



# Interstage Business Process Manager Analytics V11.1



## Overview

Windows/Solaris/Linux

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# About this Manual

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This document provides an overview of Interstage Business Process Manager Analytics.

## Intended Audience

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

- Operating system administration
- Application server administration
- Database administration

## This Manual Contains:

Chapter	Title	Description
1	Interstage BPM and Interstage BPM Analytics	Basic concepts of Interstage BPM Analytics.
2	What Interstage BPM Analytics Does	Descriptions of architecture and features.
3	How Interstage BPM Analytics is Setup / Configured	An overview of the set-up sequence and configuration process.
4	Running Interstage BPM Analytics	Management of running status.
5	How Results are Used	Summary of front services.

## 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.
<b>screen text</b>	Text, which is visible in the user interface, is <b>bold</b> .
<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.
- *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.

- *Management Console Guide*

Explains how to use 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.

## 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 Microsoft(R) Windows Server(R) 2008,Enterprise 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
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	Oracle11g, or Oracle

Formal name	Abbreviation
Oracle Database 11g R2 Standard Edition Oracle Database 11g R2 Standard Edition One	
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 and Interstage BPM Analytics

The range of business environments that can support Business Process Activity Management can broadly be defined as any business whose business processes and activities are capable of being monitored electronically.

Obviously in a modern economy the BPM concept can be applied to a wide range of situations and industries.

Interstage Business Process Manager is Fujitsu's entry into the BPM marketplace. In general, it is limited to ensuring that the processes are turned on and may include fault logging, etc. Interstage BPM contains monitoring capabilities and reporting functions.

Interstage BPM Analytics provides additional functionality allowing for full Business Activity Monitoring (BAM) capabilities, including data collection and analysis, to improve and accelerate the business performance.

## 1.1 Business Activity Monitoring - BAM

A comprehensive Business Activity Monitoring (BAM) suite will allow the totality of the business's processes to be monitored using one centralized application.

Interstage BPM Analytics is designed to complement and effortlessly integrate with Interstage BPM but also to access and utilize other data sources in the wider business environment. Interstage BPM Analytics supplies superior data collection, analysis and display functionality associated with a modern BAMs architecture.

Data generated as a result of all activities within the business would be retrieved from a wide range of sources in the business, rendered into a single, common data format and then subjected to calculations that produce the analysis results. All this can be scheduled to occur in real-time, or periodically.

The results of the analysis can then be viewed graphically in a dashboard, or actions could be initiated such as e-mails to responsible parties or a call to another application. Data could also be exported to another analysis system, for example as a .csv log file.

### 1.1.1 How does BAM fit in to BPM?

Generally, BPM provides an environment in which various different business processes are defined and managed. Once in place, the whole business environment is then orchestrated so that the normal business flow follows an ordered sequence that can be directed and monitored on a system-wide basis by the BPM.

Normally a BPM will have basic monitoring facilities to ensure the processes are being completed as scheduled. Also logging facilities exist, often for compliance purposes.

In a BPM an enormous amount of communications occurs throughout the environment. To a large extent, the basic monitoring capabilities of the average BPM do not exploit the available data to its fullest potential. This is where some type of Business Activity Monitoring (BAM) becomes useful.

The purpose of the BAM software is to more fully exploit this huge amount of information that is available, but not adequately leveraged.

The BAM achieves this in four ways:

- Centralized collection of Data
- Centralized Analysis of Data
- Rational Display of Data
- Defining Actions for Events

### 1.1.2 Implementing Interstage BPM Analytics

The optimal environment for implementing the **Interstage BPM Analytics** BAM is by using the full Interstage Product Suite together with Interstage BPM Analytics.

This assumes that the business is running **Interstage Business Process Manager** on *Fujitsu's Interstage Application Server* (IAS) incorporating the **Interstage Business Process Manager Server**.

At the heart of the **Interstage Business Process Manager Server**, the **Process Definition Interpreter** (also known as the Enactment engine) is responsible for enacting processes defined with the **Interstage Business Process Manager Studio**.

In this ideal situation, **Interstage Business Process Manager Studio** has been used to design/model, integrate and establish communicates between the various business processes and the **Interstage Business Process Manager Console** is a single interface for users to execute, manage, and monitor business processes.

The **Interstage Business Process Manager Server** communicates with the Database adapter to maintain process state data, process instance and activity-related data, and process history information. The **Interstage Business Process Manager Server** has a number of defined service adapters that allow connectivity to critical resources such as business process related databases, LDAP directories, document management systems, etc. Fujitsu supplies adapters for most systems required for business process deployment.

Into this environment **Interstage Business Process Manager Analytics** can easily integrate and extent **Interstage BPM's** capabilities.

### **1.1.3 Focus of this Document**

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In this document we will be primarily concerned with the implementation of Interstage BPM Analytics into the environment described above, i.e. a managed business situation where components of the Interstage family are used in conjunction with normal third party components such as databases, LDAP servers and other common business hardware.

## Chapter 2 What Interstage BPM Analytics Does

Interstage BPM Analytics extends the utility of Interstage Business Process Management (IBPM) functionality by collecting data from both the IBPM system as well as third party business systems, interpreting and saving that data to a single format in a database. In the database the data is subjected to complex analysis and the results are displayed on custom designed dashboards, used to generate alerts and messages, or the resulting data is exported as a report or files for further analysis elsewhere.

### Interstage BPM's Basic Monitoring Utilities

Interstage BPM comes with its own simple Analytics and KPI reporting tool. It is a simple dashboard that reports data exclusively from Interstage BPM processes:

- It monitors IBPM Business Processes exclusively
- It is not designed to monitor information/data from other systems

IBPM's analytical and display capabilities are limited to displaying process activity data on its dashboard, e.g. how many instances of process "X" are currently activated, etc.

### Interstage BPM Analytics Extends IBPM's Analysis Capability

Interstage BPM Analytics enables the following two types of analysis to improve business process:

- Analyze the performance of business process as an Interstage BPM extension
- Analyze information/data from existing systems such as applications, databases, and ERP systems

When Interstage BPM Analytics is added to the Interstage BPM environment, a much larger set of analysis and reporting functions for Interstage BPM business processes is available. More importantly, it also includes the ability to monitor a wider range of business systems through its RDB and Log file sensors. In this way, Interstage BPM Analytics can monitor and analyze the whole of the enterprise, and access the widest possible view of how the business and its individual processes are performing.

The Analytics Studio enables users to configure sensors so that data and other communications from a wide variety of devices and processes can be collected by the Analytics event processing engine.

The complexity of calculations available in the Analytics Studio allows greater flexibility and creativity in the design and delivery of information about how the business is actually functioning.

In addition to monitoring and analyzing, Interstage BPM Analytics can also cause consequent events to occur such as an email alert message to be sent, a call to another application to occur, etc.

Data and other information can also be exported for further analysis, compliance, auditing or archiving purposes.

## 2.1 Interstage BPM Analytics Components

The following graphic demonstrates the role of Interstage BPM Analytics in a business environment using Interstage BPM as well as other Application/ERP components:



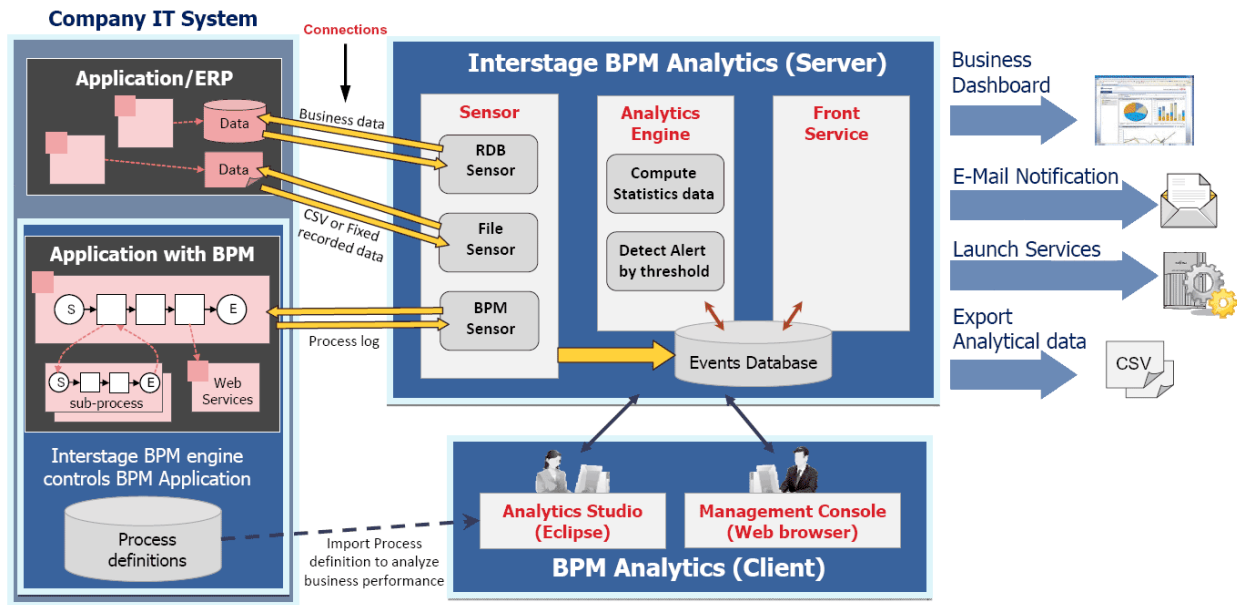


Figure 1 Interstage BPM Analytics Architecture

Interstage BPM Analytics is constructed of three main modules: **Sensors**, **Event Processor** (referred to as **Analytics Engine** in the above diagram) and **Presentation** (called **Front Service** in the above diagram).

## Sensors

Sensors connect to the other components of the business and gather business data (known as business events) from those systems. These business events can come from text or .csv files, databases and IBPM systems.

## Analytics Engine

The Analytics Engine captures all the data, makes sure it is in a common format and then analyzes it per business rules set up in the Analytics Studio.

## Front Service

The Front Service provides users with the representation of the event information in a Dashboard-style display.

Data can also be presented via e-mail notification and/or generated actions, such as calling another application or event, etc. or simply exported as raw data to another application.

## 2.2 How Interstage BPM Analytics Works

### 2.2.1 Event Collection

The event collection function collects business event data from parts of the entire business and stores it in the Events Database. The scope of its collection capabilities extends beyond the processes defined in the IBPM and can include data and information from other data sources that are within the business.

Events to be collected, and the configuration of their sensors, are defined and configured in the Analytics Studio, an Eclipse-based plug-in to the Interstage Studio tool.

Interstage BPM Analytics can monitor the following types of systems:

## Workflow of Interstage BPM Processes

Interstage BPM Analytics can collect, as events, a variety of historical information such as process start, activity start and completion, user defined information as well as performance information on how well process within the IBPM system are running.

### RDB

At regular intervals Interstage BPM Analytic's RDB monitoring function can be set to collect data items stored in business databases and store them in the Events Database in a common format.

### Text files

Data that has been output to text files during business system operations can also be collected as events. Interstage BPM Analytics can collect CSV and fixed recorded file which usually used by Legacy systems.

Text file monitoring can periodically browse within files and collect as events the parts that have been added.

In addition, collection conditions can be set such that only information that matches those conditions is collected. For example, events such as "Monitoring at 30 minute intervals of information on travel expense applications that exceed a total of \$US100" can be monitored.

Schedules and rules for event collection can also be set.



#### Note

There are two types of text file sensors: text file sensors that operate as Web applications, and text file sensors that operate as Windows services (Windows service edition text file sensor). The Windows service edition text file sensor can be used to collect monitoring data from machines in which Interstage Application Server is not installed.

## Setting event collection schedules

Users can select from schedule types such as: at specific time intervals, every week, and at the end of each month.

These settings are configured using the **Analytics Studio**.

## 2.2.2 Analytics Engine

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The ability to calculate statistical data and run functions on the events data to produce meaningful, custom-made analyses is the most important feature of Interstage BPM Analytics.

These calculations are done by the Analytics Engine using data stored in the Analytics Events Database.

The event processing function performs statistics processing and alert assessments to events collected in the events collection stage, see above.

### Statistical Calculation

Calculates a sum or average of the collected events. The statistical results are managed as statistical events in the Events Database.

Using the Analytics Studio, settings are entered for statistical events and statistical rules can be set.

### Alert Assessment

The Analytics Engine assesses the collected events by setting conditions using threshold values. If these thresholds are exceeded, an alert is registered. Alerts can, in turn, become events of statistical results, saved in the Events Database.

Examples of alerts include:

- Checking the event by parameter values

Example: When monthly sales are less than \$5,000,000

- Checking the progress of a process

Example: When a process step is not completed three days before the next step's completion due date

# Chapter 3 How Interstage BPM Analytics is Setup / Configured

This section provides an outline on how and where to setup and configure the elements used by Interstage BPM Analytics.

This chapter assumes that the installation of Interstage Application Server and Interstage BPM and Interstage BPM Analytics Server, Studio and Console (see steps 1 and 2 below) have been completed. For details on these topics, refer to the relevant Installation Guides.

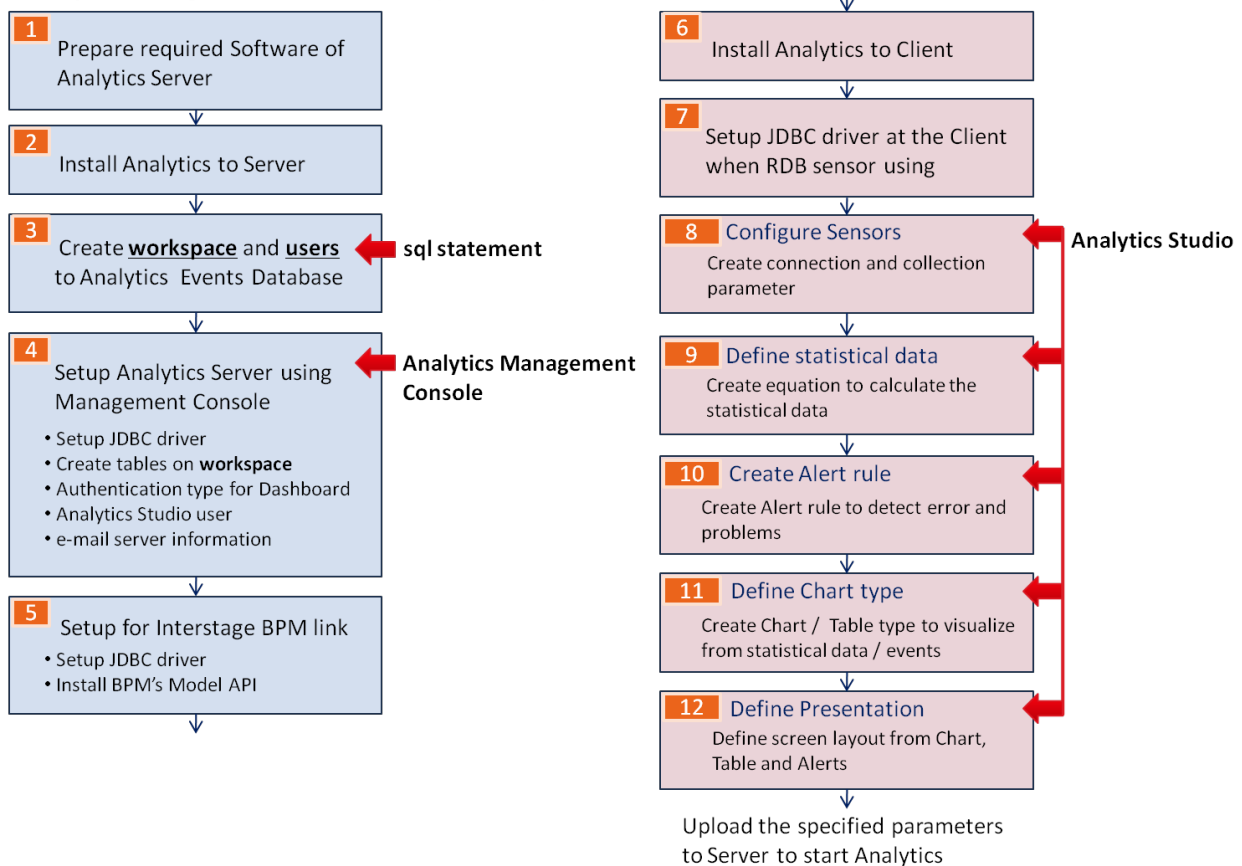
For each Business it is necessary to create appropriate Analytic elements definitions using the procedures below. Where and how these elements are created depends on which functions are being used.

The setup and configuration of the Interstage BPM Analytics components primarily occurs in either of two places:

- the Interstage BPM Analytics Management Console, or
- the Interstage BPM Analytics Studio

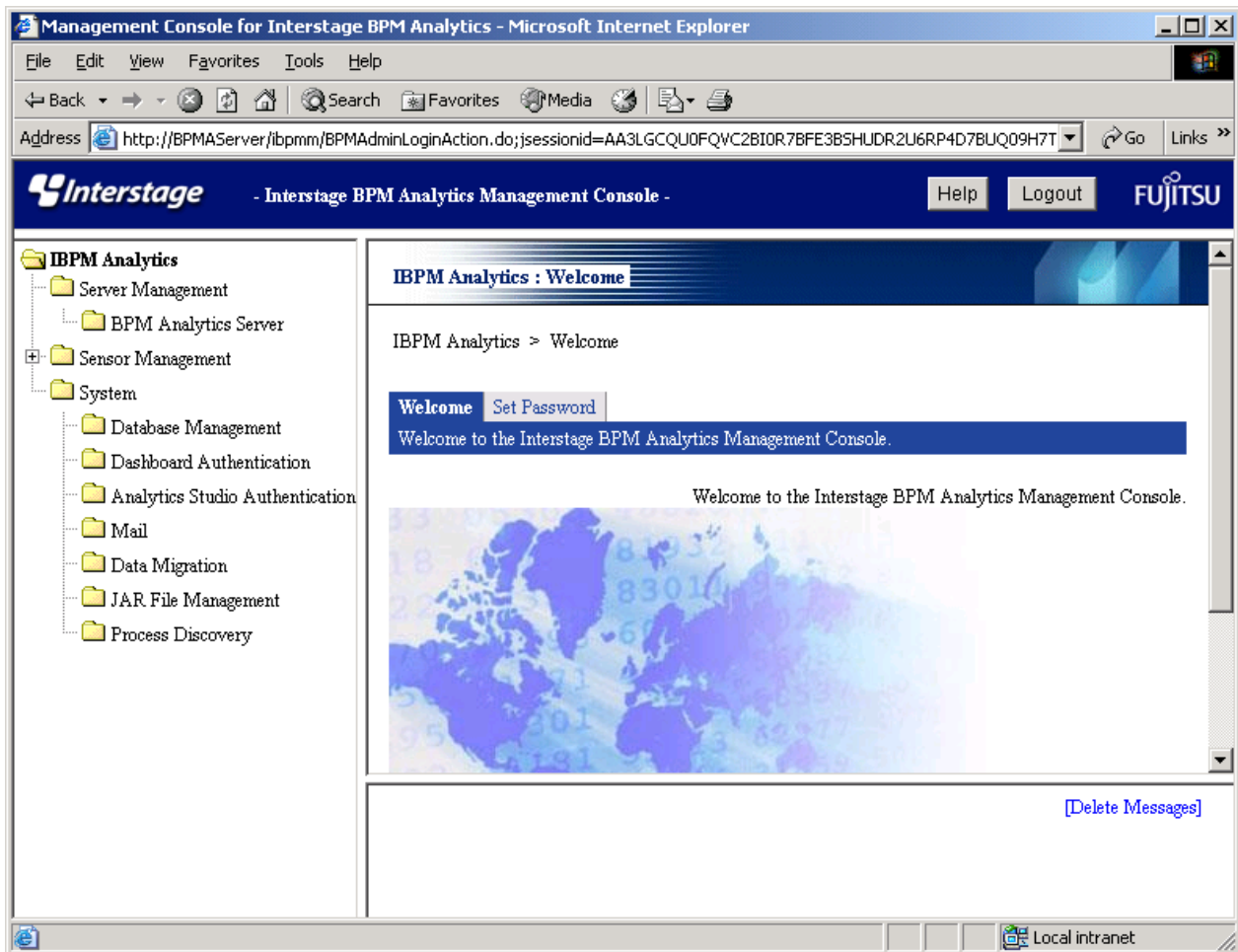
The following diagram shows where each element is created and configured, each process is numbered in the chronological order in which it must be completed:

## Setup / Configuration flowchart (Outline)



## 3.1 Interstage BPM Analytics Management Console

The Interstage BPM Analytics Management Console is a Web tool for making environment settings and managing Analytics Server behavior.



The Interstage BPM Analytics Management Console has the following functions.

### Server Management

- View status of the Analytics Server
- Start and stop the Analytics Server
- Change Analytics Server settings
- Change the connection destination of Analytics Server
- View logs of Analytics Server
- Modify logging settings
- Restrict machines of remote sensor

### Sensor Management

- View status of sensors
- View status of connections
- Start and stop connections
- Modify sensor settings

## System

### Database Management

- Add JDBC Driver file for the events database
- Setup connection information for the Events DB
- Setup connection information for the Archive DB
- Manage tables of Event DB and Archive DB
- Modify connection pooling settings for the Events DB

### Dashboard Authentication

- Choose dashboard authentication type
- Manage the user-defined Login Module definition

### Analytics Studio Authentication

- View the Analytics Studio User List
- Create a new Analytics Studio user
- Modify and delete the Analytics Studio user

### Mail

- Setup SMTP Server and Authentication settings

### Data Migration

- View the Archive Rule List
- Create a new Archive Rule
- Modify and delete the Archive Rule

### JAR File Management

- View the additional JAR file list
- Add and delete JAR files

### Process Discovery

- Modify Process Discovery integration parameters

## 3.2 Interstage BPM Analytics Studio

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The Analytics Studio is the tool for defining how information is gathered, what sort of analysis is done on the information and how the results of the analysis should be displayed. Presentation can be by Dashboard, messages, reports, etc. Suitable presentation is key to effective monitoring operations.

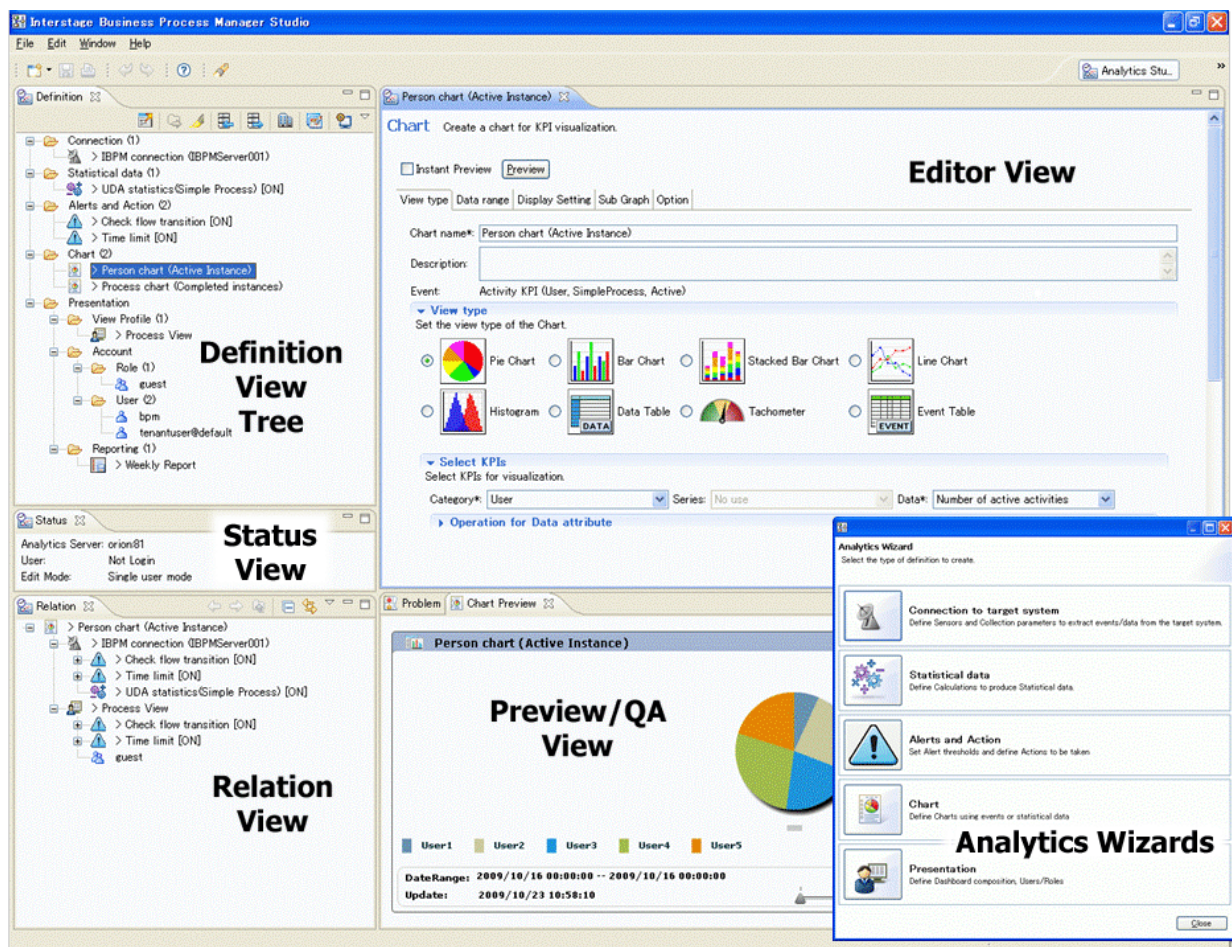
This tool operates as an Interstage Studio plug-in running on an Eclipse platform.

Use the Analytics Studio to set event collection settings and visualization methods.

### 3.2.1 Analytics Studio Workbench

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An example of the Analytics Studio's user interface is as follows:



## Views

The workbench consists of five panels, referred to as views.

The Definition View tree, Status View and the Relation View on the left are fixed in their location, however they can be resized by dragging their borders.

The content of the **Editor View** and **Preview/QA View** on the right depend on which element has been selected in the **Definition View Tree**.

The **Status View** shows information which are Connecting Analytics Server name, logged in User name and Edit mode.

The **Editor View** is typically used to review a resource's parameters and settings and to make any necessary changes. Select an element from the **Definition View Tree** and double click to open it in the **Editor View** on the right.

Elements that are referenced by the item currently being edited and its related elements are displayed in the **Relation View** in the lower left of the screen.

For example, when a View Profile element is selected, some Chart elements are displayed in the Relation View. The Relation View helps users to visualize the relationships between the elements in each View Profile.

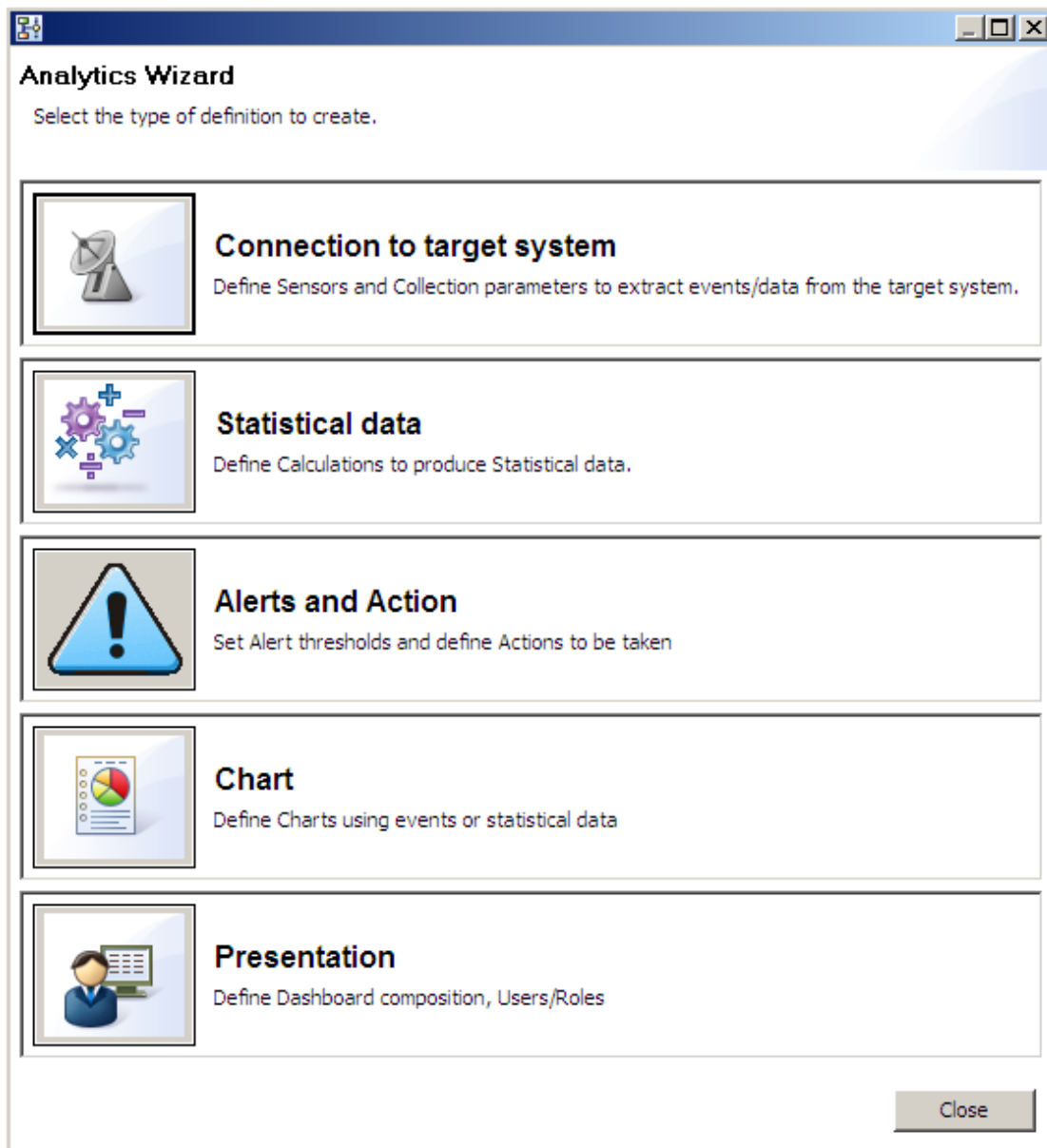
The Preview/Quality Assurance View allows charts to be previewed and for any errors or warnings to be displayed.

## Analytics Wizard

The Analytics Wizard is used to begin creating individual definitions. There are five Wizards. Each type contains the initial steps for creating different types of definitions. After the definitions are created, additional settings and parameters can be set or adjusted in the Editor View.

To open the Wizard selection dialog, click on the Launch Wizard command in the Definition View's tool bar:

The Analytics Wizard selection dialog box will open:



It contains links to each of the five Wizards along with a short description of each.

## 3.2.2 Tasks Performed by Analytics Studio's Wizards

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### Set Event Collection

Set the following in the event collection settings using the **Create Connection for a Target System Wizard**:

#### *Sensors*

Using Sensors (information for connecting to the systems being monitored, etc.) set the target system from which general events will be collected.

#### *Define Collection Tasks*

Collection tasks (data to be collected, dealing with events to be stored in the event database, etc.)

#### *Schedule Collections*

Sensor operation schedule

## Set Event Processing

Set the following in the event processing settings using the **Create Calculation Table Wizard**:

### *Define Events*

Events (attributes of events to be stored in the event database, etc.)

### *Set Statistical Rules*

Simple statistical rules (event statistics rules, format of statistical events that store statistical results, etc.)

### *Set Alert Triggers*

Alert assessment (assessment conditions, messages to be output, etc.)

### *Schedule Statistical Sampling*

Statistical schedule

## Set Visualization and Actions

Set the following visualization and action settings using the following Wizards:

### *Design / Configure Dashboard*

The Dashboard display is defined in the Analytics Studio using the **Create Dashboard Wizard's Create View Profile** tools.

### *Design / Configure Display / Reports*

Reports content and display is defined in the Analytics Studio using the **Create Dashboard Wizard's Create Regular Report** tools

### *Set Access Parameters for Users*

Roles and Users are set in the Analytics Studio using the Create Dashboard Wizard's **Create Role**, **Create User** and **Create User(s) (Batch)** tools.

The new roles and users details are held in the **Account** grouping of the **Presentation (Dashboard)** limb of the Selection tree.

### *Design and Set Escalation Actions*

Escalation (message template format and distribution addresses, and connection destination)

## 3.2.3 Wizard Details

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Detailed explanations of the steps and parameters of each Wizard can be found in the *Interstage Business Process Manager Analytics Studio Guide*.



# Chapter 4 Running Interstage BPM Analytics

Once set up, Interstage BPM Analytics can be used to constantly monitor and analyze business activities, providing real-time displays, reports or actions.

## 4.1 Interstage BPM Analytics 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 Analytics server and its environment. One of its functions is to start or stop the Analytics server.

### Start Analytics Server

Once all the components are created and configured, the Analytics Server can be started from the Server Management > BPM Analytics Server window of the Interstage BPM Analytics Console:

[IBPM Analytics](#) > [Server Management](#) > [BPM Analytics Server](#) > [Status](#)

Status Settings Connection View Log Logging Machine Restrictions  
View status of the IBPM Analytics server. Start, stop or re-start it.

IBPM Analytics Server Name	Status	Start Time
BPM Analytics Server	Running	Sep 2, 2009 10:28:34

Refresh Start Stop Re-Start

Once started, the Server will continuously receive events from the sensors and automatically perform the calculations defined and produce the representations of the data as required.

## 4.2 Management Command Line UI

An alternative method of starting the Analytics Server, as well as performing a number of other system setting and maintenance functions, is to enter Management commands into the command line shell (command prompt).

Examples of commands that can be entered in this way include:

- Start /Stop the Analytics Server
- View the status of Analytics Server
- Reregister event data
- Re-execute escalation
- View and change the connection destination to Analytics server

For a complete list of Management Commands, refer to the last chapter of the *Interstage Business Process Manager Analytics Console Guide*.

# Chapter 5 How Results are Used

Once the Analytics Server is started, it will collect events from a variety of sources and store them in a common format in the Events Database. There the data will be processed by the Analytics Engine and the results also stored in the Events Database, available for presentation.

Presentation can occur in a number of ways.

While the most obvious use of the results is to present the information in a Dashboard so that it is visible and useful to managers and other analysts, the results can also be used to trigger a new event - for example to send an e-mail, call another application, etc.

The result data can also be exported to external destinations.

## 5.1 Dashboard

The status of business activities can be displayed using graphs or tables, and the status of alerts can be displayed in real time. This makes it possible to respond to the various events that arise during business operations (such as errors) more quickly and efficiently.

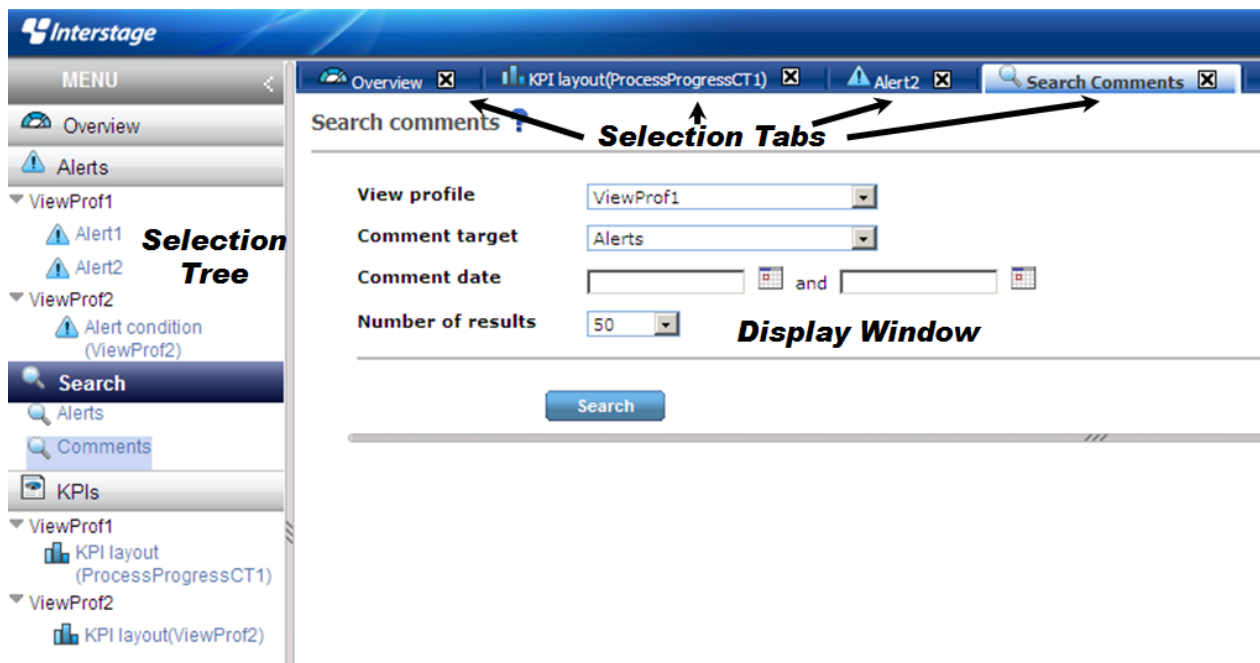
Dashboards are defined in the Analytics Studio as View Profiles. Components such as charts, alerts and statistics can be included in each profile.

Once the Dashboard has been defined, it can be accessed via the following URL:

```
http://[hostname]:[port]/ibpmm/
```

### 5.1.1 Viewing a Dashboard Element

All of the elements included in the View Profile will be displayed in the selection tree at the left.



Select an element in the tree and click on it. If there are sub-elements, they will expand below.

The tabbed page will open in the Display Window on the right.

More than one tabbed page can be open at a time. Click on a tab to bring its contents to the top of the Display Window.

Some tabbed pages have sub-tabs, click on these to access the information contained.

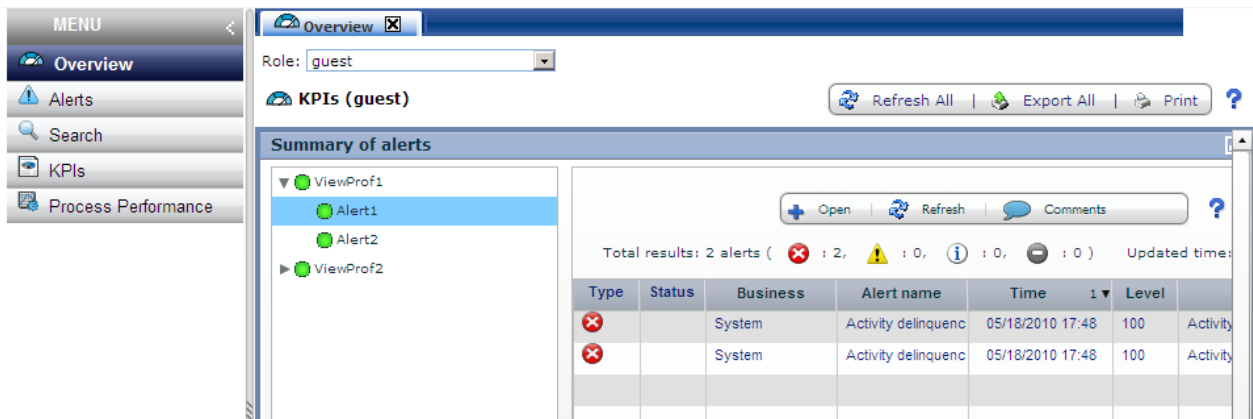
## 5.1.2 Overview - Display

The Dashboard provides a user-defined Overview of the business activities. Normally it is used to show KPI's and Alerts using simple representation such as signals, charts and tachometers. Users can monitor business conditions quickly via this information.

The Overview is displayed by default when the Dashboard is accessed.

The Dashboard Overview display is represented by the  icon. It appears on the tab of each Overview tabbed pane.

The following is a typical **Dashboard Overview** display:



The contents of the Overview can contain Alert summary, Alerts list, Charts and External URL. The exact content of the Overview page is defined using the Analytics Studio's Role settings.

Only one **Overview** page can be defined for each View Profile.

The Dashboard display is defined in the Analytics Studio using the Create Dashboard Wizard's Create View Profile tools.

## 5.1.3 Other Dashboard Display Types

In addition to the Overview tabbed page shown above, there are four different types of displays which can be included in each View Profile:


### Alerts

**Alerts** are based on the result of calculations carried out by the **Analytics Engine** on data in the **Events Database**.

The extent of each alert's coverage is defined using the Analytic's Studio's Alert's Wizard.

Each View Profile can include a number of alerts, each displayed according to the setting made in the Analytics Studio.

Each Alerts tabbed page has a list of Alerts that meet the definition's criteria, together with various data relating to each alert.


**Alerts** tabs are indicated by the  icon, as is the Alerts section and links in the Selection Tree.

In the Dashboard, Alerts can have comments attached to them, their display can be configured by users and they can be printed.

### KPI

Charts based on calculations performed by the Analytics Engine on data in the Events Data base can be displayed on the KPI tabbed pages.

The type of chart - pie, bar, graph, histogram, etc. - or table or tachometer dial, can be specified for the display.

KPI tabs are indicated by the  icon, as is the KPI section and links in the Selection Tree.


Large amounts of subsidiary information can be made available, on sub-tabbed pages and using the charts drill-down feature.

### Process Performance

The Process Performance display allows data generated by business processes to be displayed on tables.

The time range of the display, and whether all data or data from individual time-frames, can be controlled.

The display can also be configured by the user.

Process Performance tabs are indicated by the  icon, as is the Process Performance section and links in the Selection Tree.

The Process Performance display has 2 modes: Monitor mode and Analysis mode.

#### Monitor Mode

Monitor mode is to monitor the active processes currently.

#### Analysis Mode

Analysis mode is to analyze the processes which have started between the specified period.



The Process Performance is available only in case of integrating with the Console component of the Interstage BPM.


## Search



The Search facility allows users to find data within three types of events - Alerts, Processes and Comments.

Select a data type from the Search area of the Selection Tree.

A tabbed page will open containing search parameters that the user can adjust to define the search criteria.

More than one tabbed search page can be open at a time, each will be indicated by the  icon.

Search results can be printed.



The Search of the Processes is available only in case of integrating with the Console component of the Interstage BPM.

## 5.2 Alert and Response Generation

In addition to presenting data and results on the Dashboard, Interstage BPM Analytics can use its front services to communicate.

The Alerts created using the Analytics Studio's Alert's wizard can be used to populate the Alerts tabbed pages in the dashboard (as was demonstrated in the previous section), but can also be used in a number of other operations.

Alerts can be used as a trigger mechanism to set off another event, or to send a message, etc.

### Alerts / Escalation

When an alert is generated, the alert contents can be posted to site users via email.

Use the Analytics Studio to enter these settings.

### Calling External Applications

Escalation can also involve a call to external services or applications. These can be set to be launched as part of a response to an event.

Use the Analytics Studio to enter these settings.

## 5.3 Linking Data with External Tools

Interstage BPM Analytics can also be configured to send data outside of the Analytics environment.

The monitoring results in the event database can be output to CSV files so that this data can be linked to other systems or analyzed using tools such as Excel. Use a management command to output data to CSV files.

### CSV Output Command

The events stored in Events Database can be searched using search conditions and can then be output as CSV files.

Search conditions are defined in files known as "search definition files". For example, conditions such as "Sales slips for which events were issued between 10/01/2009 and 10/31/2009 for order delivery tasks" can be specified.

## 5.4 Reports

In the Analytics Studio, a range of Reports can be defined and configured to be produced using the Create Dashboard Wizard's **Create Regular Report** tool.

Reports have their own schedule and View Profile.

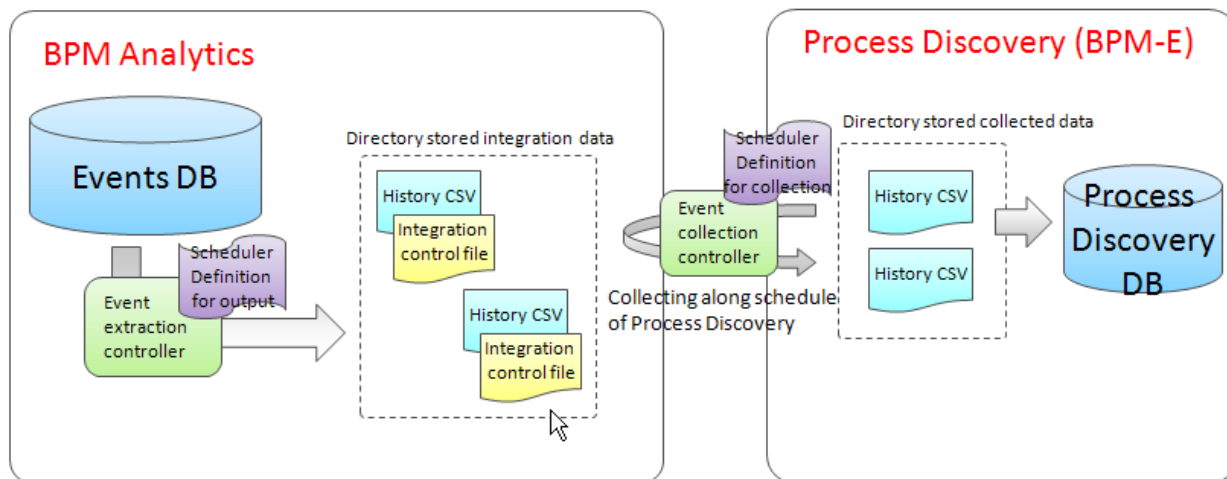
Reports can also include one or more KPI charts or Alerts list which are defined at during the View Profile definition.

At the Report definition page of Analytics Studio, users can set a schedule to generate regular reports and specify which KPI Layout or View Profile Alert condition will be generated.

## 5.5 Process Discovery (BPM-E) Integration

Interstage BPM Analytics and Process Discovery (BPM-E) can integrate using Analytics CSV data.

### How to integrate

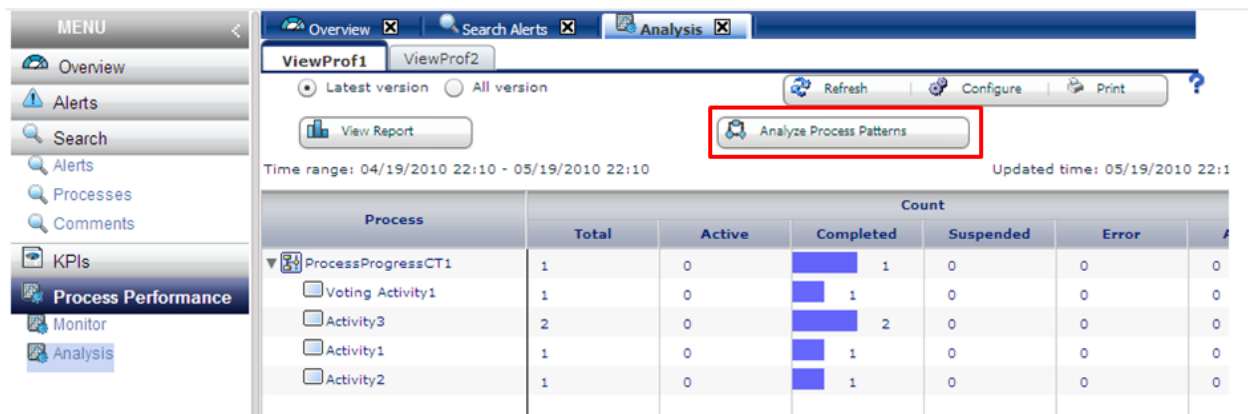


Interstage BPM Analytics outputs the integration data formed CSV (History CSV) from the Events DB and integration control file each Process Definition periodically when output schedule is defined.

Completed Process data is only collected by this system. (Executing Process Data, error Process Data are not collected.)

After that, output data (History CSV) is collected by Process Discovery (BPM-E) engine and stored in the Process Discovery DB.

## How to refer Process Discovery (BPM-E) data



The screenshot displays the Analytics Dashboard interface. On the left is a 'MENU' sidebar with options: Overview, Alerts, Search, Alerts, Processes, Comments, KPIs, Process Performance, Monitor, and Analysis. The main area shows a 'ViewProf1' tab with 'Latest version' selected. A red box highlights the 'Analyze Process Patterns' button. Below this, a table displays process data for 'ProcessProgressCT1' and its sub-activities.

Process	Count					
	Total	Active	Completed	Suspended	Error	A
ProcessProgressCT1	1	0	1	0	0	0
Voting Activity1	1	0	1	0	0	0
Activity3	2	0	2	0	0	0
Activity1	1	0	1	0	0	0
Activity2	1	0	1	0	0	0

Process Discovery data can be referred using the Process Performance menu with Analysis mode on the Analytics Dashboard.

When a Process (or root task in case of Dynamic Process) is selected, "Analyze Process Patterns" button is emerged. When this button is clicked, Process Discovery (BPM-E) web flow viewer is launched.