



Interstage Business Process Manager Analytics V11.1



Management Console Guide

Windows/Solaris/Linux

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About this Manual

This document describes how to use the Management Console and Management Commands to configure the core parameters, how to start/stop the Interstage BPM Analytics service and how to display the Interstage BPM Analytics status.

Intended Audience

This manual is intended for use by the system administrator. It assumes that the reader has a working knowledge of the following topics:

- Operating system administration
- Application server administration
- Database administration

This Manual Contains:

Chapter	Title	Description
1	Interstage BPM Analytics Management Console	Summary of the Management Console.
2	Analytics Management Console User Interface	How to use the Web based user interface of the Management Console.
3	Server Management	How to use the console to start, stop and view the status of the Analytics Server.
4	Sensor Management	How to use the console to start, stop and view the status of the Sensors.
5	System	Configuration of the core parameters.
6	Analytics Management Command Line UI	How to use the Command Line based user interface of the Management Console.

Typographical Conventions

The following conventions are used throughout this manual:

Example	Meaning
command	Text, which you are required to type at a command line, is identified by Courier font.
screen text	Text, which is visible in the user interface, is bold .
<i>Reference</i>	Reference material is in <i>italics</i> .
Parameter	A command parameter is identified by Courier font.

Reference Materials

The following reference materials for Interstage BPM Analytics are also available:

- *Release Notes*
Contains an overview of Interstage BPM Analytics, and late-breaking information that could not make it into the manuals.
- *Overview*
Describes the Interstage BPM Analytics Architecture and features.
- *Installation Guide*
Explains how to install Interstage BPM Analytics.

- *Dashboard / Output Guide*

Explains how to use the Dashboard to display Analytical data.

- *Administration Guide*

Contains Administration tools and tips, Message references and Troubleshooting.

- *Analytics Studio Guide*

Explains how to use the Analytics Studio to configure the parameters to enable Interstage BPM Analytics features.

Abbreviations

The following references for BPM Analytics are also available:

Formal name	Abbreviation
Microsoft(R) Windows Server(TM) 2003, Standard Edition Microsoft(R) Windows Server(TM) 2003, Enterprise Edition Microsoft(R) Windows Server(TM) 2003 R2, Standard Edition Microsoft(R) Windows Server(TM) 2003 R2, Enterprise Edition	Windows Server
Microsoft(R) Windows Server(TM) 2003, Standard x64 Edition Microsoft(R) Windows Server(TM) 2003, Enterprise x64 Edition Microsoft(R) Windows Server(TM) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(TM) 2003 R2, Enterprise x64 Edition	Windows Server 2003(x64), or Windows Server 2003
Microsoft(R) Windows Server(R) 2008, Standard Edition Microsoft(R) Windows Server(R) 2008, Enterprise Edition Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise	Windows Server
Microsoft(R) Windows(R) XP Professional operating system Microsoft(R) Windows(R) XP Home Edition operating system	Windows XP, or Windows
Microsoft(R) Windows Vista(R) Business Microsoft(R) Windows Vista(R) Enterprise Microsoft(R) Windows Vista(R) Ultimate	Windows Vista, or Windows
Microsoft(R) Windows(R) 7 Home Premium Microsoft(R) Windows(R) 7 Professional Microsoft(R) Windows(R) 7 Ultimate	Windows 7, or Windows
Microsoft(R) Internet Information Server Microsoft(R) Internet Information Services	IIS
Microsoft(R) Internet Explorer 6.0 Microsoft(R) Internet Explorer 7.0 Microsoft(R) Internet Explorer 8.0	Internet Explorer
Microsoft(R) Excel	Excel
Solaris(TM) 10 operating system	Solaris 10, or Solaris
Red Hat Enterprise Linux AS Red Hat Enterprise Linux ES Red Hat Enterprise Linux 5	Linux
Interstage Application Server Enterprise Edition Interstage Application Server Standard-J Edition	Interstage Application Server
Interstage Studio Enterprise Edition Interstage Studio Standard-J Edition	Interstage Studio, or Studio
Interstage Business Process Manager	IBPM

Formal name	Abbreviation
Oracle Database 10g Enterprise Edition R10.1.0/R10.2.0 Oracle Database 10g Standard Edition R10.1.0/R10.2.0 Oracle Database 10g Standard Edition One R10.1.0/R10.2.0	Oracle10g, or Oracle
Oracle Database 11g Enterprise Edition Oracle Database 11g Standard Edition Oracle Database 11g Standard Edition One Oracle Database 11g R2 Enterprise Edition Oracle Database 11g R2 Standard Edition Oracle Database 11g R2 Standard Edition One	Oracle11g, or Oracle
Microsoft SQL Server 2005 Standard Edition Microsoft SQL Server 2005 Enterprise Edition	SQL Server 2005, or SQL Server
Microsoft SQL Server 2008 Standard Edition Microsoft SQL Server 2008 Enterprise Edition	SQL Server 2008, or SQL Server

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Chapter 1 Interstage BPM Analytics Management Console

The Interstage BPM Analytics Management Console is a web-browser based tool for making environment settings and managing monitoring behavior.

The Interstage BPM Analytics Management Console's functions primarily affect the relationship between the Interstage BPM Analytics server and its environment.



The Interstage Business Process Manager server has its own console. It operates primarily to manage business processes and to access and respond to workflow issues.

Management Commands

The operating system's command shell can also be used to perform some of the tasks of the **Management Console**.

In addition, **Management Commands** have some capabilities that are not found in the **Management Console**.

At the end of this guide is an overview of the **Management Command** functionality.

1.1 When the Management Console is Commonly Used

1.1.1 After the first installation

Change Administrator Password

To ensure operational security, change the initial password. Passwords should be based on a security policy managed by your administrator.

The initial password of this product at installation time is set to "bpm".

```
BPM Analytics > Set Password
```

Add JDBC driver file and setup the Events DB Connection

Add the JDBC driver file for connecting to the Events Database, and then configure the connection settings for the Events Database.

```
BPM Analytics > System > Database Management > Event DB
```

Create Tables for the Events Database

To start the Analytics Server, a system table must be created in the specified RDBMS.

```
BPM Analytics > System > Database Management > Table Management
```

Determine Dashboard Authentication Type, if necessary

Determine the authentication type for login to the Dashboard.

"Built-in Authentication" is set by default. Changing the authentication type during operation is not recommended.

```
BPM Analytics > System > Dashboard Authentication
```

Start Analytics Server

Start the Analytics Server after creating the Events Database.

```
BPM Analytics > Server Management > BPM Analytics Server > Status
```

Create Analytics Studio User

Create a user for the Analytics Studio who will edit the operation settings of the Analytics Server. If uploading operational settings from the Analytics Studio to the Analytics Server, this user becomes the target of authentication.

The Analytics Studio User is set by default as one person, with the user ID/password of "bpm/bpm".

To ensure operational security, we recommend deleting the default user, and creating a new user.

```
BPM Analytics > System > Analytics Studio Authentication
```

Set Up Mail Server

To deploy the mail send function with the Escalation function, set the Mail Server information that will be used by Analytics Server.

```
BPM Analytics > System > Mail
```

Add JAR files to Analytics Server if necessary

Add JAR files as necessary. This function is used to add the required JAR files when linking to the Interstage Business Process Manager server, or to distribute JDBC driver files to a sensor.

```
BPM Analytics > System > JAR File Management
```

1.1.2 For Routine Maintenance

Manage Connection Status

Start and stop the Connections of Sensors, if necessary.

For example, this feature is used if an RDBMS that is a target system is stopped for maintenance, or if event collection from the Analytics Server is stopped temporarily.

Start/Stop is also required to implement changes to definitions when changing sensor definitions using Analytics Studio.

```
BPM Analytics > Sensor Management > [Sensor Name] > Connection Status
```

Schedule Archive Database processes

In order to appropriately manage data volume in the Events Database and to maintain data redundancy and records, save past events data from the Events Database to the Archive Database.

```
BPM Analytics > System > Data Migration > Archive Rules
```

Clean up Database

In order to appropriately maintain data volumes in the Events Database, periodically delete past events data from the Events Database.

```
BPM Analytics > System > Database Management > Table Management
```

Events Database Management

Reflect changes to the user password of the RDBMS used as an Events Database, and settings information, during operations.

```
BPM Analytics > System > Database Management > Event DB  
BPM Analytics > System > Database Management > Archive DB
```

View Log

The operation results of operation definitions created using Analytics Studio, and uploaded to the Analytics Server can be checked.

```
BPM Analytics > Server Management > BPM Analytics Server > View Log
```

Start and Stop the Analytics Server

Used, for example, if an RDBMS for which an Events Database has been created is stopped for maintenance, or if the Analytics Server operation is stopped temporarily.

Start/Stop is also required to implement changes to definitions when changing sensor definitions using Analytics Studio.

BPM Analytics > Server Management > BPM Analytics Server > Status

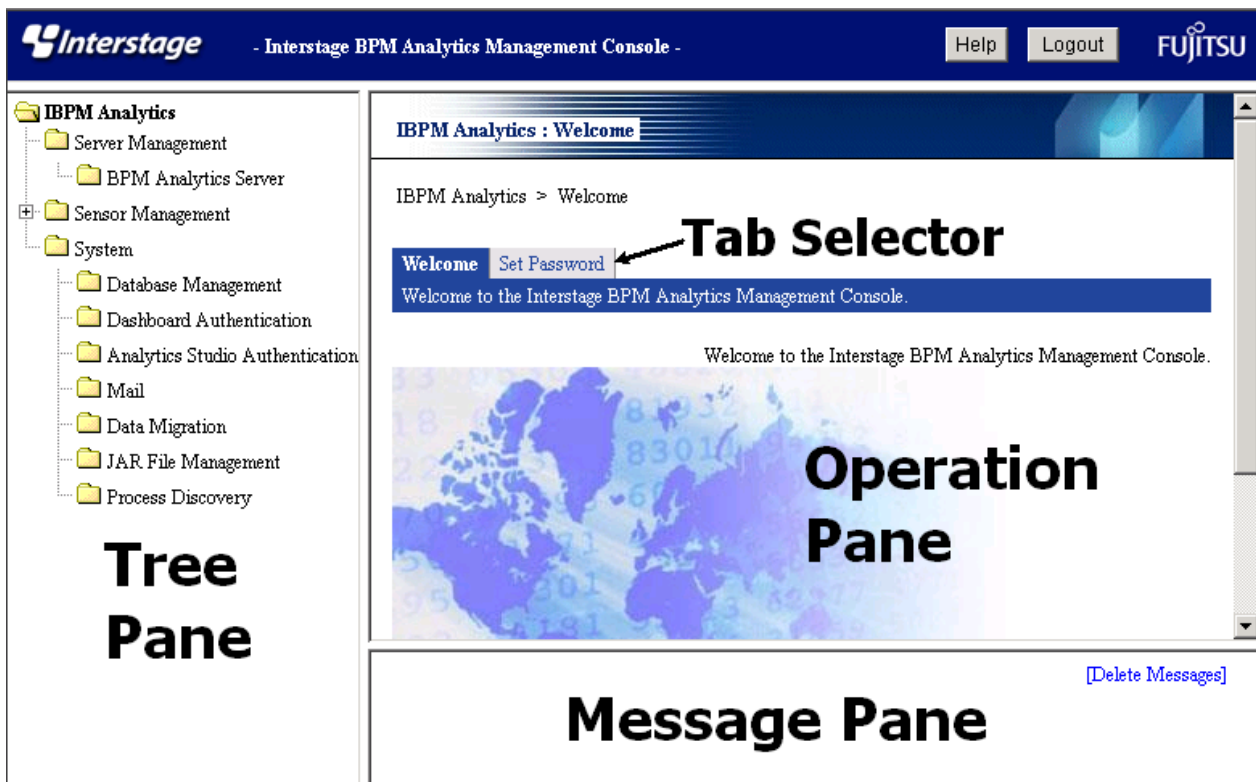
Manage Analytics Studio Users

Manage the users of the Analytics Studio who edit the operational settings of the Analytics Server.

BPM Analytics > System > Analytics Studio Authentication

Chapter 2 Analytics Management Console User Interface

The **Management Console's** web-based user interface window is divided into three panes:



The above graphic shows how the screen appears when the Analytics Management Console is first opened. It contains the navigation tree panel on the left, the **Welcome** is displayed in the Operation Pane in the top right, and an empty Message Pane is found in the lower right.

The panes can be resized by dragging their common borders.

Tree Pane (left-hand side)

The menus for the Management Console are displayed as a navigation tree.

Interstage BPM Analytics' root folder is "BPM Analytics".

A folder preceded by a box with a cross in it indicates that the folder contains a sub-menu.

To view the contents of a particular folder, click on the box with a cross in it. Its contents will open as a sub-menu beneath it.

Click on any of the folders that do not have a box with a cross to open it in the Operation pane, to the right, on top.

Click on a box with a minus sign in it to collapse that folder's sub-menus.

Operation Pane (top right)

This pane displays the content of the folder that has been selected in the Tree pane.

Many windows in the Operation Pane have more than one tabbed page.

By default the windows will open displaying the first tabbed page on the right.

Click on any of the tabs to open its page.

Message Pane (bottom right)

This pane displays information such as logs, errors, and warnings for operations that have been performed using the Management Console.

Refer to the *Interstage Business Process Manager Analytics Administration Guide* for details on the meanings of these messages, their color code and how to handle them.

2.1 Analytics Management Console Start Page

Login

Analytics URL

Users start the Analytics Management Console by typing its address into the web-browser's address bar.

The address must conform to the following format:

```
http://server:port/ibpmm/BPMAdminTool.do
```

- server :

Specifies the host name or IP address of the Analytics Server.

- port :

Specifies the port number of the Web server.

The default value is 80.



If another user is already logged-in to the Management Console, the message, "Another administrator is logging in.", will be displayed in the login window. Clicking the Force Login button makes it possible to forcibly log in.

Logging in forcibly causes the other administrator (who is already logged in) to be logged out forcibly. Ensure that you check the other administrator's situation before logging in forcibly.

Login

After the address is entered in the address bar, the login window will open.

Users enter the administrator's password and click **Login**

Logout

Once logged-in, the **Logout** button appears in the top right corner of the console.

Click **Logout** at any time to exit Analytics Management Console.



If the Web browser is closed without logging out, the **Force Login** window may be displayed the next time a user tries to log in to the Management Console.

You should logout when finishing the Management Console before closing the web browser window.

Welcome

When the Interstage BPM Analytics Management Console is first opened, its **Start Page** is displayed in the **Operation Pane** with its **Welcome** tabbed page open.

The **Welcome** contains a welcome message and has no other functionality.

The **Message Pane** is also displayed, at this time it should be empty.

Set Password

Click the **Set Password** tab on the **Start Page** if you need to change the administrator's password.

The default password is "bpm".

After installation, the default password must be changed to ensure operational security.

The **Set Administrator Password** screen will be displayed on **Set Password** tab:

Welcome **Set Password**

Set a password of Interstage BPM Analytics System Administrator.

Set Administrator Password

Current Password	<input type="text"/>
New Password	<input type="text"/>
Confirm Password	<input type="text"/>

Modify

To change the password, enter the existing password into the **Current Password** field (if it is not already there), then enter a new password into the **New Password** field. Next retype the same string as the new password into the **Confirm Password** field and click the **Modify** button.

A new password can be between 1 and 32 characters.

The administrator password should be safeguarded according to your workplace security policies.

Chapter 3 Server Management

Server Management sub-menu of the Analytics Console contains the following groups of settings:

- Status
- Settings
- Connection
- View Log (New)
- Logging
- Machine Restrictions

Click on a sub-menu item to open its window in the Operation Pane to the right.

Each window has a number of tabbed pages containing related settings.

By default each window will open with the first tabbed page displayed.

3.1 Status

The **Status** window allow users to check on the current operational status of the **Analytics Server** and to start or stop it as required.

Click the **Status** tab on the **BPM Analytics Server** window to display the settings:

BPM Analytics Server : Status

BPM Analytics > Server Management > BPM Analytics Server > Status

Status Settings Connection View Log Logging Machine Restrictions

View status of Analytics server. Start, stop or re-start it.

Analytics Server Name	Status	Start Time
BPM Analytics Server	Running	Jul 28, 2009 11:28:36

Refresh Start Stop Re-Start

The **Status** window first displays the name of the Analytics Server, then its current status and the date and time that it was last started.

Current Status

The Status field can be either Running, Stopped or Not Connected.

Click the Start button to start the Analytics Server, the status will change to Running.

Click the Stop button to stop the Analytics Server, the status will change to Stopped.

Not Connected status means that the connection setting is wrong or the network is down.

Use the Refresh button to confirm the current status at the time.

The Re-Start button is a single button that combines two operations: it first does a stop operation, then a start operation.

Note

The **Start / Stop** functions can also be run from the **Management Commands**, see the *Analytics Management Console Command Line UI* section at the end of this guide for more details.

3.2 Settings

The **Settings** window contains information about the Analytics server that was started or stopped in the **Status** window.

Click the **Settings** tab on the **BPM Analytics Server** window to display the following information:

BPM Analytics Server : Settings

BPM Analytics > Server Management > BPM Analytics Server > Settings

Status **Settings** Connection View Log Logging Machine Restrictions

Modify settings of Analytics Server.

Analytics Server Settings	
Analytics Server ID	MON_0000000000
Analytics Server Name	<input type="text" value="BPM Analytics Server"/>
Max Number of Sessions	<input type="text" value="100"/>
Searching for Events and Alerts	<input checked="" type="radio"/> Use <input type="radio"/> Not Use
Event Calculation	<input checked="" type="radio"/> Use <input type="radio"/> Not Use
Event Registration	<input checked="" type="radio"/> Use <input type="radio"/> Not Use

Modify

Server Identification

The **ID** code and **Name** of the Analytics Server used to identify the server are displayed.

The **Analytics Server ID** code cannot be altered by the user.

The **Analytics Server Name** is displayed in menus and lists. This name can be changed.

To change the name, type in a string that is between 1 and 64 characters and click the **Modify** button.

Max Number of Sessions

The current setting for the maximum number of sessions is displayed.

"Sessions" means the maximum number of users who can login to the Analytics Server.

Change this setting by typing a new whole number into the field and clicking the **Modify** button.

Note

Adjust the **Max Number**, keeping in mind the memory size of the server.

Searching for Events and Alerts

Select the **Searching for Events and Alerts** option to enable the search facility in the Dashboard.

Event Calculation

Select whether to use the **Event Calculation** function.

The administrator can decide to allow the calculation function or not. Calculations are done on information in the Events Database to provide more detailed information and analysis of activities in the business, e.g. average sales for a month/year, etc..

Event Registration

Select whether to use the **Event Registration** function.

This is a function that receives and stores event data that has been sent from various sensors. This is a background activity for gathering the event data into the Events Databases. It is a core activity which Analytics would be performing most of the time, except in very unusual cases.



Ordinarily these three options must be set to **Use**.

Don't change them without recommendation from Fujitsu technical support.

3.3 Connection

The **Connection** window contains the current **URL** address of the Analytics Server.

Click the **Connection** tab on the **BPM Analytics Server** window to display it:

BPM Analytics Server : Connection

BPM Analytics > Server Management > BPM Analytics Server > Connection

Status Settings **Connection** View Log Logging Machine Restrictions

Modify the Connection Information of Analytics Server for remote sensors.

Server Connection Information

URL	<input type="text" value="http://BPM:81"/>
-----	--

Modify

Modify URL Address

It is possible to modify the URL address from this field.

For the host name, specify the host name or IP address of the machine where the Analytics Server is running.

Specify the URL of the Analytics Server using the following format:

```
http://host name:port number
```

For the (optional) port number, specify the port number of the Web server (it is 80 by default).

Once the **URL** has been correctly entered, click the **Modify** button.



This connection information is also used by **Sensors** and by the **Analytics Studio**, so make sure that this host name can be resolved from the machines on which the sensors and **Analytics Studio** are running.

3.4 View Log

Provides a log of the latest information, the exact display of which can be set up in the Analytics Studio.

3.4.1 Latest Results

Only the latest results are extracted from the operation log and these latest results are displayed for each definition name.

Accordingly, it does not list all definitions on the Analytics Studio.

BPM Analytics Server : View Log

BPM Analytics > Server Management > BPM Analytics Server > View Log

Status Settings Connection **View Log** Logging Machine Restrictions

View the log information of Analytics server.

Latest results Operation log Server log Access log

View the Latest Execution Result by Each Definition.

Task [\[Hide\]](#)

Sensor Name / Connection Name		MONOENG / Text Sensor connection	
Name	Result	Execution Time	Comment
Hamburger_Shop	executed	Jul 30, 2009 11:25:00	

Calculation [\[Show\]](#)

Alert [\[Hide\]](#)

Name	Result	Execution Time	Comment
Student and Female	occurrence	Jul 29, 2009 16:59:38	: Alerts have been occurred. [Number o...

Escalation [\[Show\]](#)

Refresh

The Latest Results are summarized from the Operation Log. Not all definitions are listed. Tasks of remote sensors are not listed on this page.

Refresh

To check the very latest status, click the **Refresh** button.

3.4.2 Ops Log/Server Log/Access Log

In the **View Log** window, the **Operation Log**, **Server Log** and **Access Log** tabs display log information that is output while the Analytics Server is operating for each respective activity type.

BPM Analytics Server : View Log

BPM Analytics > Server Management > BPM Analytics Server > View Log

Status Settings Connection **View Log** Logging Machine Restrictions

View the log information of Analytics server.

Latest results **Operation log** Server log Access log

View the Operation Log.

```
2009-07-30 09:45:06 BSDK0402 sensor task starting
Hamburger_Shop
[message: ] TSK_HS17NP50TM
2009-07-30 09:45:06 BSDK0402 sensor task started
Hamburger_Shop
[message: ] TSK_HS17NP50TM
2009-07-30 09:45:30 BSDK0404 sensor task executing
Hamburger_Shop
[message: ] TSK_HS17NP50TM
2009-07-30 09:45:30 BSDK0405 sensor task executed
Hamburger_Shop
[message: ] TSK_HS17NP50TM
2009-07-30 09:46:00 BSDK0404 sensor task executing
Hamburger_Shop
[message: ] TSK_HS17NP50TM
```

Refresh Download

Refresh

To check the latest status of the log information that is displayed, click the **Refresh** button.

Download

To download the log information currently displayed as a file, click the **Download** button.

Downloaded files contain more old information than the log information displayed in this work area.

3.5 Logging

The **Logging** tabbed page contains settings for both **Server Logs** and **Access Logs**.

Users can set the level of importance or seriousness at which events will be logged, as well as the maximum size of log files and maximum number of backup log files to be created.

The settings' options are the same for both types of logs.

Click the **Logging** tab on the **BPM Analytics Server** window to display the settings for the two log types:

Status Settings Connection View Log **Logging** Machine Restrictions

Modify the Logging setting for the Analytics Server.

Server Log	
Log Level	INFORMATION and higher levels
Capacity of Log File	1MB
Max Number of Back Up Files	5 file(s)

Access Log	
Log Level	INFORMATION and higher levels
Capacity of Log File	1MB
Max Number of Back Up Files	5 file(s)

Modify

3.5.1 Server Log

The **Server Log** records information relating to the behavior of the Analytics Server.

3.5.2 Access Log

The **Access Log** records information about access to the Analytics Server from the **Analytics Management Console**.

Record Log Level

There are five levels at which the importance, or seriousness, of events to be logged can be set.

In descending order of importance, they are as follows

- 1. Fatal

Select for Logs containing only information about fatal errors.

- 2. Error

Setting for Logs containing information about errors that require some kind of action, as well as more serious events included in the previous level.

- 3. Warning

For Logs containing information that requires attention, as well as the errors or warnings included in the previous levels.

- 4. Detailed Information

Logs output with this level include status information as well as the errors or warnings included in the previous levels.

- 5. Debugging Information

This logging level is for IBPM Analytics developers to output debugging information.

 Note

If level 5 - **Debugging Information** is specified, the log output volume will be larger than for any of the other four levels. Be aware that the amount of information output may be extremely large.

To apply a new level, select a different level from the drop-down menu and click the **Modify** button to change the setting.

3.6 Machine Restrictions

The **Machine Restrictions** window allows the administrator to restrict certain machines from sending event information to the Events Database for Event Registration.

Click the **Machine Restrictions** tab on the **BPM Analytics Server** window to display it:

BPM Analytics Server : Machine Restrictions

BPM Analytics > Server Management > BPM Analytics Server > Machine Restrictions

Status Settings Connection View Log Logging **Machine Restrictions**

Set Machine Restrictions of Event Registration from remote sensors.

Machine Restrictions

Restriction Address	<input checked="" type="radio"/> Disabled	
	<input type="radio"/> Enabled	
	<input type="text"/>	
	- Address List -	
	<table border="1"><tr><td> </td></tr></table>	
	<input type="button" value="Add"/> <input type="button" value="Delete"/>	

3.6.1 Restriction Address

Disabled

Select **Disabled** if no restrictions are to be applied to events being collected by the Analytics Server.

All events collected by the sensor function will be sent to the Analytics server.

When this option is selected, the **Add** and **Delete** buttons will be disabled.

Enabled

If **Enabled** is selected, access to the Analytics server will be limited to the IP addresses of the machines that appear in the **Address List**. This allows the administrator to restrict which machines can send events to this Analytics server.

Add button

Enter a single IP address for a machine to be allowed access into the text entry field.

The format to use is:

Click the **Add** button to add the IP address to the **Address List** of IP addresses allowed to access the Analytics Server.

Delete button

Select an IP address, or range of IP addresses, from the **Address List** and click the **Delete** button to remove the address or addresses from the **Address List**.



Note

Only remote sensors from the Analytics Server are set up using the **Machine Restrictions** tab.

Event registration cannot be restricted for the local sensor on the same machine as the Analytics Server. Event registration is always allowed for the local sensor, and so there is no need to set the IP address of the Analytics Server.

However, if event registration is to be restricted to only the local sensor on the same machine as the Analytics Server (and event registration from remote sensors on all other machines is to be prohibited), specify only the IP address of the machine where the Analytics Server is running for access to event registration.

Chapter 4 Sensor Management

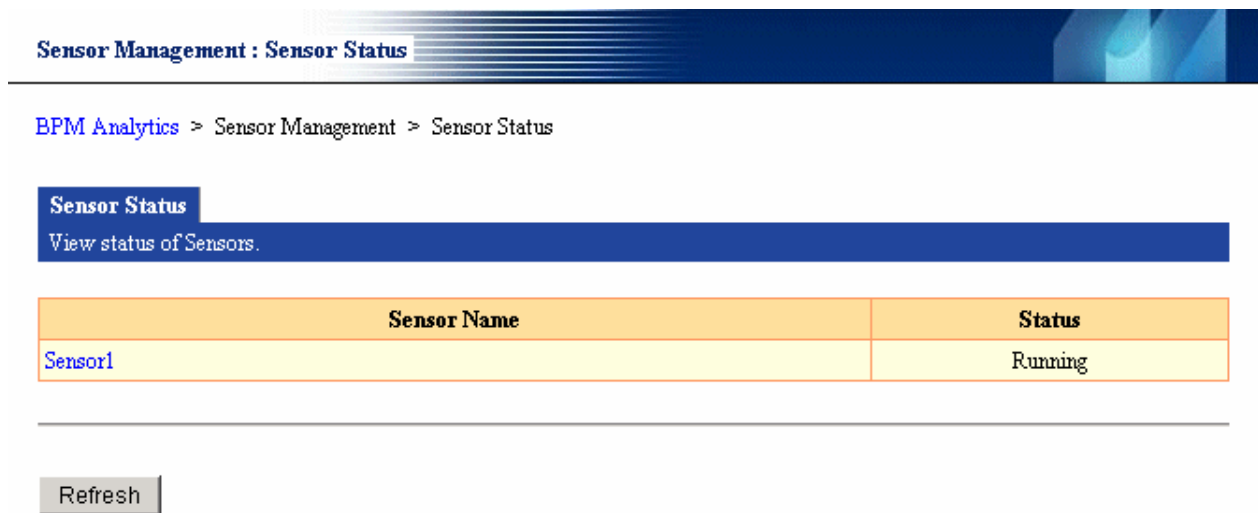
Sensor Management can be used to display the status of registered sensor, and to start and stop connections.

The **Sensor Status** window displays all the registered sensor.

Click on one of the sensors to display its details in its own **Connection Status** window. Here the **Connection Type** and **Status** for that sensor can be monitored, started, stopped, etc.

4.1 Sensor Status

From the Interstage BPM Analytics Management Console select **Sensor Management** in the tree pane on the left. Its sub-menu will drop down.



A list of all registered **Sensors** is displayed. In the example above, one Sensor has been registered.

The current **Status** of each sensor is displayed on the right hand side.

There are two **Status** types: **Running** and **Stopped**

Click **Refresh** to see if any new **Sensors** have been added, or if an existing sensor's **Status** has changed.

Each **Sensor Name** contains a link to a display of its details. Click on a **Sensor Name** to view its details in the **Connection Status** window.



Note

Sensors can be added using installer, and be deleted or edited using **Management Console**.

4.2 Connection Status

Click on a **Sensor Name** in the **Sensor Status** to view its details in the **Connection Status** window.

In the first section, the **Connection Status** window displays the name of the **Sensor** to which the details in the following sections relate to, and its current **Status**: **Running** or **Stopped**

Sensor1 : Connection Status

BPM Analytics > Sensor Management > Sensor1 > Connection Status

Connection Status

View status of Connections. Start or stop them. Modify the Sensor Settings.

Sensor Name	Status
Sensor1	Running

Connection Name	Connection Type	Status
<input type="checkbox"/> Flow Sensor connection	BPMFlow	Stopped
<input type="checkbox"/> Flow Sensor connection	MaintenanceBPMFlow	Stopped
<input type="checkbox"/> Text Sensor connection	Text File	Running

Refresh

Select All

Clear All

Start

Stop

Sensor Settings

Sensor Id	AID_1JZU53RYUE
Sensor Name	<input type="text" value="Sensor1"/>
Max number of Events per WEF	<input type="text" value="3000"/>
Sensor URL	<input type="text" value="http://MONOENG:81"/>

Modify

Delete Sensor

The second section displays a list of all **Connections** set for the **Sensor** including details about its **Connection Type** and its current **Status**.

In the third section, sensor settings can be edited. These settings contain high level settings items. Therefore, do not change them without first consulting Fujitsu technical support.

Connection Name

The Connection Name was created in the Analytics Studio's Connection Wizard. It cannot be edited here.

Select the check box for the connections to be controlled by the Start and Stop buttons.

When a check box is not selected, the Start and Stop buttons will not affect its operation.

Connection Type

The **Connection Type** indicates the type of resource from which the sensor collects event information.

The **Connection Type** may be one of the following:

- RDB
- Text File
- BPMFlow
- MaintenanceBPMFlow

Status

The **Status** can be either **Running** or **Stopped**.

The **Status** can be turned on by checking the checkboxes on the left of each connection and clicking the **Start** button.

To stop a connection from running, check its checkbox and press the **Stop** button.

All **Connections** can be started or stopped at once by clicking the **Select All** button and then the **Start** button, or the **Select All** button and then the **Stop** button.

Refresh button

Although the Analytics Server constantly monitors sensor activity, this display is not dynamically updated. Information may have changed since you opened the screen. To display details of the current operation, click the **Refresh** button.



- The **Start** and **Stop** buttons cannot be used with Windows Service Edition text file sensors.
To start or stop this type of sensor, start or stop the “Analytics Text File Sensor” service on the machines where the sensor is installed.
- When the Analytics server is restarted, the status of Windows Service Edition text file sensors may not be up to date. Wait a while, and then check the status of these sensors again.

Modify button

If necessary, enter changes to the **Sensor Settings** (**Sensor Name**, **Max number of Events per WEF**, **Sensor URL**) in the text fields provided, and then click the **Modify** button to make the changes effective.

Normally, you do not have to change these settings until you encounter problems with a sensor.

Delete Sensor button

When the sensor is no longer used, click the **Delete Sensor** button to delete the sensor. Before deleting the sensor, you must first delete its connections using the Analytics Studio.

Chapter 5 System

From the *Interstage* BPM Analytics Management Console select **System** in the navigation tree pane on the left, its sub-menu will drop down.

The **System** sub-menu contains links to the following windows:

- Database Management
- Dashboard Authentication
- Analytics Studio Authentication (New)
- Mail
- Data Migration
- JAR File Management
- Process Discovery

Each of these windows has a number of tabbed pages containing settings and data displays.

5.1 Database Management

The **Database Management** window has four tabbed pages relating to the operation and maintenance of the Events Database:

- Event DB
- Archive DB
- Table Management
- Connection Pooling

By default, the **Event DB** tabbed page is opened when the **Database Management** is initially opened from the navigation tree.

5.1.1 Event DB

The **Event DB** tabbed page contains data and settings using Java Database Connectivity (*JDBC*) to connect between the Analytics Server and a particular database.

This page will indicate which DB environment is used - i.e. Oracle, SQLServer etc.

If necessary, the JDBC driver file can be added to the Analytics Server through the settings on this page.



Note

If you add the JDBC driver file, please restart the based J2EE container on the Application Server in which the Analytics Server is running.

A single Events Database is connected at a time.

When selecting the JDBC Driver from the pull-down list, the fields on the Events Database Connection table will be changed to suit the selected database type.

In the following example, an Oracle database was selected:

BPM Analytics > System > Database Management > Event DB

Event DB | Archive DB | Table Management | Connection Pooling

Modify the Connection Information of Event DB. Add or delete JDBC driver file(s).

JDBC driver file settings	
JDBC driver file(s)	ojdbc14.jar
File path	<input type="text"/> <input type="button" value="Browse..."/>
To apply JDBC driver file(s), restart the based J2EE container on the Application Server.	

Event DB Connection	
JDBC Driver	Oracle oracle.jdbc.driver.OracleDriver
JDBC Connection URL	jdbc:oracle:thin:@10.0.0.2:1521:orcl
Table Space Name	USERS
User Name	bpmuser
Password	<input type="checkbox"/> Set new password <input type="password"/>
Can not use the same Schema and User for Event DB and Archive DB.	

As an *Oracle* database is selected in the example, the **Table Space Name** field is displayed.

The following JDBC compliant databases can be used:

- Oracle
- SQLServer 2005/2008
- DB2

5.1.2 Archive DB

When an **Archive Database** is used, its connection information will be displayed in this tabbed page of the **Database Management** window.

An Archive Database is used to store unwanted historical events from the main Events Database to free up space and improve performance. Also, an Archive Database could archive the historical events to another Events Database which you could then use to do analysis over later, leaving the main Events Database for the day-to-day view of the business.

The **Archive DB Connection** section has the same display layout and contains the same items as the **Event DB Connection** section, refer to the previous section for details.

5.1.3 Table Management

Once the Events and Archive Databases have been defined and registered, the Database tables can be created in them using the tools in this tabbed page.

The **Table Management** page displays details for the **Events Database** and the **Archive Database**.

The tools associated with this tabbed page allow users to **Create Tables** and **Clean up Tables**.

Tables contain the data from the events, it is a common a maintenance task to clean out unwanted information from the Events Database.

Click the **Table Management** tab in the **Database Management** window to access the table management tools:



IBPM Analytics > System > Database Management > Table Management

Event DB | Archive DB | **Table Management** | Connection Pooling

View the System Table Status. Create it. Delete data from it.

Type of database	Status	Status
Events DB	Created	<input type="button" value="Create Table"/>
Archive DB	Not defined	<input type="button" value="Create Table"/>

Deletion Condition of data of System Tables

Delete unnecessary data from the System tables. The deleted data cannot be restored.

Type	<input checked="" type="radio"/> Initialize (Delete all events and alerts.) <input type="radio"/> Select Event <input type="text" value="[Event definition does not exist.]"/> <input type="radio"/> Select Alert <input type="text" value="[Alert definition does not exist.]"/>
When the event is deleted, the alert that relates to the event will be deleted at the same time.	
Time Range	<input type="checkbox"/> Time Range (If not checked, the differential collection information of the corresponding event will be initialized.) Start time: 2010 Apr 9th 00:00:00 End time: 2010 Apr 9th 00:00:00
Password	<input type="text"/>

The deleted data cannot be restored.

The display consists of two sections and a command button.

The upper section shows the details of the currently registered Databases, and the lower section contains the tools for cleaning up Database tables.

Type of Database

This field identifies the Events and Archive Databases. There are always only one Events Database and either one Archive Database or no Archive Database.



Note

In order to use the Archive Database, restart of the Analytics server is required after creating the Archive Database.

Status

The current Status of the System Tables of either the Events Database or the Archive Database is displayed.

The Status can be either Created, Not defined or Error.

A table with Created status has been defined, registered and is working correctly.

Error means that a table was created, but there is a problem with the table.

The status is Not defined if a database has not yet been created in this window.

Create Table

If the **Status** is **Not defined**, the **Create Table** button is enabled. Click it to create the system tables in order to manage the events data.

Clean up Table

Click the Delete Data button to clean up the Events DB.

Type

Specify data to be deleted.

Initialize

Deletes all event data and alert data.

If the **Time Range** checkbox isn't checked, the differential collection information of the corresponding event will be initialized.

Select Event

Limits the data to be deleted by specifying an event definition name.

Select an event from the event list. When the event is deleted, all the events related to that event will also be deleted at the same time.

If the **Time Range** checkbox isn't checked, the differential collection information of the corresponding event will be initialized.

Select Alert

Select an alert definition name from the list to delete its alerts.

Time Range

Specify the timeframe of the data to be deleted. This can be skipped.

The value at the end date is not included in the specified range.

Therefore, when 18:00 is specified at the end date, the data of 18:00 is not deleted.



Note

If users intend to initialize the differential collection information, need to stop the corresponding collection before cleaning up the table.

After cleaning up the table, initialization of the differential collection information is done as soon as the corresponding connection re-start.

In addition to condition of Time Range, following conditions are fulfilled to initialize the differential collection information.

- The corresponding sensor's type is 'Text' or 'RDB'.
- The corresponding connection information is not modified by using Analytics Studio during the term between cleaning up the table and starting up the corresponding connection.

Password

Enter the password required to confirm the operation.

5.1.4 Connection Pooling

There are a number of JDBC connections that remain open. These are reused when a connection is required.

Connection Pooling saves having to open a connection each time it is required, which would reduce performance. The connection will be closed when it is no longer required.

In this page the **Connection Pooling** settings can be made. This allows the Administrator to decide how many connections will be available in the pool and for how long they will remain open if not used.

Click the **Connection Pooling** tab in the **Database Management** page to access the pooling settings:

Database Management : Connection Pooling

[BPM Analytics](#) > [System](#) > [Database Management](#) > Connection Pooling

[Event DB](#) | [Archive DB](#) | [Table Management](#) | **Connection Pooling**

Modify the Connection Pooling Information of Event DB.

Usage of Pooling	Max Number of Connections	Max Waiting Time of Connection
Searching for Events and Alerts	<input type="text" value="8"/>	<input type="text" value="60"/> second(s)
Event Calculation	<input type="text" value="4"/>	<input type="text" value="300"/> second(s)
Event Registration	<input type="text" value="4"/>	<input type="text" value="300"/> second(s)

Usage of Pooling

Lists the connection usage times available and shows the connection pooling characteristics for each of them.

There are three types of usage: **Searching for Events and Alerts** (Retrieval), **Event Calculation** and **Event Registration**

Searching for Events and Alerts

When the search operation in the Dashboard is used, these connections are used to search for business events, calculation events and alert data when charts and alerts are displayed in the Dashboard.

Event Calculation

These connections are used to search for business events during event calculations and to store calculation events as part of Event Calculation processing.

Event Registration

These connections are used to store details of business events that are sent from sensors to the Events Database.

Modify button

Enter the changes to these settings and click the **Modify** button to apply them.

The Analytics Server must be restarted for any changes on this screen to take effect.

5.2 Dashboard Authentication

In order to restrict which users can log in to the Dashboard, the environment settings for an authentication server (usually an application server or LDAP server) must first be made.

These changes are made using the Management Console's Dashboard Authentication function.

From the **System** tree menu, select **Dashboard Authentication**:

Dashboard Authentication

[BPM Analytics](#) > [System](#) > [Dashboard Authentication](#)

Dashboard Authentication

LoginModule List

Create a new LoginModule

Modify the Dashboard Authentication type.

Authentication Type for Dashboard

Built-in Authentication

Modify

After modification, restart Analytics Server to apply changes.

Authentication Type for Dashboard

There are seven pre-defined Authentication Type settings (including the option of not performing authentication at login to the dashboard).

If a user-defined LoginModule is defined, these are listed together.

Select the authentication method for the Dashboard from the following:

Built-in Authentication

Only use the Interstage BPM Analytics authentication function, without using an authentication server.

Do not authenticate

Operate without performing login authentication.

LDAP (Authentication Server)

Authenticate by linking to an LDAP server.

Active Directory Service (Authentication Server)

Authenticate by linking to Active Directory Service.

Native Windows (Authentication Server)

Authenticate by linking to the Windows account management function.

Interstage SSO (Authentication Server)

Authenticate by linking to Interstage SSO. Please write the following format into the **Option**:

Example) business-system-name="<Business System Name>"

User-Defined LoginModule

Authenticate by linking to user-defined system via a LoginModule.

Modify Button

When the required changes have been made, click the **Modify** button to send the changes to the Analytics Server.

Note

In order for any change to take effect (including a change to **Do Not Authenticate**), the **Analytics Server** must be restarted.

Note

Before using Interstage SSO authentication type, Interstage Single Sign-On needs to be setup. And the following settings must be confirmed:

- Notification of Sign-off URL: notify
- Single Sign-on JavaAPI: enable
- Session Management: enable
- Protection Path: /ibpmm/dashboard/

LoginModule List / Create a new LoginModule

The two tabbed pages are for managing user-defined LoginModules.

They are used when developing a LoginModule to extend Dashboard authentication.

5.3 Analytics Studio Authentication

Manages which users will have access to the Analytics Studio.

5.3.1 User List

Lists users who can access Analytics Studio.

The User ID is one of the User ID's specified in the **Create a New User** tabbed page of this window, (refer to the next section for details).

A Description can be attached to each User ID.

Analytics Studio Authentication : User List

[BPM Analytics](#) > [System](#) > [Analytics Studio Authentication](#) > [User List](#)

User List [Create a New User](#)

View the Analytics Studio User List.

	User ID	Description
<input type="checkbox"/>	bpm	Administrative user for Analytics Studio

Delete

Select All

Clear All

Delete

To prevent a user from accessing Analytics Studio, check the checkbox to the left of the corresponding user ID, then click the **Delete** button.

To select all checkboxes, click the **Select All** button. To unselect all checkboxes, click the **Clear All** button.

5.3.2 Create a New User

Creates Analytics Studio users.

In the **Analytics Studio Authentication** window, click the **Create a New User** tab.



Analytics Studio Authentication : Create a New User

[BPM Analytics](#) > [System](#) > [Analytics Studio Authentication](#) > [Create a New User](#)

User List **Create a New User**

Create a new Analytics Studio User.

Analytics Studio User Definition

User ID	<input type="text"/>
Password	<input type="password"/>
Description	<input type="text"/>

Create

User ID

Enter the User ID for Analytics Studio use to be created.

A maximum of 64 characters can be entered.

Password

Enter a password that corresponds to the User ID.

Description

Enter a description of the type of users that will be authorized to access the Analytics Studio with this User ID.

Create

When the **Create** button is clicked, a User ID for Analytics Studio is created with the entered content.

The new User ID will now be included in the list on the **User List** tabbed page of the window (see previous section). And the User ID can be used to operate Analytics Studio until it is deleted.

5.4 Mail

The Analytics Server can generate Alerts as e-mail messages under conditions defined in the Interstage BPM Analytics Studio. In order to send these e-mails, the **Mail** settings must be properly configured using the Analytics Console.

There are three groups of **Mail** settings:

- SMTP Server
- SMTP Authentication
- POP before SMTP Authentication

Each has a separate tabbed page in the Mail window.

When **Mail** is selected from the **System** menu in the navigation tree, by default the **SMTP Server** tabbed page will be displayed:

5.4.1 SMTP Server

This tabbed page contains functions used to specify and set the address of the SMTP (Simple Mail Transfer Protocol) server and the sender address.

When the tabbed page opens, it displays the current SMTP Server settings. All settings on this page can be altered by the user.

Mail : SMTP Server

[BPM Analytics](#) > [System](#) > [Mail](#) > [SMTP Server](#)

SMTP Server | SMTP Authentication | POP before SMTP Authentication

Modify the SMTP Server settings.

SMTP Server	
SMTP Server Address	<input type="text" value="smtp.xxx.fujitsu.com"/>
SMTP Port Number	<input type="text" value="25"/>
Sender Address	<input type="text" value="bpm_admin@jp.fujitsu.com"/>
Retry Count	<input type="text" value="5"/> time(s)
Retry Interval	<input type="text" value="10"/> second(s)

The following settings can be made:

SMTP Server Address

Specifies the host name (fully qualified domain name - FQDN) or IP address of the SMTP server that is used when mail is distributed.

SMTP Port Number

Specifies the port number that is used with SMTP

An integer between 1 and 65535 can be specified.

Normally, "25" is used.

Sender Address

Specifies the sender email address that is used when mail is distributed.

The address can be a string up to 256 characters long.

Number of Retries

Specifies the number of retries to connect to the mail server if the first connection attempt fails. Use an integer between 0 and 10.

Retry Interval

Specifies the interval (in seconds) between reconnection attempts if the first connection attempt fails.

Use an integer between 0 and 20. If “0” is specified, the next connection attempt will be made immediately.

5.4.2 SMTP Authentication

This page displays the current settings for SMTP authentication:

Mail : SMTP Authentication

[BPM Analytics](#) > [System](#) > [Mail](#) > SMTP Authentication

[SMTP Server](#) **SMTP Authentication** [POP before SMTP Authentication](#)

Modify the SMTP Authentication settings.

SMTP Authentication	
SMTP Authentication	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Account Name	<input type="text"/>
Password	<input checked="" type="checkbox"/> Set new password <input type="text"/>

Enable / Disable

Select whether or not to perform SMTP authentication.

If **Disable** is the current setting, the remaining fields will be disabled and grayed-out.

If **Enable** is selected, the following settings will be displayed and can be specified or altered:

Account name

Specifies the account name for the SMTP server.

The address can be a string up to 256 characters long.

Password

To set a new password or change the existing password, select the **Set new password** check box and type the new string of characters into the **Password** text box.

Use up to 256 characters when specifying the password.

Modify button

Once the changes have been entered, click the **Modify** button to enter the changes.

The Analytics Server has to be restarted before the changes will take effect.

Note

To change items other than the **Password** item, cancel the **Set password** check box. If the **Set password** check box is selected, the password will have to be entered even when other items are changed.

5.4.3 POP before SMTP Authentication

Specify the address and account name for the POP (Post Office Protocol) server for POP-before-SMTP type authentication.

Mail : POP before SMTP Authentication

[BPM Analytics](#) > [System](#) > [Mail](#) > POP before SMTP Authentication

SMTP Server | SMTP Authentication | **POP before SMTP Authentication**

Modify settings of the POP before SMTP Authentication.

POP before SMTP Authentication	
POP before SMTP Authentication	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
POP Server Address	<input type="text"/>
POP Port Number	<input type="text" value="110"/>
Account Name	<input type="text"/>
Password	<input checked="" type="checkbox"/> Set new password <input type="text"/>

Modify

POP before SMTP authentication

Select whether or not to perform POP before SMTP authentication.

If **Disable** is the current setting, the remaining fields will be disabled and grayed-out.

If **Enable** is selected, the following settings will be displayed and can be specified or altered:

POP server address

Specifies the address of the POP server to be used for authentication.

The address can be a string up to 256 characters long.

POP port number

Specifies the port number that is used with POP.

Specify an integer between 1 and 65535.

Normally "110" is specified.

Account name

Specifies the account name for the POP server, using up to 256 characters.

Password

To set a new password or change the existing password, select the Set password check box and type the new string of characters into the **Password** text box.

Use up to 256 characters when specifying the password.

Modify button

Once the changes have been entered, click the Modify button to enter the changes.



Note

To change items other than the **Password** item, cancel the **Set password** check box. If the **Set password** check box is selected, the password will have to be entered even when other items are changed.

5.5 Data Migration

Data Migration rules are used to maintain the Events Database and the Archive Database.

The data migration rules apply to the data paths between the Events and the Archive Databases when cleaning and other maintenance tasks are being performed. The rules allow the administrator to clean unnecessary data from the live Events Database and either delete the unwanted data or move it to an Archive Database.

Multiple rules for data migration can be set. For example, one rule to move important historical data into an Archive Database and another rule to delete any remaining unwanted data. There is no limit to the number of rules that can be set.

The **Data Migration** window contains two tabbed pages:

- Archive Rules containing a list of data migration rule settings, and
- Create an Archive Rule containing tools to create new data migration rule settings

When **Data Migration** is selected from the **System** menu in the navigation tree, by default the **Archive Rules** tabbed page will be displayed.

5.5.1 Archive Rules

The **Archive Rules** tabbed page contains the Archive Rule List:

Data Migration : Archive Rules

[BPM Analytics](#) > [System](#) > [Data Migration](#) > [Archive Rules](#)

Archive Rules [Create an Archive Rule](#)

[View the Archive Rule list.](#)

	Rule Name	Execution Schedule
<input type="checkbox"/>	MonthlyMigration	Monthly On 1st At 00:00

Delete

Select All

Clear All

This section displays a list of data migration rule settings for moving data to the Analysis DB or deleting it.

The **Name** for each rule is displayed together with its **Execution Schedule**. Both of these are defined in the **Create an Archive Rule** tabbed page (refer to the next section for details).

To remove a rule from the list, check the box to its left and then click the **Delete** button.

To remove all rules from the list, click the **Select All** button and then click the **Delete** button.

To unselect a rule, click its check box. To remove the checks from all check boxes, click the **Clear All** button.

5.5.2 Create an Archive Rule

Click the **Create an Archive Rule** tab to define a new rule for inclusion in the Archive Rules list:

Data Migration : Create an Archive Rule

IBPM Analytics > System > Data Migration > Create an Archive Rule

Archive Rules **Create an Archive Rule**

Create a new Archive Rule for Data Migration.

Rule Definition

Rule Name:

Two or more execution conditions can be set for one shift definition. It operates on the condition added to the condition list.

Migration mode	<input checked="" type="radio"/> Migration to Archive DB <input type="radio"/> Delete
Event Definition	Business Process: <input type="text" value="Hamburger Sales"/> Event Definition: <input type="text" value="[All Event Definition]"/>
Length of Present Event Period	<input type="text" value="1"/> <input type="text" value="month(s)"/> <small>The range set as Present Event Period will kept on the event DB without being migrated.</small>
Option [open/close]	<input type="checkbox"/> Migration of uncompleted process instance <input type="checkbox"/> Force delete if the abnormal instance not completed in the specified period.

- Condition List -

Business Process	Event Definition	Mode	Length of Present Event Period	
Hamburger Sales	Hamburger_Shop	Migration to Archive DB	<input type="text" value="1"/> <input type="text" value="month(s)"/>	<input type="button" value="Delete"/>

Execution Schedule [\[open/close\]](#)

On
 Mondayweek(s) Tuesdayweek(s) Wednesdayweek(s) Thursdayweek(s) Fridayweek(s)
 Saturdayweek(s) Sundayweek(s)
 At :

Type in a new **Rule Name** in the text field and then set its parameters in the **Events to Migrate** area.

The following items can be set:

Migration Mode

Set whether the rule will govern Migration to the Archive Database or cause event data in the Events Database to be deleted.

Event Definition

Define the events that will be affected by the rule. The definition can include reference to a Business process and an Event Definition.

Length of Present Event Period

Set the length of time that an event will be kept on the Events Database before it is either migrated to the archive or deleted (depending on the Mode selected, see first setting, above).

Option [open/close]

This option effects only the deletion of workflow events. Workflow events consist of a series of events [start, order, approval, delivery, end ... etc.] that are part of an ongoing process.

Since they are not completed events, the Analytics Server would normally not delete them. However, if this option is selected, Analytics Server will delete uncompleted series forcibly.

Click the [open/close] button to show/hide the option check box and description on the right.

Add to list button

An Archive Rule can have multiple conditions. The conditions are each defined in the above settings.

Click the **Add to list** button include a newly defined condition in the Condition list below. The Condition list can hold any number of conditions.

Condition List

Displays the migration condition list associated with the current Archive Rule. Each Archive Rule may have multiple conditions, details of which are displayed in this list.

To remove a condition from the Archive Rule, click its **Delete** button on the right margin of the **Condition List**.

Execution Schedule

Set the timing to execute the **Archive Rule**.

By default, **Archive Rule** will be executed on 1st day of the month at 00:00.

Click the [open/close] button to show/hide the **Execution Schedule** parameters settings.

Create Button

Once the settings have been made, click the **Create** button to create a new Archive Rule.

It will now be included in the **Archive Rule List** on the **Archive Rule** tabbed page, refer to previous section above.

5.6 JAR File Management

Use this function to register JAR files required to operate the Analytics server and the sensor.

JAR files are mainly required for the following uses:

- JDBC driver for the DB Sensor to access the database
- Model API for the Workflow Sensor in order to integrate with Interstage BPM

A list of existing JAR files, and a tool to import new JAR files, can be found on the **JAR File Management** tabbed page:

JAR File Management

Register JAR file(s) for the Analytics Server or Sensors. (e.g. iFlow.jar)

To add JAR file

File path	<input type="text"/>	Browse...
-----------	----------------------	-----------

Add

In order to apply the adding JAR file(s), restart the based J2EE Container on the Application Server.

List of files	
<input type="checkbox"/>	ojdbc14.jar
<input type="checkbox"/>	iFlow.jar
<input type="checkbox"/>	fujitsu-ibpm-engine-ejb_jar_client.jar

Delete

5.6.1 Add JAR files

File Path

In the File path field enter the path of the target file that you want to add as a JAR file. Either type in the correct path, or use the **Browse...** button to select a file.

Add button

Once the target file has been entered into the file field, click the **Add** button to add the specified file to the server.



Note

Before the JAR files can be available for use, the J2EE container on the Application Server must be restarted.

5.6.2 List of Files

This list contains the files that have been associated with the Analytics Server.

The files are in .jar format. A JAR format is a Java Archive. It contains the Java Classes to implement the interface to the database or system.

5.7 Process Discovery

In order to integrate Process Discovery Function with Analytics Server, the integration parameters must be properly configured using the Analytics Console. Integration Parameters:

This tabbed page contains functions used to specify and set the integration parameters for Process Discovery.

When the tabbed page opens, it displays the current intergration parameters.

Process Discovery : Integration Parameters

IBPM Analytics > System > Process Discovery > Integration Parameters

Integration Parameters

Modify the integration parameters for process discovery.

Process Discovery Integration	
Integration with Process Discovery	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Launcher URL	<input type="text" value="http://[HostName]:[PortNumber]/flowviewer/"/>
Data Generation Method	
Scheduler	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Execution Schedule	Interval <input type="text" value=""/> On <input type="text" value="Jan"/> <input type="text" value="1st"/> <input type="checkbox"/> Monday <input type="checkbox"/> Tuesday <input type="checkbox"/> Wednesday <input type="checkbox"/> Thursday <input type="checkbox"/> Friday <input type="checkbox"/> Saturday <input type="checkbox"/> Sunday At <input type="text" value="00"/> : <input type="text" value="00"/> Interval: <input type="text" value="1"/> <input type="text" value="day(s)"/>
Destination	<input type="text" value="C:/ibpmm_data/bpme"/>
Integration Data	
Preservation Type	<input type="radio"/> Persistence <input checked="" type="radio"/> Temporary

Modify

After modification, restart the IBPM Analytics Server to apply the changes.

The following settings can be make:

Intergration with Process Discovery

Select **Enabled** if Process Discovery button on dashboard is displayed. Otherwise, select **Disabled**.

Launcher URL

Specify the URL of Process Discovery viewer.

Scheduler

Select **Enabled** if integration data for Process Discovery is generated regularly. Otherwise, select **Disabled**.

Execution Schedule

Set the timing to execute the generation of integration data.

By default, it will be executed at 00:00 everyday.

Destination

Specify the directory to output the integration data on server.

Preservation Type

Select **Persistence** if integration data is accumulated in Process Discovery. Otherwise, select **Temporary**.

Modify button

Once the changes have been entered, click the **Modify** button to enter the changes.



After modification of Scheduler, Execution Schedule and Destination, restart the Analytics server to apply them.



In order to realize the Process Discovery (BPM-E) integration, user required to install and configure the Process Discovery (BPM-E). Refer to following manuals and configure correctly.

- Process Discovery (BPM-E) Event Extraction Tool Operation Guide
- Process Discovery (BPM-E) Web Flow Viewer User's Guide

Chapter 6 Analytics Management Command Line UI

Some functions in Analytics can be run using the **Command Line User Interface**.

For some operations, this is an alternative to the Management Console. Other operations can only be run from the command line.

Open the operating system's command shell and type in the Management commands.

Feedback for command line operations is via the results of the command in the command itself, or via a message string displayed in the terminal window.

6.1 Management Commands

These are mostly administration functions including the following:

- Start and Stop the Analytics Server
- View the status of the Analytics Server
- Reregister event information
- Re-execute escalation
- View and change the connection destination of remote sensors to the Analytics Server

The following commands are available:

bpmstart

This command starts the Analytics Server.

bpmstop

This command stops the Analytics Server.

bpmstat

This command displays the operating status of the Analytics Server.

bpmregisterwef

This command re-registers event information that failed to be registered in the Events Database.

bpmescalateaction

This command re-executes an escalation action that failed to be escalated in the Events Database.

bpmupdatesensorconf

This command displays and updates information for the Analytics Server that the sensor connects to.

If information about the Analytics Server (such as the IP address, server name or Web server port number) was specified incorrectly when the sensor was installed, this command can be used to correct the information after installation.

6.2 CSV Output Command

This function outputs data (such as the general events and statistics events held in the Events Database) so that it can be used externally to analyze data or link to other systems.

6.2.1 Output Types

The following output types are available:

- General Events Output

- Statistics Events Output
- Workflow Events Output

6.3 Management Command Synopsis

bpmstart

[Functions]

This command starts the Analytics server.

[Command name]

bpmstart

[Syntax]

bpmstart -p AdminPassword

[Option/parameter explanation]

-p AdminPassword

Specifies the administrator password for this product.

[Usage example]

If this command terminates normally, the Analytics Server will start. The results for this command are displayed in the following format:

```
> bpmstart -p XXX
BADDC0101: The Analytics Server is started.
```

Messages are output to the standard error output.

[Return value]

Normal

0

Error

Other than 0

bpmstop

[Functions]

This command stops the Analytics server.

[Command name]

bpmstop

[Syntax]

bpmstop -p AdminPassword

[Option/parameter explanation]

-p AdminPassword

Specifies the administrator password for this product.

[Usage example]

If this command terminates normally, the Analytics server will stop. The results for this command are displayed in the following format:

```
> bpmstop -p XXX
BADDC0103: The Analytics Server is stopped.
```

Messages are output to the standard error output.

[Return value]

- Normal
- 0
- Error
- Other than 0

bpmstat

[Functions]

This command displays the operating status of the Analytics server.

[Command name]

bpmstat

[Syntax]

bpmstat -p AdminPassword

[Option/parameter explanation]

-p AdminPassword

Specifies the administrator password for this product.

[Usage example]

If this command terminates normally, the operational status of the Analytics server will be output to the standard output using the following format:

```
> bpmstat -p XXX
Server ID           : Server Name           : Status
MON_0000000000    : BPM Analytics Server : RUNNING
```

Server ID

This is the ID for the Analytics server.

Server Name

This is the name of the Analytics server.

Status

This is the operational status of the monitoring server. One of the following values will be displayed:

RUNNING

The Analytics server is running.

STOPPED

The Analytics server is stopped.

UNKNOWN

This value is displayed when the status of the Analytics server is unknown.

If this command terminates abnormally, an error message will be output to the standard error output.

[Return value]

- Normal
- 0
- Error
- Other than 0

bpmregisterwef

[Functions]

This command re-registers event data that failed to be registered in the Events Database.

[Command name]

bpmregisterwef

[Syntax]

bpmregisterwef -p AdminPassword -r ReceivedID[-q] [-y]

[Option/parameter explanation]

-p AdminPassword

Specifies the administrator password for this product.

-r ReceivedID

Specify the reception IDs for the files whose event data is to be re-registered. Multiple reception IDs can be specified, separated by commas.

-q

Specify this option to not output messages.

-y

Specify this option to answer "y" to all confirmation messages.

[Usage example]

If this command terminates normally, the execution results will be output to the standard output using the following format:

```
> bpmregisterwef -p XXX -r 9999999999999999AID_XXXXXXXXXX
The processing for re-registering event data has started.
The following reception ID will be re-registered. Is this OK?
[ y/n ] [ Reception ID: 9999999999999999AID_XXXXXXXXXX ]
y
Reception ID | Status | Details
9999999999999999AID_XXXXXXXXXX | OK |
The processing for re-registering event information has completed.
>
```

If this command terminates abnormally, an error message will be output to the standard error output.

[Return value]

Normal

0

Error

Other than 0

[Note]

The Analytics server must be running when this command is executed.

Practical example using the command for re-registering event data

Events that failed to be registered because of a defect in the event data can be re-registered by executing the Event Information Re-registration command on the machine where the Analytics server is running.

For events that failed to be registered, files for re-registering event data, as well as information about the error that occurred, are output to the following folder:

```
Work directory\event\eventcollection\errorWEF
```

The names of the files that are output are used as reception IDs with the Event data Re-registration command. Note that the reception IDs do not include the ".xml" file extension.

The procedure for re-registering events using the files that have been output to this folder is as follows:

Check the content of the errors by referring both to the files that have been output and to the following log:

```
[Folder where the IBPMMServer WorkUnit has been deployed]\log\bpmeventcollectorerror.log
```

Use a text editor to correct the attribute values for the event information according to the content of the error. Determine which values to correct based on the Administration Guide and the manuals provided by the product vendor.

If parts of the file other than attribute values are modified inappropriately, an analysis error may occur when the event information is re-registered. If this happens, modify the file again, as indicated by the error.

File output example:

```
<?xml version="1.0" encoding="UTF-8"?>
<Header>
<RegistrationInfo ReceivedId="1149072189187003AID_EN43RST301(*1)" AgentAppId="AID_EN43RST301"
TransactionType="WEF"/>
<ErrorInfo>
<ErrorData DataIndex="1"(*2)>
<ErrorDetail ErrorCode="BECS3018" ErrorMessage="BECS3018: An attribute value for the event is
illegal. [Attribute name:Turnover][ Attribute type:xs:integer ][ Attribute
value:StringValue_NG ]"/>(*3)</ErrorData>
</ErrorInfo>
</Header>
<Body>
<bpmm-s-fmt:BusinessEvents>
<bpmm-s-fmt:BusinessEvent>(*4)<bpmm-s-fmt:EventStatus BusinessName="Turnover information
collection" EventType="BUSINESS"/>
<bpmm-s-fmt:GeneralData Name=" Turnover event 01"
ReferenceTime="2006-05-11T18:00:00.000+09:00">
<bpmm-s-fmt:Data Name="Region name(*5)" Type="xs:string" Value="Kanto(*6)"/>
<bpmm-s-fmt:Data Name="Turnover (*5)"Type="xs:integer" Value="StringValue_NG(*6)"/>
</bpmm-s-fmt:GeneralData>
</bpmm-s-fmt:BusinessEvent>(*7)<bpmm-s-fmt:BusinessEvent>(*4)
</bpmm-s-fmt:BusinessEvent>(*7)
</bpmm-s-fmt:BusinessEvents>
</Body>
```

*1: Reception ID

*2: Position in the file of the event information for which the error occurred

This item is not output if the error was caused by the entire file, such as when the error is an analysis error.

*3: Error content

*4: Start position for the event information

*5: Attribute name

*6: Attribute value

*7: End position for the event information

All of the information between *4 and *7 refers to a single event.

Log output example:

```
2006/05/31 19:43:20,046+JST ERROR [Thread-31]
BPM.EVENTREGISTERERROR - BECS6002: [ Reception ID:1149072189187003AID_EN43RST301(*1) ]
[Error index:1(*2) ][ Error code:BECS3018 ]
[Error message:BECS3018: An attribute value for the event is illegal. [Attribute name: Turnover]
[ Attribute type:xs:integer ][ Attribute value:StringValue_NG ](*3) ]
```

```
2006/05/31 19:55:40,203+JST ERROR [Thread-25]
BPM.EVENTREGISTERERROR - BECS6001: [Reception ID:1149072189187003AID_EN43RST301(*1) ]
[Error code:BECS3012 ]
[Error message:BECS3012: An error occurred while the WEF was being analyzed. ( Details:cvc-
complex-type.4: Attribute 'Type' must appear on element 'bpmm-s-fmt:Data'. )(*3) ]
```

*1: The reception ID for the file that includes the event information where the error occurred

*2: Position in the file of the event information where the error occurred

This item is not output if the error was caused by the entire file, such as when the error is an analysis error.

*3: Error content

Re-register the event by executing the Event data Re-registration command.

[Note]

Registration sometimes fails while the Event data Re-registration command is executing. In this case, perform the event re-registration procedure again. Note that the behavior when errors occur during re-registration depends on the circumstances of how the errors occur:

If an error occurs while an attempt is being made to connect to the database or rule engine:

The re-registration processing will be terminated immediately when an error occurs.

If there is a defect with the modified event information:

The error information in the target files for re-registering events is overwritten by information for the error that has occurred. In this case, neither the event where the error occurred nor the other events in the same file as this event will be re-registered. If the Event data Re-registration command was executed specifying multiple reception IDs, re-registration processing will continue for the files that do not contain events where errors have occurred.

bpmescalateaction

[Functions]

This command is used to re-execute processing when the escalation function has failed (due to an environment error or some other reason). This command has the following two functions:

Checking the execution status of escalations after alerts have occurred

Re-executing escalations

[Command name]

bpmescalateaction

[Syntax]

```
bpmescalateaction { -s | -e } -i ActionID -p Password
```

[Option/parameter explanation]

-s

Status check mode

Checks the status of the action with the ID specified in -i.

-e ServerName

Execution mode

Re-executes the escalation for the action with the ID specified in -i. If the status of the escalation execution for the specified action ID is "successful" or "executing", the command will terminate without re-executing the escalation.

-i ActionID

Specify the action ID. Action IDs can be acquired from the "Action Execution Results" section of the Alert View.

-p Password

Specifies the administrator password for this product.

[Usage example]

The content that is displayed when this command terminates normally depends on which option was specified.

If the -s option is specified:

```
> bpmescalateaction -s -i 0000000000082400000000000615 -p bpm
(When the command terminates normally)
The status check for escalation execution has completed.
STATUS: Executing
(When the command terminates abnormally)
The status check for escalation execution has failed.
[Detailed message]
```

If the -e option is specified:

```
> bpmescalateaction -e -i 0000000000082400000000000615 -p bpm
(When the command terminates normally)
Re-executing the escalation has completed.
STATUS: Successful
(When the command terminates abnormally)
Re-executing the escalation has failed.
[Detailed message]
```

[Return value]

Normal

0

Error

Other than 0

[Messages]

There is an error in the specified syntax.

There is an error with the specified password.

There is an error with the format of the action ID.

The escalation execution result for the specified action ID does not exist.

The status of the specified escalation execution is already "successful" or "executing".
(Only if the -e option has been specified)

Re-executing the escalation has failed.
(Only if the -e option has been specified)

Checking the status has failed.
(Only if the -s option has been specified)

Others

bpmupdatesensorconf

[Functions]

This command displays and updates information for the monitoring server that the sensor controller connects to.

If information about the monitoring server (such as the IP address, server name or Web server port number) was specified incorrectly when the sensor was installed, this command can be used to change the information after installation.

[Command name]

bpmupdatesensorconf

[Syntax]

bpmupdatesensorconf { -d | -s ServerName }

[Option/parameter explanation]

-d

Displays the current connection destination monitoring server.

-s ServerName

Updates the connection destination monitoring server. For ServerName, specify the host name or IP address of the machine where the monitoring server is running. If the Web server port number for the specified machine is anything other than "80", specify the port number after the host name/IP address, separated by a colon (":").

Example:

bpm.fujitsu.com:8080

[Usage example]

The content that is displayed when this command terminates usually depends on which option was specified.

If the -d option is specified:

```
> bpmupdatesensorconf -d
Connection destination monitoring server: bpm.fujitsu.com
>
```

If the -s option is specified:

```
> bpmupdatesensorconf -s bpm.fujitsu.com
Do you want to update the connection destination monitoring server?
To update the connection destination monitoring server, enter "y" or "yes".
The update processing has completed.
>
```

Messages indicating normal termination ("INFO" or "WARN" messages) are output to the standard output.

Messages indicating abnormal termination (messages other than "INFO" or "WARN") are output to the standard error output.

[Return value]

Normal

0

Error

Other than 0

[Messages]

There is an error in the specified syntax.

Updating the repository client connection information file has failed.

CSV Output Command

[Functions]

This command outputs the event data specified by a search condition definition file to a CSV file.

[Command name]

bpmexport2csv

[Syntax]

bpmexport2csv -p AdminPassword -o outputFile -e searchConditionFile

[Option/parameter explanation]

-p AdminPassword

Specify the password for the Analytics administrator.

-o outputFile

Specify the path to the CSV output file.

-e searchConditionFile

Specify the path to the search condition definition file.

[Execution result]

If the command terminates normally, the data that matches the search conditions will be output in CSV format.

If this command terminates abnormally, an error message will be output to the standard error output or CSV file.

[Return value]

Normal

0

Error

Other than 0

[Note]

The Analytics server must be running when this command is executed.

The attributes that are output depend on the event definitions when the command is executed. If an attribute values in a definition is not in the database, the data will be considered as not existing. Attribute values in the database that are not in the definitions will not be output.

[Search Condition Definition Files]

Search condition definition files are specified with the CSV output command in order to select the range of events to be output, or the format of the data that is output.

Search condition definition files are text files with the following format:

Parameter name = Parameter value

Parameter name=Parameter value

Create search condition definition files with a text editor. Enter the required search and output parameters, with one parameter per line.

The following table shows the parameters that can be specified with search condition definition files.

Parameter name	Parameter value	Meaning	Required/Optional
targetDB	EventDB or ArchiveDB	Specify the database to be searched. EventDB: The Events Database ArchiveDB: The Archive Database The default value is "ArchiveDB".	Optional
businessName	Business Process name	Specify the name of the Business Process to be output.	Required
eventName	Event name	Specify the name of the event to be output.	Required

Parameter name	Parameter value	Meaning	Required/Optional
startTime or finishTime	Date and time	Specify the period for which data is to be output. startTime: The start date/time for the period finishTime: The end date/time for the period Specify dates and times using the following format: "YYYY-MM-DD HH24:MI:SS" [To output all data] Omit both startTime and finishTime. [To output all data after a certain time] Specify only startTime. [To output all data before a certain time] Specify only finishTime.	Optional
dateFormat	1 or 2	Specify the output format for date/time data. 1: Data is output using the "YYYY-MM-DD" format. 2: Data is output using the "YYYY-MM-DD [time]" format. The default value is 2. When "2" is specified for this parameter, the output format for the time part is based on the specification of the timeFormat parameter.	Optional
timeFormat	1, 2 or 3	Specify the output format for the [time] part of time or date/time data. 1: The time is output using the "HH24:MI" format (accurate to the minute). 2: The time is output using the "HH24:MI:SS" format (accurate to the second). 3: The time is output using the "HH24:MI:SS.FF" format (accurate to the millisecond). The default value is 3.	Optional

Information

When following parameter is indicated in the Search Condition Definition Files, additional file for Process Discovery integration is created.

- BPMEInteg = true

[CSV Output Format]

Output Rules:

Strings are enclosed in double quotes and separated by commas.

Data is separated into columns using commas (",") and separated into rows using linefeed characters.

String data items are entirely enclosed in double quotes (").

If a data item includes a double quote ("), the entire data will be enclosed in double quotes and the double quote within the data will be doubled ("").

If a column entry is empty (NULL), there will be two consecutive commas, with nothing output for the empty column entry.

Column headings are output in the first row.

The code is appended to intermediate lines in the file, while 0x0d,0x0a is appended to the last line in the file.

Output format for general events

Column heading	Data type	Meaning
BusinessName	String	The name of the business system
EventName	String	The name of the general event
OccurrenceTime	String	The date and time when the event occurred The output format depends on the specification for dateFormat in the search condition definition file.
Attribute name	String	Attribute value The output format for the attribute values of date/time and time data depends on the specifications for dateFormat and timeFormat in the search condition definition file.

Output format of statistics events

Column heading	Data type	Meaning
BusinessName	String	The name of the business system
EventName	String	The name of the general event
OccurrenceTime	String	The date and time when the event occurred or the date and time when statistics calculations started The output format can be specified using the dateFormat parameter.
EndTime	String	The date and time when statistics calculations ended. The output format can be specified using the dateFormat parameter.
Attribute name	String	Attribute value For date/time and time data, the output format can be specified using the dateFormat and timeFormat parameters.

Output format of workflow events

Activity information which belongs to completed processes is output each line.

(system activity and transition are NOT included.)

Column heading	Data type	Meaning
TopParentProcessInstanceID	String	The identifier of top parent process instance. If the parent process instance is NOT exist, the identifier of this process instance itself is output.
ParentProcessInstanceID	String	The identifier of parent process instance. If the parent process instance is NOT exist, the identifier of this process instance itself is output.
ParentActivityID	String	The identifier of parent activity.

Column heading	Data type	Meaning
		If the parent activity is NOT exist, the identifier of this activity itself is output.
ParentActivityInstanceID	String	The identifier of parent activity instance. If the parent activity instance is NOT exist, the identifier of this activity instance itself is output.
ProcessInstanceID	String	The identifier of process instance.
ActivityID	String	The identifier of activity.
ActivityName	String	The name of activity.
ActivityInstanceID	String	The identifier of activity instance.
StartEID	String	The identifier of this start event.
StartEOT	String	The date and time when the event of this activity started. The output format depends on the specification for dateFormat in the search condition definition file.
EndEID	String	The identifier of this end event.
EndEOT	String	The date and time when the event of this activity ended. The output format depends on the specification for dateFormat in the search condition definition file.
ActivityInstanceNamePath	String	The path string that specifies the concatenation from top parent activity to this activity.
LowEndActivity	String	The flag that specifies whether this activity is tail end. 0: NOT tail end, 1: tail end
Assignee	String	The name of person who is assigned some tasks at this activity.
AlertFlag	String	The flag that specifies whether some alert s occur at this activity. 0: none, 1: occurrence
ProcessInstanceName	String	The name of process instance.
TenantName	String	The name of tenant
Attribute name	String	Attribute value