

Business Manager's Guide

Netscape Application Server:
Process Automation Edition

Version 4.0

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This *Business Manager's Guide* provides information business managers need to successfully manage Netscape Application Server: Process Automation Edition (PAE). Read about the basics here before you begin using PAE. This guide assumes you have installed PAE on your system. For installation instructions, see the *Installation Guide*.

About This Guide

This guide provides several chapters providing detailed information about process instances, statistics, and work items.

Conventions Used in This Guide

File and directory paths are given in Windows format (with backslashes separating directory names). For Unix versions, the directory paths are the same, except slashes are used instead of backslashes to separate directories.

This guide uses URLs of the form:

`http://server.domain/path/file.html`

In these URLs, *server* is the name of server on which you run your application; *domain* is your Internet domain name; *path* is the directory structure on the server; and *file* is an individual filename. Italic items in URLs are placeholders.

This guide uses the following font conventions:

- The monospace font is used for sample code and code listings, API and language elements (such as function names and class names), file names, path names, directory names, and HTML tags.
- *Italic* type is used for book titles, emphasis, variables and placeholders, and words used in the literal sense.

- **Boldface** type is used for glossary terms

Viewing Documentation Online

For your convenience, PAE manuals are replicated online in both PDF and HTML formats. You can access the online documentation from the Help menu of each PAE component. You can access context-sensitive documentation by clicking a Help button or link in each PAE component.

Introduction to PAE Business Management

Netscape Application Server: Process Automation Edition (PAE) is a business process management system that runs on Netscape Application Server with a graphical design interface for defining forms and their routing, two administrative interfaces for configuring and maintaining the PAE components, and an end-user interface for creating work requests, handling work items, and performing searches.

This guide focuses on using the business management interface in Process Business Manager to monitor statistics and process instances. See the the *Administrator's Guide* for information on the system administration interface of Process Administrator.

This introductory chapter includes these sections:

- Overview
- Process Business Manager
 - Process Instance Forms
 - Statistics Forms

Overview

PAE consists of these components:

- Process Engine: The software internal to PAE.
- Process Administrator: An application accessible through your web browser that is used for managing clusters and applications in PAE.
- Process Business Manager: An application accessible through your web browser that is used for managing processes and statistics for PAE.
- Process Builder: The Java application for building PAE applications.
- Process Express: The HTML-based interface for end users who are accessing PAE applications.

PAE also uses these other components, which it associates into a **cluster**:

- a corporate user LDAP directory service
- a configuration LDAP directory service that stores the application definitions
- a relational database for user data, such as the products available from Oracle and Sybase
- one or more Netscape Application Servers
- a Netscape Enterprise Server
- a mail server for notifications

When an application developer using Process Builder deploys an application so that end users can access it, they must identify the cluster on which to deploy it. All successfully deployed applications are available to any valid end user on any Netscape Application Server across the cluster. All applications in a cluster share the same common database and directories. They access the same repository for their application definitions and they use the same set of cross-application tables in the database.

End users use Process Express to access the applications built in Process Builder. As they create new work requests and other examples of business processes, and as they complete their assigned tasks, they are generating user data that is stored in the cluster's database.

As the business manager, you have these abilities:

- searching for process instances
- searching for work items
- monitoring process instance and work item statistics

Your first task is to install the PAE components and make sure they are configured correctly for your environment. See the *Installation Guide* for instructions.

After end users begin using Process Express, you can view the process instance and work item data that they generate.

Process Business Manager

To perform your tasks as a PAE business manager, you must have the application server that you are using for PAE running on your local computer. Access to Process Business Manager is through its home page at

`http://yourServer/Business.apm/`

Process Business Manager uses a tabbed HTML-based interface that provides access to management functions in these areas:

- Process Instances
- Statistics

Process Instance Forms

Process Business Manager provides several forms for finding and administering process instances. You can find all process instances that match certain criteria, or you can manage a specific process instance and view its details and history.

Find Process Instances. Used to find process instances that match the criteria.

Process Instances List. Used to list the matched process instances. You can select one instance to administer it or to view its details and history.

Display Process Instance. Used to manage a specific process instance.

Details and History. Used to display information about the process instance as well as provide its history as end users handle it through Process Express.

Find Work Items. Used to find work items that match the criteria.

Work Items List. Used to list the matched work items. You can select one work item to administer it or to view its details and history.

Display and Administer a Work Item. Used to perform administrative actions on a work item.

Statistics Forms

Process Business Manager provides two forms for obtaining statistics about process instances. You can set up criteria for the process instances you are interested in and you can obtain a report about them.

Process Instances Statistics. Used to set the criteria for the process instances to be included in the statistics report.

Process Instances Statistics Report. Used to report process instance statistics.

Work Item Statistics. Used to set the criteria for the work items to be included in the statistics report.

Work Item Statistics Report. Used to report work item statistics.

Process Instances

Netscape Application Server: Process Automation Edition (PAE) provides several forms for managing process instance and work item data. You can get a listing of all that match a set of criteria, you can administer a specific process instance or work item, and you can get statistics on both process instances and work items.

This chapter describes these topics:

- About Process Instances and Work Items
- Managing Process Instances
- Managing Work Items

About Process Instances and Work Items

A **process instance** is an instance of a deployed Process Builder application that has been initiated by an end user in Process Express. For example, if a user wants to issue a request for time off, they could initiate a new time off request in Process Express. When they do this, a new instance of the Time Off application is created in the database. This application consists of several tasks, called **work items**, each of which is assigned to a different user. (In Process Builder, work items are referred to as *activities*.) For example, an employee, her manager, and her HR representative may be assigned to different activities

in a process map in Process Builder. In Process Express, each has their assigned task appear as work item in their work list. As each person completes their assigned task, the request is routed to the next assignee's work list as a work item that they must act upon. Each time the process instance moves to a new work item, is accepted, or is completed, the process instance and work item states are updated internally.

PAE 4.0 has the concept of *parallel processing* and *subprocesses*. When a parallel processing application such as Office Setup is initiated by an end user in Process Express, a single process instance can have many work items that are active simultaneously. This results in a one-to-many relationship between the process instance and its work items, and they can be in different states. For example, a process instance may be open and in a running state, but one of its work items could be suspended.

When a parent process arrives at the subprocess activity in the process map, it generates a subprocess. A single work item is created in the parent process to track the subprocess as a whole. This work item is unusual in that no one is assigned to the task, but it allows the Process Engine to track the start and end of the subprocess, so that it knows when to continue with the other activities in the process. In addition to the single subprocess work item in the parent process, individual work items are created as usual for each defined subprocess activity as the subprocess continues through its own defined process.

At any given time, a process instance or its work items can be in one of several different states. As business manager, you can move them from one state to another. For example, you may want to suspend a particular process instance when an assigned user ID is no longer valid.

- Note** When you change the state of a process instance, you may be affecting the state of its constituent work items. For example, when you suspend a process instance, all of its work items are also suspended. When you resume the process instance, the work items are also resumed. The reverse is not true: When you suspend a work item, the parent process instance is not also suspended.

Table 2.1 Process instance state definitions

State Name	Description
Open:	
<i>running</i>	The process instance has been created and is executing according to the process map. There is no exception or error condition
<i>suspended</i>	The process instance is unavailable, and assignees cannot take any action on it until the process has returned to the running or active state. Note: When you suspend a process instance, all of its work items are also suspended and are inaccessible. When you resume the process instance, the work items are also resumed.
Closed:	
<i>completed</i>	The process instance has finished normally without manual intervention.
<i>terminated</i>	The process instance is aborted before its normal completion. This also terminates all the work items associated with the process instance.

As with process instances, at any given time, a work item can be in one of several different states. As business manager, you can move them from one state to another. For example, you may want to suspend a particular work item when an assigned user ID is no longer valid. When you suspend a work item, you do not affect the other work items in the process instance nor do you affect the state of the process instance itself. Completed work items are removed immediately from the database, so they are no longer in any state.

Table 2.2 Work item state definitions

State Name	Description
Open:	
<i>available</i>	The work item has been created but is not yet owned by anyone. The assignee (or one of a group of possible assignees) for a work item has not yet accepted it.

Table 2.2 Work item state definitions

State Name	Description
<i>active</i>	The assignee (or one of a group of possible assignees) for a work item has accepted the work item.
<i>suspended</i>	<p>The work item is unavailable, and assignees cannot take any action for it until it has returned to the running or active state. The work item can be suspended on its own or as part of a process instance.</p> <p>Note: If the process instance that the work item is part of has been suspended, all of its work items are also suspended. When the process instance is resumed, the work item is also resumed.</p>

As business manager, you can make some state changes for open process instances and work items, but not for closed ones. The table here identifies the permitted state changes.

Table 2.3 Permitted process instance and work item state changes

Can change from:	To these new states:
running	suspended, terminated (process instances)
active (process instances) available (work items)	suspended, terminated (process instances)
suspended	resumed to previous state, terminated (process instances)

Although expiration is not a state, a work item can be flagged as *expired*. Timer agents periodically check for expired work items. A work item can become expired if it has an expiration setter script set up for it in Process Builder and it has not been acted upon in Process Express before the date indicated in the script.

The Process Builder designer can use expiration setter scripts to define an absolute or a relative expiration date for each work item. The designer can define a change of state as part of a work item's expiration handler script. A typical example is that upon expiration a work item's state changes to a suspended or terminated state.

Whenever a timer finds an expired work item, it is flagged as expired in Process Express and in Process Business Manager with a small flag icon in the Due Date column. You can extend the expiration date for any work item that has passed its expiration date. See “Administering a Work Item” on page 25 for more information.

Managing Process Instances

You can view and modify the process instances in your cluster. You can obtain a list of process instances by defining a set of search criteria such as by user, by application, across all applications in cluster, for specific creation or modification time periods, by expiration date, or by state.

Note All existing process instances disappear if a process developer revises, then redeploys, an application that has been previously deployed to development. This does not occur to applications deployed to production; process developers cannot add or delete data fields to applications deployed to production.

This section includes these topics:

- Finding Process Instances
- The Process Instances List
- Administering a Process Instance
- Viewing Details and History

To manage your process instances, follow these steps:

1. Go to Process Business Manager at `http://yourServer/Business.apm`.
2. Click the Process Instances tab. The Find Process Instances page is displayed.

3. You can enter search criteria for process instances (for details, see the next section, “Finding Process Instances” on page 16):
 - by application
 - by user
 - by initiation and modification date
 - by state
4. Click Find when you have entered your criteria to display a list showing all matching process instances.

Finding Process Instances

You can get a list of process instances based on the values you enter for one or more of these fields. For more general, conceptual information, see “About Process Instances and Work Items.”

Note If you enter no find criteria, all range fields default to “all-inclusive.” Whatever criteria you specify are ANDed together, limiting the search to those process instances that fit all the criteria. If you enter a value in only the first part of a range, the criterion for that range becomes “after and including that data point.” Likewise, if you only enter a value in the second part of a range, the criterion for that range becomes “up to and including that data point.”

Figure 2.1 The Find Process Instances page

Find Process Instances

Search on Process Instances | [Search on Work Items](#)

To find a particular process instance, enter your criteria below, then click "Find" to retrieve a listing of process instances that match those criteria.

Help

Find all Process Instances ...

From Application

Initiated by user

Initiated between and (MM/dd/yyyy HH:mm:ss)

Last modified between and (MM/dd/yyyy HH:mm:ss)

With the state

From application. Select “Any Application” or a specific application from the drop-down list.

Initiated by user. Enter the user ID of a Process Express end user.

Initiated between. Enter a from and to range of dates formatted as *mm/dd/yyyy [hh:mi:ss]*. Note that this field uses a 24-hour clock.

Last modified between. Enter a from and to range of dates formatted as *mm/dd/yyyy [hh:mi:ss]*. Note that this field uses a 24-hour clock.

With the state. Select “Open State” or a specific state from the drop-down list.

The Process Instances List

Once you submit your process instance criteria, the PAE displays a list of all process instances that meet your criteria.

Figure 2.2 The Process Instances List

Process Instances List						
Process Instance	ID	Application	Priority	Current Work Items	Work Item Due Date	
Mike Sijacic Wed Jan 05 00:00:00 MST 2000-Thu Dec 31 2000	32	TimeOffRequest	3	Manager Approval	10/31/1999	
Mike Sijacic 9/0/99-0/1/100	33	TimeOffRequest	3	Manager Approval	10/31/1999	
Mike Sijacic 10/0/1999-1/6/2000	34	TimeOffRequest	3	Manager Approval	10/31/1999	
Mike Sijacic 10/31/1999-1/15/2000	35	TimeOffRequest	3	Manager Approval	10/31/1999	
Mike Sijacic	36	OfficeSetup	3	Set Up Phone Order Computer	none none	
Sanborn Hodgkins 11/4/1999-11/30/1999	43	TimeOffRequest	3	Manager Approval	11/03/1999	
						Help

The columns of data for the listing are:

- (State Icon): An icon indicating whether the process instance is currently running (normal orange activity icon), suspended (dimmed out), completed (green), or terminated (X).
- Process Instance: The name of the process instance, such as Joe's Timeoff Request. This name is a link to the Display Process Instance page for that process instance. (For details, see the next section, "Administering a Process Instance" on page 19.)

Note: If the application is in the Testing stage, all process instances are renamed to the user ID of their initiator.

- ID: The process instance ID number. With parallel processing applications, there may be multiple work items for a single process instance ID.
- Application: The application that the process instance belongs to.
- Priority: The priority level for the current activity. The default value is 3.

- Current Work Items: The work items that are currently active. There may be several for a parallel processing application. If the item is an exception handler or a subprocess, a specific icon is displayed. For example, the last work item in Figure 2.2 is a subprocess. The work item is a link to the Display Work Item page.
- Work Item Due Date: The date when the current activity is due to expire. Items that have already expired or that are about to expire show warning icons next to them. An alert triangle warns of an imminent expiration. A flag indicates a process instance with an already expired activity.

Administering a Process Instance

You can select an open process instance from the listings page and administer it by changing its state.

To administer a process instance, follow these steps:

1. Click the link for a specific process instance in the Process Instances List page. The Display Process Instance page is displayed.
2. Choose one or more actions for that process instance.
3. Click Perform Actions when you are done.

Figure 2.3 The Display Process Instance page

The screenshot shows a web-based application interface titled "Display Process Instance". At the top, there's a header bar with a gear icon, the text "Process Instance: **Mike Sijacic** ([Details and History](#))", and "ID: 36". Below the header, it says "Application OfficeSetup". The main content area has a table with two columns: "Current Work Items" and "Due Date". Under "Current Work Items", there's a row for "Set Up Phone". Under "Due Date", it says "none". In the bottom right corner of the main area, there's a "Help" link. A message box below the table states: "As the administrator, you can perform these administrative actions on this process instance." Below this message, it says "This process instance has the state **RUNNING**". There are three radio buttons for changing the state: "Do not change" (selected), "Suspend", and "Terminate to Exit Node" (with a dropdown menu showing "Setup Complete"). At the bottom, there are "Perform Actions" and "Reset" buttons.

This page allows you to change the process instance's state.

Changing the State of a Process Instance

You can change the state of open process instances, but you can only change them to certain other states. See Table 2.3 on page 14 for details.

To change a process instance's state:

- I. Click the radio button that reflects your choice:
 - Do not change
 - Suspend (suspend the process instance and all of its constituent work items)
 - Resume (resume a suspended process instance and any of its work items that are suspended to their previous state)

- Terminate (abnormally terminate the process instance) If you choose this option, you must select the exit point you want to use as the designated termination activity. This automatically terminates its constituent work items. You can select any exit point in the process map to terminate a process instance.
2. Click Perform Actions to change the state.

Viewing Details and History

The heading of the Display Process Instance page includes a link to the Details and History page. This provides a detailed history of every action users have performed for every work item for the process instance.

To view the details and history page:

1. Go to Process Business Manager at `http://yourServer/Business.apm`.
2. Click the Process Instances tab.
3. Enter search criteria and click Submit.
4. Click a process instance link on the Process Instances List. This displays the Display Process Instance page.
5. Click the View Details & History link in the heading at the top of the page. This displays the details and history for that process instance.
6. Close the window when you are done.

Figure 2.4 The Details and History page
Details and History

The screenshot shows a web-based application interface for managing work items. At the top, there's a header with the title "Details and History". Below the header, a navigation bar has two tabs: "History" (which is selected) and "ID: 36". The main content area displays a list of work item steps with their descriptions and timestamps. A watermark reading "Test Mode" is visible across the center of the page.

Step	Description	Timestamp
Start	Start.Start Office Preparation completed by sijacic	[10/31/1999 16:24:37]
Assign Office and Specify Computer	Assignee: admin Assign Office and Specify Computer.Office Assigned completed by sijacic	[10/31/1999 16:24:37] [10/31/1999 16:25:45]
Basic Setup	Automated step completed by BPM automated agent	[10/31/1999 16:25:46]
Set Up Phone	Assignee: admin	[10/31/1999 16:25:46]
Order Computer	Assignee: admin	[10/31/1999 16:25:46]

[Help](#)

Managing Work Items

You can view and modify the work items for the process instances in your cluster. You can obtain a list of work items by defining a set of search criteria such as by user, by application, across all applications in cluster, for specific creation or modification time periods, by expiration date, or by state.

This section includes these topics:

- Finding Work Items
- The Work Item List
- Administering a Work Item

To manage your work items, follow these steps:

1. Go to Process Business Manager at `http://yourServer/Business.apm`.
2. Click the Process Instances tab. The Find Process Instances page is displayed.

3. Click the Search on Work Items link. The Find Work Items page is displayed.
4. You can enter search criteria for work items (for details, see the next section, “Finding Work Items”):
 - by application
 - by user
 - by expiration date
 - by state
5. Click Find when you have entered your criteria to display a list showing all matching work items.

Finding Work Items

You can get a list of work items based on the values you enter for one or more of these fields.

Figure 2.5 The Find Work Items page

The screenshot shows the 'Find Work Items' page. At the top, there are two links: 'Search on Process Instances' and 'Search on Work Items'. Below them is a descriptive text: 'To find a particular work item, enter your criteria below, then click "Find" to retrieve a listing of work items that match those criteria.' On the right side of the page, there is a 'Help' link. The main area contains several search criteria fields:

- 'From application' dropdown menu: '-Any Application-- ▾'
- 'Assigned to user' input field with a user icon button to its right.
- 'Expired between' date range input fields with a time format placeholder '(MM/dd/yyyy HH:mm:ss)' and a checkbox for 'Show only work items that have expired'.
- 'With the state' dropdown menu: '--Any State-- ▾'

At the bottom of the form are two buttons: 'Find' and 'Reset Form'.

From application. Select “Any Application” or a specific application from the drop-down list.

Assigned to user. Enter the user ID of a Process Express end user.

Expired between. Enter a from and to range of dates formatted as *mm/dd/yyyy [hh:mm:ss]*. Note that this field uses a 24-hour clock. This applies only to the work items of open process instances.

Show only work items that have expired. This checkbox allows you to limit the listing to only those work items that have expired. This applies only to the work items of open process instances.

With the state. Select “Any State” or a specific state from the drop-down list.

The Work Item List

Once you submit your work item criteria, PAE displays a list of all work items that meet your criteria.

Figure 2.6 The Work Items List page

Work Items List				
Work Item	ID	Application	Activity Name	Due Date
Mike Sijacic Wed Jan 05 00:00:00 MST 2000-Thu Dec 32 TimeOffRequest Manager Approval 10/31/1999 ▲	32	TimeOffRequest	Manager Approval	10/31/1999 ▲
Mike Sijacic 9/0/99-0/1/100 33 TimeOffRequest Manager Approval 10/31/1999 ▲	33	TimeOffRequest	Manager Approval	10/31/1999 ▲
Mike Sijacic 10/0/1999-1/6/2000 34 TimeOffRequest Manager Approval 10/31/1999 ▲	34	TimeOffRequest	Manager Approval	10/31/1999 ▲
Mike Sijacic 10/31/1999-1/15/2000 35 TimeOffRequest Manager Approval 10/31/1999 ▲	35	TimeOffRequest	Manager Approval	10/31/1999 ▲
Mike Sijacic 36 OfficeSetup Set Up Phone none	36	OfficeSetup	Set Up Phone	none
Mike Sijacic 36 OfficeSetup Order Computer none	36	OfficeSetup	Order Computer	none
Sanborn Hodgkins 11/4/1999-11/30/1999 43 TimeOffRequest Manager Approval 11/03/1999 ▹	43	TimeOffRequest	Manager Approval	11/03/1999 ▹

The columns of data for the listing are:

- (State Icon): An icon indicating whether the work item is currently available (orange activity icon) or suspended (dimmed out).
- Work Item: The name of the work item. This name is a link to the Display a Work Item page for that work item. (For details, see the next section, “Administering a Work Item.”)
- ID: The ID number for the process instance that this work item belongs to.
- Application: The display name of the application for which this work item was created.
- Activity Name: The name of the activity that the work item performs, as defined in Process Builder.
- Due Date: The date when the current work item is due to expire. Items that have already expired or that are about to expire show warning icons next to them. An alert triangle warns of an imminent expiration. A flag indicates a work item with an already expired activity.

Administering a Work Item

You can select an open work item from the listings page and perform additional administrative actions upon it. If you choose to perform more than one administrative action, and one of the actions is to move the work item to another activity, the move operation is executed first.

The administrative page, Display a Work Item, can be displayed in two formats: the administrative portion alone or a form with the administrative portion at the bottom. If no form was defined for the administrator by the designer in Process Builder, then only the administrative portion is displayed. If a form was defined, then that form is displayed with a section at the bottom where you can perform administrative actions.

To do this, follow these steps:

1. Click the link for a specific work item in the Work Item List page. This displays the Display a Work Item page for that work item.
2. Choose one or more actions for that work item.
3. Click Perform Actions when you are done.

Figure 2.7 The Display and Administer a Work Item page

The screenshot shows a web-based application interface for managing work items. At the top, there's a header bar with the title "Display Work Item". Below it, a message says "As the administrator, you can perform these administrative actions on this work item." On the right side of this bar is a "Help" link. The main content area starts with a statement: "This work item has the state **ACTIVE**". To its right are two radio buttons: one selected ("Do not change") and another ("Suspend"). Below this, another message states: "This work item is currently assigned to user **uid=sijacic,ou=People,dc=netscape,dc=com**". Underneath this, there's a field labeled "Delegate the current activity to user" with a dropdown menu icon. At the bottom of the page is a grey footer bar containing two buttons: "Perform Action" and "Reset".

The choices for actions you can perform are:

- change the work item's state
- extend the current activity's expiration date (only displayed when the activity has already been flagged as expired)
- move the current activity to a different activity
- delegate the current activity to another user

This page allows you to change the work item's state.

Changing the State of a Work Item

You can only change the state of open work items, and you can only change them to certain other states. See Table 2.3 on page 14 for details.

To change a work item's state:

1. Click the radio button that reflects your choice:
 - Do not change
 - Suspend (suspend the work item)
 - Resume (resume a suspended work item to its previous state)
2. Click Perform Actions to change the state.

Extending the Expiration Date

You can extend the expiration date for an open work item if its due date has already passed.

To extend the work item's due date:

1. Enter the new expiration date in the format *MM/DD/YY [hh:mm:ss]*. The date or time must be in the future.
2. Click Perform Actions to extend the work item's due date.

Moving to a Different Activity

You can change the current work item to any other activity that is defined for the application. That is, you can switch to an activity that is further along in the process definition or to one that precedes the current activity. You can move to a different activity even if the current activity is unfinished.

For parallel processing applications, you can only change to an activity that is on the same processing branch as the current work item.

Note Switching the current work item can damage the integrity of your application data because you may skip a critical step or you may perform another step twice. You must understand the consequences and define possible remedies as

needed before making a switch. You need to be sure that this process instance can still complete or you may have to manually terminate the individual process instance.

To move the work item to another activity:

1. Choose an activity from the drop-down list. Process Business Manager only displays the activities that are defined for this process instance.
2. Click Perform Actions to change the activity.

Note No notification goes to the initiator or to the previous assignee about the switch.

Delegating to Another User

You can reassign an open work item to another user.

To delegate the work item:

1. If you know the user ID for the person or group to whom you want to reassign the work item, enter it here.
2. If you do not know the user ID or group ID, click on the Find User icon. This displays the Find User page.

Figure 2.8 The Find User page

The screenshot shows a web-based application interface for finding users. At the top, there is a search bar with the placeholder text "Enter the name or the user id of the user that you are looking for" and a "Search" button. Below the search bar, a message indicates "0 users found." At the bottom right of the page, there is a "Help" link.

3. Enter a partial name and click Search. This displays a second Find User page that lists all matching user IDs.
4. Select a user from the displayed list and click Select. This returns you to the Display and Administer a Work Item page.
5. Click Perform Actions to delegate the activity.

Statistics

Netscape Application Server: Process Automation Edition (PAE) provides Process Business Manager that allows you to get statistics on both process instances and work items.

This chapter describes these topics:

- Obtaining Statistics
 - Obtaining Process Instance Statistics
 - Obtaining Work Item Statistics

Obtaining Statistics

You can obtain statistics about both process instances and work items.

This section includes these topics:

- Obtaining Process Instance Statistics
- Obtaining Work Item Statistics

Obtaining Process Instance Statistics

When you click the Statistics tab, the Process Instances Statistics page is displayed. You use this page to request a statistics report for all process instances for one or all applications that are initiated or modified within a given time period. There is an equivalent page for work items. See “Obtaining Work Item Statistics” on page 34 for details.

Figure 3.1 The Process Instances Statistics page

The screenshot shows the 'Process Instance Statistics' page. At the top right is a 'Help' link. Below it is a message: 'Find statistics on Process Instances | [Find statistics on Work Items](#)'. A note below says: 'To view statistics for process instances, enter your criteria below and press "Report" to return a table of statistics.' A large grey button at the bottom contains the text 'Return statistics on all process instances...'. Above this button are two input fields: 'From application' with a dropdown menu showing '--Any Application--' and 'During period from' with two text boxes for date and time entry, followed by '(MM/dd/yyyy HH:mm:ss)'. At the very bottom are two buttons: 'Report' and 'Reset Form'.

Note If a process instance is not initiated or modified during the time period, it is not included in the statistics.

If you enter no criteria, the date range defaults to “all-inclusive.” If you enter a value in only the first part of a range, the criterion for that range becomes “after and including that date.” Likewise, if you only enter a value in the second part of a range, the criterion for that range becomes “until and including that date.”

To obtain a statistics report, follow these steps:

1. Go Process Business Manager at `http://yourServer/Business.apm`.
2. Click the Statistics tab.
3. Select an application to report against by choosing “Any Application” or a specific application from the drop-down list.
4. Enter a range of dates or leave blank to include all.

- Click Submit to display the Process Instances Statistics Report.

Figure 3.2 The Process Instances Statistics Report

Process Instance Statistics				Help
Process Instances	Applications			Totals
	DataSheet	TimeOffRequest	OfficeSetup	
started	4	5	2	11
open	0	5	1	6
running	0	5	1	6
suspended	0	0	0	0
closed	4	0	1	5
completed	4	0	1	5
terminated	0	0	0	0

Each blue-underlined number in the report is a link to a Process Instances List that lists all the instances that were combined to make up that number. See Figure 3.3 for an example.

On the Statistics Report, statistics are provided for these categories:

- All process instances for an application
- Started
- Open process instances
 - running
 - suspended
- Closed process instances
 - completed
 - terminated

Note The set of process instances on the listings page could include more process instances than indicated in the Statistics Report if the end date is blank or is in the future because additional instances could have been initiated or modified after the report was run.

Figure 3.3 The Process Instance List Resulting From the Statistics Report

Process Instances List					
Summary: 5 items found - Process Instance Search					
Process Instance	ID	Application	Priority	Current Work Items	Work Item Due Date
Mike Sijacic Wed Jan 05 00:00:00 MST 2000-Thu Dec 31 2000	32	TimeOffRequest	3	Manager Approval	10/31/1999
Mike Sijacic 9/0/99-0/1/100	33	TimeOffRequest	3	Manager Approval	10/31/1999
Mike Sijacic 10/0/1999-1/6/2000	34	TimeOffRequest	3	Manager Approval	10/31/1999
Mike Sijacic 10/31/1999-1/15/2000	35	TimeOffRequest	3	Manager Approval	10/31/1999
Sanborn Hodgkins 11/4/1999-11/30/1999	43	TimeOffRequest	3	Manager Approval	11/03/1999

If you click the Process Instance link, you can administer the process instance through the Display Process Instance page.

If you click the Current Work Item link, you can administer the work item through the Display Work Item page.

Obtaining Work Item Statistics

When you click the Statistics tab and then the Find Statistics on Work Items link, the Work Item Statistics page is displayed. You use this page to request a statistics report for all work items for one or all applications that are initiated or modified within a given time period.

Figure 3.4 The Work Item Statistics Page

The screenshot shows a web-based application titled "Work Item Statistics". At the top, there is a link "Find statistics on Process Instances" and another link "Find statistics on Work Items". Below these links is a descriptive text: "To view statistics for work items, enter your criteria below and press "Report" to return a table of statistics." On the right side of this text is a "Help" link. The main input area contains a label "Return statistics on all work items..." and a dropdown menu labeled "From application" with the option "-Any Application--". At the bottom of the form are two buttons: "Report" and "Reset Form".

To obtain a statistics report, follow these steps:

1. Go to Process Business Manager at `http://yourServer/Business.apm`.
2. Click the Statistics tab.
3. Click the Find Statistics on Work Items link.
4. Select an application to report against by choosing “Any Application” or a specific application from the drop-down list.
5. Click Report to display the Statistics Report.

Figure 3.5 The Work Item Statistics Report

The screenshot shows a table titled "Work Item Statistics Report". The table displays statistics for selected applications. The columns are "Applications", "Node Name", and "Number Open". The data in the table is as follows:

Applications	Node Name	Number Open
OfficeSetup	Order Computer	1
	Set Up Phone	1
TimeOffRequest	Manager Approval	5

At the bottom right of the table is a "Help" link.

If you click the Application link and the process designer saved the process map as a JPEG file before deploying the application, the process map JPEG file is displayed. At each activity with one or more work items currently active, there is a highlighted number indicating the quantity. If the map was not saved as a JPEG file, you get a “file not found” error message.

If you click a blue-underlined number, a Work Items List is displayed that lists all the instances that were combined to make up that number.

Figure 3.6 The Work Item List Resulting From the Statistics Report

Work Items List				
Work Item	ID	Application	Activity Name	Due Date
 Mike Sijacic Wed Jan 05 00:00:00 MST 2000-Thu Dec	32	TimeOffRequest	Manager Approval	10/31/1999
 Mike Sijacic 9/0/99-0/1/100	33	TimeOffRequest	Manager Approval	10/31/1999
 Mike Sijacic 10/0/1999-1/6/2000	34	TimeOffRequest	Manager Approval	10/31/1999
 Mike Sijacic 10/31/1999-1/15/2000	35	TimeOffRequest	Manager Approval	10/31/1999
 Sanborn Hodgkins 11/4/1999-11/30/1999	43	TimeOffRequest	Manager Approval	11/03/1999

Glossary

activity	A step in an application where an assignee needs to perform an action. This is referred to as a <i>work item</i> in Process Express.
application	In Process Builder, the application the designer creates to handle a PAE process.
assignee	The person assigned to an activity for a particular process instance.
automated activity	A step in an application where an action is performed automatically, without an assignee.
builder	The person who creates the application using Process Builder.
child process	In subprocesses, the subordinate process that is called by the main or parent process.
class ID	The identifier of a group of fields with certain common properties.
CGI	Common Gateway Interface. The specification for communication between an HTTP server and gateway programs on the server. Allows web interfaces to databases and enables the dynamic generation of HTML documents by gateway programs.
cluster	The association of a configuration directory, a corporate user directory, one or more application servers, and a database.
configuration directory	The Netscape Directory Server where PAE cluster and application information is stored.
content store	The Enterprise Server folder in which file attachments and the user and password needed to access them are stored.
corporate user directory	The LDAP directory service used to store the user and group information for a corporation. Process Builder reads from it when a designer sets up an application's users and groups and assigns work items. Process Express, Process Administrator, and Process Business Manager read from it when identifying a work item's assignee or when an assignee wants to delegate a task to another user.

creator	The person who initiates a process instance. In Process Express, Process Administrator, and Process Business Manager, called the <i>initiator</i> .
database	The relational database that stores the information generated by process instances. For example, the database could be Informix, Oracle, or Sybase.
decision point	A point at which a process map branches depending upon conditions defined in the decision point.
deploy	To copy an application stored locally to a cluster. It can be deployed for storage only, or it can be deployed for testing or production. If it is deployed for testing or production, the application information is deployed to the configuration directory, and the application is activated on the application server.
entry point	A point in the process where a user can initiate a process instance.
exception handler	Used in subprocesses, a step in an application that allows the administrator to intervene manually if errors occur in the interaction between a parent and child process.
exit point	A point in the process where the process ends.
extranet	An extension of a company's intranet onto the Internet, to allow customers, suppliers, and remote workers access to the data.
form	A part of an application a user fills out to complete a process instance, or uses to view information on a process.
group	A set of users defined in the corporate user directory or within an individual application to whom the designer can assign an activity, or work item,
HTML	HyperText Markup Language. A markup language (derived from SGML) used to create web documents.
HTTP	HyperText Transfer Protocol. A protocol for communication between web clients and servers.
initiator	The person who initiates a process instance. In Process Builder, called the <i>creator</i> .
intranet	A network which provides similar services within an organization to those provided by the Internet outside it but which is not necessarily connected to the Internet.

nested parallel process	A parallel process nested within a larger parallel process. The activities in the nested process are considered to be part of the nested process and not the larger process.
parallel processing	A step in an application that branches between two or more branches so that two or more activities can execute in parallel.
parent process	In subprocesses, the main process that calls the subordinate or child process.
participant	A user of Process Express.
Process Administrator	The component of PAE that administrators use to administer PAE and PAE applications. Process Administrator is the IT administrator's interface described in the <i>Administrator's Guide</i> . Process Business Manager is the business manager's interface, described in the <i>Business Manager's Guide</i> .
Process Express	The component of PAE that end users use to initiate process instances, complete work items, and search for process instances.
Process Builder	The component of PAE that designers use to build and deploy applications.
Process Business Manager	The component of PAE that business managers use to administer PAE work items and process instances. Process Business Manager is the business manager's interface, described in the <i>Business Manager's Guide</i> . Process Administrator is the IT administrator's interface described in the <i>Administrator's Guide</i> .
Process Engine	The PAE software component that contains Process Express, Process Administrator, Process Business Manager and the internal software that runs PAE.
process	A process is a series of activities, or <i>work items</i> , that can be completed by end users using Process Express.
process instance	A particular example of a PAE process; for example, in a time off process, a process instance would be a particular request by an employee for vacation time off for a specific period of time.
PAE	Netscape Application Server: Process Automation Edition, a process management solution.
process map	The visual representation of the process a PAE application handles.
processing branch	A set of activities that progress from a given split to its corresponding join. Also called a <i>thread</i> .

property	An attribute of an item or component used in an application that contains information about the item. For example, an activity has properties containing information such as the name of the activity and what script is run when it is completed.
role	A role is the part a user plays in a specific process instance.
script	In PAE, a script is a JavaScript script that can, but does not have to, include a function.
Simple Workflow Access Protocol (SWAP)	A protocol that allows process management systems to instigate, monitor, and control workflow processes on other process management systems.
subprocess	A fully functional process that is called from within another process. The process that calls the subprocess is the parent process and the subprocess is its child process.
trusted user	A group in a subprocess. By adding a user to this group that matches the AppUserID in the parent process, you can set up a reliable secure handshake between two specific applications.
transition	The links between steps in a process. On the process map, they are represented by lines with arrows that lead from one item to another.
work item	A work item is an individual task in a process as it appears to the end user on a work list. This is referred to as an activity in Process Builder.

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