: none"> <li>Record: System Overview (PI)</li> <li>Field: Available Mbytes</li> <li>Abnormal condition: Available Mbytes &lt; 3</li> <li>Warning condition: Available Mbytes &lt; 4</li> </ul>
CPU Usage	<ul style="list-style-type: none"> <li>Record: System Overview (PI)</li> <li>Field: CPU %</li> <li>Abnormal condition: CPU % &gt;= 90</li> <li>Warning condition: CPU % &gt; 80</li> </ul>
Disk Space	<ul style="list-style-type: none"> <li>Record: System Overview (PI)</li> <li>Field: Available Mbytes</li> <li>Abnormal condition: Available Mbytes &lt; 3</li> <li>Warning condition: Available Mbytes &lt; 4</li> </ul>

6. Check the report templates that are associated with the alarm, as displayed in **Action - Report to be displayed**.

The following report template is associated with the Available Memory alarm:

Reports/Windows/Operating System/Troubleshooting/Real-Time/System Overview

The underscored portion is the folder in which the report template is stored.

### Postrequisites

Check the definitions in the report template that is associated with the alarm.

### Related topics

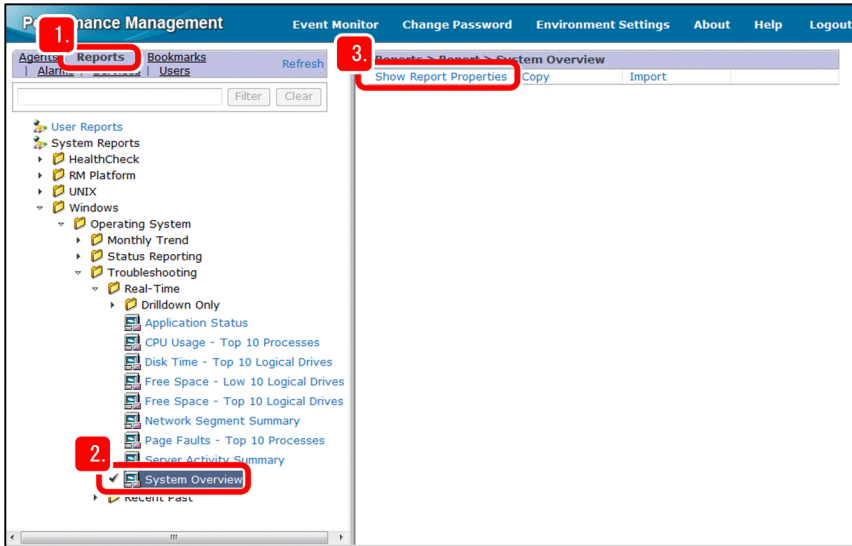
- [1.2.1 Evaluating monitored items](#)
- [2.3.1\(3\) Checking the definitions in the report template](#)

## (3) Checking the definitions in the report template

View on the monitoring console the definitions in the selected report template (items to be displayed in a report) and determine whether the intended monitoring operation can be achieved with this report template.

### Procedure

1. In the Main window, select the **Reports** tab.



2. Expand the report template under the **System Reports** folder.

To expand the System Overview report template, select **System Overview** under **System Reports - Windows - Operating System - Troubleshooting - Real-Time**.

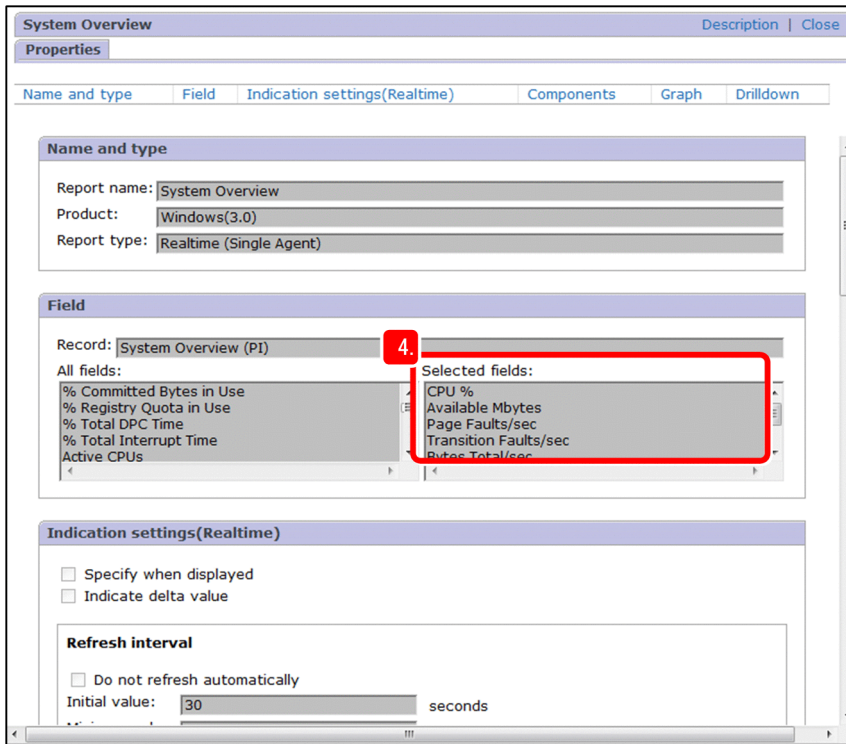
3. Click **Properties**.

The Properties window is displayed so that you check the definitions in the report template.

4. In **Field - Selected fields:**, check the display items (fields) defined for the report.

The following display items (fields) are defined for the System Overview report:

- CPU %
- Available Mbytes
- Page Faults/sec
- Transition Faults/sec
- Bytes Total/sec
- Pages/sec
- File Data Ops/sec
- File Control Ops/sec



### Tip

You can view an explanation of each field by clicking **Description** in the upper right area of the Properties window.

## Postrequisites

Bind alarm tables to monitoring agents.

## Related topics

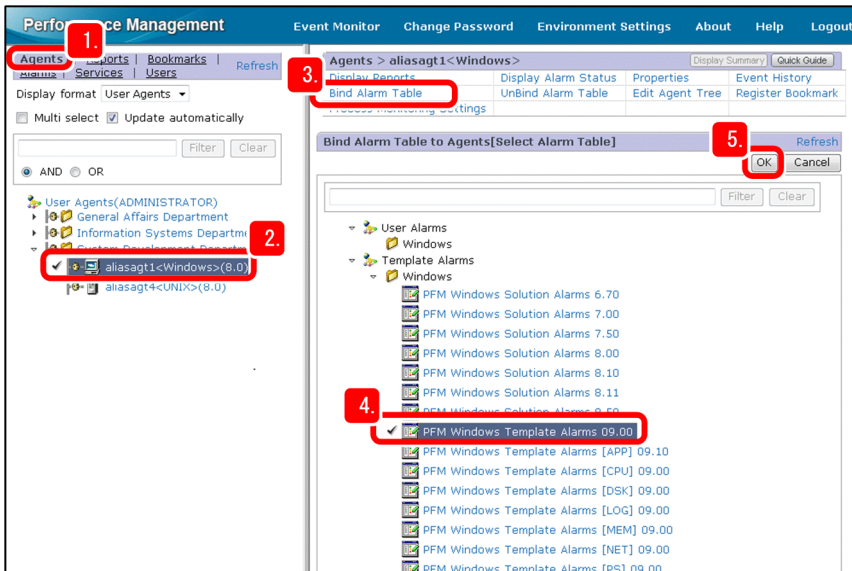
- [2.3.2 Binding alarm tables to monitoring agents](#)

## 2.3.2 Binding alarm tables to monitoring agents

Bind the alarm table to monitoring agents. When the alarm table is bound, the monitoring operation using alarms starts. If monitoring templates are used, each alarm template corresponds to an alarm table.

### Procedure

1. Verify that the **Agents** tab is selected in the Main window.  
If any other tab is selected, select the **Agents** tab.



2. Select the monitoring agent that is to start monitoring using alarms
  3. Select **Bind Alarm Table**.
  4. In the Bind Alarm Table to Agents[Select Alarm Table] window, select the alarm table that you want to bind. To bind the PFM Windows Template Alarms 09.00 alarm table, select **PFM Windows Template Alarms 09.00** in the **Windows** folder under **Template Alarms**.
  5. Click the **OK** button.
- The selected alarm table is bound to the monitoring agent and the monitoring operation begins.



### Note

In Performance Management, you can bind multiple alarm tables to a single monitoring agent. To bind multiple alarm tables, you need to enable the function for binding multiple alarm tables. For details, see the topic *Examining alarm table binding methods* in the *JPI/Performance Management Planning and Configuration Guide*.

### Postrequisites

Check if the monitoring operation has started successfully.

### Related topics

- [2.3.3 Checking whether the monitoring operation started successfully](#)

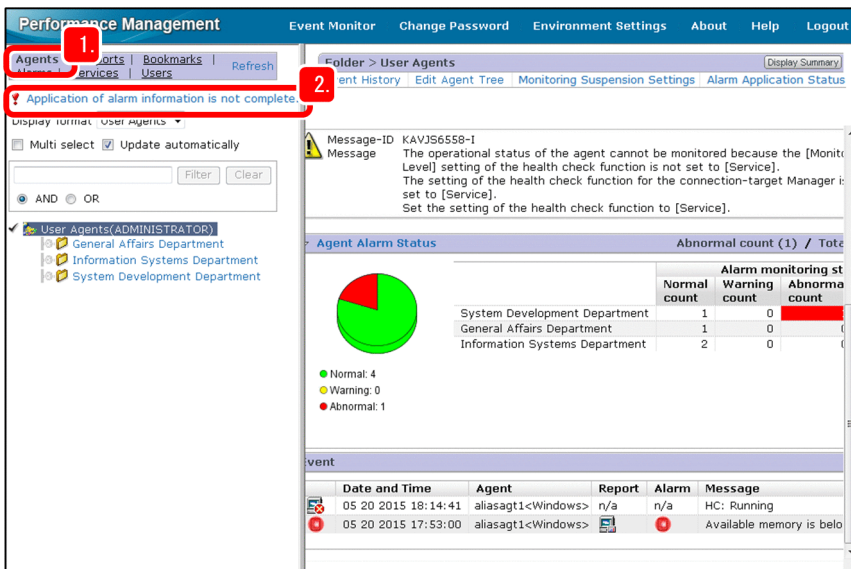
## 2.3.3 Checking whether the monitoring operation started successfully

Check the message area of the Agent Tree to confirm that the monitoring operation started successfully. If a message is displayed in the message area, the monitoring operation might not have started successfully. In this case, check the status in the Alarm Application Status window, and then take appropriate action.

### Procedure

1. In the Main window, confirm that the Agents tab is selected.

If a tab other than the **Agents** tab is selected, select the **Agents** tab.



2. Check the message area on the left.

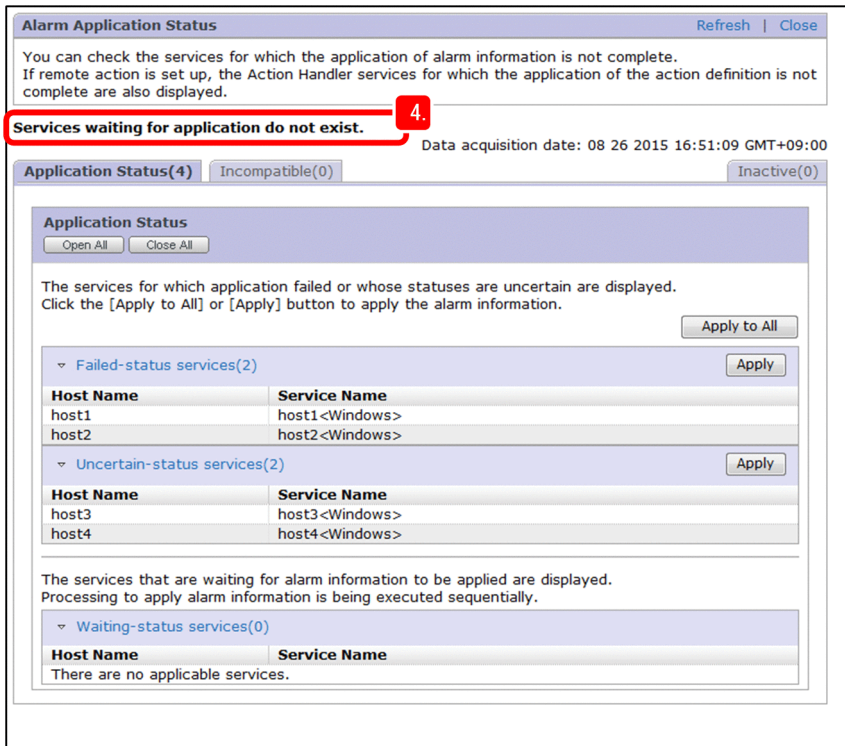
- If nothing is displayed in the message area:  
The monitoring operation started successfully.
- If a message is displayed in the message area:  
The information about the bound alarm tables might not have been applied to the monitoring agent. In this case, the monitoring operation might not have started successfully.  
Wait a while, and then click **Refresh**. If the message in the message area is still displayed, perform step 3 and then the subsequent steps.

3. Click the message to display the Alarm Application Status window.

Alternatively, you can click **Alarm Application Status** on the top right of the window to display the Alarm Application Status window.

4. If there are services that are waiting for information to be applied, wait a while, and then click **Refresh**. Confirm that **Services waiting for application do not exist.** is displayed.





5. Check the **Application Status** tab, **Incompatible** tab, and the **Inactive** tab.

On these tabs, the services to which alarm information (alarm definition details, details of action definitions relevant to alarms, and information about binding operations for alarm tables) has not yet been applied are displayed.

Depending on the status of the service, take action as described in the following table:

Tab	Status	Description	Action
<b>Application Status</b>	Failed	An attempt to apply alarm information failed, or an application operation timed out.	Click the <b>Apply to All</b> button, or the <b>Apply</b> button to apply the alarm information again.
	Uncertain	The application status for alarm information is unknown.	
<b>Incompatible</b>	Incompatible	An attempt to apply alarm information failed, or an application operation timed out. In addition, the service is provided by a version that does not support the application operation that uses the <b>Application Status</b> tab.	Take appropriate action by following the displayed message.
<b>Inactive</b>	Inactive	Alarm information cannot be applied because the service is stopped.	Take appropriate action by following the displayed message. Note that if there is no problem with the services being suspended, no action is required.

After you have taken appropriate action, display the Alarm Application Status window again, or click **Refresh** to check the most recent alarm application status. If no services are displayed in the Alarm Application Status window, then the monitoring operation has started successfully.

## 2.4 Checking the monitoring status and troubleshooting

Check on the monitoring console the monitoring status obtained by the alarm function, and then troubleshoot problems that are detected, such as any Warning or Abnormal status.

### 2.4.1 Checking the overall condition of the system

Display the System Operational Status Summary window and check the overall condition of the system. You can check server operational status, agent operational status, agent alarm status, and event status in real time in the System Operational Status Summary window.

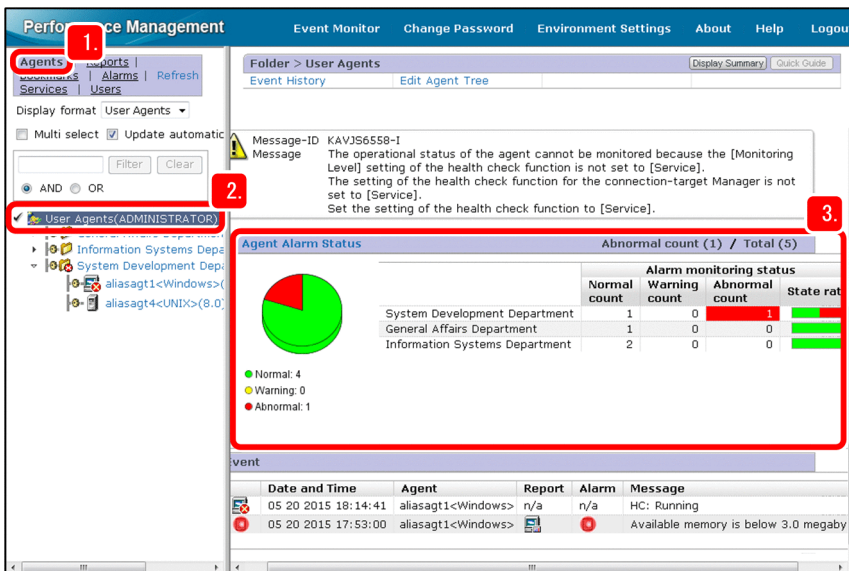
#### Prerequisites

To check the alarm status of the monitoring agents, you must have bound alarm tables to the monitoring agents.

#### Procedure

1. Verify that the **Agents** tab is selected in the Main window.

If any other tab is selected, select the **Agents** tab.



2. Select the highest hierarchy or folder.

The System Operational Status Summary window is displayed so that you can check the overall condition of the monitoring agents under the selected hierarchy.



#### Note

**Agent Operational Status** is not displayed by default in the System Operational Status Summary window. To set **Agent Operational Status** to be the default display, you must specify settings on the **Services** tab. For details, see *Using summary display to check the operating status* in the *JPI/Performance Management User's Guide*.

3. Look for Warning and Abnormal as the **Agent Alarm Status**.

Warning and Abnormal indicate that an alarm threshold has been exceeded at an agent.

## Postrequisites

Check the alarm statuses of the monitoring agents for which `Warning` or `Abnormal` is displayed.

## Related topics

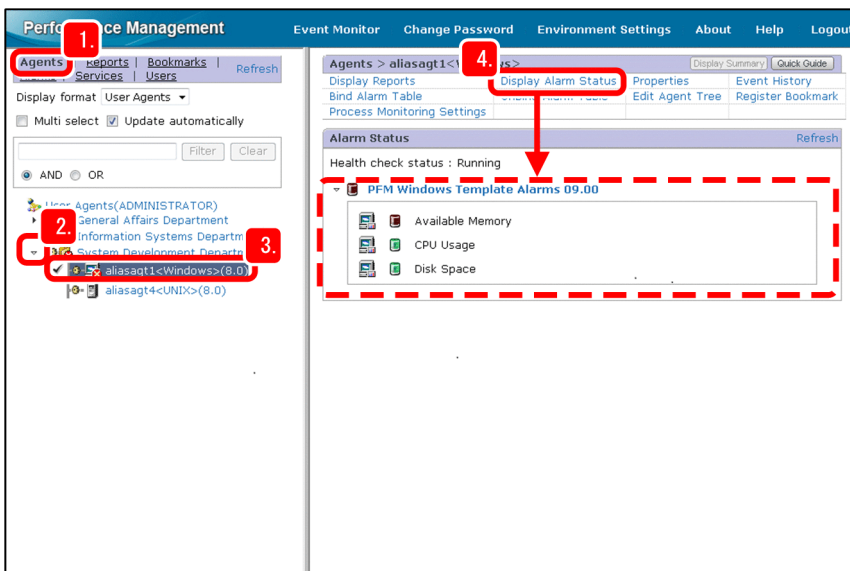
- [2.3.2 Binding alarm tables to monitoring agents](#)
- [2.4.2 Checking the status of alarms](#)





## 2.4.2 Checking the status of alarms




If `Warning` or `Abnormal` is displayed in **Agent Alarm Status** in the System Operational Status Summary window, check the alarm statuses of the corresponding monitoring agents.

### Procedure

1. Verify that the **Agents** tab is selected in the Main window.  
If any other tab is selected, select the **Agents** tab.



2. Click the  symbol for the folder that contains a monitoring agent whose alarm status is `Warning` or `Abnormal`.  
The folder is expanded and the agents are displayed.  
You can determine whether a folder contains a monitoring agent whose status is `Warning` or `Abnormal` by checking the appearance of the folder icon, as explained in the following:
  -  : All monitoring agents in the folder are `Normal`.
  -  : The folder contains a monitoring agent whose status is `Warning`.
  -  : The folder contains a monitoring agent whose status is `Abnormal`.
3. Select a monitoring agent whose alarm status is `Warning` or `Abnormal`.
4. Click **Display Alarm Status**.  
The alarm table bound to the selected monitoring agent is displayed so that you can check the status of the alarms.  
An alarm's status is indicated by the appearance of its icons. The following shows the meaning of each icon:

-  : The alarm's status is Normal.
-  : The alarm's status is Warning.
-  : The alarm's status is Abnormal.

## Postrequisites

Display the reports associated with the alarms and determine the causes of Warning and Abnormal alarm statuses.

## Related topics

- [2.4.3 Displaying the reports associated with alarms](#)

## 2.4.3 Displaying the reports associated with alarms

You can display the report associated with a selected alarm from each monitoring agent's Display Alarm Status window. If an alarm's status is Warning or Abnormal, display for troubleshooting purposes the report associated with that alarm.

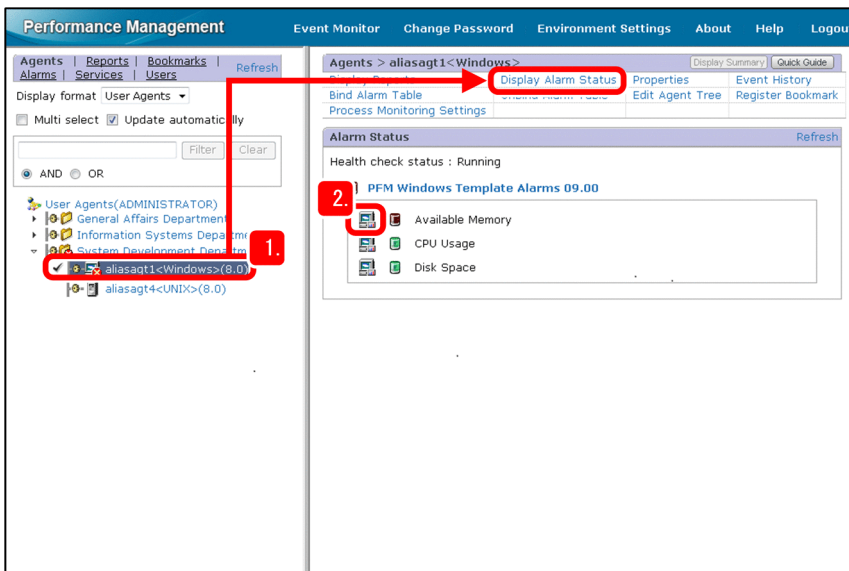
## Prerequisites

You can display only the report that has been associated with a particular alarm. For alarm templates, their associations are predefined.

## Procedure

1. Select the target monitoring agent and click **Display Alarm Status**.

The alarm table bound to the monitoring agent is displayed so that you can check the status of the alarms.



2. Click the (  ) icon to the left of the alarm whose status is Warning or Abnormal.

The report associated with that alarm is displayed.

The System Overview report is displayed for the Available Mbytes icon.



## Note

The format of a report that is displayed depends on the alarm definition. The report display formats include tables, lists, and graphs. Graphs include eight types:

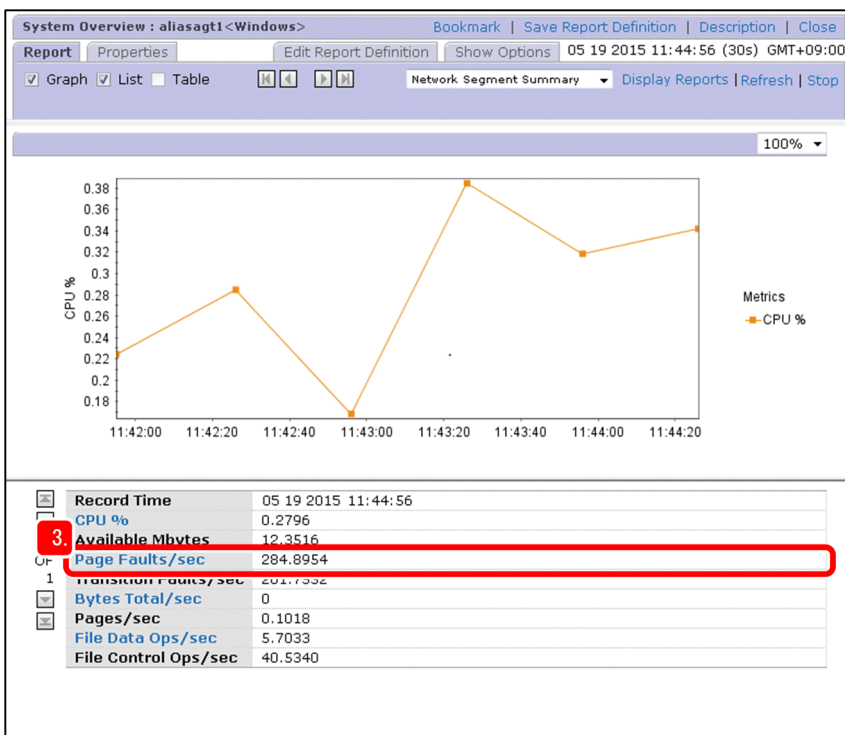
- Column graph
- Stacked column graph
- Bar graph
- Stacked bar graph
- Pie graph
- Line graph
- Area graph
- Stacked area graph

3. Analyze the displayed report and determine the cause of the problem.

### Example of report analysis

If you want to find out from the *System Overview* report why the amount of unused physical memory has shrunk, check the items that might be related to the physical memory. This example checks *Page Faults/sec*, which indicates the number of page faults per second.

The figure below indicates that there are many page faults occurring currently. This might be related to a shortage of physical memory.



### Postrequisites

If the cause of the problem could not be determined, display drilldown reports for further troubleshooting.

## Related topics

- [2.4.4 Displaying drilldown reports](#)

## 2.4.4 Displaying drilldown reports

Performance Management enables you to associate one report with another report to display the latter as a drilldown report. You can use drilldown reports to check more detailed information (and other related information) to further investigate the cause of any problem occurring in the business system.

### Prerequisites

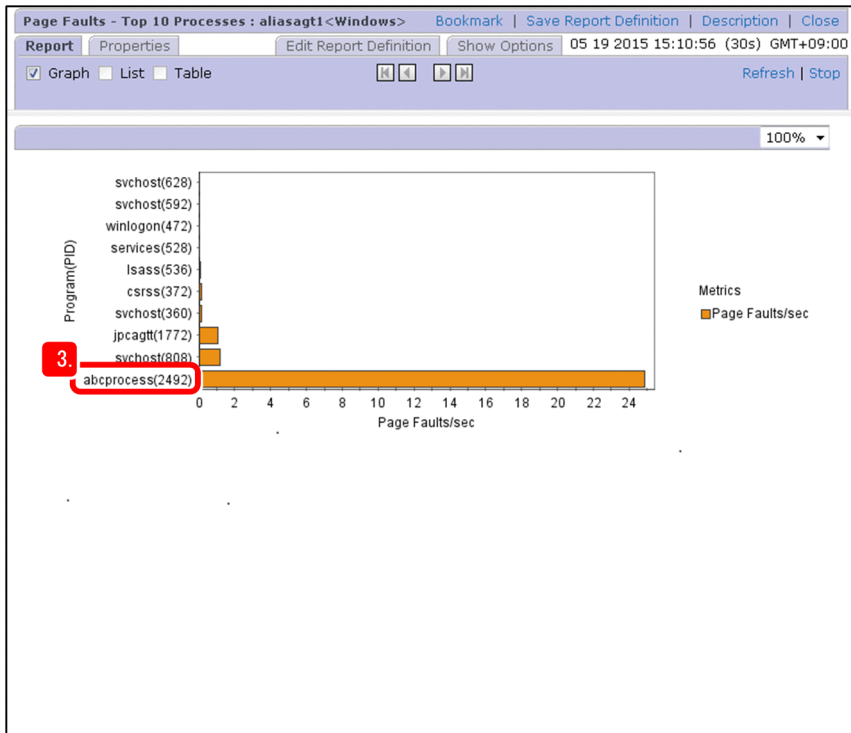
You can display only those drilldown reports that have been associated with a report. For report templates, their associations have been pre-defined.

### Procedure

1. Display a report.
2. Click the link for an item (field) in the report.  
The drilldown report associated with that item (field) is displayed.  
If `Page Faults/sec` is clicked in the `System Overview` report, the `Page Faults - Top 10 Processes` drilldown report is displayed. This drilldown report displays a bar graph of the 10 processes exhibiting the highest number of page faults.
3. Analyze the displayed report for troubleshooting.

### Example of report analysis

If you want to find out from the `Page Faults - Top 10 Processes` report why the amount of unused physical memory has shrunk, look at the names of the processes that rank high. In the figure below, the `abcprocess` process has the highest number of page faults. From this, we can assume that the `abcprocess` process is responsible for the shortage of physical memory.



# 3

## Capacity Planning for the Business System

In this chapter, we will check the reports created by Performance Management and analyze the performance of your business system. Based on the analysis results, we will formulate a growth support plan that anticipates the future operating needs of the business system.



## 3.1 Performance Management functions to be used (capacity planning for the business system)

---

Use the report function of Performance Management to perform capacity planning for the business system. Performance Management displays reports by processing monitoring target performance data that has been collected from the monitoring agents.

### Related topics

- [2.1.1 Management of performance data by Performance Management](#)
- [2.1.3 Report function](#)

## 3.2 General procedure for checking reports and performing capacity planning for the business system

---

Performance Management supports capacity planning for your business system, such as by anticipating server and disk expansion, and by providing reports that help you identify trends affecting your business system. Capacity planning for the business system involves preparing for capacity planning, checking the current status and performing capacity planning, and taking preemptive actions based on the capacity planning that you have performed.

The table below describes the general procedure for using Performance Management to perform capacity planning for a business system. Performance Management supports tasks 1 through 3.

Overview of tasks	No.	Task
Preparing for capacity planning	1	Select the monitoring templates to be used.
Checking the current status and performing capacity planning	2	Periodically display reports for capacity planning and analyze trends.
	3	Print the information displayed in the reports and report the analysis results.
Taking preemptive actions based on the capacity planning that you have performed	4	Take preemptive actions based on the capacity planning that you have performed.

### Related topics

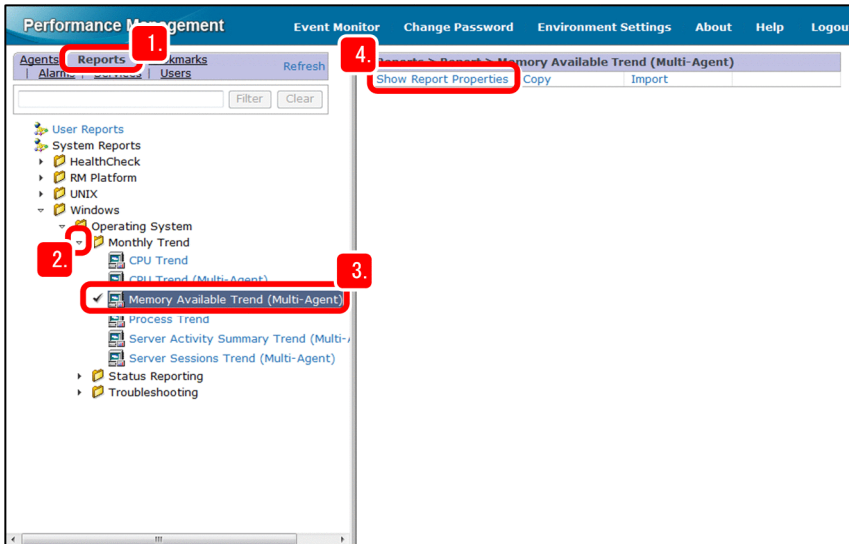
- [3.3 Selecting a monitoring template to be used \(capacity planning for the business system\)](#)
- [3.4 Displaying reports for capacity planning](#)
- [3.5 Using reports to analyze trends in the business system](#)
- [3.6 Printing the information displayed in the reports on the monitoring console](#)

### 3.3 Selecting a monitoring template to be used (capacity planning for the business system)

The reports that can be used for capacity planning are stored in the **Monthly Trend** folder under **System Reports**. Select a report that matches your purpose based on the monitored items that you evaluated before you installed Performance Management.

#### Procedure

1. In the Main window, select the **Reports** tab.



2. Click the ▶ symbol for the **Monthly Trend** folder to expand the folder.

For the report template for PFM - Agent Option for Platform (for Windows), expand the **Monthly Trend** folder under **System Reports - Windows - Operating System**.

3. Check the displayed report templates and select the one that matches the item you want to monitor.

For example, if the item you want to monitor is the amount of unused physical memory area, select the *Memory Available Trend (Multi-Agent)* report template.

4. Click **Show Report Properties**.

The Show Report Properties window for the selected report template is displayed.

5. Check the definitions in the report template.

Check **Field - Selected fields**: to see the items (fields) that will be displayed in the report.

For example, the *Available Mbytes* field is defined in the *Memory Available Trend (Multi-Agent)* report template.

**Memory Available Trend (Multi-Agent)** Description | Close

**Properties**

Name and type    Field    Indication settings(Historical)    Components    Graph    Drilldown

---

**Name and type**

Report name:

Product:

Report type:

---

**Field**

Record:  5.

All fields:

- % Committed Bytes in Use
- % Registry Quota in Use
- % Total DPC Time
- % Total Interrupt Time
- Active CPUs

Selected fields:

- Available Mbytes

---

**Indication settings(Historical)**

Specify when displayed

Maximum number of records:

**Settings for the report display period**

Date range:

Report interval:



### Tip

You can view an explanation of each field by clicking **Description** in the upper right area of the Properties window.

6. Repeat steps 3 through 5 for each item you want to monitor.



### Note

If you determine from checking the definitions that the intended monitoring operation cannot be performed using the selected monitoring template, you will have to edit the monitoring template or create appropriate alarm tables and reports. For details, see the topics *Setting up and operating alarms* and *Overview and procedure for report creation* in the *JPI/Performance Management User's Guide*.

### Postrequisites

Display reports for capacity planning.

### Related topics

- [3.4 Displaying reports for capacity planning](#)

## 3.4 Displaying reports for capacity planning

The **Monthly Trend** report template folder contains reports that enable you to check totaled results of performance data for the past one month. Information displayed in these reports can help you with capacity planning for your business system.

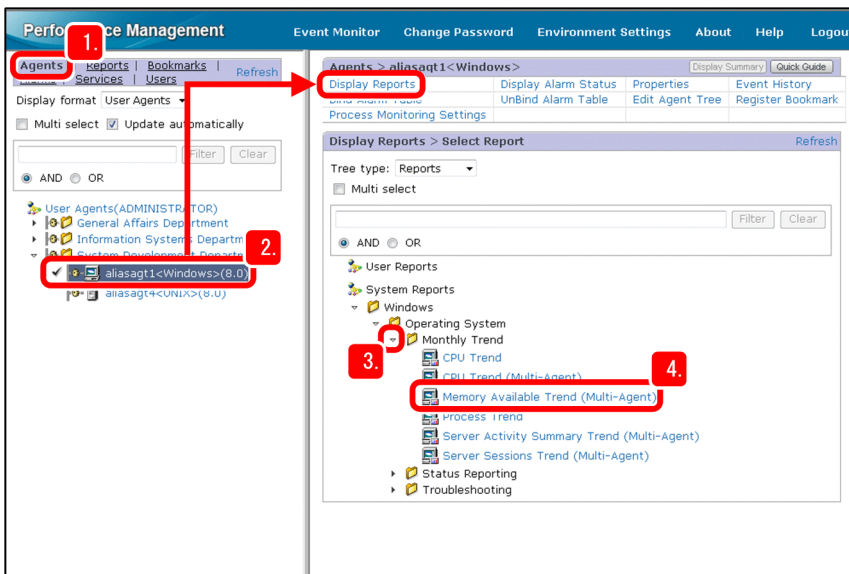
### Prerequisites

There are no prerequisites for displaying the reports in the **Monthly Trend** folder. You can display the reports without any advance preparations because data for the fields in the reports had already been set for collection when the configuration of the monitoring agents was completed.

### Procedure

1. Verify that the **Agents** tab is selected in the Main window.

If any other tab is selected, select the **Agents** tab.



2. Select a desired monitoring agent to display the Display Reports window.

3. Expand the **Monthly Trend** folder.

For the PFM - Agent Option for Platform (for Windows) report template, expand the **Monthly Trend** folder under **System Reports - Windows - Operating System**.

4. Click the desired report template.

The report window is displayed.

#### Tip

You can export information from the report to a CSV file by clicking the **Export** button in the report window. You can reference the exported performance data in an environment from which you cannot log in to Performance Management and use other tools to convert the performance data to an easy-to-analyze format. For details about the procedures, see *Exporting reports in CSV or HTML format by using a Web browser* in the *JPI/Performance Management User's Guide*.

### Postrequisites

Use reports to obtain trends in the business system and as an aid in capacity planning.

## Related topics

- *3.5 Using reports to analyze trends in the business system*

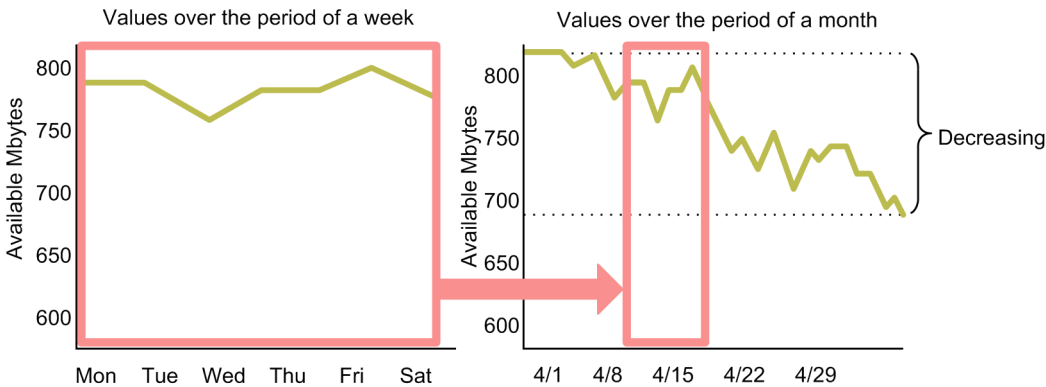
## 3.5 Using reports to analyze trends in the business system

You can analyze trends in the business system and help perform capacity planning for the business system by using the reports created in Performance Management.

This section provides an example of determining trends in a business system based on the `Memory Available Trend (Multi-Agent)` report that provides the amount of available physical memory in multiple systems.

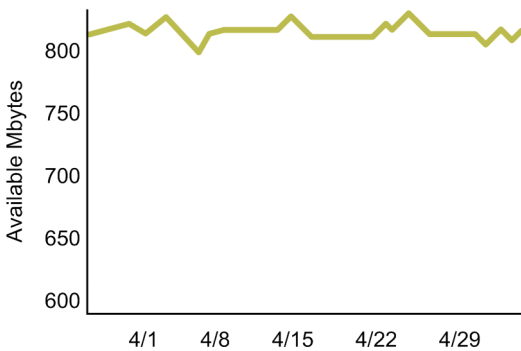
### Whether the value has been changing gradually over an extended period of time

This approach checks whether the field's value has been increasing or decreasing gradually over an extended period of time. For example, if values over the period of a week look stable, but values over the period of a month show a gradual decrease, some action, such as expansion of the memory, might be necessary in the near future.



### Whether the value is stable and there is sufficient capacity

This approach checks whether the field's values are stable and there is sufficient capacity. For example, if the amount of available physical memory has been high for a month, use of that server might be reduced.



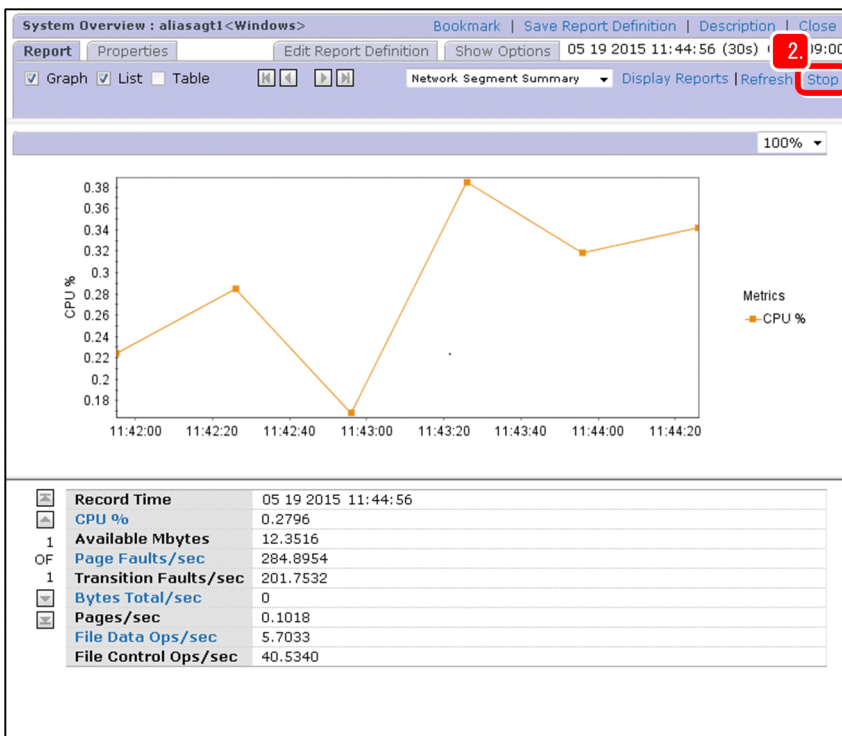
By checking reports with such approaches, you can obtain information needed for optimizing your IT resources. You can use the reports provided by Performance Management to perform capacity planning for your business system without resorting to planning based on guesswork.

## 3.6 Printing the information displayed in the reports on the monitoring console

You can print the reports created in Performance Management in a readable format. Printed reports can be used to check performance data in an environment from which the user cannot log in to Performance Management and used for reporting performance data analysis results.

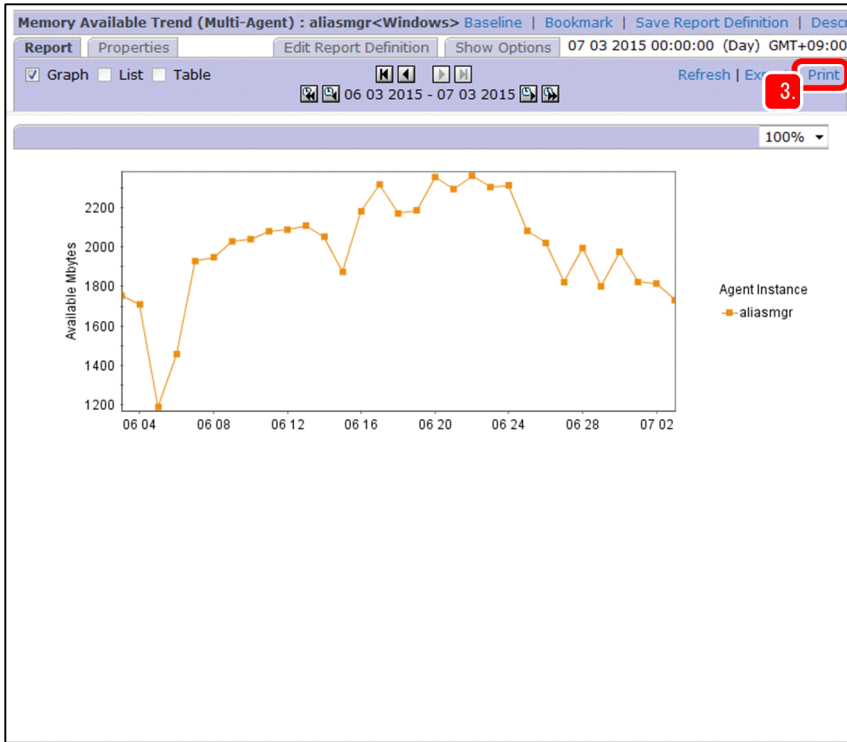
### Procedure

1. Display a report that you want to print.
2. To display a real-time report, first click the **Stop** menu on the **Display Reports** tab in the report window. Automatic updating of real-time reporting stops and the **Print** menu is displayed. This step is not needed for historical reports, because the **Print** menu is displayed when the report window is displayed.



3. In the report window, on the **Display Reports** tab, select the **Print** menu. A new window opens for printing the report. This window displays the report in printout format.





4. Use the appropriate Web browser function to print the report.



**Tip**

You can also use a Web browser function to save the report print window as an HTML file.

If you set the `jpcrpt` command to execute automatically, you can export reports as HTML files periodically at a predefined interval or export multiple reports as HTML files at once. For details, see the topic *Exporting reports in CSV or HTML format by using a command* in the *JPI/Performance Management User's Guide*.



# Appendixes

## A. Firewall passage directions

In a firewall environment, you can fix the port numbers and specify settings to allow data to pass through the firewall. In the system configuration used in this manual, these settings are specified if there are firewalls between the monitoring console and monitoring console server and between the monitoring manager and monitoring agents.



### Note

There are other settings that might need to be specified in the case of a different system configuration. For details, see the topic *Firewall passage directions* in the manual *JPI/Performance Management Reference*.

Set port numbers in the following direction to pass through the firewall.

### For a firewall between the monitoring console and the monitoring console server

Service name	Monitoring console	Pass-through direction	Monitoring console server
Web Service	Any	→	Port number fixed in the <code>httpsd.conf</code> file (default is 20358)

### For a firewall between the monitoring manager and monitoring agents

For communication from the monitoring manager to monitoring agents, set the direction as follows:

Service name	Monitoring manager	Pass-through direction	Monitoring agent
Action Handler	Any	→	Port number fixed by the <code>jpconf port define</code> command
Agent Collector			
Agent Store			
Status Server			

For communication from monitoring agents to the monitoring manager, set the direction as follows:

Service name	Monitoring manager	Pass-through direction	Monitoring agent
Action Handler	Port number fixed by the <code>jpconf port define</code> command	←	Any
Agent Collector (health check agent)			
Agent Store (health check agent)			
Correlator			
Master Manager			
Master Store			
Name Server			
Status Server			
Trap Generator			

Service name	Monitoring manager	Pass-through direction	Monitoring agent
View Server	Port number fixed by the <code>jpccconf port define</code> command	←	Any

### Related topics

- *Firewall passage directions* in the manual *JPI/Performance Management Reference* and in the documentation for each agent product.

## B. Windows Used for Monitoring the Business System and for Capacity Planning

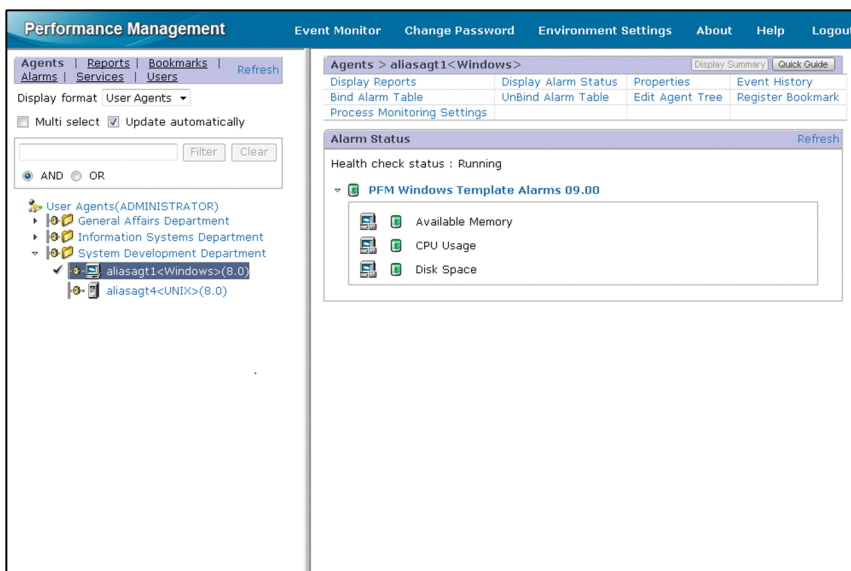
Using Performance Management to monitor the business system and perform capacity planning involves use of the Agents, Alarms, and Reports windows.

The Agents window is used to perform operations after Performance Management operation has begun, such as displaying the monitoring agents. The Alarms and Reports windows are used to perform operations that are related to preparing for Performance Management operation, such as managing definition information.

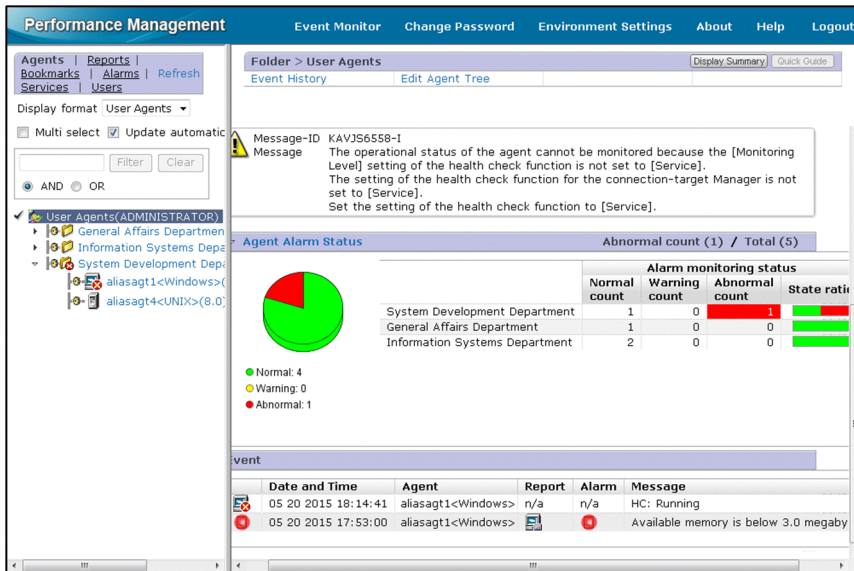
This section provides an overview of each window. Understanding what you can do with each window will enable you to use Performance Management more effectively.

### B.1 Operations supported in the Agents window

In the Agents window, you can edit and display the information managed by Performance Management for each monitoring agent. Use this window to check the monitoring status in Performance Management, such as checking the status of alarms and displaying reports for monitoring agents.



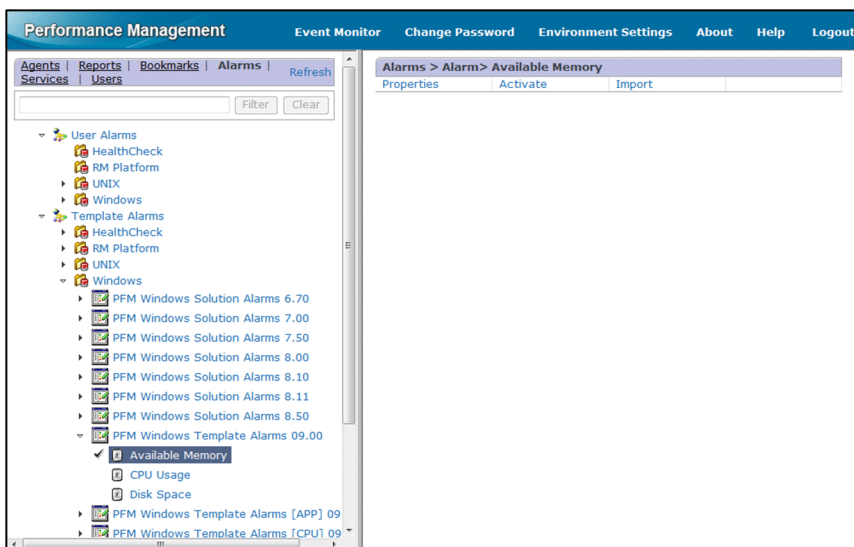
If you select the root or a folder in the left part of the Agents window, the System Operational Status Summary window is displayed. In the System Operational Status Summary window, you can check server operational status, agent operational status, agent alarm status, and event status in real time.



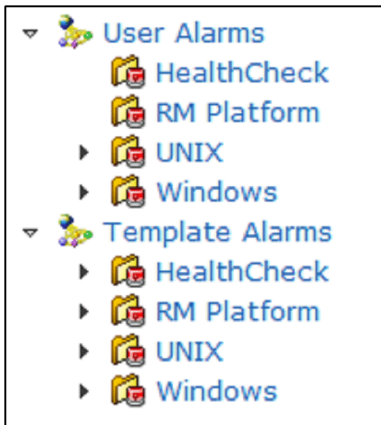
For details about the Agents window, see the topic *Agents window* in the manual *JPI/Performance Management Reference*.

## B.2 Operations supported in the Alarms window

In the Alarms window, you can manage alarm tables and alarm definition information. Use this window to prepare for using alarms in the monitoring operation, such as by displaying the definitions in alarm tables and creating, copying, and editing alarm tables.



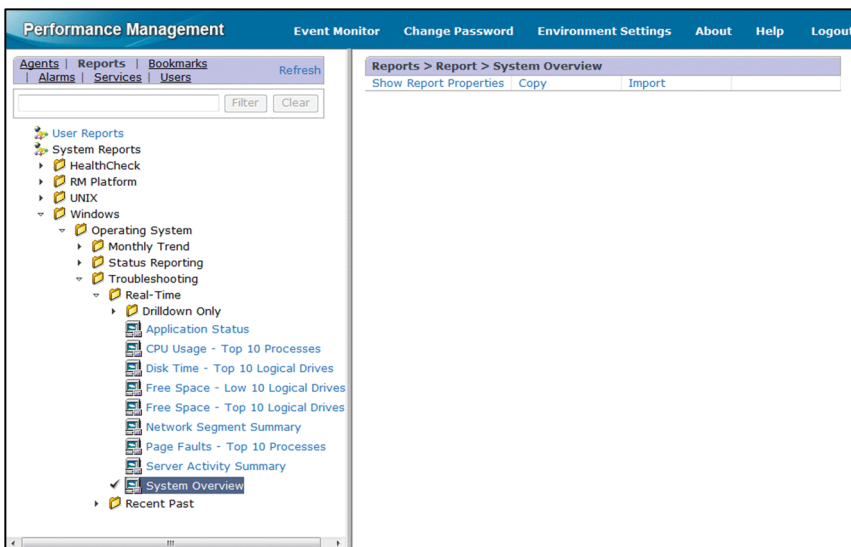
In the left part of the Alarms window, alarm tables and alarms are displayed in a tree format. You select a desired alarm table or alarm from the tree as shown below. The **User Alarms** folder stores alarm tables defined by the user, and the **Template Alarms** folder stores alarm templates.



For details about the Alarms window, see the topic *Alarms window* in the manual *JPI/Performance Management Reference*.

## B.3 Operations supported in the Reports window

In the Reports window, you can manage report definition information. Use this window to prepare for report display, such as by displaying report definitions and creating, copying, and editing reports.



In the left part of the Reports window, reports are displayed in a tree format. You select a desired report from the tree as shown below. The **User Reports** folder stores reports defined by the user, and the **System Reports** folder stores report templates.



For details about the Reports window, see the topic *Reports window* in the manual *JPI/Performance Management Reference*.



## C. Advanced Use

This section introduces the advanced functions of Performance Management. For details, see the listed other manuals in the Performance Management series.

Purpose	Performance Management function to be used	Overview of the function	Reference
Running Performance Management in different system configurations	Operation in a cluster configuration	Runs Performance Management with the monitoring manager, monitoring console server, and monitoring agents configured in a cluster system. Availability of a business system can be enhanced by running it with a cluster configuration.	<i>Overview of cluster systems in the JP1/Performance Management User's Guide</i>
	Multiple monitoring	Uses two monitoring managers. If the primary manager fails, the secondary manager is switched in to continue monitoring operations. This eliminates downtime in the monitoring operation, thereby improving availability.	<i>Overview of multiple monitoring in the JP1/Performance Management User's Guide</i>
	Remote monitoring	Collects performance data from a remote server that is not a monitoring target server. Operation monitoring can be started without having to stop the system because there is no need to install an agent on the monitoring target server.	<i>Select a suitable monitoring method in the JP1/Performance Management Planning and Configuration Guide</i>
Checking Performance Management for problems	Health check and status management	A health check determines whether any of the monitoring agents' services and monitoring agent hosts are stopped. Status management obtains the detailed status of the services running in the Performance Management system. These functions enable the user to detect problems in the Performance Management system itself and to achieve stable operation monitoring on a continuous basis.	<i>Overview of the health check function and the status management function in the JP1/Performance Management Planning and Configuration Guide</i>
Defining unique alarms and reports	Creating alarm tables	Defines new alarm tables. This function enables the user to create unique alarm tables that are suited to the system environment.	<i>Setting up and operating alarms in the JP1/Performance Management User's Guide</i>
	Copying and editing alarm tables	Copies monitoring templates and existing alarm tables and customizes them according to the purpose. This function enables the user to create unique alarm tables easily.	
	Creating alarms by using Quick Guide	Creates simple alarms with a minimum of effort. This function enables the user to create unique alarms easily.	
	Creating reports	Defines new reports. This function enables the user to create unique reports that are suited to the system environment.	<i>Overview and procedure for report creation in the JP1/Performance Management User's Guide</i>
	Copying and editing reports	Copies monitoring templates and existing reports and customizes them according to the purpose. This function enables the user to create unique reports easily.	
	Creating reports by using Quick Guide	Creates simple reports with a minimum of effort. This function enables the user to create unique reports easily.	

## D. Revision History

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This appendix provides the revision history of this manual for each version.

### D.1 Changes in version 11-10

- The following OSs are now supported:
  - AIX V7.2
  - Microsoft(R) Windows Server(R) 2016

### D.2 Changes in version 11-01

- Restart of the Performance Management services is now unnecessary if the information about the local host is not changed after editing the `jpchosts` file.

### D.3 Changes in 11-00

- The following OSs were deleted and are no longer supported:

PFM - Manager and PFM - Web Console

- Microsoft(R) Windows Server(R) 2003
- Microsoft(R) Windows Server(R) 2008 (other than R2)
- AIX 6 (32bit)
- AIX 7 (32bit)
- HP-UX 11i V3 (IPF)
- Red Hat Enterprise Linux(R) 5 (x86)
- Red Hat Enterprise Linux(R) 5 (AMD/Intel 64)
- Red Hat Enterprise Linux(R) 5 Advanced Platform (AMD/Intel 64)
- Red Hat Enterprise Linux(R) 5 Advanced Platform (x86)
- Red Hat Enterprise Linux(R) Server 6 (32-bit x86)
- Solaris 10

PFM - Base and PFM - Agent for Platform

- Microsoft(R) Windows Server(R) 2003
- Microsoft(R) Windows Server(R) 2008 (other than R2)
- AIX 6 (32bit)
- AIX 7 (32bit)
- Red Hat Enterprise Linux(R) 5 (x86)
- Red Hat Enterprise Linux(R) 5 (AMD/Intel 64)
- Red Hat Enterprise Linux(R) Server 6 (32-bit x86)

- The following OSs are now supported:
  - CentOS 6.1 (x64) and later
  - CentOS 7.1 and later
  - Red Hat Enterprise Linux(R) Server 7.1 and later
  - Oracle Linux(R) Operating System 6.1 (x64) and later
  - Oracle Linux(R) Operating System 7.1 and later
  - SUSE Linux(R) Enterprise Server 12
- Descriptions about prerequisite OSs, required memory, and disk space were added.
- Descriptions about English and Chinese were added to the language settings of the prerequisite OSs.
- A function for checking the alarm application status was added to the message area for Agents and to the Alarm Application Status window.
- Descriptions about the directions of passage through the firewall were added.

## E. Reference Material for this Manual

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This appendix provides reference information, including various conventions, for this manual.

### E.1 Related publications

This manual is part of a related set of manuals. The manuals in the set are listed below (with the manual numbers):

#### **PFM - Manager, PFM - Base, and PFM - Web Console manuals**

- *JP1 Version 11 JP1/Performance Management Planning and Configuration Guide (3021-3-A37(E))*
- *JP1 Version 11 JP1/Performance Management User's Guide (3021-3-A38(E))*
- *JP1 Version 11 JP1/Performance Management Reference (3021-3-A39(E))*

#### **Agent product manuals**

- *JP1 Version 11 JP1/Performance Management - Remote Monitor for Platform(3021-3-A42(E))*
- *JP1 Version 11 JP1/Performance Management - Remote Monitor for Virtual Machine(3021-3-A43(E))*
- *JP1 Version 11 JP1/Performance Management - Remote Monitor for Oracle(3021-3-A44(E))*
- *JP1 Version 11 JP1/Performance Management - Remote Monitor for Microsoft(R) SQL Server(3021-3-A45(E))*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Platform (3021-3-A51(E)), for Windows Systems*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Platform (3021-3-A52(E)), for UNIX Systems*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Service Response(3021-3-A53(E))*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Oracle(3021-3-A54)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Microsoft(R) SQL Server(3021-3-A55)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for IBM DB2(3021-3-A56)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for HiRDB(3021-3-A57)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Enterprise Applications(3021-3-A58(E))*
- *JP1 Version 11 JP1/Performance Management - Agent Option for IBM Lotus Domino(3021-3-A59)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Microsoft(R) Exchange Server(3021-3-A60)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Microsoft(R) Internet Information Server(3021-3-A61)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for IBM WebSphere Application Server(3021-3-A62)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for Oracle(R) WebLogic Server(3021-3-A63)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for uCosminexus Application Server(3021-3-A64)#*
- *JP1 Version 11 JP1/Performance Management - Agent Option for OpenTPI(3021-3-A65)#*
- *JP1 Version 10 JP1/Performance Management - Agent Option for JP1/AJS3(3021-3-063)#*
- *JP1 Version 10 JP1/Performance Management - Agent Option for IBM WebSphere MQ(3021-3-071)#*

#: This manual is available only in Japanese.

## E.2 Abbreviations for Microsoft product names

This manual uses the following abbreviations for Microsoft product names.

Abbreviation		Full name or meaning
Exchange Server		Microsoft(R) Exchange Server
IIS		Microsoft(R) Internet Information Services
Internet Explorer		Microsoft(R) Internet Explorer(R)
		Windows(R) Internet Explorer(R)
SQL Server		Microsoft(R) SQL Server 2005 Enterprise Edition
		Microsoft(R) SQL Server 2005 Standard Edition
		Microsoft(R) SQL Server 2008 Enterprise
		Microsoft(R) SQL Server 2008 Enterprise R2
		Microsoft(R) SQL Server 2008 Standard
		Microsoft(R) SQL Server 2008 Standard R2
		Microsoft(R) SQL Server 2012 Business Intelligence Edition
		Microsoft(R) SQL Server 2012 Enterprise Edition
		Microsoft(R) SQL Server 2012 Standard Edition
Windows Server 2003		Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition
		Microsoft(R) Windows Server(R) 2003, Standard x64 Edition
		Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
		Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition
		Microsoft(R) Windows Server(R) 2003, Enterprise Edition
		Microsoft(R) Windows Server(R) 2003, Standard Edition
		Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition
		Microsoft(R) Windows Server(R) 2003 R2, Standard Edition
Windows Server 2008	Windows Server 2008 (other than R2)	Microsoft(R) Windows Server(R) 2008 Enterprise
		Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(R)
		Microsoft(R) Windows Server(R) 2008 Standard
		Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(R)
	Windows Server 2008 R2	Microsoft(R) Windows Server(R) 2008 R2 Datacenter
		Microsoft(R) Windows Server(R) 2008 R2 Enterprise
		Microsoft(R) Windows Server(R) 2008 R2 Standard
Windows Server 2012		Microsoft(R) Windows Server(R) 2012 Datacenter
		Microsoft(R) Windows Server(R) 2012 Standard

Abbreviation	Full name or meaning
Windows Server 2012	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2012 R2 Datacenter
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2012 R2 Standard
Windows Server 2016	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2016 Datacenter
	Microsoft <sup>(R)</sup> Windows Server <sup>(R)</sup> 2016 Standard

The generic term Windows might be used to refer to Windows Server 2008, Windows Server 2012 and Windows Server 2016.

## E.3 Conventions: Folders and directories for Performance Management

In this manual, the Performance Management installation folder and installation directory are referred to as the installation folder.

The default installation folder for the Windows edition of Performance Management is as follows.

Installation folder for the Performance Management programs other than PFM - Web Console

*system-drive*\Program Files (x86)\Hitachi\jplpc

Installation folder for PFM - Web Console

*system-drive*\Program Files (x86)\Hitachi\jplpcWebCon

The default installation folder for the UNIX edition of Performance Management is as follows.

Installation directory for the Performance Management programs other than PFM - Web Console

/opt/jplpc

Installation directory for PFM - Web Console

/opt/jplpcwebcon

## E.4 Conventions: Abbreviations for product names

Abbreviation	Full name or meaning		
AIX	AIX V6.1		
	AIX V7.1		
	AIX V7.2		
Firefox	Firefox <sup>(R)</sup>		
HP-UX	HP-UX 11i V3 (IPF)		
IPF	Itanium <sup>(R)</sup> Processor Family		
JP1/AJS3	JP1/Automatic Job Management System 3		
	JP1/Automatic Job Management System 3 - Agent		
	JP1/Automatic Job Management System 3 - Manager		
	JP1/Automatic Job Management System 3 - View		
Linux	CentOS	CentOS 6 (x64)	CentOS 6.1 (x64) and later

Abbreviation			Full name or meaning
Linux	CentOS	CentOS 7	CentOS 7.1 and later
	Linux 6 (x64)		Red Hat Enterprise Linux(R) Server 6.1 (64-bit x86_64) and later
	Linux 7		Red Hat Enterprise Linux(R) Server 7.1 and later
	Oracle Linux	Oracle Linux 6 (x64)	Oracle Linux(R) Operating System 6.1 (x64) and later
		Oracle Linux 7	Oracle Linux(R) Operating System 7.1 and later
	SUSE Linux	SUSE Linux 12	SUSE Linux(R) Enterprise Server 12
Performance Management			JP1/Performance Management
PFM - Agent	PFM - Agent for JP1/AJS <sup>#</sup>	PFM - Agent for JP1/AJS3	JP1/Performance Management - Agent Option for JP1/AJS3
	PFM - Agent for Cosminexus <sup>#</sup>		JP1/Performance Management - Agent Option for uCosminexus Application Server
	PFM - Agent for DB2		JP1/Performance Management - Agent Option for IBM DB2
	PFM - Agent for Domino		JP1/Performance Management - Agent Option for IBM Lotus Domino
	PFM - Agent for Enterprise Applications		JP1/Performance Management - Agent Option for Enterprise Applications
	PFM - Agent for Exchange Server <sup>#</sup>		JP1/Performance Management - Agent Option for Microsoft(R) Exchange Server
	PFM - Agent for HiRDB		JP1/Performance Management - Agent Option for HiRDB
	PFM - Agent for IBM WebSphereMQ <sup>#</sup>		JP1/Performance Management - Agent Option for IBM WebSphere MQ
	PFM - Agent for IIS <sup>#</sup>		JP1/Performance Management - Agent Option for Microsoft(R) Internet Information Server
	PFM - Agent for Microsoft SQL Server		JP1/Performance Management - Agent Option for Microsoft(R) SQL Server
	PFM - Agent for OpenTP1 <sup>#</sup>		JP1/Performance Management - Agent Option for OpenTP1
	PFM - Agent for Oracle		JP1/Performance Management - Agent Option for Oracle
	PFM - Agent for Platform	PFM - Agent for Platform(UNIX)	JP1/Performance Management - Agent Option for Platform(UNIX <sup>(R)</sup> )
		PFM - Agent for Platform(Windows)	JP1/Performance Management - Agent Option for Platform(Windows <sup>(R)</sup> )
	PFM - Agent for Service Response		JP1/Performance Management - Agent Option for Service Response
	PFM - Agent for WebLogic Server <sup>#</sup>		JP1/Performance Management - Agent Option for Oracle(R) WebLogic Server
PFM - Agent for WebSphere Application Server <sup>#</sup>		JP1/Performance Management - Agent Option for IBM WebSphere Application Server	
PFM - Base			JP1/Performance Management - Base
PFM - Manager			JP1/Performance Management - Manager

Abbreviation		Full name or meaning
PFM - RM	PFM - RM for Microsoft SQL Server	JP1/Performance Management - Remote Monitor for Microsoft(R) SQL Server
	PFM - RM for Oracle	JP1/Performance Management - Remote Monitor for Oracle
	PFM - RM for Platform	JP1/Performance Management - Remote Monitor for Platform
	PFM - RM for VM	JP1/Performance Management - Remote Monitor for Virtual Machine
PFM - Web Console		JP1/Performance Management - Web Console
Solaris	Solaris 10	Solaris 10 (SPARC)
	Solaris 11	Solaris 11 (SPARC)

- The generic term Performance Management might be used to refer to PFM - Manager, PFM - Agent for Platform, PFM - Base, PFM - Web Console, and PFM - RM.
- The generic term UNIX might be used to refer to HP-UX, Solaris, AIX, and Linux.

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This product works in a Japanese environment only.

## E.5 Conventions: Acronyms

Acronym	Full name or meaning
CPU	Central Processing Unit
CSV	Comma Separated Values
DNS	Domain Name System
GIF	Graphics Interchange Format
HTML	HyperText Markup Language
OS	Operating System
SNMP	Simple Network Management Protocol
UAC	User Account Control

## E.6 Conventions: Units (such as KB, MB, GB, and TB)

This manual uses the following conventions:

- 1 KB (kilobyte) is 1,024 bytes
- 1 MB (megabyte) is 1,024<sup>2</sup> bytes
- 1 GB (gigabyte) is 1,024<sup>3</sup> bytes
- 1 TB (terabyte) is 1,024<sup>4</sup> bytes



## F. Glossary

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### agent product

A generic name for a program product that collects and manages performance data from programs, such as OSs and applications. The host on which an agent product is installed has the role of a *monitoring agent*.

### alarm

Information that defines conditions and methods for sending notifications to the administrator when collected performance data reaches threshold values. Alarms can be set for each item that is monitored.

### alarm table

A set of alarms. When an operation called binding is performed on a monitoring agent, the monitoring operation begins in accordance with the definitions in the alarm table.

### alarm template

A template of alarms provided by Performance Management. Alarm templates can be used as is as alarm tables because required items are predefined. Alarm templates can also be customized as appropriate to the purpose of the monitoring operation.

### binding

Process of associating a monitoring agent with an alarm table. The monitoring operation using alarms begins when an alarm table is associated with a monitoring agent.

### drilldown report

A report that is associated with a specific field on a report. Drilldown reports are used to display detailed information or related information for a report.

### field

A performance data item contained in a record. Fields correspond to monitored items in Performance Management. For example, `CPU %` and `Page Faults/sec` are fields of the System Overview (PI) record.

### health check

A function for determining whether monitoring agent services and hosts are stopped.

### historical report

A report that displays changes in the data for a monitoring target over a period of time. A historical report is created to analyze trends in a monitoring target.

### monitoring agent

A generic name for a service that collects performance data from monitoring targets in a Performance Management system.

### monitoring console

A console window used to display the performance data collected from monitoring targets by monitoring agents and to display the Performance Management configuration windows.

### monitoring console server

A generic name for a service that enables a Web browser to be used in a Performance Management system to display the performance data collected from monitoring targets by monitoring agents and to display the Performance Management configuration windows.

### monitoring manager

A generic name for a service that performs central management of monitoring agents in a Performance Management system.

### monitoring template

An alarm table or a report that contains predefined monitored items and monitoring conditions that are used frequently. A monitoring template used by the alarm function is called an alarm template, and a monitoring template used by the report function is called a report template.

### operation monitoring

Monitoring of the status of programs, such as OSs and applications, in a business system to detect warning signs of failures and to display data that is needed for analyzing the causes of problems.

### performance data

Operational status data collected from monitoring targets, such as OSs and applications.

### Performance Management

A general term for a group of JP1/Performance Management products. JP1/Performance Management includes PFM - Manager, PFM - Web Console, PFM - Agent Option for Platform, and PFM - Base.

### PFM - Agent Option for Platform

An agent product that collects and manages performance data for purposes of monitoring the performance of an OS. These agent products include PFM - Agent Option for Platform (for Windows) and PFM - Agent Option for Platform (for UNIX).

### PFM - Base

A product required for such agent products as PFM - Agent Option for Platform and PFM - Remote Monitor for Platform. This product is not needed if the agent product is located on the server on which JP1/PFM - Manager is running.

### PFM - Manager

A program product that provides central management of monitoring agents. The host on which PFM - Manager is installed has the role of the *monitoring manager*.

### PFM - Web Console

A program product for displaying in a Web browser the performance data collected from monitoring targets by monitoring agents and the Performance Management configuration windows. The host on which PFM - Web Console is installed has the role of the *monitoring console server*.

### real-time report

A report providing current information about a monitoring target. A real-time report is created to check the current status of a monitored item for which a history of performance data is not being collected.

**record**

A collection of performance data items that is organized by purpose. For example, the System Overview (PI) record is a collection of such performance data items as the CPU usage and the amount of unused physical memory area. This data is used to determine the overall status of the system. Monitoring agents collect performance data in records. The records that can be collected depend on the agent product.

**remote monitoring**

An operation mode in which performance data is collected from a remote host without installing an agent product on the monitoring target server.

**report**

Performance data that is collected from monitoring targets and displayed in easy-to-understand graphs and tables. The two types of reports are real-time reports and historical reports.

**report template**

A template for reports that is provided by Performance Management. Report templates can be used as is for producing reports because required items are predefined. Report templates can also be customized for the purpose of the monitoring operation.

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