

Applications Manager

Version 8.0

User Guide

UC4 Software, Inc.

Applications Manager Version 8.0

Applications Manager User Guide

By Jack Ireton

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Contents

About This Guide	vi
Where to Go for More Information	viii
What is New in Applications Manager 8.0	x
1. Applications Manager Operations	1
1.1 Introduction to Applications Manager Operations.....	2
1.2 Using the Applications Manager Desktop.....	4
1.3 Working in the Applications Manager Windows	6
1.4 Editing General Desktop and ToolBar Settings.....	8
1.5 Setting Alerts	10
1.6 Setting the User Interface Font.....	12
1.7 Viewing Operations Reports.....	14
1.8 Customizing Tables	18
1.9 Changing Status Colors.....	20
1.10 Viewing the About Applications Manager Window	22
1.11 Linking to Online Manuals and Applications Manager Web Sites	24
1.12 Launching the Applications Manager Client	26
1.13 Logging on to Applications Manager	28
1.14 Getting More with Applications Manager Add-on Products.....	30
2. Requesting Jobs and Process Flows	35
2.1 Introduction to Requesting Jobs and Process Flows.....	36
2.2 Requesting Jobs and Process Flows	38
2.3 Submitting Jobs and Process Flows.....	40
3. Viewing and Printing Output	45
3.1 Introduction to Viewing and Printing Output	46
3.2 Working with the Output Window	48
3.3 Querying the Output Window	50
3.4 Viewing Output Files with the File Viewer	54
3.5 Printing, FTPing, and Emailing Output Files.....	56
3.6 Opening Output Files with Other Applications.....	58
3.7 Sharing File Associations with All Applications Manager Users.....	60
4. Monitoring and Managing Tasks in Explorer	63
4.1 Introduction to Monitoring and Managing Tasks.....	64
4.2 Using the Explorer Window	66
4.3 Working with the Backlog	68
4.4 Working with History.....	70

4.5	Backlog and History Column Descriptions	72
4.6	Focusing the Backlog Display with Explorer	74
4.7	Monitoring with the Status Bar and Object Icons	76
4.8	Troubleshooting Failed Tasks	78
4.9	Taking Actions on Tasks in the Backlog.....	80
4.9.1	Putting Tasks On Hold	82
4.9.2	Killing Tasks	84
4.9.3	Resetting Aborted and On Hold Tasks.....	86
4.9.4	Deleting Tasks	88
4.9.5	Removing All Predecessors for Tasks	90
4.10	Viewing and Editing Task Details	92
4.10.1	General Task Details: Viewing and Editing.....	94
4.10.2	Task Prompts: Viewing and Editing	98
4.10.3	Pending Predecessor Links: Viewing and Removing.....	100
4.10.4	Successors in the Backlog: Viewing	102
4.10.5	Task and Predecessors in a Flow Diagram: Viewing, Adding, and Editing.....	104
4.10.6	Task Conditions: Viewing and Editing.....	106
4.10.7	Task Documentation: Viewing.....	108
4.10.8	Task Output Files: Viewing	110
4.10.9	Task Comments: Adding and Viewing	112
4.11	Unsatisfying Tasks as External Predecessors in History	114
4.12	Managing ZOS Tasks.....	116
4.13	Viewing History in a Gantt Chart	120
4.13.1	Comparing Run Times in a Gantt Chart.....	122
4.14	How Applications Manager Handles System Failures.....	124
5.	Querying and Filtering Explorer.....	127
5.1	Introduction to Querying and Filtering Explorer.....	128
5.2	Querying for Tasks in History	130
5.3	Filtering the Backlog and History.....	134
6.	Staging Tasks in the Backlog.....	139
6.1	Introduction to Staging Tasks in the Backlog	140
6.2	Staging Tasks	142
6.3	Managing Staged Tasks	144
7.	Working with Agents and Queues	147
7.1	Introduction to Monitoring and Managing Agents and Queues	148
7.2	Monitoring Agents	150
7.3	Managing Agents	152
7.4	Viewing and Printing Automation Engine and Agent Logs.....	154
7.5	Monitoring Queues.....	156
7.6	Changing Queue Settings	158
7.7	Administering Queues.....	160
7.7.1	Defining Queues	162
7.7.2	Defining Thread Schedules.....	164

7.8 Removing External Predecessors by Queue.....	166
8. Viewing Forecasts and Monitoring System Performance	169
8.1 Introduction to Viewing Forecasts and Monitoring System Performance	170
8.2 Viewing Forecasts	172
8.3 Viewing Graphical Forecasts.....	174
8.4 Setting the FORECAST Job Parameters	176
8.5 Generating Production Schedules.....	178
8.6 Monitoring System Performance with the Dashboard	180
8.7 Editing Dashboard Properties.....	182
9. Monitoring and Managing Tasks with the Gantt View.....	185
9.1 Introduction to Monitoring and Managing Tasks with the Gantt View.....	186
9.2 Reading the Gantt View Window.....	188
9.3 Interpreting Adjusted Start and End Times.....	190
9.4 Finding Tasks in the Gantt View Window	192
9.5 Setting the Gantt View Preferences	194
9.6 Printing from the Gantt View.....	196
10. Monitoring Multiple Automation Engines and Agents with AppMaster	199
10.1 Introduction to Monitoring with AppMaster	200
10.2 Monitoring AppMaster Views.....	202
10.3 Viewing the Agent Summary or Properties for an Icon.....	204
10.4 Monitoring Statuses with AppMaster	206
Appendices	209
Appendix A: Automation Engine/Agent Status Values	210
Appendix B: Task Status Values	213
Index	225

About This Guide

The User Guide is a comprehensive procedures manual for Applications Manager operators.

The *User Guide* is a comprehensive procedures manual that covers all aspects of Applications Manager operations.

Text Conventions

The following text conventions are used throughout this guide:

- User interface field names, menu items, and window names are written in **bold**.
- File names and text within scripts are written in a **bold arial font**.
- Variable text is written <within brackets>. In the example below <run ID number> represents the actual run ID number of a requested job.

If you submit a large process flow, the message will read, ‘Task submission in progress: Run ID = <run ID number>’ until all components of the process flow have been placed into the Backlog.

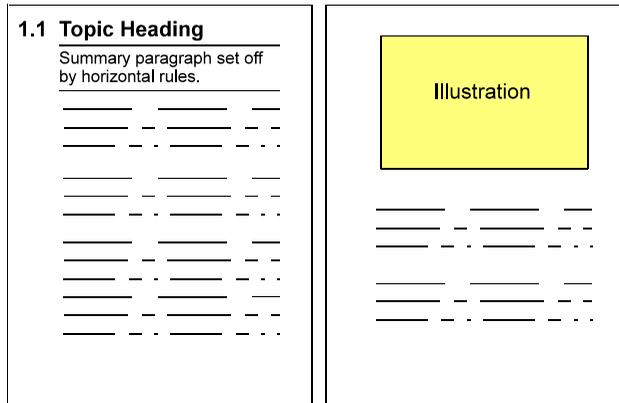
Cross-Reference Conventions

Cross-references to topics within a manual list the topic name and number as shown in the following example: For information on task details in the Backlog, see topic *4.7 Viewing and Editing Task Details*.

Cross-references to topics in other Applications Manager manuals list the manual name as shown in the following example: For information on external predecessors, see topic *5.5 Working with External Predecessors* in the *Development Guide*.

Unique Format

The manual is written as a series of topics, with all but a few topics presented on two facing pages. Illustrations are always displayed within the topic. These features make it easy to find where a topic starts and ends, and eliminate flipping pages to find an illustration.



In some rare cases a topic cannot fit onto two pages. To draw attention to these exceptions, we have included a continuation symbol...



...in the lower right corner of the second page.

Each topic begins with a heading followed by a summary paragraph set off by horizontal rules. The summary paragraph states the key concepts presented in the topic. If a topic has a subtopic, the subtopic is also presented on two facing pages. The topic heading is carried over to the subtopics, and is displayed in smaller letters above the subtopic heading.

To get a quick overview of a chapter, read the summary paragraph for each topic and look at the figures and figure captions.

Where to Go for More Information

The most up-to-date Applications Manager documentation is available in the online manuals. You can access the manuals from the Help menu in the Applications Manager client. PDF manuals are also available, but may not be as current. The knowledge base on the UC4 Support site provides write-ups to address problems and frequently asked questions. Additionally, support technicians are available based on your support contract.

Online Manuals

Complete online versions of the Applications Manager manuals are accessible by selecting **Applications Manager Manual** from the **Help** menu on the Applications Manager desktop or by clicking the **Help** button in various client windows. If you select **Help** while defining an object, Applications Manager opens the corresponding help topic. Occasionally new functionality is added to an Applications Manager version and bugs are fixed throughout each version's life cycle. The most recent edits to the manuals are included in the online help of each build.

PDFs on the Support Site

PDF files for Applications Manager, Operations Manager and Rapid Automation agents are available on the UC4 Support site:

<http://support.uc4.com>

PDF files are usually only generated when an application is first released. For the most up to date information, see the online help that ships with the application.

Knowledge Base

The knowledge base provides write-ups to address problems and frequently asked questions. It is searchable by error message, category, and text. The knowledge base is located on the UC4 Support site.

Applications Manager User Forum

The Applications Manager User Forum is a place where you can network with other Applications Manager users to trade tricks, tips and best practices. Check on the latest product developments, find out about new service offerings, and make new friends and connections. The forum is located on the UC4 Support site.

Contacting UC4 Support

If you encounter problems with Applications Manager, you can solve most problems using:

- The instructions provided in the Applications Manager manuals.
- The knowledge base available at the UC4 Support site.

You can access the UC4 Support site from the Applications Manager desktop by going to the **Help** menu and selecting **Applications Manager Support**.

If you are unable to resolve a problem, contact UC4 Technical Support. Except for emergencies, we suggest opening a support call from the UC4 Support site. All support calls received via the Web are reviewed within one business day.

UC4 Technical Support via phone is available from 6:00 A.M. to 5:00 P.M. Pacific Standard Time, Monday through Friday. Emergency (24 x 7) technical support is available. Contact your UC4 Account Manager if you are interested in purchasing emergency support.

You can contact UC4 Technical Support at:

United States

Web: <http://support.uc4.com>
 Telephone: 1-877-277-9679
 Email: support@uc4.com
 Fax: 425-562-9350

Europe

Web: <http://support.uc4.com>
 Telephone: +43 (2233) 7788-22
 Email: support@uc4.com
 Fax: +43 (2233) 7788-99

Before you call UC4 Technical Support, please have the following information available:

- Version number of Applications Manager you are running
- Operating system on which Applications Manager is running (e.g. Sun, Hewlett-Packard)
- Operating system host name
- Operating system login information for the Applications Manager account(s)
- Database login information for the Applications Manager account(s)
- Problem reference number if you are making a follow-up call on a previous problem

If you are calling UC4 Technical Support for the first time, please be prepared to provide your name, company name, location, and phone number.

The UC4 Technical Support representative will give you a problem identification (PID) number. Please write down the number. If you call again about the same problem, the number will allow the representative to more quickly access the history of the problem.

What is New in Applications Manager 8.0

Applications Manager 8.0 includes several new features and enhancements from previous versions.

UC4 has always been known for their industry-leading and innovative capabilities in scheduling applications across enterprises. UC4 continues this tradition with the Applications Manager Version 8.0 release, once again demonstrating why it is the most innovative task scheduling company today.

New Look and Feel

For version 8.0 of the UC4 Automation Suite, both Applications Manager and Operations Manager now use a new, improved common look and feel. Several Applications Manager screens have been improved for ease of use, including the **Jobs** definition window and the **Submit** window.

Rapid Automation Agents for SCT Banner and VMware and FTP

New agents are now available for the SCT Banner and VMware and FTP. Benefits of these solutions include:

- Automated remote deployment
- No agent upgrades
- No more waiting for the next software version to upgrade
- Jobs run faster than with scripting solutions
- No new processes are spawned
- Login connection pooling saves time and is more efficient
- Highly customizable agent and job tabs are integrated into the product
- Solution version control
- All resources for a solution are located in a single file

New Replacement Values

Two new replacement values have been added. They are:

- {job}: The job name rather than its alias
- {subflow_id}: The flow id of the individual flow rather than its top level parent

Several additional replacement values that used legacy terminology have also been copied and renamed. For a full list, see topic *7.6 Replacement Value Descriptions* in the *Development Guide*.

Notifications, Output Scans, and Environment Variables for Process Flow Components

Notifications, output scans, and environment variables can now be selected for process flow components. This was the most requested feature at the 2007 User Conference.

What Was New in Applications Manager 7.1

New Client Login Report

A new `AW_CLIENT_LOGINS_REPORT` report has been added to the already extensive list of actions audited in the Applications Manager environment. Applications Manager will keep track of the time each user logs into or out of the Applications Manager system. Monitoring logins is becoming one of the critical elements required to meet Sarbanes/Oxley compliance. For information on viewing reports, see topic *1.7 Viewing Operations Reports* in the *User Guide*.

Quick Searches for Tasks in the Backlog

You can type the first few letters of a task name from the Backlog's **Search** field, and Applications Manager will find it.

Agent Groups and Machines Displayed in their Own Branches in the Explorer Window

In the **Explorer** window, you can view agent groups in their own branch in the object tree. They are no longer part of the agents branch. Additionally, you can now view all the agents installed on each machine.

New Status Detail Information in Backlog Task Summaries

New status detail information in the Backlog Task Summaries shows why a task is not running. Tasks may not be eligible to run due to unsatisfied predecessors, queue status, agent status, automation engine status, conditions, or time settings. For more information on Backlog Task Summaries, see topic *4.5 Backlog and History Column Descriptions* in the *User Guide*.

Notifications, Output Scans and Environment Variables Shown in Task Details

A task's notifications, output scans, and environment variables are now shown on the **General** tab of the task's Task Details window in the Backlog and History. For more information, see topic *4.10.1 General Task Details: Viewing and Editing* in the *User Guide*.

Re-Request from History

You can now re-request a single task listed in the History pane of the **Explorer** window. To do so, right-click the entry and select the **Request** option. Applications Manager lists the selected job or process flow on a tab on the **Submit** window.

When you re-request process flow components this way, they will run with the same prompt values as the selected entry in History. All other settings, including alias name, conditions, predecessors, output settings, and queues will use the settings in the job definition.

Send Email Attachments as PDF Files or in Zip Files

When you email an output file from the **Task Details** or **Output** windows, or using a notification, you can now attach the output files as PDF files or in Zip files. For more information, see topics *3.5 Printing, FTPing, and Emailing Output Files* in the *User Guide* and *2.6.2 Defining Notifications* in the *Development Guide*.

View Output Files in Any Application You Define File Associations For

When viewing output files, you can now manually select an application when you want to view any output file if you have specified a file association for that application. For more information, see topic *3: Opening Output Files with Other Applications* in the *User Guide*.



Focus Output Scan on the End of a Long File

You can optionally specify to start the scanning a number lines from bottom of the file with output scans. This is so you can just scan the end of very long files. For more information, see topic *2.6.1 Defining Output Scans* in the *Development Guide*.

Scan .zip and .pdf Output Files

Output scanning now supports **.zip** and **.pdf** files.

Rename Email Attachments Sent with Notifications

A new option allows you to rename outputs when attached to email with a notification. For more information, see topic *2.6.2 Defining Notifications* in the *Development Guide*.

Calculate Job and Process Flow Average Run Times Based on History

You can now calculate job and process flow average run times based on History using a calculate button on the **General** tab. For more information, see topics *2.6.5 Storing and Calculating Job Average Run Times* and *3.14 Calculating Process Flow Average Run Times* in the *Development Guide*.

Select Program Names for Jobs Using Agent Groups

You can now use the **Select** button next to the **Program Name** field on the **General** tab of the **Jobs** window to select a job's program name when the job is assigned to an agent group.

Create and Run ZOS Tasks

The new ZOS agent supports the full range of Applications Manager functions including launching tasks, tracking status, and capturing output. For more information, see chapter *2.14 Creating Jobs to Run on a ZOS Agent* in the *Development Guide*.

New Formats for Prompts and ToolTips on the Submit Window

Prompts are now displayed in different formats on the **Submit** window when you make ad hoc requests. Prompt formats include radio buttons, check boxes, **Select** buttons, selectable dates from a calendar, and more. Prompt formats are selected when you define a prompt's data type. You also have the ability to add ToolTips to prompt descriptions. For more information on prompts and data types, see chapter *6: Adding Prompts to Jobs and Process Flows* in the *Development Guide*.

Environment Variables in Prompt Values

You can now include environment variables in prompt values. The environment variables must be enclosed in { } curly brackets. When an environment variable is used in a prompt's value, its corresponding environment variable object must be assigned to the task via its agent, application, program type, or job definition. For more information on prompt values, see topic *6.4 Adding, Updating, and Deleting Prompts* in the *Development Guide*.

Comma Separated Prompt Values

A new setting for prompts allows you to select one or more values from a list and return them as a comma separated string. For more information, see topic *6.4 Adding, Updating, and Deleting Prompts* in the *Development Guide*.

New Agent Type Logins for Data Types

You can now use agent type logins to request information from an agent's application. Agent type logins are written in { } brackets. For example you can select {RME} or {PSE} and Applications Manager will run that SQL statement using the API connection it has to PeopleSoft or the remote automation engine. For more information, see topic *6.6 Defining Data Types* in the *Development Guide*.

New File and Password Data Types

File data types allow you to select the files in a directory as a list of values. For more information, see topic *6.6.3 Using File Data Types* in the *Development Guide*. Password data types allow you to enter passwords as prompt values. For more information, see topic *6.6.4 Using Password Data Types* in the *Development Guide*.

New Predecessors from and to Sub Process Flows

Predecessors can now originate from and/or be assigned to components in sub process flows. For more information, see topic *5.5.1 Adding Internal Predecessor Links in Process Flows* in the *Development Guide*.

New Active/Inactive Setting for Schedules

There is a new **Active** check box for job and process flow schedules.

New Conditions Types

Three new condition types have been added to Applications Manager:

- **CHECK FILE FTP:** Allows you to check for a file on any remote host that has a specified host login object.
- **CHECK CONNECTION:** Checks whether a login connection exists or does not exist. When selecting the login, you can first pick a login type to filter the list.
- **ALWAYS TRUE:** Takes an action every time a task is run. This serves the same purpose as entering 1=1 for a USER DEFINED condition.

For more information on condition types, see topic *8.4.2 Selecting Condition Types* in the *Development Guide*.

New FTP_JAVA and SFTP_JAVA Jobs

Two new jobs have been added for file transferring. They are:

- **FTP_JAVA:** This is an updated version of the FTP job. It includes several prompts and prompt options not available on the original FTP job, such as **mget** and **mput** commands.
- **SFTP_JAVA:** This job uses secure FTP with SSH to transfer files.

For more information, see chapter *11: File Transferring* in the *Development Guide*.

Simplified Email Output Devices and Interfaces

Applications Manager now ships with an email output interface object and an output device, both named AW_EMAIL. You can use the AW_EMAIL output device to send email on any supported operating system. For more information, see topic *2.8 Emailing Output* in the *Administration Guide*.



Assigning User Options to a User Group

User options can optionally be assigned to user groups. When user options are assigned to a user group, all users with that user group will have that user option set to true for them. You cannot add, edit, or delete user option objects like other Applications Manager objects. You can only assign them to user groups. For more information, see topic *3.2.1 Setting User Options in the Administration Guide*.

New Export Format Prompt for Report Jobs

When jobs are created from reports, they now include an ‘Export Format’ prompt. Use this prompt to determine whether to separate entries in a row by spaces, commas, or tabs. It is useful if you will be exporting the report to another application. For more information, see topic *5.11 Creating Jobs from Reports in the Administration Guide*.

Parsing Oracle Errors in Triggers and Procedures from the Database Browser

You can parse Oracle errors in triggers and procedures from the database browser. For more information, see topic *5.13.2 Parsing Oracle Errors in Triggers from the Database Browser in the Administration Guide*.

Enhanced Event Logging

With the enhanced event logging capabilities, Applications Manager can log status changes for tasks, agents, and the automation engine. You can use a monitoring tool such as HP OpenView, SNMP, Patrol, Tivoli, or Unicenter to query the output files and report Applications Manager statuses. For more information, see chapter *6: Event Logging in the Administration Guide*.

Run Tasks Remotely on Other Automation Engines

You can now define remote execution agents that allow you to initiate jobs and process flows on one automation engine and run them on another. For more information, see chapter *7: Running Tasks on Remote Automation Engines in the Administration Guide*.

AgentService Can Use Any RMI Server for Database Connections

The **AgentService** process now looks for RMI servers in a database table and connects to all RMI servers it sees. If the automation engine RMI server (the one at **master_ip_address**) goes down, the **AgentService** will use one of the other RMI servers to make database calls. For more information, see topic *8.5 The AgentService Process in the Administration Guide*.

Automatic Log Rollover and Zip

When log files grow to approximately 50 megabytes, Applications Manager automatically rolls them over. When Applications Manager finishes writing to a log, it auto-zips it to save disc space. When the log directory reaches 500 megabytes, it is purged. Server logs are purged after 7 days. The rollover and purge settings are configurable. For more information, see topic *12.3.1 awenv.ini Replacement Values and Variables in the Administration Guide*.

Customizable System Look and Feel or Theme

You can specify whether to use the system look and feel, or to set a theme. You might want to specify themes to differentiate your production automation engine from your development automation engine. For more information, see *Appendix D: Specifying the Look and Feel and Theme for the Client in the Administration Guide*.

Use Custom SSL Certificates for Connection Authentication

You can use a custom SSL certificate for connection authentication by creating **user_keystore** and **user_keystore_config** files. You can encrypt the password in the **user_keystore_config** file. For more information, see topic *2.10 Using Custom SSL Certificates for Connection Authentication* in the *Installation Guide*.

1

Applications Manager Operations

1.1 Introduction to Applications Manager Operations	2
1.2 Using the Applications Manager Desktop	4
1.3 Working in the Applications Manager Windows	6
1.4 Editing General Desktop and ToolBar Settings	8
1.5 Setting Alerts	10
1.6 Setting the User Interface Font	12
1.7 Viewing Operations Reports	14
1.8 Customizing Tables	18
1.9 Changing Status Colors	20
1.10 Viewing the About Applications Manager Window	22
1.11 Linking to Online Manuals and Applications Manager Web Sites	24
1.12 Launching the Applications Manager Client	26
1.13 Logging on to Applications Manager	28
1.14 Getting More with Applications Manager Add-on Products	30

1.1 Introduction to Applications Manager Operations

As an operator, you will monitor tasks as they run through Applications Manager.

Applications Manager provides robust operations tools that make it easy for you to monitor and manage tasks as they execute. As an Applications Manager operator, you can:

- Monitor the system.
- Run tasks on an as-needed basis.
- See what tasks will run during your shift.
- Troubleshoot tasks.
- Take actions on tasks.
- Stage tasks up to 48 hours ahead.
- Handle exceptions to normal processing.
- View and print task output.
- Control load on the system.
- Prevent tasks from launching.
- Run tasks from the command line.

Each of the areas of Applications Manager used by operators is described briefly below. Details for each are given in the remainder of this chapter and the chapters that follow.

Using the Explorer Window

The **Explorer** window is the primary tool you use to monitor and manage agents, queues, and tasks. A sample **Explorer** window is shown in Figure A.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	11646	Y		TEST_MODULE	05-08-26	08:26	00:00:04	RUNNING	TRUNK	SQLOPER	
BATCH	11643	Y	A		05-08-26	08:26	00:00:10	RUNNING	TRUNK	SQLOPER	ICONS1
BATCH	11642			ICONS1	05-08-26	08:26	00:00:11	INITIATED	APPWOR...	SQLOPER	
BATCH	11644	Y	B		05-08-26		00:00:00	PRED WAIT	APPWOR...	SQLOPER	ICONS1
BATCH	11645	Y	C		05-08-26		00:00:00	PRED WAIT	APPWOR...	SQLOPER	ICONS1

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	11639	Y	A		02-05-09	08:25	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS2
BATCH	11635	Y	C		02-05-09	08:25	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11634	Y	B		02-05-09	08:25	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11633	Y	A		02-05-09	08:24	00:05:01	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11637	Y		TEST_MODULE	02-05-09	08:24	00:00:05	FINISHED	TRUNK	SQLOPER	
BATCH	11636	Y		TEST_MODULE	02-05-09	08:24	00:00:06	FINISHED	TRUNK	SQLOPER	
BATCH	11629			SIMPLE	02-05-09	08:19	00:00:18	FINISHED	APPWOR...	SQLOPER	
BATCH	11631			B	02-05-09	08:19	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11630			A	02-05-09	08:19	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11628	Y		TEST_MODULE	02-05-09	08:15	00:00:05	FINISHED	TRUNK	SQLOPER	

Figure A. The Explorer window.

Viewing Forecasts

Using the forecast feature, you can view a list of scheduled jobs and process flows.

Requesting Jobs and Process Flows

There may be times when you want to run tasks outside of a set schedule. You can submit individual jobs and process flows from the **Requests** window. In Applications Manager, we refer to these as “ad hoc” requests.

Using the Graphical Analysis Package

Your license key determines whether the add-on features of the Graphical Analysis Package are included with your Applications Manager automation engine/agent instance. A license key with the Graphical Analysis Package gives you access to several windows including the following:

- **Graphical Forecast:** Displays scheduled jobs and process flows in a Gantt chart format.
- **Backlog Gantt View:** Displays the contents of the Backlog in a real-time Gantt chart format. You can take actions on tasks or view/edit their task details.
- **History Gantt View:** Displays in Gantt chart format how the components of a process flow in the History executed.
- **Dashboard:** Provides information about system performance.

For a complete list of Graphical Analysis Package features, see topic *1.14 Getting More with Applications Manager Add-on Products*.

Viewing Operations Reports

Applications Manager comes with a set of predefined reports that provide information about your Applications Manager objects. If your product key includes the Graphical Analysis Package, you can also import an extensive set of Applications Manager History Analysis reports that you can use to review how tasks were processed. With the Graphical Analysis Package, you can also create your own custom reports.

1.2 Using the Applications Manager Desktop

From the Applications Manager desktop you can access all Applications Manager features and options.

You can access all Applications Manager features and options from the Applications Manager desktop.

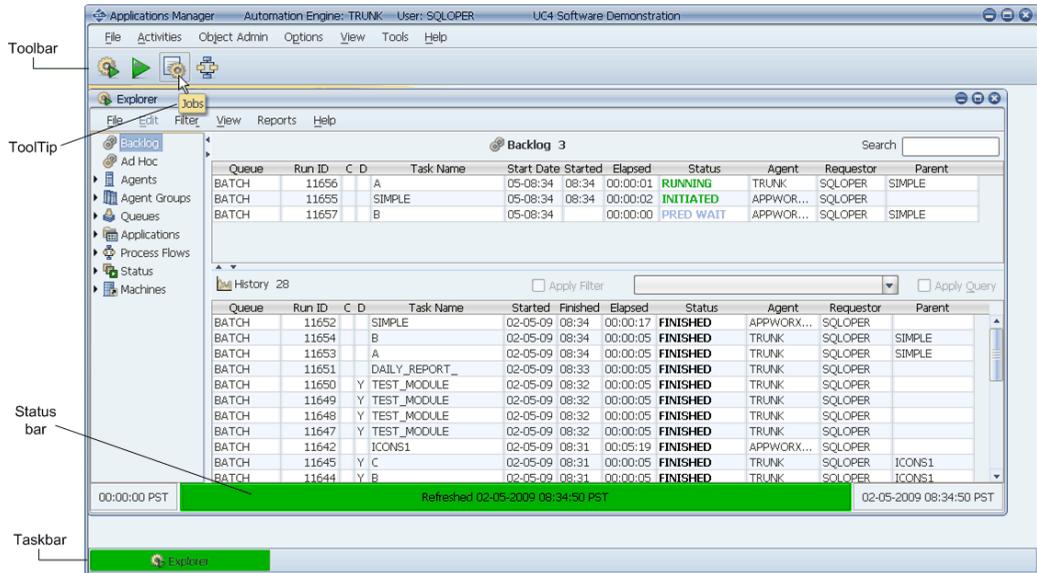


Figure A. The Applications Manager desktop.

Note: If you are using a Windows client with 800x600 resolution, you will need to select the Windows auto hide taskbar option.

ToolTips

ToolTips provide a brief description of buttons, icons, and fields. To see a ToolTip, rest the mouse pointer over the button, icon, or field. A ToolTip appears after the mouse pointer has remained motionless for a second or two. In Figure A, the mouse pointer is resting on the Jobs icon in the toolbar. You can disable ToolTips by going to the **View** menu and unchecking the **ToolTips** option.

Toolbar and Menus

The toolbar consists of a row of icons running across the top of the screen. Click an icon to open its corresponding window. You can also access the windows in the toolbar from the **Operations** and **Object Admin** menu items.

Activities menu listings open windows where you can take actions such as opening **Explorer** or running ad hoc tasks with **Requests**.

Object Admin menu listings open selector windows where you can view, add, edit, or delete object definitions (depending on your user group access).

You can view or hide the toolbar by opening the **View** menu and checking the **toolbar** option. You can add or remove the icons displayed on the toolbar by selecting **Settings** from the **Options** menu. For instructions on editing desktop settings, see topic *1.4 Editing General Desktop and ToolBar Settings*.

Taskbar

The taskbar is a graphic bar running across the bottom of the desktop that is used to select active windows. When you open an Applications Manager editing window, the window is represented by an icon in the taskbar. From the taskbar, you can right-click a window icon to:

- Restore a window to the desktop or minimize it to the taskbar. You can also display an active window by opening the **View** menu, selecting **Windows**, and choosing a window.
- Maximize a window to fill the desktop.
- Move a window to the front of the desktop.
- Close a window.

Selector windows are used when defining Applications Manager objects. They are not displayed on the taskbar because they do not contain unique information and are represented by icons on the toolbar.

Status Bar

The status bar is displayed across the bottom of the **Explorer** window. Its color alerts you to the status of the automation engine, agents, and tasks running in the Backlog. When the **Explorer** window is minimized it uses the same color scheme on the taskbar. For more information on the status bar, see topic *4.7 Monitoring with the Status Bar and Object Icons*.

Closing All Windows or Selector Windows

To close all windows, go to the **View** menu and select **Close all**. To close only the selector windows, select **Close selectors**. For more information on selector windows, see topic *1.5 Adding, Editing, and Deleting Applications Manager Objects* in the *Development Guide*.

1.3 Working in the Applications Manager Windows

In many of the Applications Manager windows, the columns can be sorted and rearranged. Applications Manager conforms to most GUI standards, including keyboard navigation.

In most Applications Manager windows that include a table, you can sort the entries, and size and rearrange the columns.

Sorting Columns

You can display the items within a column in ascending or descending order. Click the header of a desired column to view its entries in descending order. Click a second time to view the entries in ascending order. Note that the arrow to the right of the column name reflects this change. Some columns can be clicked a third time to display the entries in their default order. The arrow may be displayed in a separate column, or not at all, when entries are in their default order. You can click the columns additional times to cycle through the options.

Copying Text from Rows

To copy text from a table in an Applications Manager window, click one or more rows and enter Ctrl-C. You must select the entire row. You can then paste the text into an email, word processor, or other application of your choice.

Temporarily Changing Column Order

To temporarily change the order of the columns, use the mouse to point to the heading of the column you want to move, hold down the mouse button, and drag the column to the new position (see Figure A).

Note: These settings are not retained when you close the window. Many columns can be configured and saved. For more information, see topic *1.8 Customizing Tables*.

Copying, Cutting, and Pasting Text

You can right-click in a field to bring up a pop-up menu with copy, cut, and paste options.

Bringing Error Dialogs into View

If you minimize the Applications Manager desktop when an error message is displayed, the Applications Manager desktop may seem to lock up. This is because the Error dialog is out of

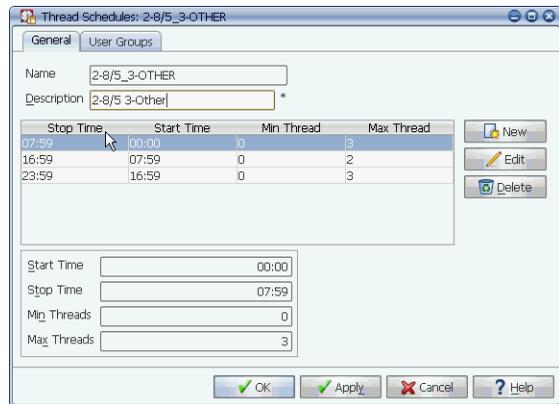


Figure A. You can change the order of the Applications Manager columns.

view. To bring the error dialog back into view, hold down the Alt key and press the Tab key until you highlight the Java coffee cup icon

Keyboard Navigation

You can use the following keyboard navigation in Applications Manager:

- Ctrl-Up arrow key sets the focus on the current tab, then the right and left arrow keys will navigate to the other tabs. Ctrl-Down arrow key returns focus to the page.
- If a table has focus, then Ctrl-Tab will move the focus out of the table.
- When you are in a table, Enter and Tab are used for navigation within the table.
- To alternately expand and collapse an object's key, press Enter.
- To select a mnemonic key, click Alt+<the key>.

Assigning Options.

When required, you assign options and objects using the type of window shown in Figure B.

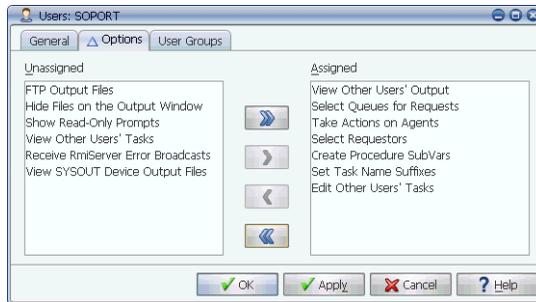


Figure B. Double-click or use the arrow key to assign/unassign options.

Assign objects by moving them from the **Unassigned** column to the **Assigned** column. The table below describes how to assign multiple options.

To:	Do this:
Move a selected value between the two columns	Double-click the value. -or- Select the value and click the single arrow button.
Move all values between the two columns	Click on the double arrow button.
Make multiple contiguous selections	Hold down the Shift key and click the first and last values.
Make multiple nonadjacent selections	Hold down the Control key and click on each value.

1.4 Editing General Desktop and ToolBar Settings

To edit general Applications Manager and ToolBar settings, select Settings from the Options menu.

You can edit and save general, toolbar, and alert desktop settings. These settings apply only to your workstation while you are logged in to an Applications Manager session.

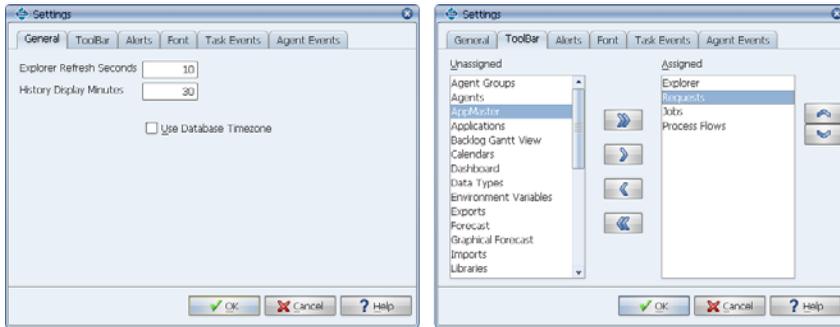


Figure A. The General and ToolBar tabs of the Settings window.

Editing General and Toolbar Settings

To set the Applications Manager desktop settings:

1. From the **Options** menu, choose **Settings**.
Applications Manager displays the **General** tab of the **Settings** window shown on the left in Figure A. The settings are described in Table A.
2. You can customize the toolbar by adding and removing icons. To add or remove icons on the toolbar, select the **ToolBar** tab shown on the right in Figure A.
3. To move items between the **Unassigned** and **Assigned** columns, double-click or use the arrow keys.

For details on assigning and unassigning values, see topic *1.3 Working in the Applications Manager Windows*.

4. You can set alerts in Applications Manager that are triggered by the status of tasks in the Backlog by selecting the **Alerts** tab. For example, you can play a sound whenever a task aborts. For more information, see topic *1.6 Setting the User Interface Font*.
5. Applications Manager can log status changes for tasks, agents, and the automation engine. If you have the DBA user group, you can configure status logging options from the **Task Events** and **Agent Events** tabs of the **Settings** window. If you do not have the DBA user group, you will not see these tabs. For more information, see chapter 6: *Event Logging in the Administration Guide*.
6. To save the settings for the current session and future sessions, click **OK**.

Table A. Applications Manager Desktop Settings

Setting	Description
Explorer Refresh Seconds	You control the Explorer window's automatic refresh rate by entering a number of seconds in this field. In Figure A, the refresh frequency is set to 10 seconds (the lowest number of seconds available). You can also manually refresh by entering Ctrl-R or by clicking the status bar on the Explorer window.
History Display Minutes	<p>You control how long records are displayed in History using the Previous minutes field. For example, if you set Previous minutes to 60, only tasks that have run within the last 60 minutes will be displayed.</p> <p>Note: In some cases records will remain in History beyond this setting due to predecessor requirements.</p> <p>In Figure A, the Previous minutes field is set to 30. The amount of History displayed when you log in to the client is determined by the HistoryRetentionTime setting in the Options.properties file. For more information on the HistoryRetentionTime setting and the Options.properties file, see topic <i>12.4 Options.properties File</i> in the <i>Administration Guide</i>.</p> <p>Caution! The higher you set your Previous minutes, the more memory you will use. You can always run a History query to view older tasks in History. For more information on History queries, see <i>5.2 Querying for Tasks in History</i>.</p>
Use Database Time Zone	<p>If this option is selected, times shown in the Submit window are based on the time set for the Applications Manager database. If it is not selected, then the times shown in the Submit window are local time based on the client machine. This is translated to database time for running the task.</p> <p>Times shown in the Backlog, History, on the status bar, and in the lower right corner of the Explorer screen are always in database time.</p>

What Are User Options?

User options are additional settings selected by your Applications Manager administrator. They control user access to Applications Manager features such as the **Hide** feature in the **Output** window. For more information on user options, see topic *3.2.1 Setting User Options* in the *Administration Guide*.

1.5 Setting Alerts

You can set alerts in Applications Manager that will be triggered by the status of tasks in the Backlog.

If the color change in the status bar is not a sufficient alert for your monitoring purposes, you can set additional alerts for specific statuses. For example, you might have a sound or voice message play when a task aborts. Alerts launch a program or script on the client machine while you are logged on. To set the alerts, use the **Alerts** tab on the **Settings** window shown in Figure A.



Figure A. You can set alerts for specific statuses.

Statuses

You can define alerts for the following statuses:

- Aborted task: when a task completes with a non-FINISHED status such as ABORTED
- Hold task: when a task goes into a HOLD status
- Agent trouble: when an agent goes into a status that requires operator intervention such as a BUSY or TROUBLE
- All clear: when all task/agent statuses are changed so that tasks are eligible to run again

You can choose to trigger the alert when the first task or agent displays the status, or every time a new task or agent displays the status.

Local Windows Programs

An alert runs a local Windows program that you specify in the field next to the alert category. You must enter a command which includes the full path to the program file. In Figure A, commands like the following are used to play **.wav** files with the operating system's default player:

```
cmd /c="C:\Sounds\abort_task.wav"
```

You may want to create custom scripts to run as alerts.

Procedure

To set an alert:

1. Display the **Settings** window by opening the **Options** menu and choosing **Settings**.
2. Select the **Alerts** tab as shown in Figure A.
3. For each type of alert, enter a fully-pathed program name, or click the **Select** button and choose the program name.
Note: The program you choose must be an executable or Applications Manager will return an error message when the task/agent goes into the specified status.
4. To activate the alerts, click the **Alerts on** option.
5. Choose one of the frequency options:
 - **First time:** The alert is executed the first time a task or agent shows the indicated status. The alert will not be executed again as long as that task or agent remains in the indicated status. For example, if three tasks abort at the same time, you will get only one alert.
 - **Every time:** The alert is executed every time a task or agent shows the indicated status. For example, if three tasks abort at the same time, you will get three alerts.
6. To save the alert definitions, click **OK**.

Creating Notifications

Applications Manager notifications send messages and output files, based on task status, to any output device defined in Applications Manager. For information on defining notifications, see topic *2.6.2 Defining Notifications* in the *Development Guide*.

Applications Manager can log status changes for tasks, agents, and the automation engine. If you have the DBA user group, you can configure status logging options from the **Task Events** and **Agent Events** tabs of the **Settings** window. If you do not have the DBA user group, you will not see these tabs. For more information, see chapter *6: Event Logging* in the *Administration Guide*.

1.6 Setting the User Interface Font

You can adjust the size of the user interface font from the Font tab or the Settings window. You must entirely exit the Applications Manager client for the change to take effect.

To set the font size, use the **Font** tab on the **Settings** window shown in Figure A. After selecting a font size and clicking **OK**, you must close the Applications Manager client, re-open it, and log into a new session for the new font size to take effect. Re-logging in from the **File** menu will not make the change.

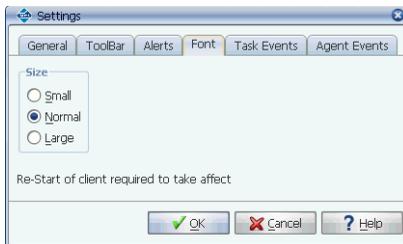


Figure A. After selecting a font size, you must exit the client and re-open it to see the change..

1.7 Viewing Operations Reports

To view reports for an object type, open that object's selector window and click Reports.

Applications Manager comes with a set of reports that provide information about the Applications Manager objects. If your product key includes the Graphical Analysis Package, you can also import an extensive set of Applications Manager History Analysis reports that allow you to review how tasks were processed. With the Graphical Analysis Package, you will also be able to create your own custom reports. A report that audits schedule changes is shown in Figure A. Additional reports may be created if users have the necessary user group access. For information on creating reports, see chapter 5: *Creating Reports and Browsing the Database* in the *Administration Guide*.

Change Date	Module/Chain	Schedule	Exception	Field	Prior Value	New Value	Changed By
10-13-2008 12:32:22	AW_CALC_HISTORY_STATISTICS	DAILY		insert			JIRETON
10-13-2008 12:32:22	AW_CALC_HISTORY_STATISTICS	DAILY		Next rundate	20041125	20081014	JIRETON
10-13-2008 12:32:22	AW_CALC_HISTORY_STATISTICS	DAILY		Master Time	20041125 04:00:00	20081014 04:00:00	JIRETON
10-29-2008 14:31:00	FORECAST	TWICE_DAILY		Master Time	20081024 11:59:00	20081029 11:59:00	Y-TRUNK
10-29-2008 14:31:00	FORECAST	TWICE_DAILY		Next rundate	20081024	20081029	Y-TRUNK
10-29-2008 14:31:01	AW_CALC_HISTORY_STATISTICS	DAILY		Next rundate	20081025	20081030	Y-TRUNK
10-29-2008 14:31:01	AW_CALC_HISTORY_STATISTICS	DAILY		Master Time	20081025 04:00:00	20081030 04:00:00	Y-TRUNK
10-29-2008 14:31:01	RMI_LOG_ROLLOVER	DAILY_RMI_LOG_ROLLOVER		Next rundate	20081025	20081030	Y-TRUNK
10-29-2008 14:31:01	RMI_LOG_ROLLOVER	DAILY_RMI_LOG_ROLLOVER		Master Time	20081025 00:00:00	20081030 00:00:00	Y-TRUNK
10-29-2008 14:31:01	SYSTEM	SYSTEM		Master Time	20081025 00:00:00	20081030 00:00:00	Y-TRUNK
10-29-2008 14:31:01	SYSTEM	SYSTEM		Next rundate	20081025	20081030	Y-TRUNK
10-29-2008 14:31:01	UPGRADE	DAILY_UPGRADE		Next rundate	20081025	20081030	Y-TRUNK
10-29-2008 14:31:01	UPGRADE	DAILY_UPGRADE		Master Time	20081025 07:00:00	20081030 07:00:00	Y-TRUNK
10-29-2008 14:34:44	FORECAST	TWICE_DAILY		Master Time	20081029 11:59:00	20081029 23:59:00	SQLOPER
10-29-2008 14:34:44	FORECAST	TWICE_DAILY		Next Start Time	11:59:00	23:59:00	SQLOPER
10-30-2008 17:18:19	FORECAST	TWICE_DAILY		Next Start Time	11:59:00	23:59:00	SQLOPER
10-30-2008 17:18:19	FORECAST	TWICE_DAILY		Master Time	20081030 11:59:00	20081030 23:59:00	SQLOPER
11-07-2008 10:53:51	AW_CALC_HISTORY_STATISTICS	DAILY		Master Time	20081106 04:00:00	20081108 04:00:00	SQLOPER
11-07-2008 10:53:51	AW_CALC_HISTORY_STATISTICS	DAILY		Next rundate	20081106	20081108	SQLOPER

Figure A. A sample report.

You can view reports for each of the operations windows and selector windows.

To view reports for:	Do this:
An object type	Open that object's selector window and click Reports .
An operations window	Open the operations window and choose the report type from the Reports menu.

This opens the **Reports** window and selects the report type corresponding to the window you opened it from. In Figure B, the **Reports** button is selected on the **Jobs Selector** window, opening the **Reports** window with the Jobs type highlighted.

To view reports for another object type, select that object type from the **Type** box. If an object is not listed in the **Type** box, there are no reports for it. Once you select a report, click the **Show** button.

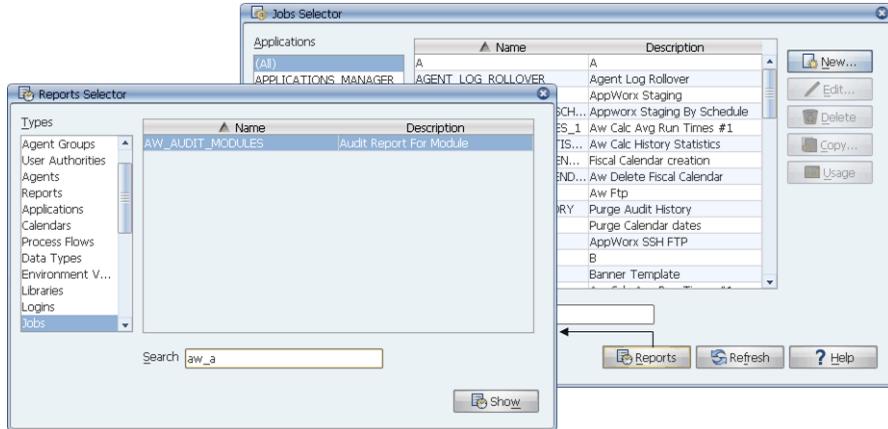


Figure B. Select a report on the Reports window.

Enabling Audit Reports

To run auditing reports, your Applications Manager administrator must enable auditing for the automation engine. For more information, see topic *4.6 Enabling Applications Manager Auditing* in the *Administration Guide*.

Prompt Values

Some reports require you to enter prompt values. If the report you select requires prompt values, you must respond to the prompts in the **Report Parameters** window shown in Figure C. Once prompt values are provided (if necessary), Applications Manager displays the report in its own window as shown in Figure A.



Figure C. Enter prompt values

Changing the Lines per Page

You can specify the number of lines displayed on each page using the **Lines per Page** field. The new setting will go into effect when you click the **Redisplay** button. Doing so will update the time and date in the report header, but not the data displayed in the report.



Running Applications Manager History Analysis Reports

With the purchase of the Graphical Analysis Package, you receive several pre-defined reports that analyze your task history. These reports are referred to as Applications Manager History Analysis or AHA reports. They include an AHA prefix designation in their names. For example, the AHA-FINISHED_JOBS_BY_STATUS_HR report returns completed tasks according to status by hour. Data relating to AHA reports is generated and loaded into Applications Manager by running the CALC_HISTORY_STATISTICS job. For more information, see topic *5.12 Retrieving Historical Data for Applications Manager Historical Analysis Reports* in the *Administration Guide*.

1.8 Customizing Tables

In many of the Applications Manager windows, you can choose the columns you want displayed. You can also change the order of the columns and change the column names.

Many of the Applications Manager windows display tables of information. In these windows, you can choose the columns displayed and their order using **Setup** windows.

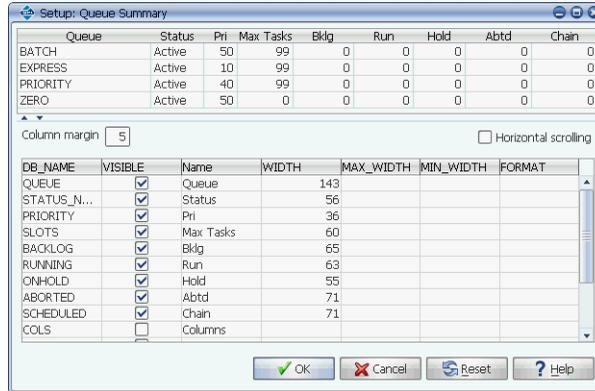


Figure A. A sample Setup window where you can customize tables.

The tables that you can customize are listed below:

Menu Option	Customizes
Backlog	All views of the Backlog viewable from the Explorer window.
History	History on the Explorer window.
Output	The Output window.
Agent Summary	The Agent Summary on the Explorer window.
Queue Summary	The Queue Summary on the Explorer window.
Process Flow Summary	The Process Flow Summary on the Explorer window.
Status Summary	The Status Summary on the Explorer window.
Task Output files	The Output files tab on the Task Details window.
Agent Logs	The Agent Logs window.
Gantt task summary	The information displayed in the pop-up table when you hover over a job or process flow in the Backlog Gantt view window and the Flow Diagram window.
Backlog task summary	The information displayed in the pop-up table when you hover over the Run ID column for tasks in the Backlog .

The steps for choosing columns and changing the column order are the same for all tables. To edit a table, open the **Options** menu, select **Tables**, then select the table you want to edit. The **Setup** window for the **Queue Summary** table is shown in Figure A.

The top of the window shows the table as it will be displayed in Applications Manager. The bottom of the window displays a list of the columns that can be displayed. For a description of all customizable columns, see *Appendix C: Customizable Columns* in the *Administration Guide*.

Making Changes

The table below describes how to customize Applications Manager tables.

To:	Do this:
Display a column	Check the VISIBLE column. All visible columns are brought to the top of the list. Newly checked columns are added to the far right side of the table. You can click the title of the column in the top display and drag it to a new location.
Change the name of a column	Edit the entry in the Name column.
Control the width of a column	Enter a number of pixels in the MAX_WIDTH and MIN_WIDTH columns. If you enter MIN_WIDTH settings, its possible that some columns will be pushed off the table. If this happens, select the Horizontal scrolling option described below.
Format date columns	Select a date format from the FORMAT column.
Control the margins within a column	In the Column margin field, enter a number of pixels to be added to the left and right margins of the column.
Allow scrolling	By default, tables do not scroll. As you add columns, Applications Manager adjusts the width of the columns so they are all displayed in the table. If the tables become too narrow to read the contents, you can select the Horizontal scrolling option. This maintains the default width of the columns and displays a scroll bar across the bottom of the table.
Change the order of the columns	Select the title of a column in the top window and drag it to a new location.
Return the table to its last saved setting	Click the Reset button at the bottom of the window.

Default Settings

Your Applications Manager administrator can set default settings for Applications Manager tables. If you customize tables, the default settings are overridden. For more information on setting table defaults, see topic *3.2.2 Customizing Applications Manager Defaults with DEFAULT_USER* in the *Administration Guide*.

1.9 Changing Status Colors

You can change the colors used to indicate statuses for tasks, agents, and the automation engine in the Backlog and History.

In the Backlog and History on the **Explorer** window, Applications Manager displays a task's status in the Status column. To provide visual cues, Applications Manager uses colors for the statuses. For example, green is RUNNING, yellow is HOLD, and red is ABORTED. If you wish, you can change the colors used for groups of statuses.

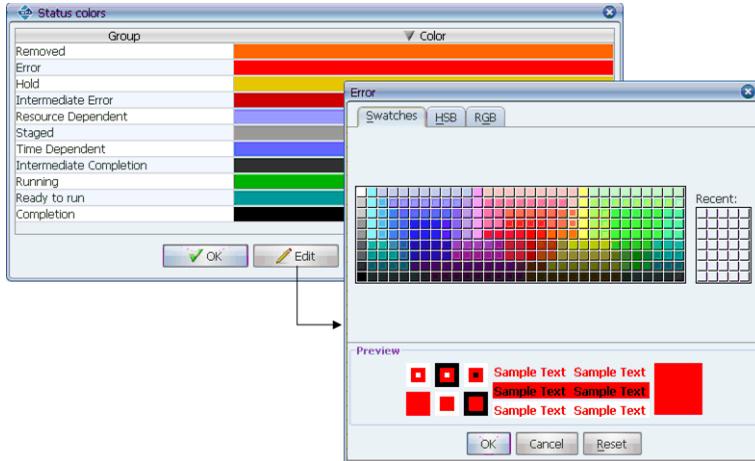


Figure A. You can change status colors for groups of statuses.

Procedure

To change the color for a group of statuses:

1. From the **Options** menu, select **Status colors**.
Applications Manager displays the **Status colors** window shown in Figure A.
2. Select the status group you want to change and click **Edit**.
Applications Manager displays the color selection window shown in Figure A.
Statuses included in each group are listed in Table A.
3. Select a color and click **OK**.

Table A. Status Color Groups

Group	Statuses
Ready to run	QUEUED
Time Dependent	DATE PENDING
Resource Dependent	SELF WAIT, QUEUE WAIT, CONDITN WAIT, UNAVAILABLE, AGENT WAIT, PRED WAIT
Intermediate Completion	STG SKIP, PW-SKIP, PW-DELETE
Hold	HOLD PRED WT, HOLD
Staged	STAGED HOLD, STG_PW HOLD, STAGED, STAGED_PW
Running	LAUNCHED, STARTING, RUNNING
Completion	FINISHED, SkipCond, CANCELLED, DELETED
Error	DB ERROR, RESUMED, STARTED, STOPPED, ERRORS, EXPIRES, EXPIRED, IDLED, TROUBLE, BUSY, CHECK LOG, INACTIVE, BAD CONNECT,BAD M>JN, BAD TYPE, BAD BATCH, BAD LIBR, BAD LOGIN, HOST FAILURE, BAD QUEUE, BAD DATE PRM, BAD SQL STMT, BAD MODULE, BAD_AGENT, FILE_ERROR, START_ERROR, START_FAILED, RECURSIVE, BAD CONDITN, DIED, ABORTED, KILLED, TIMEDOUT, LAUNCH ERROR
Intermediate Error	DEAD, ABORTD, KILL, TIME-OUT, KILL1, KILLING, LAUNCH ERR

Default Settings

Your Applications Manager administrator can set default values for status colors. If you customize status colors, they override the default settings. For more information on setting status color defaults, see topic *3.2.2 Customizing Applications Manager Defaults with DEFAULT_USER* in the *Administration Guide*.

1.10 Viewing the About Applications Manager Window

To view the About Applications Manager window, open the Help menu and select About Applications Manager.

Use the **About Applications Manager** window to view details about your Applications Manager build. This information may be requested if you call UC4 Technical Support. When you select the **About Applications Manager** menu item from the **Help** menu, Applications Manager displays the **About Applications Manager** window shown in Figure A.

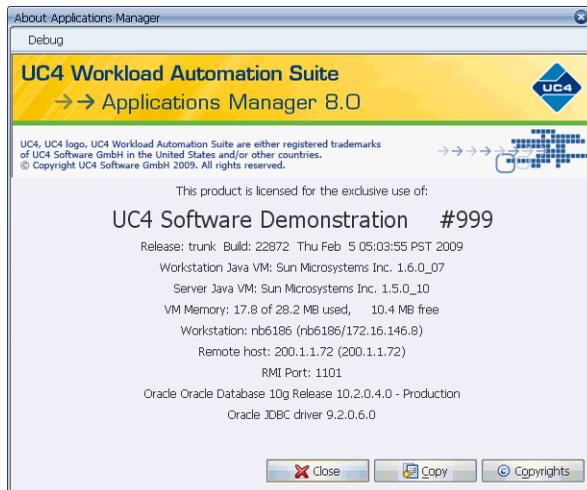


Figure A. The About Applications Manager window.

The **About Applications Manager** window includes:

- The Applications Manager version and build number
- Workstation Java VM information
- Server Java VM information
- Java VM free memory information
- The DNS name and IP address of the computer you are using
- The RMI host's DNS name and IP address
- The RMI host's port number
- The Oracle database version and details

To place the system information on your clipboard, click **Copy**.

To view copyrights for third party software used by Applications Manager, click **Copyrights**. Copyright information also exists in the **copyrights** directory on the Applications Manager automation engine.

Setting Debug from the Applications Manager Client

You can turn on debug for the Applications Manager client, the RMI server, or Oracle trace by selecting options in the **Debug** menu. For more information, see topic *10.4 Setting Client, Server, Oracle Trace, and All Agent Debug* in the *Administration Guide*.

1.11 Linking to Online Manuals and Applications Manager Web Sites

The Applications Manager Help window includes all the Applications Manager manuals online. PDF manuals are available on the Applications Manager Support site. You can link to the Applications Manager Support site or the Applications Manager home page from the Help menu.

Use the **Applications Manager Online Manuals** option on the **Help** menu to view the Applications Manager manuals online. When you select the **Applications Manager Online Manuals** menu item, Applications Manager opens the **Applications Manager Help** window shown in Figure A.

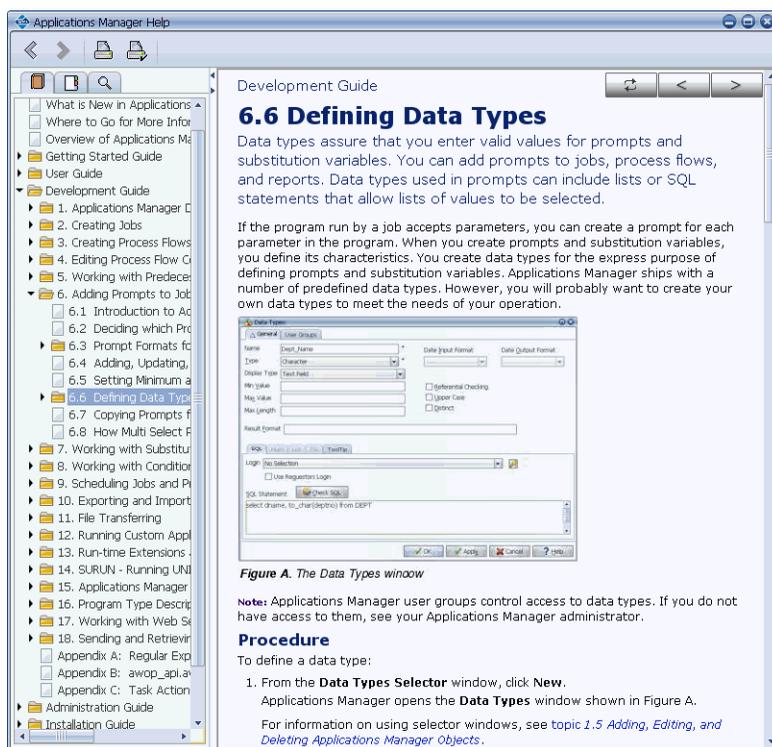


Figure A. The Data Types window

Notes: Applications Manager user groups control access to data types. If you do not have access to them, see your Applications Manager administrator.

Procedure

To define a data type:

1. From the **Data Types Selector** window, click **New**.
Applications Manager opens the **Data Types** window shown in Figure A.
For information on using selector windows, see [topic 1.5 Adding, Editing, and Deleting Applications Manager Objects](#).

Figure A. The Applications Manager online manuals

Many of the Applications Manager windows include context sensitive **Help** buttons or menu items that link to a corresponding topic in the Applications Manager manuals.

The **Applications Manager Help** window includes table of contents, index and search tabs. This index is a combined index of all the Applications Manager manuals.

By default the **Applications Manager Help** window is displayed in the top left corner of the screen. Its default size is 800 by 600 pixels. Your Applications Manager administrator can change these settings for all users. For more information, see *Appendix B: Changing the Default Size and Location of the Help Window* in the *Administration Guide*.

PDF files for all Applications Manager manuals are available on the Applications Manager Support site. A new PDF file is generated each time its corresponding manual is printed. Occasionally new functionality is added to an Applications Manager version and bugs are fixed throughout each version's life cycle. Therefore, the most recent edits to the manuals are included in the online help of each Applications Manager build.

Connecting to the Applications Manager Web Sites

Use the **Applications Manager Web Site** item on the **Help** menu to access information about Applications Manager products and services. Use the **Applications Manager Support** item to open new support issues, check the status of open support issues, browse our Frequently Asked Questions, view announcements and holiday information, view release notes, browse our Knowledge Base, and read the current and back issues of our newsletters.

When you select the **Applications Manager Web Site** or **Applications Manager Support** menu items, Applications Manager launches a Web browser and opens the appropriate site.

Visiting the Applications Manager User Forum

The Applications Manager User Forum is a place where you can network with other Applications Manager users to trade tricks, tips and best practices. Check on the latest product developments, find out about new service offerings, and make new friends and connections.

To register, visit <http://forum.appworx.com> and fill out a short registration form. The forum content is available only to current Applications Manager customers.

1.12 Launching the Applications Manager Client

To launch Applications Manager for the first time, enter the Applications Manager URL and select an option to either launch using Java Web Start or the Java Plugin.

You launch Applications Manager from the **Introduction to Applications Manager** page shown in Figure A. The location of the **Introduction to Applications Manager** page is **http://<automation engine IP address>:<Apache port>/<automation engine name>/Intro.html**.

Note: If you are using Internet Explorer, this page will include a link to install Java2. With other browsers, you may automatically be prompted to install Java2 if you do not have it.



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Upgrade Flash Movies

- To review new V8 features select [here](#).

Java WebStart

To start an Applications Manager client using Java WebStart, (recommended), select one of the following:

- [Start the Applications Manager Client](#).
- [Start the Applications Manager Client \(fully featured\)](#).
- [Start the AppMaster Client](#).

Note: If you are prompted to download the Client.inlp file, select the open option.

Java Plugin

The Applications Manager client for the Java Plugin requires the Java2 runtime engine. If you have not already done so, please install the Java2 runtime before using Applications Manager with the Java Plugin.

The Java2 installation software is located [here](#).

To start an Applications Manager client using the Java Plugin, select one of the following:

- [Start the Applications Manager Client](#).

Figure A. Links on the Intro page.

From this page you can launch the Applications Manager client in one of a few ways as described in the table below.

To open the Applications Manager client using:	Click the following link:
Java WebStart <i>without</i> support for loading Rapid Automation solutions or running Web Service solutions	Start the Applications Manager Client under the Java WebStart section.
Java WebStart <i>with</i> support for loading Rapid Automation solutions and running Web Service solutions	Start the Applications Manager Client (fully featured) under the Java WebStart section.

To open the Applications Manager client using:

The Java Plugin *without* support for loading Rapid Automation solutions or running Web Service solutions

Click the following link:

Start the Applications Manager Client under the Java Plugin section.

If you have the AppMaster add-on product, you can also open the AppMaster client from this page. For more information on AppMaster, see topic *1.14 Getting More with Applications Manager Add-on Products*.

Creating Shortcuts

If you use Java WebStart, which is recommended, you can create desktop and start menu shortcuts by selecting an option on the **Advanced** tab of the **Java Control Panel** window. You access the **Java Control Panel** window by selecting **Java** from the Windows Control Panel.

The Applications Manager Signed Certificate

UC4 provides a signed security certificate with its Applications Manager Java client. By granting the certificate when you first launch the Applications Manager Java client, you can bypass the need to set up an individual Java security policy file for each user. This certificate guarantees that the Applications Manager applet code is tamper-free.

When you first launch Applications Manager, a **Java Plug-in Security Warning** window is displayed. You are asked to either grant or deny a signed certificate provided by UC4 Software, Inc., asserting that the Applications Manager application code is safe to download to your system.

The certificate also gives you access to clipboard functionality and user configuration files. If you choose to deny the certificate, you will have to modify the policy file permissions for each of your client users to use the clipboard for capturing information for support. Notice that the user can choose to grant the certificate for the current session only, or to grant it always. If the certificate is granted always, the user will not have to go through this security check each time an Applications Manager session is launched.

Launching Applications Manager from the Command Line

If you are running on a console or through an X-Windows enabled terminal, you can type **appworxj** (or in Motif, **startso client**) to launch Applications Manager. When you launch the client from the command line, you won't be able to use hyperlinks in task documentation.

Accessing the Client Through a Firewall

If you will be accessing the Applications Manager client through a corporate firewall, you must open the appropriate ports, and specify those ports in the **Options.properties** file on the host machine. For details, see *2.2 Configuring the Applications Manager Client* in the *Installation Guide*.

1.13 Logging on to Applications Manager

To log on to Applications Manager, enter your user name and password and select OK.

When you launch the Applications Manager client, it displays the **Logon** window shown in Figure A.

Logging On

To log on to the Applications Manager client:

1. At the **Logon** window, enter your Applications Manager user name and password, and select an automation engine from the drop-down list.

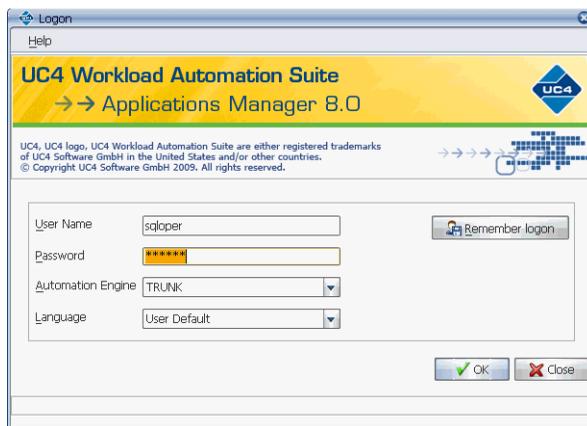


Figure A. The Logon window

User names are not case sensitive, but passwords are.

Note: If you do not know your user name and password, check with your Applications Manager administrator.

2. To have Applications Manager remember your user name and automation engine, select the **Remember logon** button.
3. Select the automation engine you wish to log into. For information on adding additional automation engines to this drop-down list, see topic *1.5 Accessing Multiple Applications Manager Instances from One Client* in the *Administration Guide*.
4. Select a language, or accept 'User default'. For information on languages, see topic *1.6 Translating Languages* in the *Administration Guide*.
5. To accept the entered information and log on to Applications Manager, click **OK**.

Note: If you have a large number of output files or tasks in the Backlog, Applications Manager will display a message alerting you that the display has been truncated.

When you log out of Applications Manager, the following settings are remembered the next time you log back in:

- The size and position of **Explorer** and **Backlog Gantt View** and Dashboard windows.
- The size and position of the main **Applications Manager** client window
- The content pane of the **Explorer** window (if open)
- Whether a saved Backlog/History Filter was selected

Receiving RmiServer Error Broadcasts

If the **Receive RmiServer Error Broadcasts** user option is assigned to your Applications Manager user, the **RmiServer Errors** window might pop up with one or more errors when you log in.

When the **Receive RmiServer Error Broadcasts** user option is assigned to a user, any RMI errors will be displayed in a pop-up window as they occur. Additionally, if any RMI errors occurred since the last time the RMI server was started, the last ten errors will be displayed in a pop-up window each time the user logs on.

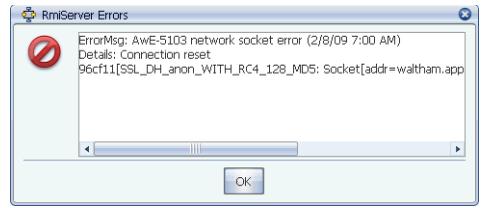


Figure B. The RmiServer Errors window

Note: If you have the DBA user group, you can clear the RMI errors without stopping the RMI server by selecting **Clear RMI Errors** from the **View** menu on the Applications Manager Desktop.

For more information on user options, see topic *3.2.1 Setting User Options* in the *Administration Guide*.

Re-Logging on to Applications Manager

There may be times when you want to log on to Applications Manager under a different user name or connect to a different automation engine. To change your logon from the desktop, go to the **File** menu and select **Re-Login**. You will have to re-enter your password when you re-log in, unless the **Disable clearing of login passwords on re-login** automation engine option is checked. For more information on automation engine options, see topic *4.4 Setting Automation Engine Options* in the *Administration Guide*.

Changing Your Password

You can change your password at any time. Your Applications Manager administrator can also set your password to expire after a certain period of time.

To change your Applications Manager password go to the **Options** menu on the Applications Manager desktop and click **Change Password**.

1.14 Getting More with Applications Manager Add-on Products

Your license key determines whether the Graphical Analysis Package, AppMaster, Web service, and Java Message Service add-on products are included with your Applications Manager automation engine/agent instance.

The following add-on features can be purchased with Applications Manager:

- The Graphical Analysis Package
- AppMaster
- Web services support
- Java Message Service support

These are sold separately. Your license key determines whether these add-on features are included with your Applications Manager automation engine/agent instance.

Graphical Analysis Package Features

A license key with the Graphical Analysis Package Features includes the following features:

- **History Gantt View:** Displays the components of a process flow in History and how they executed.
- **Graphical Forecast:** Displays scheduled jobs and process flows in a Gantt chart format.
- **Backlog Gantt View:** Displays the contents of the Backlog in a real-time Gantt chart format. You can take actions on tasks or view or edit their details.
- **Dashboard:** Provides information about system performance, including:
 - **Backlog Distribution:** Displays the percentage of tasks in the Backlog by status.
 - **Workload Balancing:** Displays the percentage of running tasks by agent.
 - **Progress of Day:** Displays the number of tasks scheduled for the day and the number that have completed.
 - **Agent Loading:** Displays the task count and thread capacity used for each agent.
 - **Queue Loading:** Displays the thread count and capacity used for each queue.
 - **Daily Activity:** Displays the maximum number of tasks running each hour of the day.
- **Process Flow Gantt View:** Displays the contents of a process flow in a Gantt chart format.
- **Process Flow Simulation:** After you have created a process flow, you can check to see if the components will execute in the correct order by running a process flow simulation. When you run a simulation, Applications Manager steps through the process flow using the predecessor links.
- **Custom Reports:** You can create additional reports as Applications Manager objects to run against the Applications Manager database or other databases.

- **Applications Manager History Analysis Reports:** With the purchase of the Graphical Analysis Package, you receive several pre-defined task history reports. These reports are referred to as Applications Manager History Analysis or AHA reports.

AppMaster Features

AppMaster is an add-on product for the Applications Manager product. From the AppMaster window, you monitor one or more views of any combination of the following as defined on your system:

- Automation engines
- Agents
- Tasks by application

To use AppMaster, you must have the same version of Applications Manager on all automation engines and all processes must be running for all automation engines. Additionally, the **Masters.properties** file must be configured for each automation engine you wish to work with. For more information, see topic *12.6 Configuring Masters.properties for AppMaster* in the *Administration Guide*.

Web Service Features

Applications Manager offers two Web service solutions.

- External Web services
- Internal Web services

Each solution is its own add-on product you can purchase.

Applications Manager can execute external Web services. With Applications Manager, you can create Web service logins and calls to methods. You define calls to the methods using substitution variable definitions and a Web service data type. Once defined, you invoke a method by calling its subvar in a prompt or condition.

Using Applications Manager Web services, external prompts can retrieve a variety of information from Applications Manager and perform the most common operations functions externally.

For more information on Web services, see chapter *17: Working with Web Services* in the *Development Guide*.

Java Message Service Features

The Java Message Service (JMS) allows you to develop business applications that asynchronously send JMS messages to queues or topics. It defines a common enterprise messaging API that is designed to be easily and efficiently supported by a wide range of enterprise messaging products. In Applications Manager, you can send JMS messages with conditions and retrieve messages from other applications as Applications Manager subvars. For more information on JMS support, see chapter *18: Sending and Retrieving JMS Messages* in the *Development Guide*.



Activating Add-on Products

The Graphical Analysis Package, AppMaster, and JMS are installed as part of the Applications Manager product. Web services require additional install components, which are included as an option for a standard Applications Manager automation engine install/upgrade. AppMaster, JMS, and Web services require configuration before they can be used.

To use any of these add-on products, you must have a valid product key. For information on purchasing Applications Manager add-on products, contact your UC4 account representative or UC4 Support.

2

Requesting Jobs and Process Flows

2.1 Introduction to Requesting Jobs and Process Flows	36
2.2 Requesting Jobs and Process Flows	38
2.3 Submitting Jobs and Process Flows	40

2.1 Introduction to Requesting Jobs and Process Flows

You can request jobs and/or process flows on an ad hoc basis. After requesting one or more jobs/process flows, you can view their statuses from the Explorer window.

There may be times when you want to run tasks outside of a set schedule. You can submit individual jobs and process flows from the **Requests** window. We refer to these as “ad hoc” requests.

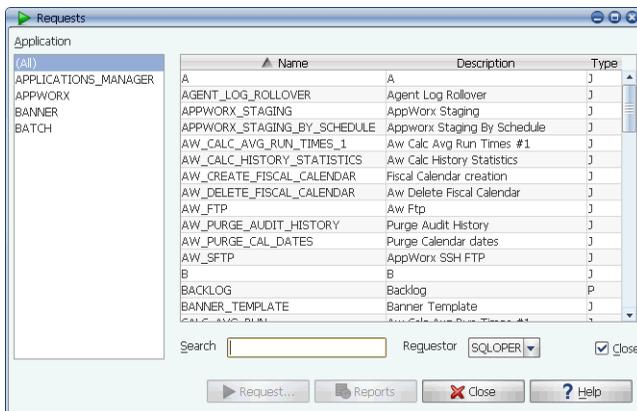


Figure A. Select one or more jobs or process flows and click Request, or simply double-click a single job or process flow to request it.

Requesting and Submitting Jobs and Process Flows

The ability to request jobs and process flow on an ad hoc basis offers a useful way to request tasks that have not been scheduled ahead of time.

When requesting jobs and process flows, you use the following two windows:

- The **Requests** window shown in Figure A is used to select one or more jobs/process flows.
- The **Submit** window shown in Figure B is used to complete prompts, select options, and submit the requested jobs and process flows to the Backlog.

When you request tasks, you can set the start date and time, queue, designated output device, send option, number of copies, and output function (LOG, PRINT, or STORE). You can also enter values to customize a job or process flow if prompts have been defined.

The screenshot shows the 'Submit' window with the following details:

- Tabs:** FORECAST (selected), FTP, TEST_MODULE
- Task Name Suffix:** [Empty text box]
- Description:** Dally Forecast
- Prompts:**
 - Start Date Time: 20090205105649
 - End Date Time (default is 1 day past start date): [Empty text box]
 - Max Depth: 20
 - Minimum Schedule Units: DAYS
- Options:**
 - Send To: [Empty dropdown]
 - Send Option: [Empty dropdown]
 - Output Function: STORE
 - Copies: [Empty text box]
 - Queue: BATCH
 - Agent: TRUNK
 - Requestor: SQLOPER
 - Start Date: 02-05-2009 10:56:49 PST
 - Hold:
- Buttons:** Submit & Close, Submit, Close, Help

Figure B. The Submit window

Checking Task Statuses

After submitting a job or process flow, you can view its status in the Backlog and History. For information on the Backlog and History, see chapter 4: *Monitoring and Managing Tasks in Explorer*.

Viewing Output

After a job executes, you can view and print output online using the **File Viewer** window. You can access the **File Viewer** window from the **Explorer**, **Backlog Gantt view**, and **Output** windows. For information on viewing and printing output, see chapter 3: *Viewing and Printing Output*.

Re-Requesting Tasks from History

To re-request a task listed in the History pane of the **Explorer** window, right-click the entry and select the **Request** option. Applications Manager lists the selected job or process flow on a tab in the **Submit** window.

When you re-request a process flow component this way, it will run with the same prompt values as the selected entry in History. All other settings, including alias name, conditions, predecessors, output settings, and queues will use the values set in the job definition.

2.2 Requesting Jobs and Process Flows

To request jobs and process flows, open the Requests window, select one or more jobs and/or process flows, and click Request, or simply double-click to submit a single job or process flow. The selected jobs and process flows are displayed in the Submit window where you can set options and parameters.

The **Requests** window offers a quick and easy way to request jobs and process flows.

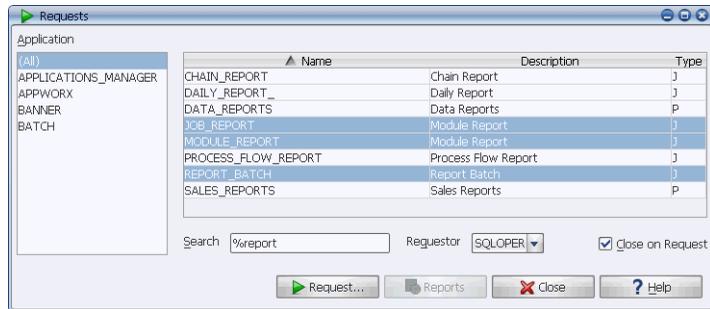


Figure A. The Requests window

Procedure

To request one or more jobs from the **Requests** window:

1. Open the **Requests** window shown in Figure A by doing one of the following:
 - Open the **Activities** menu and select **Requests**.
 - Select the Requests icon from the toolbar.
2. If appropriate, select an application from the **Application** list box on the left side of the screen.

Applications specify a group of jobs and process flows. The application you select determines the jobs and process flows displayed in the table. Only the applications and jobs assigned to you via user groups will be displayed.

3. Select one or more jobs from the list of jobs and process flows on the right side of the screen. To select more than one object, use Shift-Click or Ctrl-Click.

When selecting a job/process flow, you can type the first few letters of its name in the **Search** field and Applications Manager will find it. The **Search** field accepts valid regular expressions. For information on the syntax for regular expressions, see *Appendix A: Regular Expression Tables* in the *Development Guide*.

Note: You can double-click to quickly request a single job or process flow.

In Figure A, three jobs are selected.

4. If the **Requestor** field is active, you can select the Applications Manager user that will be assigned to the job/process flow.
You must have the **Select Requestors** user option assigned to you by your Applications Manager administrator to select a different user in this field.
5. To have the Request window automatically close upon request, check the **Close on Request** box.
6. To request the job(s), click **Request**.

Applications Manager opens the **Submit** window and displays the selected items as tabs (see Figure B). Each job can be viewed by selecting its tab. In Figure B, three jobs have been requested: JOB_REPORT, MODULE_REPORT, and REPORT_BATCH.

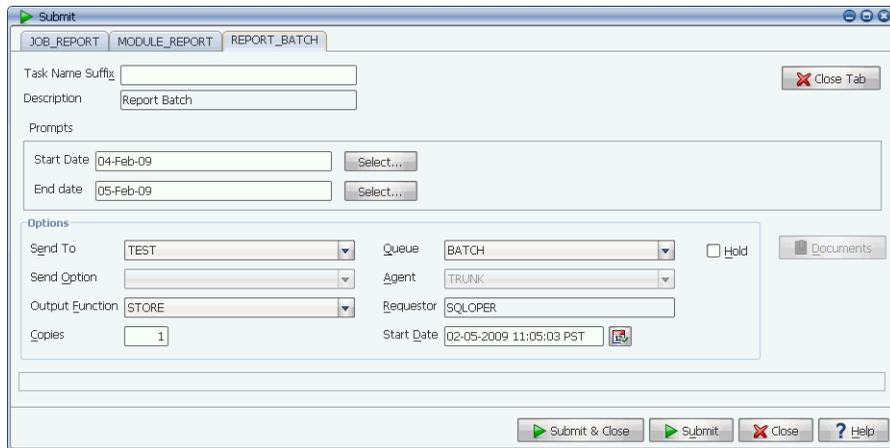


Figure B. The Submit window

If any jobs or process flows you select have agent groups assigned to them with application agents, you will be prompted in a pop-up window to select which agent you want to use to validate prompts. You will still be able to select the agent or agent group for these tasks to run on from the **Submit** window.

Next Step

After requesting one or more jobs and/or process flows, the next step is to enter prompt values, select options, and submit. For more information, see topic *2.3 Submitting Jobs and Process Flows*.

2.3 Submitting Jobs and Process Flows

Before you submit a job or process flow, you can specify values for prompts and options such as output settings, queues, agents, and start date.

After requesting jobs and process flows, they are displayed in the **Submit** window shown in Figure A. You can enter values for the prompts and options before you submit the jobs and process flows.

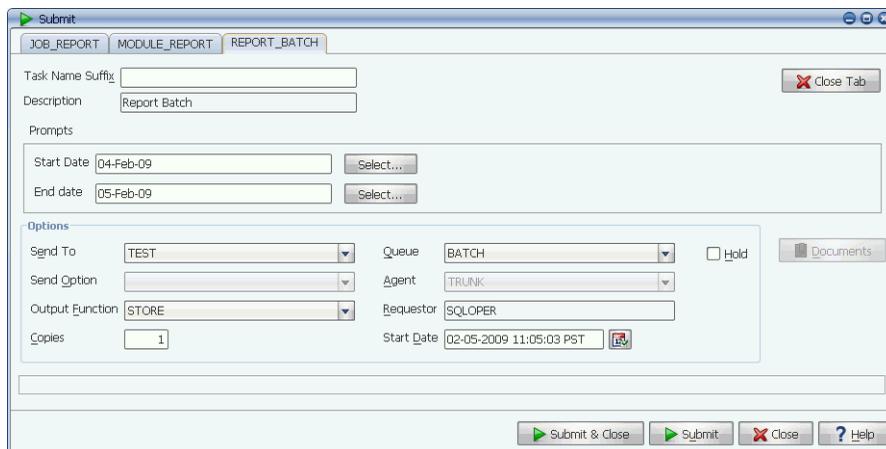


Figure A. You can respond to prompts and set the Options to control output, queues, agents, start date, and more.

Procedure

To respond to prompts and submit options:

1. Respond to the prompts in the **Prompts** box. Prompts are defined by an Applications Manager developer and are specific to the job or process flow. They are most often used to pass values to the program being run by a job. When a prompt includes a **Select** button as shown in Figure A, you can click it to select a single value or multiple values from a list of options (depending on the job/process flow definition).

Selecting values from lists helps to eliminate data entry errors. For information on selecting options from a list, see topic *1.3 Working in the Applications Manager Windows*.

2. If the **Send To** option is active, select an output device from the drop-down list.

The output devices displayed in the list are determined by the output group assigned to the job or process flow. If the **Send To** option is not active, an output group was not assigned to the job/process flow. You can still run the job/process flow and view output online, but the output will not be sent to an output device.

3. If the **Send Option** is active, select an option from the drop-down list.
The **Send Option** will be active if an output option is defined for the output device you select. For more information, see topic *2.6 Adding Output Options to Output Interface Definitions* in the *Administration Guide*.
4. Select an output function from the **Output Function** drop-down box. The output function determines how output is handled. With any of these settings, the application output or report files and the system output files are viewable from the **Explorer** window. There are three choices:
 - LOG: Legacy setting that should not be used unless you need to use the **Output** window rather than the **Explorer** window. For jobs that have the output function set to LOG, Applications Manager loads all output or report files in the **Output** window every time you log into the client. This can take several seconds or minutes. If more than 500 files are loaded, an alert will be displayed. Therefore, if you are not using the **Output** window (that is, you view output from History instead of the **Output** window), you should use the STORE setting.
 - PRINT: The output is printed according to the output settings specified on this tab.
 - STORE: The output is not printed.
5. If you are printing and want more than one copy of the output generated by the task, enter a value in the **Copies** field.
6. Select a queue from the **Queue** list box.
The **Queue** list box will be active only if you have been assigned the **Select Queues For Requests** user option by your Applications Manager administrator. If you have not been assigned this option, the **Queue** list box will be read-only, and will list only the default queue of the job.
7. If you are requesting a job that was assigned to an agent group (or a process flow assigned to a multi-execution agent group), you will be able to select a specific agent from the **Agent** drop-down list. For information about which agents components in process flows run on, see topic *4.4 How Agent Assignments are Handled for Process Flow Components* in the *Development Guide*.
8. The **Requestor** field is read-only and shows the user name that is assigned to the task. This name will be displayed in the Requestor columns in the Backlog and History.
9. To set a different start date and time, place the mouse cursor in the **Start Date** field and enter a new date or time. Or, click the button to the right of the field to open a window where you can select the date and time.

When entering start times, you can include time zone abbreviations. For more information on time zones, see topic *4.4 Setting Automation Engine Options* in the *Administration Guide*.

If you set the date and time forward, the task status in the Backlog will be shown as DATE PENDING. Components of a process flow in DATE PENDING status will show as STAGED or STAGED_PW status (depending on the components' predecessor requirements). If you set the date or time to a time that has already passed, the task will be eligible to run immediately.

You can pre-date the start date of this job or process flow to meet the predecessor requirements for tasks waiting in the Backlog from a previous virtual day.



10. If you want the task to go into a HOLD status when it is submitted to the Backlog, you can select the **Hold** option. The task will stay in the Backlog with a HOLD status and not run until you reset it.
11. If documentation has been created for the job, you can view it by clicking the **Documentation** button.
12. When you have entered the prompt values and set the options, you are ready to click one of the following to submit the job or process flow:
 - To automatically close the **Submit** window after it the job is submitted, click the **Submit & Close** button.
 - To keep the **Submit** window open, click the **Submit** button. After you submit the job or process flow this way, Applications Manager displays a message in the status bar (see Figure B). If you submit a large process flow the message will read, ‘Task submission in progress: run_id = <run ID number>’ until all components of the process flow have been placed into the Backlog. The **Close** button will be grayed out until the task is in the Backlog. Once the task is in the Backlog the message will read, ‘Task was Successfully submitted run_id = <run ID number>’.

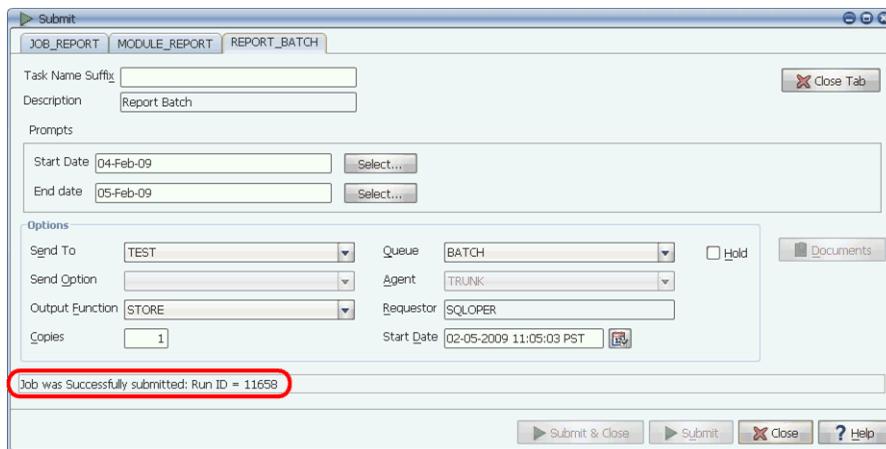


Figure B. A message will show you that the task was submitted successfully and give you the run_id.

Removing Tabs for Jobs and Process Flows from the Submit Window

If there is more than one tab in the **Submit** window, you can remove the tab by selecting it and clicking **Close Tab**. To close the **Submit** window and all tabs, click **Close**.

Invalid Prompts

After you click **Submit**, Applications Manager checks the prompt values. If the values you assigned to prompts are invalid, Applications Manager will display an error message. You can correct the values and then submit the job or process flow.

Adding a Suffix to a Job or Process Flow Name So Predecessor Links Are Not Satisfied

To add a suffix to a job or process flow name, enter the suffix in the **Task Name Suffix** field. The job or process flow will run with an underscore followed by the suffix at the end of its name. This will prevent the request from satisfying any predecessors, since the name is changed.

The **Task Name Suffix** field will only be available if you have been assigned the **Set Task Name Suffixes** user option by your Applications Manager administrator.

3

Viewing and Printing Output

3.1 Introduction to Viewing and Printing Output	46
3.2 Working with the Output Window	48
3.3 Querying the Output Window	50
3.4 Viewing Output Files with the File Viewer	54
3.5 Printing, FTPing, and Emailing Output Files	56
3.6 Opening Output Files with Other Applications	58
3.7 Sharing File Associations with All Applications Manager Users	60

3.1 Introduction to Viewing and Printing Output

Using the File Viewer, you can view output and print it to a local or system output device.

One of the most unique features of Applications Manager is its ability to capture output from tasks and make it available for printing and viewing online. Online viewing gives you immediate access to reports as soon as they have been generated. Applications Manager captures both the log file of the task and any output generated by the task. The output generated by the task may exist in the **out** directory where the automation engine is installed, or in a directory on another server associated with the application. Where output is registered is determined by the program type script associated with the job. For more information on registering output, see chapter 13: *Run-time Extensions and Environment Variables* in the *Development Guide*.

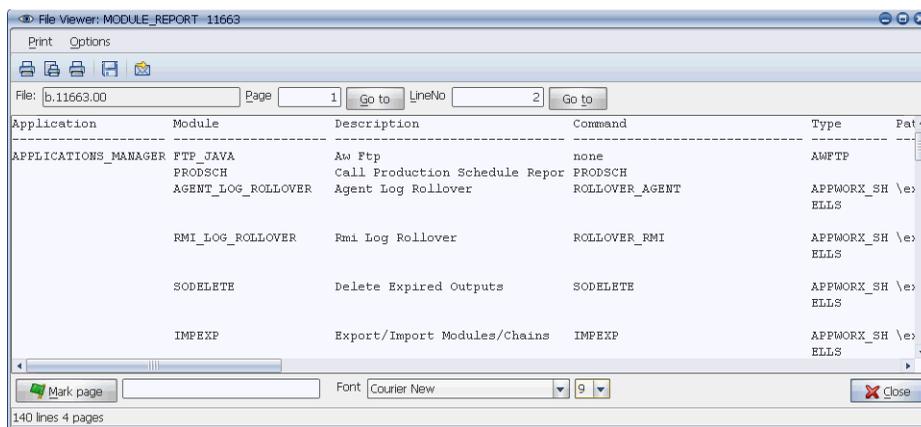


Figure A. You can view reports using the File Viewer or another designated viewer.

After you submit a task and it executes, you can view the output as plain text, HTML, or rich text format using the **File Viewer** window shown in Figure A. You can also use an alternate viewer using file associations. For information on setting file associations, see topic 3.6 *Opening Output Files with Other Applications*. Output can be printed to a local or system output device.

Opening the File Viewer Window

You can access the **File Viewer** window from:

- The **Explorer** window.
- The **Output** window.

The **Explorer** window is used to monitor and manage Applications Manager tasks, as well as agents and queues. To open the **File Viewer** window from the **Explorer** window, right-click a task in the **Backlog** or **History** and select **Output** from the pop-up menu. For more information on viewing output from the Explorer window, see topic *4.10.8 Task Output Files: Viewing*.

The **Output** window provides access to task output for users who have not been given access to the **Explorer** window. To open the **File Viewer** window from the **Output** window, select a task and click the **View** button. For more information on viewing output from the **Output** window, see topic *3.2 Working with the Output Window*.

Querying for Tasks

You can query **History** in the **Explorer** window and you can query the **Output** window. You can search for specific tasks by criteria such as job name, process flow, agent, and requestor. For more information on querying, see topics *5.2 Querying for Tasks in History* and *3.3 Querying the Output Window*.

Viewing Output in Other Applications

After a task has completed, you can view the output in the **File Viewer** window as shown in Figure A. You can also associate types of files with other viewers. For example, if you are generating an **.xls** file, you can have Applications Manager automatically launch Microsoft Excel as the viewer. To do this, you must specify the association in the **File Association** window. For information on setting file associations, see topic *3.6 Opening Output Files with Other Applications*.

Printing Output

After viewing a report, you can preview the printed output and print it to a local Windows printer or to an Applications Manager output device. These options are available from the **File Viewer** window's **File** menu and from the icons in the **File Viewer** and **Output** windows. For more information on printing output, see topic *3.5 Printing, FTPing, and Emailing Output Files*.

3.2 Working with the Output Window

The Output window only exists for legacy purposes. We do not suggest new users use it for any purpose. The Output window provides Applications Manager users access to task output without requiring that they have the necessary user group access to monitor and manage tasks in Explorer.

The **Output** window shown in Figure A provides access to task output for users that have not been given access to the **Explorer** window. By default, only tasks whose **Output function** was set to LOG will be displayed in the **Output** window. These tasks have a logged status. You can see printed, stored, or viewed tasks by running a query and searching for tasks with one or more of these statuses.

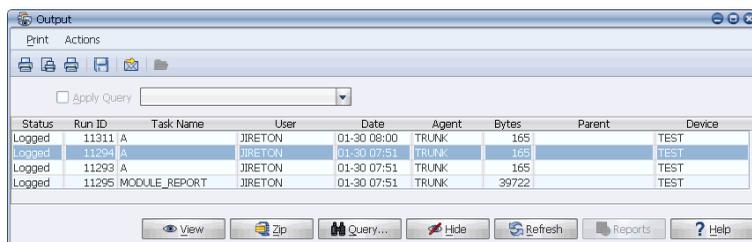


Figure A. You can view and print output from the Output window.

Opening the Output Window

Open the **Output** window shown in Figure A by doing one of the following:

- Open the **Activities** menu and select **Output**.
- Select the Output icon from the toolbar.

Output Restricted to User

By default, only the tasks you have submitted will be displayed in the **Output** window unless the **View Other Users' Output** option was assigned to you by your Applications Manager administrator. With this option set, you will have access to all outputs for the jobs you have been assigned access to regardless of the user that submitted the job. If **View SYSOUT Device Output Files** and **View Other Users' Output** are not assigned to your user, Applications Manager restricts output that is assigned to the SYSOUT output device on this window. For more information on user options, see *topic 3.2.1 Setting User Options* in the *Administration Guide*.

Output and User Groups

When you are setting up user groups, consider setting up a user group for end-users that includes access to the **Requests** and the **Output** windows only. This lets end-users submit, view, and print their specific task requests.

Working with the Output Window

The table below describes the available actions on the **Output** window.

To:	Do this:
View output	Select a task and click the View button. Applications Manager displays the output in the File Viewer window. For information on using the File Viewer window, see topic <i>3.4 Viewing Output Files with the File Viewer</i> .
Query for specific tasks	Click Query on the Output window. You can query for a specific task by a wide range of criteria such as job name, process flow name, requestor, and output status. For more information on querying the Output window, see topic <i>3.3 Querying the Output Window</i> .
Hide or unhide tasks	Select one or more files and click the Hide button. To select multiple adjacent files, use Shift+click. To select multiple non-adjacent files, use Ctrl-Click. Hiding output changes the status of the selected files to STORED and removes the listing from the viewable list. To hide all listings in this window, request the OLDPRTS job. To display hidden files, you must use the Query function and query for the STORE status. If after querying, you select a file and click Hide , its output function will be changed to LOG. If the Hide Files on the Output Window option was not assigned to you by your Applications Manager administrator, you will not be able to use the Hide button. For more information on user options, see <i>topic 3.2.1 Setting User Options</i> in the <i>Administration Guide</i> .
Refresh the display	Click the Refresh button. When you first open the Applications Manager client, tasks that have completed with a LOG status will be available for viewing without running a query on the Output window. If other tasks complete while you have a client session open, they will not automatically be added to the Output window. Refresh the display to see them.
Print output	Select a task and click the Print button or one of the Print icons. For more information on printing output, see topic <i>3.5 Printing, FTPing, and Emailing Output Files</i> .

Customizing Table Columns

You can customize many tables in Applications Manager including the table in the **Output** window. When customizing tables, you determine which columns are listed, what each column is named, and how each column is displayed.

Your Applications Manager administrator can set default values for tables. Therefore, the columns in the **Output** window may be different from what is described above. For more information, see topic *1.8 Customizing Tables*.

3.3 Querying the Output Window

To search for specific tasks in the Output window, click the Query button. You can query by jobs, process flows, requestors, output functions, output devices, agents, start times, and run IDs.

If you are looking for a specific task and the number of tasks listed in the **Output** window is overwhelming, or you wish to view output from tasks which are not listed by default, you can run a query on the **Output** window.

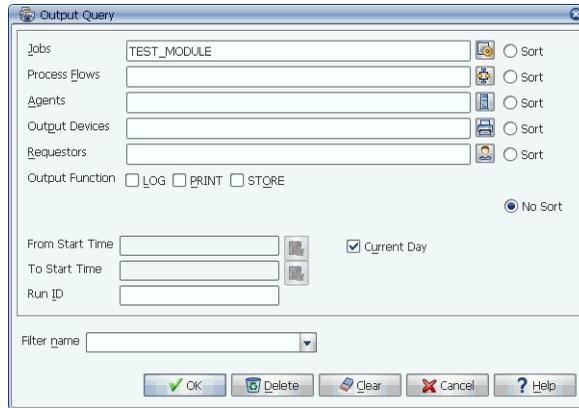


Figure A. The Output Query window

Procedure

To perform an output query:

1. Click the **Query** button on the **Output** window.

Applications Manager displays the **Output query** window shown in Figure A.

2. Select search criteria for your query.

You can use any combination of query criteria available in the **Output query** window.

The **Output query** window fields are described in Table A.

To query by one or more objects, enter values in each object's field by doing one or both of the following:

- Type in names of the objects separated by commas.
- Select from a list of objects by clicking on the object icon at the end of the field.

Table A. Output query options

Field	Description
Jobs	Searches for any task assigned to the specified job(s), including tasks that ran the job under an alias name. To query for a task run under an alias, enter the alias name.

Field	Description
Process Flows	Searches for tasks that are part of the process flow(s). The process flows themselves are not returned.
Agents	Searches for any task run on the specified agent(s).
Output Devices	Searches for any task assigned to the specified output device(s).
Requestors	Searches for any task run by the specified requestor(s).
Output Function	Searches for tasks based on the output function set for the job at run-time. There are three statuses: <ul style="list-style-type: none"> • LOG: The output is available for printing, but has not been printed. Outputs with this status appear on the Output window list by default. • PRINT: Same as LOG, but output is sent to output devices as well. • STORE: You must query to see output files with this status. System output files are typically stored.
From start time To start time	These fields accept date/time information. If the Current day option is selected, the From start time and To start time fields will be inactive.
Run ID	This field references the unique number (format: 1320.00) assigned to each task by Applications Manager. When using this field, include the decimal value where appropriate. Decimal values at the end of Run IDs indicate that tasks have been restarted. Every task has .01 added to its Run ID each time it is restarted.
Current day	The default is to query by the current day. All tasks run from midnight to the current time will be included. If you save a query with this option checked, it will be applied each time you run the saved query. The date and time of the current day are saved as an offset from the current time. That means that if you save a query for tasks run in the last two days, it will always run a query for the tasks in the last two days. There is no way to save a query from a specific date. If you uncheck this option, the From start time and To start time fields become active. You then can enter specific dates and times for the query.



3. You may select a default sort order for the query by selecting a **Sort** option.
The sort order can be overridden from the **Output** window by selecting a different column name.
4. You may also optionally save this output query to use later by entering a name in the **Filter name** drop-down box. The output query will be saved when you click **OK**.
Saved Output queries can be recalled from the **Filter name** drop-down box for History queries, Output queries, and filters of the Backlog and History.
5. Click **OK**.
Applications Manager displays a small animated window as it processes the query. Once the query is processed, Applications Manager displays the results in the **Output** window.

Using the Object Assignment Windows

When you click on an icon at the end of one of the applicable fields, Applications Manager displays the object assignment window where you can pick one or more objects to use in an output query. The windows will list only the objects to which you have user group access. Use the arrow buttons to move objects between the **Unassigned** and **Assigned** tables. For more information on assigning objects, see topic *1.3 Working in the Applications Manager Windows*.

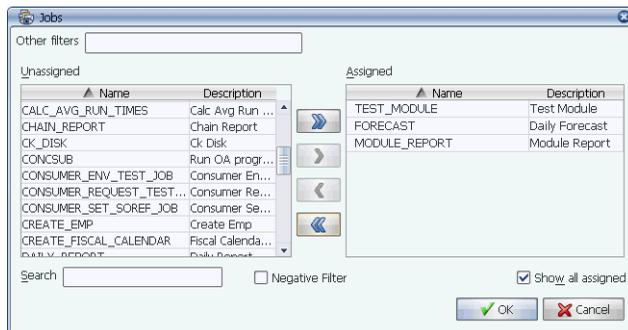


Figure B. Object assignment window for jobs

Use the **Other filters** field to enter text-based filters.

- You can enter several letters, and all objects beginning with those letters will be included.
- You can use wildcards in the text. You can use the **_** wildcard to represent a single character, and the **%** wildcard to represent an unlimited number of characters.
- You can include negative filters to exclude tasks from the search using the **!** character. For example, entering **!AW%** will exclude tasks with the letters **AW** together in their name.

Any text entered in the **Other filters** field will be included in the appropriate field on the **Select filters** window.

Use the **Search** field to query the **Unassigned** table. You can apply the search criteria to the **Assigned** column as well by unselecting the **Show all assigned** option.

Viewing Query Results

When you click **OK** in the **Output query** window, Applications Manager runs the search and displays the queried results. The **Apply Query** check box will be checked as shown in Figure C. To clear the query, uncheck the **Apply Query** box. You can view the queried results again by rechecking the **Apply Query** box. To apply a saved output query, select it from the drop-down box.

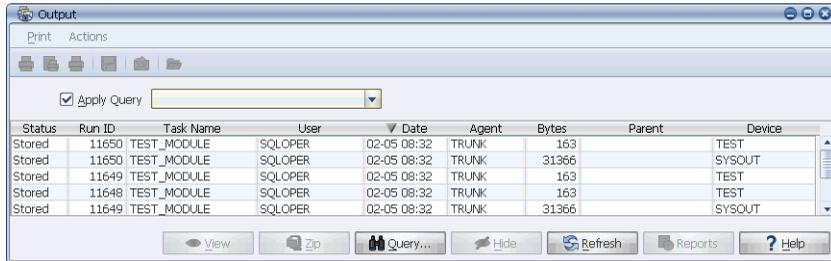


Figure C. The Output window with the Apply Query check box checked

3.4 Viewing Output Files with the File Viewer

You can access the File Viewer from the Explorer window and the Output window.

After a task executes, you can view its output online from the Applications Manager client. This means you can view a report as soon as it is available rather than waiting for printed output to be distributed. Online viewing also is useful if you are trying to debug a new program or if the output is such that you do not need a hard copy.

You can enter page and line numbers for viewing, and bookmark pages. Output is automatically displayed in one of three formats: plain text, HTML, or rich text format.

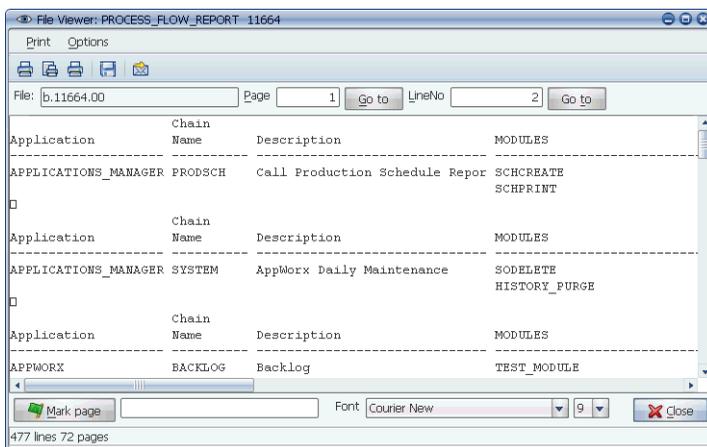


Figure A. View using the File Viewer

You can use the **File Viewer** window shown in Figure A, or an alternate viewer. For information on viewing output with alternate viewers, see topic *3.6 Opening Output Files with Other Applications*.

Viewing Output Files

To view output, open the **File Viewer** window shown in Figure A by doing one of the following:

- From the **Explorer** window, right-click a task in the Backlog or History and select **Output** from the pop-up menu. For more information on accessing the **File Viewer** window from Explorer, see topic *4.10.8 Task Output Files: Viewing*.
- From the **Output** window, select a task and click the **View** button. For more information on accessing the **File Viewer** window from the **Output** window, see topic *3.2 Working with the Output Window*.

From the **File Viewer** window, you can:

- Copy text to the clipboard with Ctrl-C.
- Go to the start or end of the output file using the Home and End keys when the output text is in focus.
- Scroll through the output by using the horizontal and vertical scroll bars.
- Close the window by pressing the Esc key.

Printing, FTPing, and Emailing Output Files

You can print, FTP, or email output from the **File Viewer** window using the print icons or from the **Print** menu on those windows. For more information, see topic *3.5 Printing, FTPing, and Emailing Output Files*.

Viewing by Page and Line Numbers

You can jump to a specific page and/or line number by entering them into the **Page** and **LineNo** fields at the top of the window and clicking the corresponding **Go To** button or pressing Enter.

Finding Specific Text

To find specific text in the output file:

1. On the **File Viewer** window, go to the **Options** menu and select **Find**.

Applications Manager displays the **Find** window shown in Figure B.



Figure B. Find window

2. Enter the text you want to find and click **Find Next**.

Check the **Match Case** check box for case-sensitive searches. Applications Manager searches run from the current location to the end of the file.

Bookmarking Pages

As you view a file, you can bookmark pages for printing by selecting the **Mark Page** button. Your marked page numbers will display in the **Pages** box located at the bottom of the screen. When you print the output, only the marked pages will be printed.

Changing Output Formats and Text Size

Applications Manager automatically selects HTML or rich text format styles based on each file's extension (**.htm**, **.html**, **.rtf**). Other files default to plain text view. When using the plain text view, you can adjust the size of the text used in the display by selecting a value from the Size list box at the bottom of the viewer. This changes the size of the text in the viewer, but it does not impact the size of the text used when the report is printed. Output can be viewed with an alternate viewer if a file association has been defined. For information on setting file associations, see topic *3.6 Opening Output Files with Other Applications*.

Viewing the End of Files

To view the end of a text file, go to the **Options** menu on **File Viewer** window and select **Tail**. The tailing option enables operators to observe the most recent end of file every 10 seconds by showing the report as it is being printed to standard output. Use this function, similar to the UNIX **tail -f <filename>** command, when trying to diagnose problems.

3.5 Printing, FTPing, and Emailing Output Files

To print, FTP, or email output files from a task using the File Viewer, go to the Print menu and select an option.

You can print, FTP, or email output from the **Output Files** tab of the **Task Details** window, the **File Viewer** window, or the **Output** window using the print icons shown in Figure A or from the **Print** menu on each window.



Figure A. Print icons

Printing Output Files to an OS Printer

To print the output to an OS printer:

1. From the **File Viewer** window, go to the **Print** menu and select **Print**, or click the Print icon.

Applications Manager opens a **Print** window.

2. Select the options and click **OK**.

If you have bookmarked one or more pages using the **Mark Page** button, Applications Manager will only print the marked pages.

Printing to an Applications Manager Output Device

To print the output to any output device defined in Applications Manager:

1. From the **File Viewer**, go to the **Print** menu and select **Send To**, or click the Send To icon.

Applications Manager displays the **Choose an Output Device** window shown in Figure B.

2. Select an output device, copies, and output option and click **OK**.

Applications Manager prints to the output device you selected.

If you have bookmarked one or more pages using the **Mark Page** button, Applications Manager will only print the marked pages.



Figure B. Choose a system output device

Note: To use the system print option, you must have user group access to the output device you wish to print to and at least one output group it is assigned to. If you do not think you have the necessary user group access, see your Applications Manager administrator.

Previewing a Print Task

To preview a print task, go to the **File** menu and select **Print Preview**, or click the Print Preview icon.

FTPing an Output File

You can send an output file to your client machine or a network location using the FTP function. To FTP a file:

1. From the **Actions** menu, select **FTP** or click the FTP icon.
Applications Manager displays the **FTP** window shown in Figure C.
2. Select the directory where you want the file placed.
3. Enter the name you want assigned to the file.
4. To initiate the transfer, click **Save**.

You cannot FTP files if the **FTP Output Files** option was not assigned to you by your Applications Manager administrator. For more information on user options, see *topic 3.2.1 Setting User Options* in the *Administration Guide*.

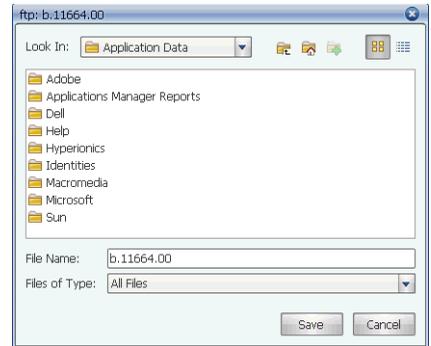


Figure C. FTP window

Emailing an Output File

You can email output files without having to define an email output device. To email output files to one or more addressees, go to the **Print** menu and select **Email**, or click the Email icon. Applications Manager opens an **Email** window shown in Figure D.

Separate multiple email addresses with a space or semicolon. To select from emails assigned to Applications Manager users, click the **Select** button. Applications Manager opens a window where you can select the email addresses. You can decide whether to add the output file as an attachment and include additional text using the box at the bottom of the screen. For information on adding email addresses to Applications Manager users, see *topic 3.2 Defining Users* in the *Administration Guide*.

You also have the option to send the output file as an attachment, include it in the message body, attach it as a PDF file, or include it in an attached zip file.

In order to send emails, you must specify email settings for the Applications Manager automation engine/local agent. For information, see *topic 4.7 Specifying Email Settings for the Automation Engine* in the *Administration Guide*.



Figure D. Email window

3.6 Opening Output Files with Other Applications

You can associate different types of files with specific applications so that Applications Manager automatically uses the specified application to view certain files. Additionally, you can manually select an application when you want to view any output file if you have specified a file association for it.

There may be times that you want to view output files in a different application rather than in the Applications Manager **File Viewer** window. To do this you define a file association. You might want to open files in another application if the files are too large to view with the **File Viewer** window, or if the file includes formatting that only a specific application will recognize. For example, if a report has a **.xls** extension, you can associate the file with Microsoft Excel. From the associated application, you can save the output file to your PC. You define file associations using the **File Association** window shown in Figure A.

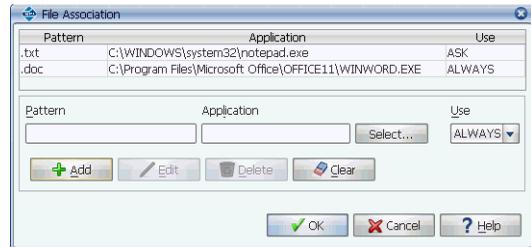


Figure A. File Association window

After you create a file association, files with corresponding names will always, sometimes, or never open with the associated application when you view the output from the Applications Manager client, depending on the file association definition. You will also have the option to open any output file with the application you created the file association for.

The file association(s) you create are associated with your user login on your PC. They are not global settings unless you share file associations for all users as described in topic 3.7 *Sharing File Associations with All Applications Manager Users*.

Adding File Associations

To add an output file association:

1. On the desktop, go to the **Options** menu and select **File Associations**.

Applications Manager opens the **File Association** window shown in Figure A.

2. Enter a file pattern in the **Pattern** field.

The most common pattern for file associations are file extensions (for example **.xls**).

The **Pattern** field accepts valid regular expressions. Note that regular expressions are case sensitive. For information on syntax accepted by regular expressions, see *Appendix A: Regular Expression Tables* in the *Development Guide*.

3. In the **Application** field, type the name of the executable file for the application you wish to associate with the file type, or use the ... button to browse for it on your PC.

- Select an option from the **Use** field.

To:	Select:
Always open file type in the associated file viewer	Always
Prompt before opening the file in the associated file viewer	Ask
Never use the associated file viewer or temporarily disable the association	Never

- Click **Add**.

Applications Manager displays the file association in the table at the top of the screen.

- When you are finished adding file associations, click **OK** to save them.

Opening Any Output File with a File Association's Application

You can manually open any output file from the Applications Manager client by selecting the Open With icon from the **Output Files** tab of the **Task Details** window or the **Output** window. In Figure B, the Open With icon has been selected, and the **Select Program** window is open. From the **Select Program** window, you can select the application you want to use to view the selected output file.

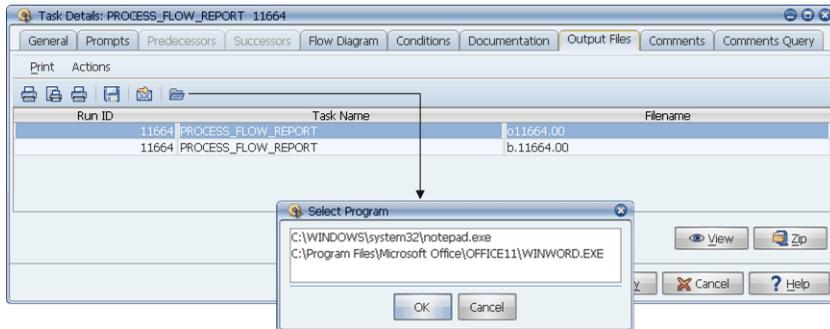


Figure B. Click the Open With icon to select an application to use to open the selected output file.

3.7 Sharing File Associations with All Applications Manager Users

If all users that log into an automation engine need to use the same file associations, you can point them to a common file.

If all users that log into an automation engine need to use the same file associations, you can point them to a common file named **fileassoc.properties**. File associations for individual users are stored in the following file:

```
C:\Documents and Settings\\fileassoc.properties
```

To assign a common file to all users, do the following:

1. Add the following line to the Applications Manager automation engine **Options.properties** file, where **N:/uc4/** is a shared directory and **fileassoc.properties** is the name of the file:

```
FileAssociations=N:/uc4/fileassoc.properties
```

You can use mapped drives or UNC paths.

For example:

```
FileAssociations=//rs62/ndrive/uc4/fileassoc.properties
```

Also, / should be used instead of \. Using backslashes will prevent properties from being saved.

The location for the **Options.properties** file is:

```
UNIX: $AW_HOME/web/classes
```

```
Windows: %AW_HOME%\web\classes
```

2. Log into the Applications Manager client and set up a file association.

Applications Manager will create the file you specified in step 1 in the directory you specified and update it with the file association information. The file association will now be globally changed for all users that have access to the drive you specified.

4

Monitoring and Managing Tasks in Explorer

4.1 Introduction to Monitoring and Managing Tasks	64
4.2 Using the Explorer Window	66
4.3 Working with the Backlog	68
4.4 Working with History	70
4.5 Backlog and History Column Descriptions	72
4.6 Focusing the Backlog Display with Explorer	74
4.7 Monitoring with the Status Bar and Object Icons	76
4.8 Troubleshooting Failed Tasks	78
4.9 Taking Actions on Tasks in the Backlog	80
4.9.1 Putting Tasks On Hold	82
4.9.2 Killing Tasks	84
4.9.3 Resetting Aborted and On Hold Tasks	86
4.9.4 Deleting Tasks	88
4.9.5 Removing All Predecessors for Tasks	90
4.10 Viewing and Editing Task Details	92
4.10.1 General Task Details: Viewing and Editing	94
4.10.2 Task Prompts: Viewing and Editing	98
4.10.3 Pending Predecessor Links: Viewing and Removing	100
4.10.4 Successors in the Backlog: Viewing	102
4.10.5 Task and Predecessors in a Flow Diagram: Viewing, Adding, and Editing	104
4.10.6 Task Conditions: Viewing and Editing	106
4.10.7 Task Documentation: Viewing	108
4.10.8 Task Output Files: Viewing	110
4.10.9 Task Comments: Adding and Viewing	112
4.11 Unsatisfying Tasks as External Predecessors in History	114
4.12 Managing ZOS Tasks	116
4.13 Viewing History in a Gantt Chart	120
4.13.1 Comparing Run Times in a Gantt Chart	122
4.14 How Applications Manager Handles System Failures	124

4.1 Introduction to Monitoring and Managing Tasks

You can monitor and manage queues, agents, and tasks with the Explorer window.

From the **Explorer** window, you can monitor and manage queues, agents, and tasks. You can check the status of queues, change queue settings, and assign queues to thread schedules to control the number of tasks the queue can process. You can check agent status, and start, stop, idle, or resume agents. You can check the statuses of tasks, restarting or killing the tasks if necessary. A sample Explorer screen displaying the Backlog and History is shown in Figure A.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	11682.01	Y	B		05-13:44	13:44	00:00:00	ABORTED	TRUNK	SQLOPER	ICONS2
BATCH	11680			ICONS2	05-13:44	13:44	00:00:36	INITIATED	APPWOR...	SQLOPER	
BATCH	11683	Y	C		05-13:44		00:00:00	PRED WAIT	APPWOR...	SQLOPER	ICONS2

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	11682	Y	B		02-05-09 13:44		00:00:00	ABORTED	TRUNK	SQLOPER	ICONS2
BATCH	11681	Y	A		02-05-09 13:44		00:00:06	FINISHED	TRUNK	SQLOPER	ICONS2
BATCH	11676			ICONS1	02-05-09 13:43		00:04:45	FINISHED	APPWORX...	SQLOPER	
BATCH	11679	Y	C		02-05-09 13:43		00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11678	Y	B		02-05-09 13:43		00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11677.01	Y	A		02-05-09 13:43		00:04:26	DELETED	TRUNK	SQLOPER	ICONS1
BATCH	11677	Y	A		02-05-09 13:42		00:03:09	KILLED	TRUNK	SQLOPER	ICONS1
BATCH	11673			SIMPLE	02-05-09 13:39		00:00:16	FINISHED	APPWORX...	SQLOPER	
BATCH	11675			B	02-05-09 13:39		00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11674			A	02-05-09 13:39		00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11672	Y		FORECAST	02-05-09 13:38		00:00:00	FINISHED	TRUNK	SQLOPER	
BATCH	11671	Y		MODULE_REPORT	02-05-09 13:38		00:00:00	FINISHED	TRUNK	SQLOPER	
BATCH	11670	Y		TEST_MODULE	02-05-09 13:38		00:00:05	FINISHED	TRUNK	SQLOPER	
BATCH	11667			SIMPLE	02-05-09 13:37		00:00:17	FINISHED	APPWORX...	SQLOPER	

Figure A. The Explorer window

The Backlog and History

Two main parts of the Explorer window that allow you to monitor and manage tasks are the Backlog and History. The Backlog is a list of tasks that:

- Are waiting to run.
- Are running.
- Have run and failed, and have stayed in the Backlog for operator intervention.

When a task leaves the Backlog, Applications Manager writes a record for it in History. History is an audit trail of all failed and completed tasks. For more information on the Backlog and History, see topics 4.3 *Working with the Backlog* and 4.4 *Working with History*.

Quick Searches for Tasks in the Backlog

You can type the first few letters of an task from the Backlog's name in the **Search** field, and Applications Manager will find it. The **Search** field accepts valid UNIX regular expressions. For example, to search for all tasks starting with the letters A and T, you would enter **[at]** in the **Search** field. For more information on syntax accepted by regular expressions, see *Appendix A: Regular Expression Tables in the Development Guide*.

Reading the Status Bar

The status bar is displayed across the bottom of the **Explorer** window. Its color alerts you to the status of the Applications Manager automation engine, agents, and tasks running in the Backlog. When the **Explorer** window is minimized, the button on the taskbar uses the same color scheme. For more information, see topic *4.7 Monitoring with the Status Bar and Object Icons*.

Customizing Explorer Tables

You can choose the columns you want displayed in the **Explorer** window and customize their order and names. For more information, see topic *1.8 Customizing Tables*.

Viewing Output Files and Task Details

You can view output files and other task details for any task in the Backlog or History. You view the task details for a task by right-clicking it and selecting an option from the pop-up menu. For more information, see topic *4.10 Viewing and Editing Task Details*.

Staging Tasks in the Backlog

Staging tasks in the Backlog allows you to edit task details before the tasks are scheduled to run. For more information, see chapter *6: Staging Tasks in the Backlog*.

Monitoring and Managing Queues and Agents

Queues control the flow of tasks. All tasks must pass through an Applications Manager queue to be executed.

Agents are instances of Applications Manager; an agent is installed on each machine where tasks are executed. An agent can be an automation engine's local agent, or a remote agent. The automation engine is also listed along with the agents in the **Explorer** window. You monitor and manage agents and queues from the **Explorer** window. For more information, see chapter *7: Working with Agents and Queues*.

Monitoring and Managing Tasks in the Gantt View

If you have the add-on Graphical Analysis Package, you can monitor and manage tasks in the Backlog using the Gantt View. For information on using the Gantt View, see chapter *9: Monitoring and Managing Tasks with the Gantt View*.

4.2 Using the Explorer Window

Explorer is used to monitor and manage the status of your agents, queues, and tasks running in the Backlog, and to focus the display of tasks in the Backlog.

Use Explorer to monitor and manage the status of your agents, queues, and tasks running in the Backlog, and to focus the display of tasks in the Backlog. You can preview and print the object tree, Backlog, and History.

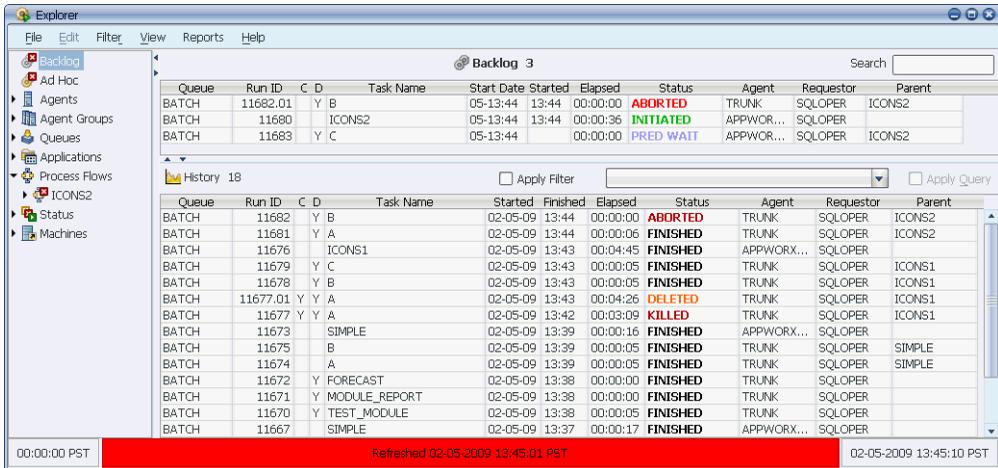


Figure A. The Explorer window includes the icon tree in the left pane.

Opening the Explorer Window

Open the **Explorer** window shown in Figure A by doing one of the following:

- Open the **Activities** menu and select **Explorer**.
- Select the Explorer icon from the toolbar.

Three Adjustable Panes

The **Explorer** window shown in Figure A includes the following three panes:

- The navigation pane on the left side of the screen provides a tree structure with selectable object icons.
- The content pane on the top right side of the screen displays information based on your selection in the navigation pane. It can show the Backlog (tasks waiting to be processed), a summary of objects selected in the object tree, an application summary, an agent summary, or a queue summary.
- The History pane on the bottom right side of the screen displays records on how tasks ran. The tasks displayed do not depend on your selection in the navigation pane.

Each of the panes can be resized by dragging the splitter bars, or clicking the splitter bar arrows.

Numbers to the right of the label for the Backlog and History indicate the number of rows currently displayed in each. Every row is counted regardless of whether it represents a job, process flow, or historical record. Some tasks may include multiple records in History. For example, a task that aborts and is reset will include two History records.

Explorer Terms

The following Explorer terms are used in this guide:

Object tree: The graphical model displayed on the left pane of the **Explorer** window.

Object icons: The icons used in the object tree to represent objects such as tasks, process flows, and queues.

Object keys: The icons to the left of the expandable objects in the object tree. You can click the object keys to show and hide objects in the tree.

Printing the Object Tree or a Table

You can preview and/or print the object tree, and the Backlog and History tables by selecting the appropriate options from the **File** menu. Figure B shows the print preview screen for a task in the Backlog in an ABORTED status.

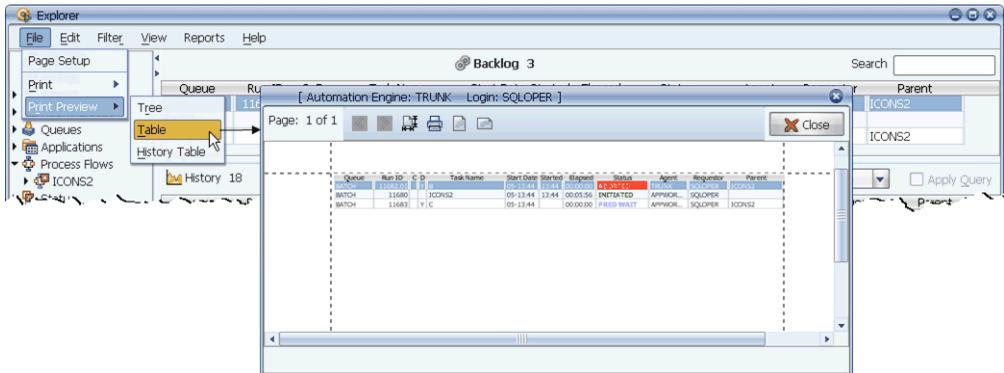


Figure B. The Print Preview window for the Backlog table.

4.3 Working with the Backlog

Clicking the Backlog object tree icon displays running tasks, aborted tasks, and tasks that have failed and remained in the Backlog for operator intervention.

Two main parts of the **Explorer** window that allow you to monitor and manage tasks are the Backlog and History.

The screenshot shows the Explorer window with two main data tables: Backlog and History. The Backlog table shows 6 rows of tasks, and the History table shows 18 rows of historical records. The status of each task is highlighted in a color-coded box.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	11682.01	Y	B		05-13:44	13:44	00:00:00	ABORTED	TRUNK	SQLOPER	ICONS2
BATCH	11685		A		05-13:59	13:59	00:00:07	RUNNING	TRUNK	SQLOPER	SIMPLE
BATCH	11680		ICONS2		05-13:44	13:44	00:15:20	INITIATED	APPWOR...	SQLOPER	SIMPLE
BATCH	11684		SIMPLE		05-13:59	13:59	00:00:08	INITIATED	APPWOR...	SQLOPER	SIMPLE
BATCH	11683	Y	C		05-13:44		00:00:00	PRED WAIT	APPWOR...	SQLOPER	ICONS2
BATCH	11686		B		05-13:59		00:00:00	PRED WAIT	APPWOR...	SQLOPER	SIMPLE

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	11682	Y	B		02-05-09 13:44	13:44	00:00:00	ABORTED	TRUNK	SQLOPER	ICONS2
BATCH	11681	Y	A		02-05-09 13:44	13:44	00:00:06	FINISHED	TRUNK	SQLOPER	ICONS2
BATCH	11676		Y	ICONS1	02-05-09 13:43	13:43	00:04:45	FINISHED	APPWOR...	SQLOPER	ICONS1
BATCH	11679		Y	C	02-05-09 13:43	13:43	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11678	Y	B		02-05-09 13:43	13:43	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11677.01	Y	A		02-05-09 13:43	13:43	00:04:26	DELETED	TRUNK	SQLOPER	ICONS1
BATCH	11677	Y	A		02-05-09 13:42	13:42	00:03:09	KILLED	TRUNK	SQLOPER	ICONS1
BATCH	11673		SIMPLE		02-05-09 13:39	13:39	00:00:16	FINISHED	APPWOR...	SQLOPER	SIMPLE
BATCH	11675		B		02-05-09 13:39	13:39	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11674		A		02-05-09 13:39	13:39	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11672	Y	FORECAST		02-05-09 13:38	13:38	00:00:00	FINISHED	TRUNK	SQLOPER	SIMPLE

Figure A. The Backlog and History in the Explorer window

Numbers to the right of the label for the Backlog and History indicate the number of rows currently displayed in each. Every row is counted regardless of whether it represents a job, process flow, or historical record. The Backlog is a list of tasks that:

- Are waiting to run.
- Are running.
- Have run and failed, and have stayed in the Backlog for operator intervention.

To view all tasks in the Backlog in the content pane on the top right side of the screen, click the Backlog icon in the object tree shown in Figure A. In the Backlog in Figure A, one task is running, some tasks are waiting in a PRED WAIT status, and one task has aborted.

Whether a task remains in the Backlog when it fails is determined by the **Stay in queue on abort** setting in its job definition.

Tasks sometimes fail by aborting, timing out, being killed, etc. When a task fails, a record is written to History under the current run ID number. If a failed task remains in the Backlog, its run ID is incremented by **.01**.

For example, in Figure A, a task with the run ID **73016** aborted and remained in the Backlog. A record of the task aborting is written to History, and the task remains in the Backlog with the run ID **73016.01**.

From the Backlog, you can:

- Take actions on tasks (see topic *4.9 Taking Actions on Tasks in the Backlog*).
- View and edit task details (see topic *4.10 Viewing and Editing Task Details*).

When a task leaves the Backlog, Applications Manager writes a record for it in History.

4.4 Working with History

History is an audit trail of completed and failed tasks displayed on the bottom of the Explorer window.

Two main parts of the **Explorer** window that allow you to monitor and manage tasks are the Backlog and History.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	11682.01	Y	B		05-13:44	13:44	00:00:00	ABORTED	TRUNK	SQLOPER	ICONS2
BATCH	11685		A		05-13:59	13:59	00:00:07	RUNNING	TRUNK	SQLOPER	SIMPLE
BATCH	11680		ICONS2		05-13:44	13:44	00:15:20	INITIATED	APPWOR...	SQLOPER	SIMPLE
BATCH	11684		SIMPLE		05-13:59	13:59	00:00:08	INITIATED	APPWOR...	SQLOPER	SIMPLE
BATCH	11683	Y	C		05-13:44		00:00:00	PRED WAIT	APPWOR...	SQLOPER	ICONS2
BATCH	11686		B		05-13:59		00:00:00	PRED WAIT	APPWOR...	SQLOPER	SIMPLE

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	11682	Y	B		02-05-09 13:44	13:44	00:00:00	ABORTED	TRUNK	SQLOPER	ICONS2
BATCH	11681	Y	A		02-05-09 13:44	13:44	00:00:06	FINISHED	TRUNK	SQLOPER	ICONS2
BATCH	11676		ICONS1		02-05-09 13:43	13:43	00:04:45	FINISHED	APPWORX...	SQLOPER	ICONS2
BATCH	11679	Y	C		02-05-09 13:43	13:43	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11678	Y	B		02-05-09 13:43	13:43	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11677.01	Y	A		02-05-09 13:43	13:43	00:04:26	DELETED	TRUNK	SQLOPER	ICONS1
BATCH	11677	Y	A		02-05-09 13:42	13:42	00:03:09	KILLED	TRUNK	SQLOPER	ICONS1
BATCH	11673		SIMPLE		02-05-09 13:39	13:39	00:00:16	FINISHED	APPWORX...	SQLOPER	SIMPLE
BATCH	11675		B		02-05-09 13:39	13:39	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11674		A		02-05-09 13:39	13:39	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11672	Y		FORECAST	02-05-09 13:38	13:38	00:00:00	FINISHED	TRUNK	SQLOPER	SIMPLE

Figure A. The Backlog and History in the Explorer window

Numbers to the right of the label for the Backlog and History indicate the number of rows currently displayed in each. Every row is counted regardless of whether it represents a job, process flow, or historical record. Some tasks may include multiple records in History. For example, a task that aborts and is reset will include two History records.

History is an audit trail that includes records for:

- All completed tasks and occurrences of task failure(s).
- RMI servers or agents being started, stopped, or having errors.
- The **AgentService** processes being stopped.

How long task history records are archived in the Applications Manager database is determined by the prompt setting for the **HISTORY_PURGE** job, which is part of the **SYSTEM** process flow. The default value is 60 days. Your Applications Manager administrator is responsible for setting this value.

The **Explorer** window includes a partial view of History in its lower right pane.

The amount of History displayed when any user logs in to the client is determined by the **HistoryRetentionTime** setting in the **Options.properties** file. For more information, see topic *12.4 Options.properties File* in the *Administration Guide*.

How long records are displayed in the History pane while a user is logged into an Applications Manager session is determined by:

- Your **History Display Minutes** desktop setting. For more information, see topic *1.4 Editing General Desktop and ToolBar Settings*.
- Whether you have a History query activated. For more information, see *5.2 Querying for Tasks in History*.

From History, you can:

- Unsatisfy tasks as predecessors (see topic *4.11 Unsatisfying Tasks as External Predecessors in History*).
- View task details (see topic *4.10 Viewing and Editing Task Details*).
- Add comments (see topic *4.10.9 Task Comments: Adding and Viewing*).
- View History Gantt Views (with the Graphical Analysis Package, see topic *4.13 Viewing History in a Gantt Chart*).
- Re-request tasks as described below.

Re-Requesting Tasks from History

You can now re-request a single task listed in the History pane of the **Explorer** window. To do so, right-click the entry and select the **Request** option. Applications Manager lists the selected job or process flow on a tab on the **Submit** window.

When you re-request process flow components this way, they will run with the same prompt values as the selected entry in History. All other settings, including alias name, conditions, predecessors, output settings, and queues will use the settings in the job definition.

4.5 Backlog and History Column Descriptions

The default columns in the Backlog and History are described in the table below. You can customize many tables in Applications Manager including the tables in the Backlog and History.

A sample **Explorer** window showing the Backlog and History is displayed in Figure A.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	11682.01	Y	B		05-13:44	13:44	00:00:00	ABORTED	TRUNK	SQLOPER	ICONS2
BATCH	11685		A		05-13:59	13:59	00:00:07	RUNNING	TRUNK	SQLOPER	SIMPLE
BATCH	11680		ICONS2		05-13:44	13:44	00:15:20	INITIATED	APPWOR...	SQLOPER	
BATCH	11684		SIMPLE		05-13:59	13:59	00:00:08	INITIATED	APPWOR...	SQLOPER	
BATCH	11683	Y	C		05-13:44		00:00:00	PRED WAIT	APPWOR...	SQLOPER	ICONS2
BATCH	11686		B		05-13:59		00:00:00	PRED WAIT	APPWOR...	SQLOPER	SIMPLE

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	11682	Y	B		02-05-09 13:44	13:44	00:00:00	ABORTED	TRUNK	SQLOPER	ICONS2
BATCH	11681	Y	A		02-05-09 13:44	13:44	00:00:06	FINISHED	TRUNK	SQLOPER	ICONS2
BATCH	11676		ICONS1		02-05-09 13:43	13:43	00:04:45	FINISHED	APPWOR...	SQLOPER	
BATCH	11679	Y	C		02-05-09 13:43	13:43	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11678	Y	B		02-05-09 13:43	13:43	00:00:05	FINISHED	TRUNK	SQLOPER	ICONS1
BATCH	11677.01	Y	A		02-05-09 13:43	13:43	00:04:26	DELETED	TRUNK	SQLOPER	ICONS1
BATCH	11677	Y	A		02-05-09 13:42	13:42	00:03:09	KILLED	TRUNK	SQLOPER	ICONS1
BATCH	11673		SIMPLE		02-05-09 13:39	13:39	00:00:16	FINISHED	APPWOR...	SQLOPER	
BATCH	11675		B		02-05-09 13:39	13:39	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11674		A		02-05-09 13:39	13:39	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11672	Y	FORECAST		02-05-09 13:38	13:38	00:00:00	FINISHED	TRUNK	SQLOPER	

Figure A. The Backlog and History in the Explorer window

The default columns in the Backlog and History are described below. Columns unique to either the Backlog or History are noted.

Column	Description
Queue	The queue the task is running on, will run on, or has run on.
Run ID	The unique identification number Applications Manager assigned to the task. Note: Decimal values at the end of Run IDs indicate the number of times a task has either been killed or has aborted and stayed in the Backlog. Each time a task is killed or aborts and stays in the Backlog, .01 is added to the task's Run ID, and a record is added to History using the task's previous run ID.
C	Uses a Y to identify tasks that include comments.
D	Uses a Y to identify tasks that include documentation.
Task Name	The name or alias, if defined, of the task.
Start Date	The date the task started executing or is scheduled to start executing.
Started	Displayed in the Backlog. The time the task is scheduled to start executing. After a task begins executing, the time it started.

Column	Description
Finished	Displayed in History. The time the task finished executing.
Elapsed	The elapsed time the task ran.
Status	The current status of the task. For a list of status values, see <i>Appendix B: Task Status Values</i> . For status detail information that tells you why a task is in a particular status, rest the mouse pointer over the Run ID column for the task and view the Status Detail information in the Backlog Task Summary pop-up table.
Agent	The agent or agent group where the task will execute (Backlog), or was executed (History). Process flows with 'No Selection' set in their Default Agent field will be assigned to the APPWORX_AGENTS agent group, an agent group containing all agents. The process flow itself does not run a program or script; only its components do.
Requestor	The person that submitted the task or the user entered as the requestor of the ad hoc request or schedule. If nothing is displayed, a Requestor was not specified for a scheduled task.
Parent	The process flow that contained the component. If the task is not a process flow component, this field will be blank.

Viewing and Customizing Tables and Backlog Task Summaries

You can customize many tables in Applications Manager including the tables in the Backlog and History. When you are working in the Backlog, a pop-up table is displayed when you hover over the Run ID column for a task. These pop-up tables are called Backlog Task Summaries, and you can also customize them. When customizing tables, you determine which columns are listed, what each column is named, and how each column is displayed.

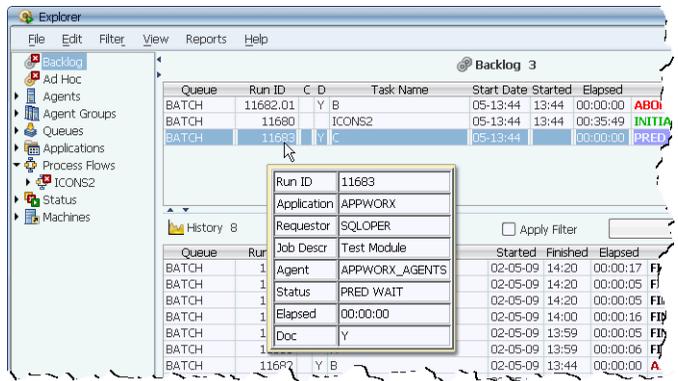


Figure B. Backlog Task Summaries display information about the task in a pop-up table including status details.

Your Applications Manager administrator can set default values for tables. Therefore, the columns in the Backlog and History may be different from what is described above. For more information, see topic *1.8 Customizing Tables*.

4.6 Focusing the Backlog Display with Explorer

You can select an icon from the Explorer tree to limit the tasks listed in the Backlog.

Using Explorer, you can limit the tasks listed in the Backlog by selecting an icon from the object tree. You can view a Process Flow Summary listing all process flows with one or more tasks in the Backlog by selecting the Process Flows icon. An example Explorer screen displaying a Process Flow Summary is shown in Figure A.

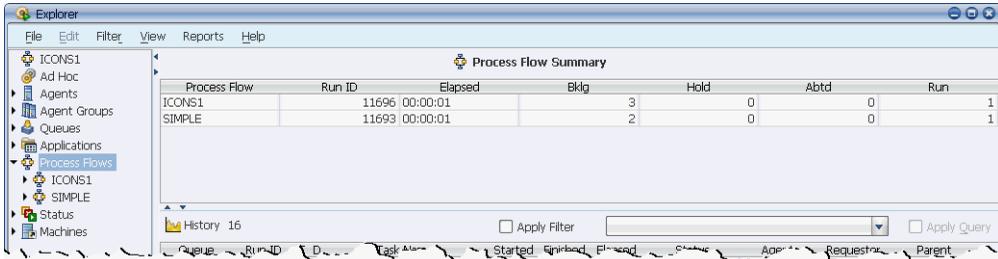


Figure A. The Process Flows icon can be selected in the Explorer window to focus on process flows in the Backlog.

The icon you select in the object tree determines the tasks listed in the Backlog.

To list:	Select this icon:
All tasks in the Backlog	Backlog
Tasks submitted using the Requests window	Ad Hoc
Tasks assigned to a particular agent	The agent
Tasks in an agent group	The agent group
Tasks assigned to a particular queue	The queue
Tasks assigned to a particular queue	The application
Tasks and history records belonging to a particular process flow	The process flow
Tasks with a particular task status (WAITING, RUNNING, ABORTED, or HOLD)	The status
Tasks by agent on a particular machine	The machine and agent

Sorting the Tasks in the Backlog by Status

You can click on the Status column header in the Backlog to display three different sort orders: ascending, descending, and severity of status. When you sort tasks by severity of status, Applications Manager lists the most severe task statuses first.

Customizing Tables

You can customize many tables in Applications Manager. When customizing tables, you determine:

- Which columns are listed.
- What each column is named.
- How each column is displayed.

Your Applications Manager administrator can set default values for tables. Therefore, the columns displayed in Explorer may be different from what is shown here. For more information, see topic *1.8 Customizing Tables*.

Limiting the View of Tasks in the Backlog

To limit the view of tasks in the Backlog by object:

1. If necessary, click the icon's key to display the child objects. To view tasks in a process flow, you may need to open several icon keys (see Figure B).
2. Select an object from the list of icons.

Applications Manager displays the list of tasks belonging to that object in the upper right pane (see Figure C).



Figure B. Click icon keys to expand icons.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	11719			ICONS1	05-14-47	14:47	00:01:26	INITIATED	APPWOR...	SQLOPER	
BATCH	11720	Y	A		05-14-47	14:47	00:01:25	RUNNING	TRUNK	SQLOPER	ICONS1
BATCH	11721	Y	B		05-14-47		00:00:00	PRED WAIT	APPWOR...	SQLOPER	ICONS1
BATCH	11722	Y	C		05-14-47		00:00:00	PRED WAIT	APPWOR...	SQLOPER	ICONS1

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	11718	Y		FORECAST	02-05-09 14:47		00:00:02	FINISHED	TRUNK	SQLOPER	
BATCH	11717	Y		TEST_MODULE	02-05-09 14:47		00:00:05	FINISHED	TRUNK	SQLOPER	
BATCH	11716	Y		TEST_MODULE	02-05-09 14:47		00:00:05	FINISHED	TRUNK	SQLOPER	
BATCH	11715	Y		TEST_MODULE	02-05-09 14:47		00:00:06	FINISHED	TRUNK	SQLOPER	
BATCH	11709			DAILY_REPORTS_...	02-05-09 14:38		00:00:36	FINISHED	APPWORX...	SQLOPER	
BATCH	11712			SIMPLE	02-05-09 14:38		00:00:17	FINISHED	APPWORX...	SQLOPER	DAILY_REP...
BATCH	11714			B	02-05-09 14:38		00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11713			A	02-05-09 14:38		00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	11711			B	02-05-09 14:38		00:00:05	FINISHED	TRUNK	SQLOPER	DAILY_REP...
BATCH	11710			A	02-05-09 14:38		00:00:05	FINISHED	TRUNK	SQLOPER	DAILY_REP...
MONITOR	11708			BANNER-AGENT	02-05-09 14:37		00:00:00	STARTED	BANNER		
MONITOR	11707			BANNER-AGENT	02-05-09 14:36		00:00:48	STOPPED	BANNER		
MONITOR	11706			CONSUMER_AGENT-AGENT	02-05-09 14:34		00:00:00	ERRORS	CONSUME...		
MONITOR	11703			TRUNK-AGENT	02-05-09 14:34		00:01:43	ERRORS	TRUNK		

Figure C. Select an icon to view the tasks belonging to it.

4.7 Monitoring with the Status Bar and Object Icons

The status bar is displayed across the bottom of the Explorer window. Its color alerts you to the status of the Applications Manager automation engine, agents, and tasks running in the Backlog. When the Explorer window is minimized, it uses the same color scheme on the taskbar. The object icons help you locate aborted/on hold tasks easily.

The status bar shown in Figure A is displayed across the bottom of the **Explorer** window. Its color alerts you to the status of the Applications Manager automation engine, agents, and tasks running in the Backlog. When the **Explorer** window is minimized, the button on the taskbar uses the same color scheme.



Figure A. The status bar is displayed across the bottom of the Explorer window, and on the taskbar.

The status bar reflects the most severe status in the system. The status bar colors and descriptions are described in the table below.

Color	Description
Green	All tasks, automation engines, and agents are running satisfactorily.
Yellow	One or more tasks are on hold. If there are aborted tasks and tasks on hold, the aborted tasks take precedence and the status bar will be red.
Red	One or more tasks have aborted, or otherwise not completed with a status of FINISHED. Or an automation engine or agent has a BUSY or TROUBLE status.

For a description of the automation engine/agent status values, see *Appendix A: Automation Engine/Agent Status Values*. For a description of the task status values, see *Appendix B: Task Status Values*.

The status bar displays the time that the **Explorer** window was last refreshed. You can manually refresh by entering Ctrl-R or by clicking the status bar on the **Explorer** window. The **Explorer** window is automatically refreshed based on the **Explorer Refresh Seconds** desktop setting. For information on editing desktop settings, see topic *1.4 Editing General Desktop and ToolBar Settings*.

The current date and time of the database are displayed to the right of the status bar.

Viewing Components in a Process Flow

Process flow components in the Explorer tree are listed based on the execution order of each tasks' predecessors. When you select a process flow in the Explorer tree, those same components are displayed in the top right Explorer pane according to your Backlog search criteria (by default this is based on task status). To view the structure of a process flow, right-click and select **Flow Diagram**.

Managing Task Statuses with the Object Icons

The Explorer icons in the object tree alert you to task status and give you a quick method for finding aborted/on hold tasks.

For example, PROCESS_FLOW_1 is in the Backlog. PROCESS_FLOW_1 includes four process flow components. The first three icons represent process flows that ran successfully. When the fourth process flow ran, a task aborted, leading to the sequence of events below.

1. When the task aborted, the status bar turned red to alert the user Pat Brown.
2. Pat opened the **Explorer** window and could see by the red X indicator on the Process Flows icon that one or more tasks in a process flow had aborted.

Note: Pat could have selected the Backlog, Ad Hoc, or Status icons to find the aborted task, but chose the process flow option out of personal preference.

3. Next, Pat clicked the Process Flows icon key to view a list of running components.

The icon for PROCESS_FLOW_1 had a red X indicator, so Pat knew that this process flow, or a process flow nested therein, contained an aborted task.

4. Pat clicked the PROCESS_FLOW_1 icon key to view the list of tasks belonging to PROCESS_FLOW_1.

Pat could see that three process flows had finished successfully because the process flow icons were gray, and that a task had aborted in the other process flow (because the process flow icon had a red X indicator).

Pat clicked the PROJECTED_NOV icon key to view the components in that process flow.

Pat could see by the red X symbol as the second task's icon showing that it aborted. A second listing for the task, an orange icon with a circle and a diagonal line notes that a history record of the task aborting was written.

Now Pat could view the task details including the output files for the task to see why it aborted, and reset or delete it. For information on troubleshooting failed tasks, see topic *4.8 Troubleshooting Failed Tasks*.



4.8 Troubleshooting Failed Tasks

When tasks fail, view the system output file for information. For additional information, turn on task level debug, reproduce the problem, and view the new system output file.

In Applications Manager, a failed task usually is assigned an **ABORTED** status. Depending on the circumstances, some tasks fail with a status other than **ABORTED**. All failed statuses are written in red and brought to the top of the Backlog display. For a list of task status descriptions and actions, see *Appendix B: Task Status Values*.

When tasks abort, a system output file is generated which is available for viewing from the Applications Manager client. The system output file is an excellent place to start troubleshooting. Along with runtime information and parameters passed to the task, the file includes error messages. A sample system file is shown in Figure A.

To view system output files, you right click the task in the Backlog or History, select **Output**, then pick the standard output file. In Figure A, a standard output file named **o12031.00** is selected in the **File Viewer** window. From the viewer, you can view, print, FTP, or email the output file.

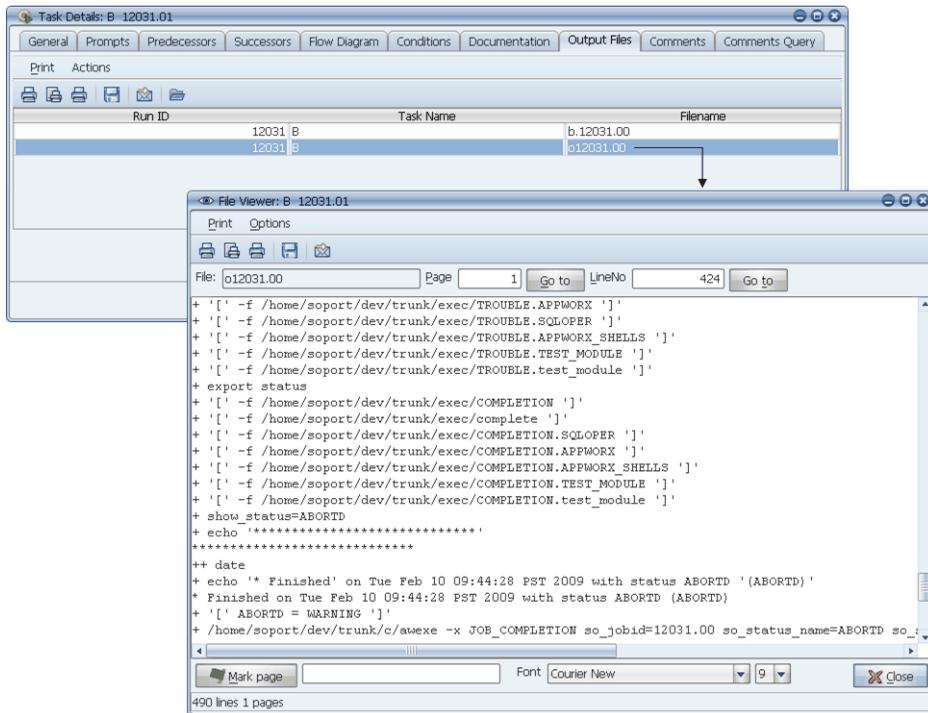


Figure A. View system output files for failed tasks.

The system output file includes basic information about the task such as:

- The name of the program executed.
- The person who ran the task.
- The Applications Manager run ID assigned to the task.
- The parameters used to run the task.
- A record of the basic steps taken to execute the task.
- Standard error reporting.

Getting More Information with Task Level Debug

If the system output file does not provide enough information to solve your problem, you can turn on the task level debug. When task level debug is on, additional information is written to the task's system output file. If you call UC4 Technical Support to help figure out why a task failed, they will most likely ask you to turn on task level debug, reproduce the problem, and send in the log. Doing this ahead of time will speed you along to the quickest possible resolution.

To turn on task level debug, create an empty file named **BODY** in the **debug** directory of the automation engine.

Task level debug is just one type of Applications Manager debugging you can set. For more information on setting all forms of debug, see chapter *10: Troubleshooting with Log Files and Debug* in the *Administration Guide*.

4.9 Taking Actions on Tasks in the Backlog

The Backlog shows the tasks being processed in each queue. You can take actions on tasks in the Backlog by right-clicking and selecting an action.

You can select one or more tasks in the Backlog (shown in Figure A) and right-click to:

- Put tasks on hold.
- Kill tasks.
- Reset aborted, killed, or on hold tasks to allow them to run again.
- Delete tasks.
- Remove all predecessors for tasks.

To take an action on one or more tasks in the Backlog, highlight the task(s), right-click and select one of the first five options from the pop-up window.

The number displayed to the right of each of these options tells you how many of the tasks you selected are eligible for that action. If a * is displayed to the right of the number, one or more of the highlighted tasks is a process flow in an INITIATED status.

Applications Manager displays a small animated window while an action is processing.

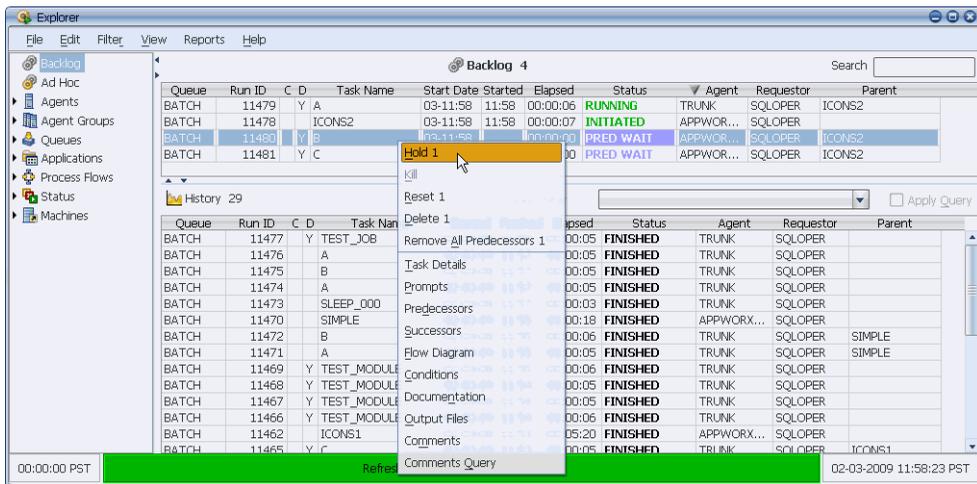


Figure A. Right-click to change the status of a task in the Backlog.

Necessary User Access

To take an action on a task, you need:

- The task's job/process flow definition in one of your user groups (with or without **Edit** authorization).
- The Explorer user authority in a user group with **Edit** authorization.

To take actions on tasks in the Backlog run by other users, you must have the **Edit Other Users' Tasks** user option. For more information, see your Applications Manager administrator.

Taking Actions on Process Flows

Actions affect process flows headers and components differently depending on whether the process flow is in an INITIATED status. Details for each action are described in the table below:

Action	When the process flow is not INITIATED	When the process flow is INITIATED
Hold	Holds the process flow header. Does not affect its components.	Holds all eligible components in the process flow.
Kill	A Kill cannot be taken against a process flow that is not in an INITIATED status.	Kills all eligible components in the process flow.
Reset	Resets the process flow header. Does not affect its components.	Resets all eligible components in the process flow.
Delete	Deletes the process flow header and all its components.*	Deletes all eligible components in the process flow.*
Remove all predecessors	Removes all predecessors for the process flow header. Does not affect its components.	Removes all predecessors for the process flow header. Does not affect its components.

When process flows are deleted, skipped, or canceled the following will occur:

- All BEFORE conditions will be canceled.
- The process flow's children that are unstarted process flows will be initialized.
- All predecessors for the process flow's children will be removed.

Subtopics

Additional information is provided in the following subtopics:

4.9.1 Putting Tasks On Hold

4.9.2 Killing Tasks

4.9.3 Resetting Aborted and On Hold Tasks

4.9.4 Deleting Tasks

4.9.5 Removing All Predecessors for Tasks

4.9 Taking Actions on Tasks in the Backlog

4.9.1 Putting Tasks On Hold

Before a task runs, you can put it on hold. To put one or more tasks on hold, select the task(s) and right-click. Choose the Hold option from the pop-up menu.

If a task is in the Backlog but has not yet started, you can put it on hold. The task will remain in the Backlog in a hold status until you reset it or delete it from the queue. If a task has started running, you cannot put it on hold. However, you can kill a running task. For information on killing a task, see *topic 4.9.2 Killing Tasks*.

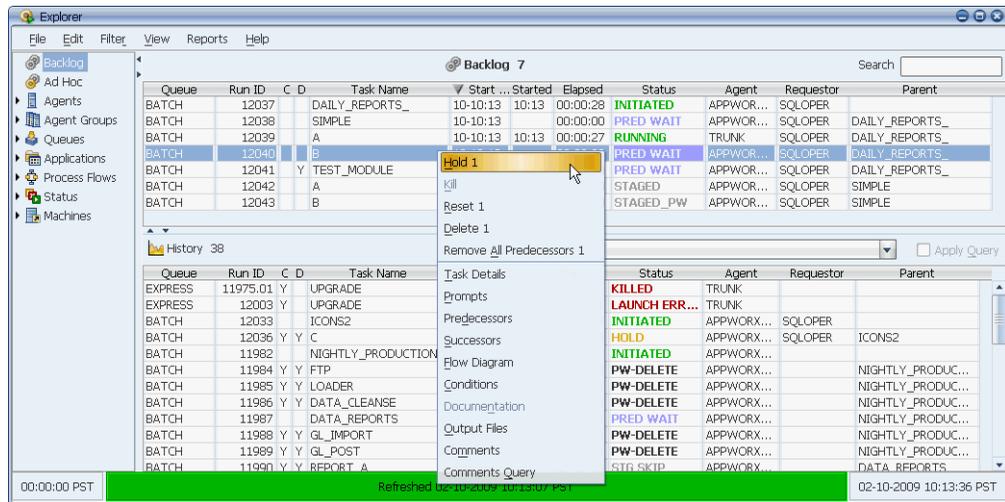


Figure A. To put a task on hold, right-click the task, select the HOLD option from the pop-up menu.

Procedure

To put tasks on hold:

1. Select one or more tasks in the Backlog and right-click.

Applications Manager displays the pop-up menu shown in Figure A. The number to the right of the **Hold**, **Kill**, **Reset**, and **Delete** options references the number of tasks you have selected that are eligible for that operation.

2. Select the **Hold** option.

Applications Manager displays the **Hold** confirmation window.

3. Click **Yes** to hold the task(s).

Applications Manager closes the confirmation window and displays a small animated window to show you that it is taking the hold action on the task(s).

Result

When you put a task on hold, its status is displayed in a hold status, such as HOLD or HOLD PRED WT. Applications Manager displays the status bar at the bottom of the window in yellow to alert you that one or more tasks are on hold (see Figure B). A record is written to the task's comment, noting that it was manually put on hold. The task remains on hold until you reset the status or delete the task from the Backlog.

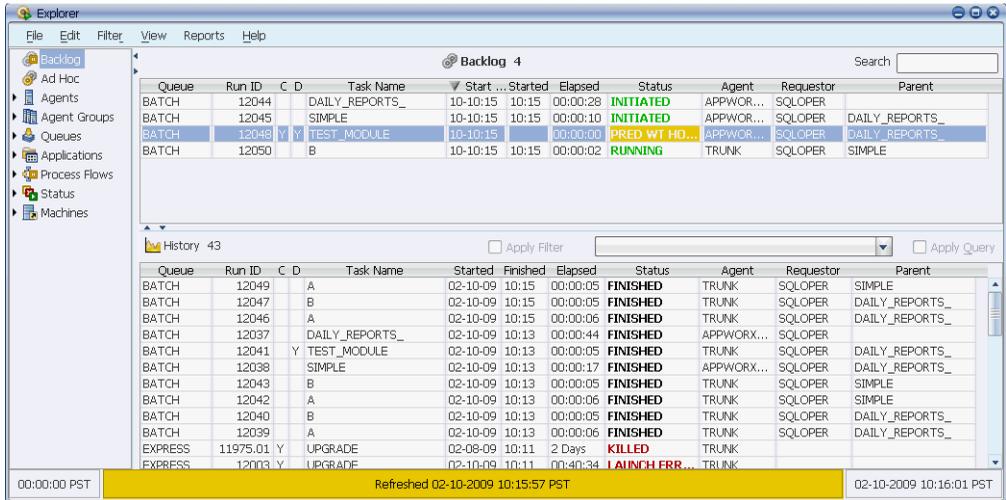


Figure B. A yellow status bar signifies that one or more tasks are on hold.

Taking Tasks Off Hold

To take tasks off hold:

1. Select one or more tasks which are on hold in the Backlog and right-click.
2. Click the **Reset** option.
Applications Manager will display the **Reset** confirmation window.
3. Click **Yes** to reset the task(s).
Applications Manager closes the window and changes the task's status to LAUNCHED.

4.9 Taking Actions on Tasks in the Backlog

4.9.2 Killing Tasks

If a task is running, you can kill it from the Backlog. To kill one or more tasks, select the task(s), right-click, and choose the Kill option from the pop-up menu.

If a task is running, you can kill it by selecting the task and using the Kill command. When you kill a task, it stays in the Backlog until you delete or reset it. When you kill a task, Applications Manager makes an entry in History showing that the task was killed.

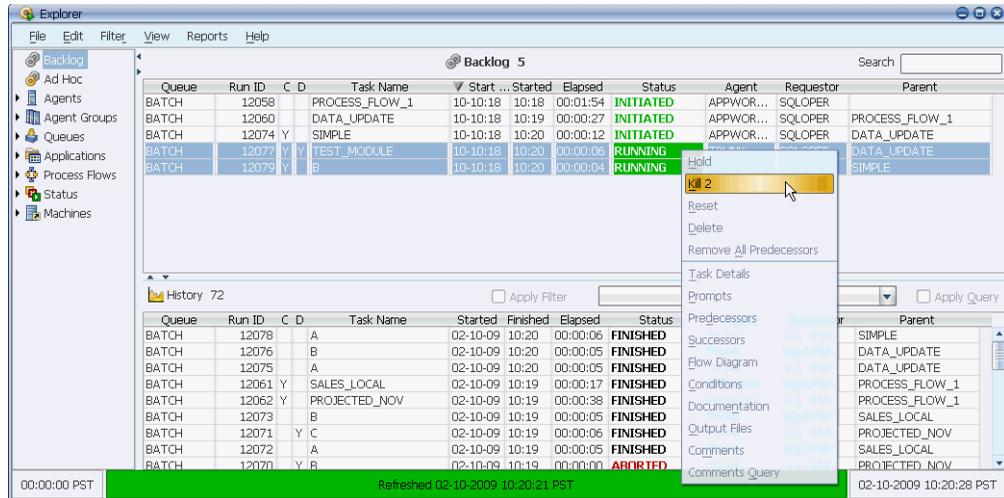


Figure A. If a task is running, you can kill it from the Backlog.

Procedure

To kill running tasks:

1. Select one or more running tasks in the Backlog that you wish to kill and right-click. Applications Manager displays the pop-up menu shown in Figure A. The number to the right of the **Hold**, **Kill**, **Reset**, and **Delete** options references the number of tasks you have selected that are eligible for that operation.
2. Click the **Kill** option. Applications Manager displays the **Kill** confirmation window.
3. Click **Yes** to kill the task(s). Applications Manager closes the confirmation window and displays a small animated window to show you that it is taking the kill action on the task(s). Once the task(s) go into a **KILLED** status, the Backlog label will be displayed in its default color.

Result

While Applications Manager is killing a task, the task's status in the Backlog changes briefly to KILL. Once the task is killed its status changes to KILLED, and an entry is made in History to show this (see Figure B). A record is written to the task's comment, noting that it was manually killed. The killed task stays in the Backlog until you delete it or reset it.

The screenshot shows the Applications Manager interface with two windows: Backlog and History.

Backlog 8

Queue	Run ID	C	D	Task Name	Start ...	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	12226			PROCESS_FLOW_1	10-10-38	10:38	00:01:22	INITIATED	APPWOR...	SQLOPER	
BATCH	12229			DATA_UPDATE	10-10-38	10:40	00:00:07	INITIATED	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12243	Y		SIMPLE	10-10-38	10:40	00:00:05	INITIATED	APPWOR...	SQLOPER	DATA_UPDATE
BATCH	12244.01	Y		A	10-10-38	10:40	00:00:05	KILLED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12245.01	Y		B	10-10-38	10:40	00:00:05	KILLED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12246	Y	Y	TEST_MODULE	10-10-38	10:40	00:00:05	RUNNING	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12247			A	10-10-38	10:40	00:00:04	RUNNING	TRUNK	SQLOPER	SIMPLE
BATCH	12248			B	10-10-38		00:00:00	PRED WAIT	APPWOR...	SQLOPER	SIMPLE

History 247

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12244	Y		A	02-10-09	10:40	00:00:04	KILLED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12245	Y		B	02-10-09	10:40	00:00:04	KILLED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12230			SALES_LOCAL	02-10-09	10:40	00:00:16	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12242			B	02-10-09	10:40	00:00:05	FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12241			A	02-10-09	10:39	00:00:05	FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12231	Y		PROJECTED_NOV	02-10-09	10:39	00:00:24	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12240	Y	Y	C	02-10-09	10:39	00:00:05	FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12239	Y		B	02-10-09	10:39	00:00:00	ABORTED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12239.01	Y	Y	B	02-10-09	10:39	00:00:00	DELETED	TRUNK	SQLOPER	PROJECTED_NOV

00:00:00 PST Refreshed 02-10-2009 10:40:13 PST 02-10-2009 10:40:16 PST

Figure B. When you kill a task, the process is stopped, the status of the task in the Backlog changes to KILLED, and an entry is made in History showing the task was killed.

When you kill a task in Applications Manager running in a UNIX environment, Applications Manager issues the **kill -15** UNIX command followed by the **kill -9** UNIX command.

4.9 Taking Actions on Tasks in the Backlog

4.9.3 Resetting Aborted and On Hold Tasks

If a task aborts or is put on hold, you can reset it directly from the Backlog. To reset one or more tasks, select the task(s), and right-click. Choose the Reset option from the pop-up menu.

If a task aborts and remains in the Backlog, is killed, or is put on hold, you can reset it directly from the **Explorer** window. Before restarting a task, you can review its details including general task details, prompts, and conditions, and correct any problems. When you restart a task that is aborted or on hold, its status changes to LAUNCHED. As soon as a thread becomes available in the queue, the status changes to QUEUED.

An aborted task stays in the Backlog if the **Stay in queue on abort** option was set when the job was created. If this option was not set, the task is cleared from the Backlog and an entry is displayed in History. You cannot restart a task from the **Explorer** window once it has been removed from the Backlog. However, you can resubmit the task by going to the **Requests** window.

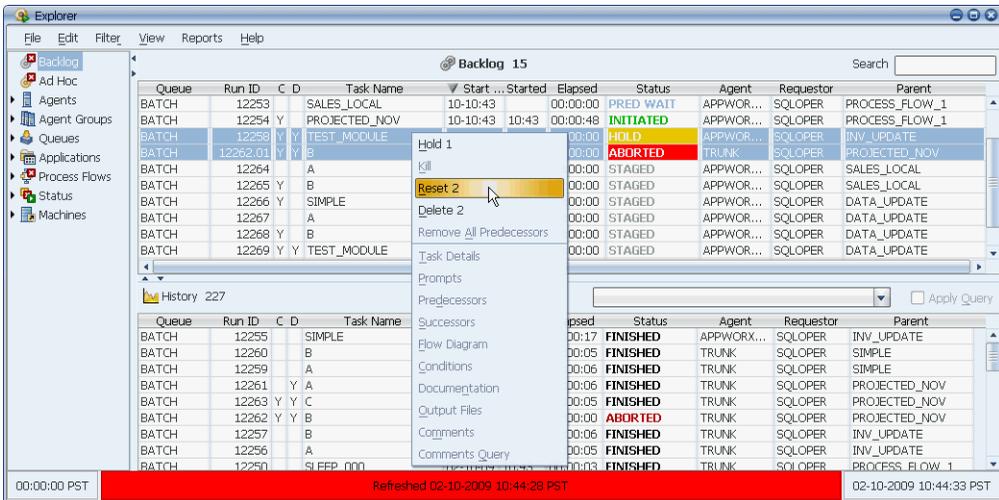


Figure A. You can reset one or more aborted or on hold tasks.

Procedure

To reset one or more tasks from the Backlog:

1. If appropriate, change the task details.

For more information on changing task details, see topic *4.10 Viewing and Editing Task Details*.

2. Select one or more tasks in the Backlog and right-click.

Applications Manager displays the pop-up menu shown in Figure A. The number to the right of the **Hold**, **Kill**, **Reset**, and **Delete** options references the number of tasks you have selected that are eligible for that operation.

3. Select the **Reset** option.

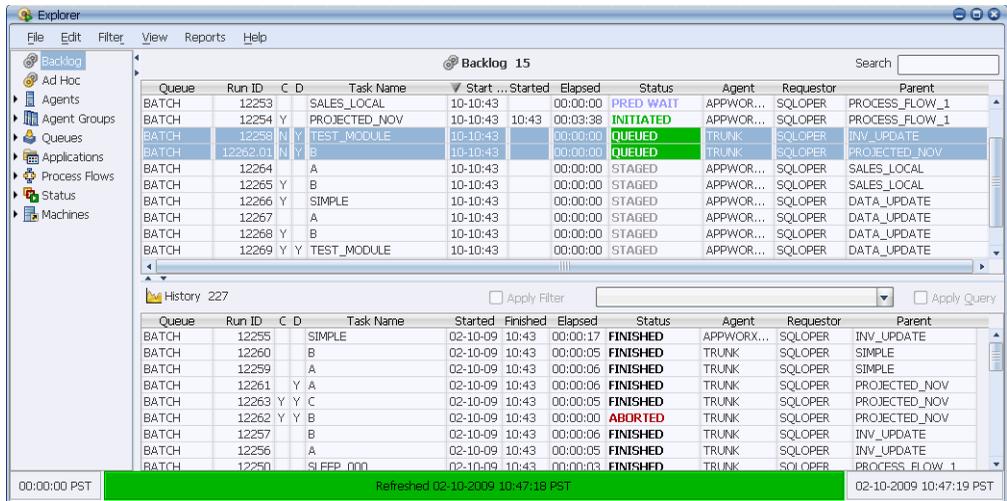
Applications Manager displays the **Reset** confirmation window.

4. Click **Yes** to reset the task(s).

Applications Manager closes the confirmation window and displays a small animated window to show you that it is taking the reset action on the task(s). Once the task(s) go into a LAUNCHED status, the Backlog label will be displayed in its default color.

Result

A record is written to the task's comment noting that it was manually reset. When a thread becomes available for the queue, Applications Manager will start the task(s).



The screenshot shows the Applications Manager Explorer window. The main window is titled "Backlog 15" and contains a table of tasks. The table has columns for Queue, Run ID, C, D, Task Name, Start, Started, Elapsed, Status, Agent, Requestor, and Parent. The tasks in the Backlog tab are:

Queue	Run ID	C	D	Task Name	Start	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	12253			SALES_LOCAL	10-10-43		00:00:00	PRED WAIT	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12254	Y		PROJECTED_NOV	10-10-43	10:43	00:03:38	INITIATED	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12258	N	Y	TEST_MODULE	10-10-43		00:00:00	QUEUED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12262.01	N	Y	B	10-10-43		00:00:00	QUEUED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12264		A		10-10-43		00:00:00	STAGED	APPWOR...	SQLOPER	SALES_LOCAL
BATCH	12265	Y	B		10-10-43		00:00:00	STAGED	APPWOR...	SQLOPER	SALES_LOCAL
BATCH	12266	Y		SIMPLE	10-10-43		00:00:00	STAGED	APPWOR...	SQLOPER	DATA_UPDATE
BATCH	12267		A		10-10-43		00:00:00	STAGED	APPWOR...	SQLOPER	DATA_UPDATE
BATCH	12268	Y	B		10-10-43		00:00:00	STAGED	APPWOR...	SQLOPER	DATA_UPDATE
BATCH	12269	Y	Y	TEST_MODULE	10-10-43		00:00:00	STAGED	APPWOR...	SQLOPER	DATA_UPDATE

The History tab shows a list of tasks with their status. The status of the tasks in the History tab is FINISHED or ABORTED. The tasks in the History tab are:

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12255			SIMPLE	02-10-09	10:43	00:00:17	FINISHED	APPWORX...	SQLOPER	INV_UPDATE
BATCH	12260		B		02-10-09	10:43	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12259		A		02-10-09	10:43	00:00:06	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12261	Y	A		02-10-09	10:43	00:00:06	FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12263	Y	Y	C	02-10-09	10:43	00:00:05	FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12262	Y	Y	B	02-10-09	10:43	00:00:00	ABORTED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12257		B		02-10-09	10:43	00:00:06	FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12256		A		02-10-09	10:43	00:00:05	FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12250			SLEEP_000	02-10-09	10:43	00:00:03	FINISHED	TRUNK	SQLOPER	PROCESS_FLOW_1

Figure B. The reset tasks are now in a QUEUED status.

4.9 Taking Actions on Tasks in the Backlog

4.9.4 Deleting Tasks

If a task in the Backlog is in a non-running status, you can delete it from the Backlog. To delete one or more tasks, select the task(s), and right-click. Choose the Delete option from the pop-up menu.

If a task in the Backlog is in a non-running status, you can delete it. For example, tasks with a status of LAUNCHED, PRED WAIT, ABORTED or KILLED can be deleted. You can also delete process flows from the Backlog. If you delete a process flow, all components in the process flow are deleted as well. When you have deleted a task, you cannot reset it from the **Explorer** window.

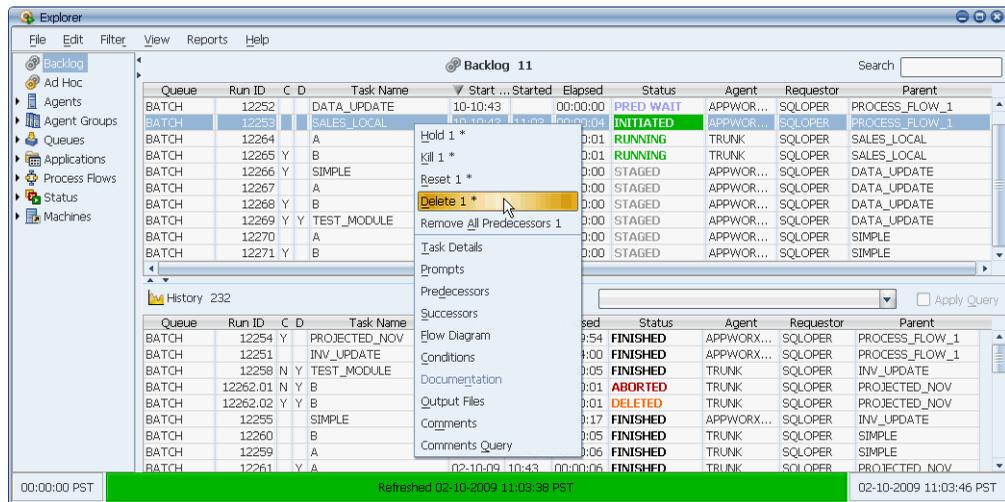


Figure A. You can delete one or more tasks.

Procedure

To delete tasks:

1. Select one or more tasks in the Backlog and right-click.

Applications Manager displays the pop-up menu shown in Figure A. The number to the right of the **Hold**, **Kill**, **Reset**, and **Delete** options references the number of tasks you have selected that are eligible for that operation.

2. Select the **Delete** option.

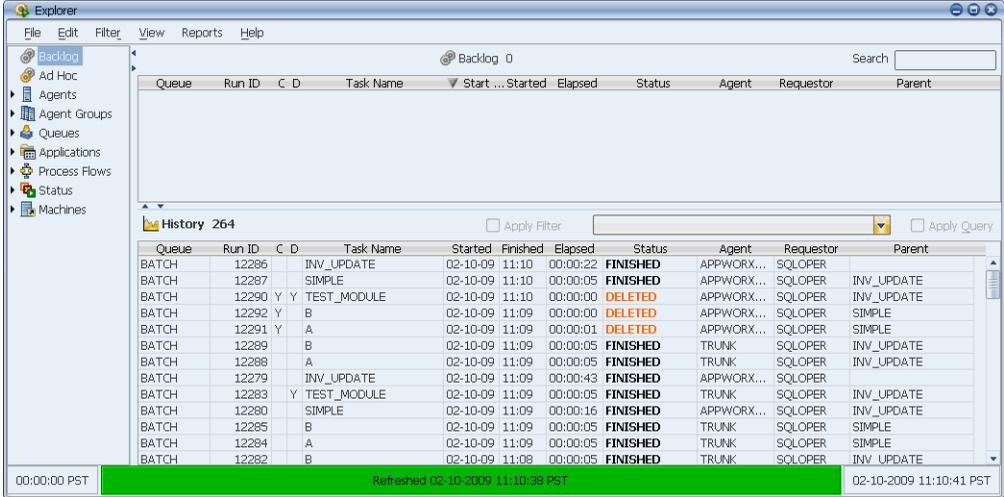
Applications Manager displays the **Delete** confirmation window.

3. Click **Yes** to delete the task(s).

Applications Manager closes the confirmation window and displays a small animated window to show you that it is taking the delete action on the task(s). Once the task(s) go into a DELETED status, the Backlog label will be displayed in its default color.

Result

When you delete tasks, they are removed from the Backlog. A record of the task deleted from the Backlog is now displayed in History with a DELETED status (see Figure B). An entry is also made in the task's comment, noting that it was manually deleted. After deleting a task, you cannot reset it from the **Explorer** window.



The screenshot shows the Explorer application window with the History tab selected. The History table contains the following data:

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12286			INV_UPDATE	02-10-09 11:10	00:00:22		FINISHED	APPWORX...	SQLOPER	
BATCH	12287			SIMPLE	02-10-09 11:10	00:00:05		FINISHED	APPWORX...	SQLOPER	INV_UPDATE
BATCH	12290	Y		TEST_MODULE	02-10-09 11:10	00:00:00		DELETED	APPWORX...	SQLOPER	INV_UPDATE
BATCH	12292	Y	B		02-10-09 11:09	00:00:00		DELETED	APPWORX...	SQLOPER	SIMPLE
BATCH	12291	Y	A		02-10-09 11:09	00:00:01		DELETED	APPWORX...	SQLOPER	SIMPLE
BATCH	12289		B		02-10-09 11:09	00:00:05		FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12288		A		02-10-09 11:09	00:00:05		FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12279			INV_UPDATE	02-10-09 11:09	00:00:43		FINISHED	APPWORX...	SQLOPER	
BATCH	12283	Y		TEST_MODULE	02-10-09 11:09	00:00:05		FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12280			SIMPLE	02-10-09 11:09	00:00:16		FINISHED	APPWORX...	SQLOPER	INV_UPDATE
BATCH	12285		B		02-10-09 11:09	00:00:05		FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12284		A		02-10-09 11:09	00:00:05		FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12282		B		02-10-09 11:08	00:00:05		FINISHED	TRUNK	SQLOPER	INV_UPDATE

Figure B. Tasks deleted from the Backlog are displayed in History with a DELETED status.

How Deleting Process Flow Components Affects Process Flows

When you delete a task from a process flow, Applications Manager handles the predecessor links as follows:

- Internal predecessor links associated with the task are inherited by the next component in the process flow.
- External predecessor links for the task are removed.

If you delete the last internal predecessor link associated with a task, that component is moved to the upper right corner of the process flow and will be eligible to run with any other component that shares its row.

4.9 Taking Actions on Tasks in the Backlog

4.9.5 Removing All Predecessors for Tasks

If a task in the Backlog is waiting for one or more predecessors before it can run, you can remove the predecessor(s) to force it to run. To remove all predecessors for one or more tasks, select the task(s), and right-click. Choose the Remove All Predecessors option from the pop-up menu.

If a task in the Backlog is waiting for one or more a predecessors before it can run, you can remove the predecessor(s) to force it to run.

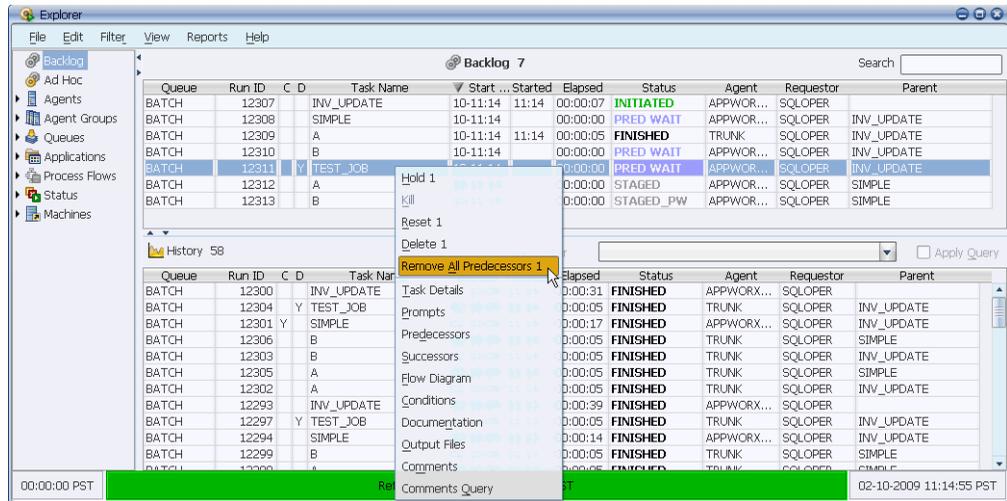


Figure A. Delete all predecessors for a task from the Backlog.

To remove all predecessor links for a task in the Backlog, right-click the task and select **Remove All Predecessors** from the pop-up menu as shown in Figure A. The task will then be eligible to run as shown in Figure B.

Note: Deleting predecessor links from this tab does not delete tasks from the Backlog.

If you wish to view and remove select predecessors for a task, you can do so on the **Predecessors** tab of the **Task Details** window. For more information, see topic *4.10.3 Pending Predecessor Links: Viewing and Removing*.

When you remove predecessor links for a task in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow. For more information on predecessor links, see chapter 5: *Working with Predecessors* in the *Development Guide*.

The screenshot shows the Explorer application interface. The main window displays a 'Backlog 4' table with the following data:

Queue	Run ID	C	D	Task Name	Start ...	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	12307			INV_UPDATE	10-11-14	11:14	00:00:30	INITIATED	APPWOR...	SQLOPER	
BATCH	12308			SIMPLE	10-11-14	11:15	00:00:13	INITIATED	APPWOR...	SQLOPER	INV_UPDATE
BATCH	12311	Y	Y	TEST_JOB	10-11-14	11:15	00:00:01	RUNNING	TRUNK	SQLOPER	INV_UPDATE
BATCH	12313			B	10-11-14	11:15	00:00:04	RUNNING	TRUNK	SQLOPER	SIMPLE

Below the Backlog table is a 'History 61' table with the following data:

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12312			A	02-10-09	11:15	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12310			B	02-10-09	11:15	00:00:05	FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12309			A	02-10-09	11:14	00:00:05	FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12300			INV_UPDATE	02-10-09	11:14	00:00:31	FINISHED	APPWOR...	SQLOPER	
BATCH	12304	Y		TEST_JOB	02-10-09	11:14	00:00:05	FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12301	Y		SIMPLE	02-10-09	11:14	00:00:17	FINISHED	APPWOR...	SQLOPER	INV_UPDATE
BATCH	12306			B	02-10-09	11:14	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12303			B	02-10-09	11:14	00:00:05	FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12305			A	02-10-09	11:14	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12302			A	02-10-09	11:14	00:00:05	FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12293			INV_UPDATE	02-10-09	11:13	00:00:39	FINISHED	APPWOR...	SQLOPER	
BATCH	12297	Y		TEST_JOB	02-10-09	11:13	00:00:05	FINISHED	TRUNK	SQLOPER	INV_UPDATE

The interface also shows a search bar, a filter section with 'Apply Filter' and 'Apply Query' checkboxes, and a status bar at the bottom indicating 'Refreshed 02-10-2009 11:15:15 PST'.

Figure B. Once all predecessors have been removed the task will be eligible to run.

Removing External Predecessors by Queue

To remove a task's external predecessors on insert to the Backlog, assign it to the REMOVE_EXT_PREDS_ON_INSERT queue. You can create the REMOVE_EXT_PREDS_ON_INSERT queue by hand or by importing it. For more information, see topic [7.8 Removing External Predecessors by Queue](#).

4.10 Viewing and Editing Task Details

You can right-click any task in the Backlog or History and select an option from the pop-up menu to view its task details. Before tasks run, or when they abort or are killed, you can change their parameters in the Backlog. To change a task's parameters, right-click the task and select an option from the pop-up menu. When you change a task's parameters in the Backlog, the changes are applied only to that instance of the task.

You can right-click any task in the Backlog or History and select an option from the pop-up menu (see Figure A) to view its task details. The option you select determines which tab will be active on the **Task Details** window.

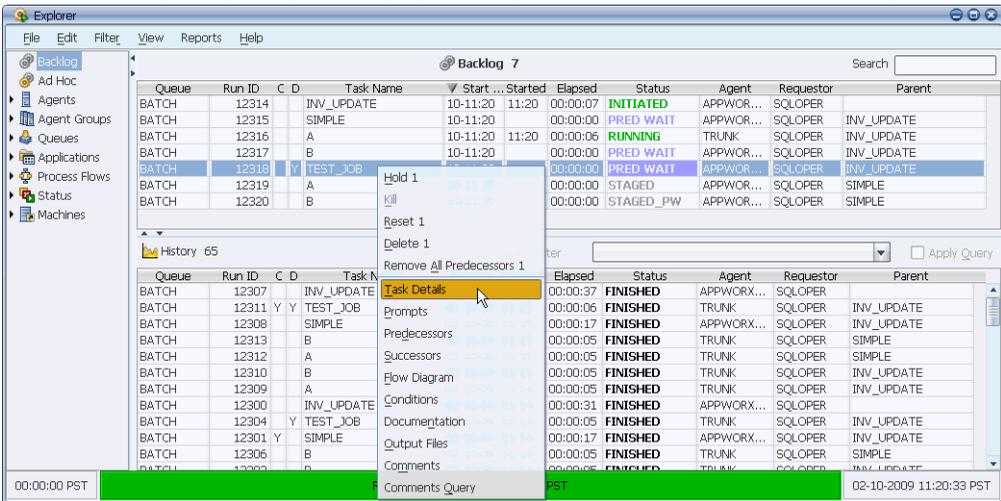


Figure A. Right-click Task Details to view the parameters for a task.

Editing Task Details

You can alter the details of tasks in a non-running status in the Backlog by doing any of the following:

- Editing general parameters such as a task's queue, login, or start time.
- Adding, changing, or deleting prompt values and predecessor links.
- Adding, changing, deleting, or copying conditions.

The changes you make apply only to the current instance of the task, and will not affect the task the next time it is submitted.

Note: To view the details for tasks submitted by other users, you must have the **View Other Users' Tasks** user option assigned to you by your Applications Manager administrator. To edit their details, you must have the **Edit Other Users' Tasks** user option. To edit all the details for tasks in the Backlog, you will also need access to the objects assigned to the job/process flow.

For more information on setting user options, see topic *3.2.1 Setting User Options* in the *Administration Guide*.

Understanding Documentation, Output Files, and Task Comments

The following tabs on the **Task Details** window provide information about the task:

- **Documentation:** Information written by the person who created the job or process flow. Documentation provides relevant information about the processing of a task. It can be comments, suggestions, or instructions. Documentation cannot be altered from the **Explorer** window.
- **Output Files:** Output files created on the agent machine when the task is run. Output files include system and application files for the task. Output files can be opened for viewing using the **File Viewer** window.
- **Comments:** Information about the running of a task. Applications Manager automatically creates comments that:
 - Tell about condition actions that affect the running of a task.
 - Detail DELETE, HOLD, RESET, and KILL actions taken by an Applications Manager user.
 - Give details on tasks with a LAUNCH ERR status.

Additionally, you can include your own comments to provide relevant information about the processing of a task. Comments are not files, and should not be confused with documentation or output files.

Subtopics

The following subtopics detail viewing and editing task details.

4.10.1 General Task Details: Viewing and Editing

4.10.2 Task Prompts: Viewing and Editing

4.10.3 Pending Predecessor Links: Viewing and Removing

4.10.5 Task and Predecessors in a Flow Diagram: Viewing, Adding, and Editing

4.10.6 Task Conditions: Viewing and Editing

4.10.7 Task Documentation: Viewing

4.10.8 Task Output Files: Viewing

4.10.9 Task Comments: Adding and Viewing

4.10 Viewing and Editing Task Details

4.10.1 General Task Details: Viewing and Editing

To view the general task details of a task in the Backlog or History, right-click the task and choose the Task Details option from the pop-up menu. You can edit the fields on the right side of the General tab for tasks in the Backlog. When you edit task details for a job or process flow in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow.

General task details determine how and where a task runs, and with what options. When you edit task details for a task in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow.

Editing General Task Details in the Backlog

To change the parameters associated with a task in the Backlog:

1. Right-click the task and select **Task Details** from the pop-up menu.
2. Applications Manager displays the **Task Details** window with the **General** tab selected (see Figure A).

The screenshot shows the 'Task Details: C 11481' window with the 'General' tab selected. The window is divided into two main columns of fields. The left column contains fields for Alias (C), Job (TEST_MODULE), User (SQLOPER), Run ID (11481), Process Flow Name (ICONS2), Request Date (02-03-2009 11:58:12 PST), Started, Ended, Process ID, and Status Detail (PRED WAIT, 11478 ICONS2 INITIATED). The right column contains fields for Max Run Time (000:00:00), Priority (50), Login ((None)), Queue (BATCH), Agent (APPWORX_AGENTS), Start Date (02-03-2009 11:58:00 PST), Send To (TEST), Send Option, Output Function (STORE), and Copies (1). There is also a checkbox for 'Restart once on Abort' and an 'Other Details' button. At the bottom, there is a table for 'Notification, Output Scan, & Environment Variables' with columns for Type, Source, and Name. The window has standard Windows window controls and buttons for OK, Apply, Cancel, and Help.

Figure A. The General tab of the Task Details window

3. Make the desired changes on the **General** tab.
You can select the other tabs to view and/or edit additional details for the task.
4. To accept the changes on all tabs, click **OK**.

Table A. View-only fields

Field	Description
Alias	The alias name for the job/process flow. You can specify an alias name when the job or process flow is: <ul style="list-style-type: none"> • Added to a process flow as a process flow component. • Requested with the REQUEST JOB condition action. • Requested using a task name suffix. • Requested with awrun.
Job	The name of the job or process flow set in the job/process flow definitions.
User	The user or requestor assigned to the task. Users and requestors are the same thing. They are set for a job or process flow in a schedule or requests. Requestors can be set to 'No Selection' in schedules, in which case no user will be listed.
Run ID	A unique number assigned to a task by Applications Manager at the time the task runs.
Process Flow Name	The parent process flow, if this task is a process flow component.
Process Flow Order No.	The order number of the task in its process flow, if the task is a process flow component.
Request Date	The actual time that the task was placed into the Backlog. Corresponds to the so_request_date database field.
Started	The actual time that the task was started by the automation engine and processed by the agent. Corresponds to the so_job_started database field.
Ended	The actual time the task finished processing on the agent. Corresponds to the so_job_ended database field.
Status	The task status. For a description of the task status values, see <i>Appendix B: Task Status Values</i> .
Process ID	A unique number assigned to a task by the operating system.
Status Detail	Details that give additional information on the reason for a task's status.
Other Details	When clicked displays a pop-up window with the application status and reference fields. These are used with the PeopleSoft extension and some custom solutions.
Notification, Output Scan, Environment Variables	Lists the notification, output scan, and environment variable objects assigned to the task and where they are assigned.



Table B. Editable fields.

Field	Description
Max Run Time	Used to prevent runaway programs. It determines how long the program can run before timing out (DDD:HH:MI). A time of 0 lets the task run forever. If a task times out, it is given a status of TIMEOUT.
Priority	<p>Determines when a job is run in relation to other tasks in the same queue. A task with a lower priority number will be run before tasks with higher numbers. The range is 1–99. The default priority is 50.</p> <p>Tasks submitted with 0 priority will have the status of NO PRIORITY in the Backlog and will not run.</p> <p>The execution order of tasks waiting to run in a QUEUED status is decided in the following order:</p> <ol style="list-style-type: none"> 1. Queue priority 2. Job priority 3. Start date and time <p>Therefore, if two tasks are waiting to run in different queues, and those queues have the same priority, the jobs' priorities are checked. If queue and job priorities are the same, their start date and times are compared.</p>
Login	<p>The login the system will use when the task is executed. Logins allow operators and programmers to run programs that access a database or host without having to know the login and password.</p> <p>Primary and secondary logins can be specified for jobs. The primary login can be overridden (if one is defined for the job) by:</p> <ul style="list-style-type: none"> • Jobs requested with the REQUEST JOB condition action. • Process flow components.
Queue	<p>The Applications Manager queue the task will run through. Queues are assigned to jobs and process flows. If a schedule is defined for a job or process flow, and the schedule is assigned to a queue, the schedule's queue will override the jobs or process flow's queue. The queue setting for a process flow does not affect its components, unless the Insert components into process flow's queue automation engine option is turned on.</p> <p>The process flow's queue is used for components only when the Insert components into process flow's queue automation engine option is turned on.</p> <p>Queues can be specified for requests (as long as the Request Queues user option is assigned).</p>
Agent	The agent where the program is stored and run.
Start Date	<p>The time that the task was scheduled to start. Corresponds to the so_start_date database field. Start dates for tasks in the Backlog are determined by either:</p> <ul style="list-style-type: none"> • Requests (may be post-dated). • Schedules for jobs and process flows. • The schedule of a component's process flow.
Send To	Specifies the output device or set of devices where the output will be sent (for example: EMAIL, ACCOUNTING LASER, ATLANTA LASER).

Field	Description
Output Option	Used for specifying dynamic output options for the selected output device. This value or list of values is defined by the output interface assigned to the output device.
Output Function	Determines how output is handled. There are three choices: <ul style="list-style-type: none"> • LOG: Legacy setting, should not be used unless you need to use the Output window rather than the Explorer window. • PRINT: The output is printed. • STORE: The output is not printed.
Copies	Sets the default number of copies to be printed.
Restart once on abort	<p>When selected, Applications Manager will automatically restart a task the first time it aborts, but will not restart it if it aborts a second time.</p> <p>When this option and the Stay in queue on abort option are both set, and the task aborts, you will see three listings for it in the Explorer window.</p> <ul style="list-style-type: none"> • The original listing for the Run ID <run_id> in History shows that the task ran. • A second listing <run_id>.01 in History shows that it aborted. • The current listing <run_id>.02 in the Backlog represents the restarted task. <p>The Restart once on abort setting is specified in each task's definition, and can be overridden with a condition.</p>

4.10 Viewing and Editing Task Details

4.10.2 Task Prompts: Viewing and Editing

To view the prompts of a task in the Backlog or History, right-click the task and choose the Prompts option from the pop-up menu. You can edit the prompts for tasks in the Backlog. When you edit prompts for a task in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow.

Prompts pass user input to the program run by a task. Prompts for a task, either a job or a process flow, can be viewed and edited from the Backlog and viewed from History. Prompts are defined by the individual that created the job or process flow.

Viewing Prompts

To view the prompts for a task, right-click a task in the Backlog or History and choose Prompts. Applications Manager displays the **Task Details** window with the **Prompts** tab selected (see Figure A).

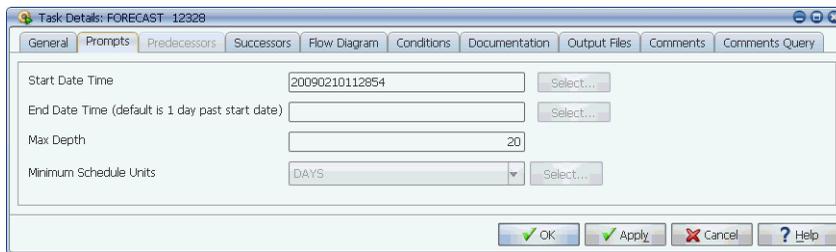


Figure A. The Prompts tab

Editing Prompts in the Backlog

To edit the prompts for a task in the Backlog:

1. Right-click the task and choose **Prompts** from the pop-up menu. Applications Manager displays the **Task Details** window with the **Prompts** tab selected (see Figure A).
2. Click to select a prompt.
3. You can edit the prompt values for each task. When you edit prompts for a task in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow. You can select the other tabs to view and/or edit additional details for the task.
4. Click **OK** to accept the changes and exit to the **Explorer** window.

4.10 Viewing and Editing Task Details

4.10.3 Pending Predecessor Links: Viewing and Removing

To view the pending predecessors for a task in the Backlog, right-click the task and choose the **Predecessors** option from the pop-up menu. When viewing pending predecessors for a task, you can delete predecessor links or view the referenced tasks' details.

Applications Manager controls task flow with predecessors. When a task is waiting to run due to predecessor requirements, you can view its pending predecessors. If you want to run the task immediately, you can remove the pending predecessor links.

Viewing Pending Predecessors

To view pending predecessors for a task, right-click the task and select **Predecessors** from the pop-up menu. Applications Manager displays a table listing each task that is a predecessor (see Figure A). The **Predecessors** tab is divided into two panes:

- The **External Scheduled Predecessors** pane in the upper part of the tab lists the tasks which are predecessors of the selected task and are not in the Backlog. If tasks are not in the Backlog, but are scheduled to run in the current virtual day, their scheduled start time will be shown in the Schedule column.
- The **Predecessors in Backlog** pane in the lower part of the tab lists the tasks which are predecessors of the selected task and are currently in the Backlog.

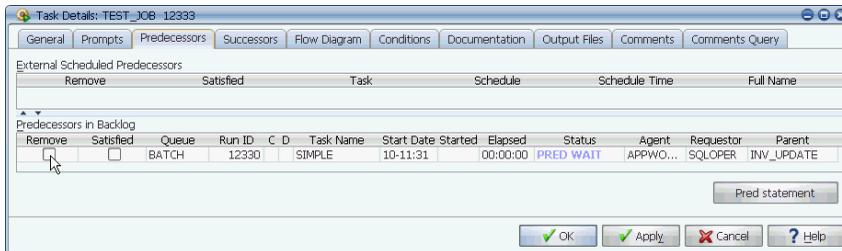


Figure A. Removing pending predecessor links to make a task eligible to run

To view the predecessor statement for a task, select the task and click the **Pred statement** button. Applications Manager displays the predecessor statement in the **Predecessor Expression** window shown in Figure B.

To view the task details for a task in the table, right-click the task and select an option.

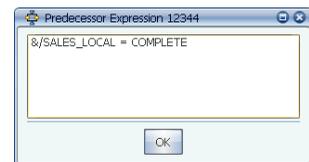


Figure B. The Predecessor Expression window

Understanding Predecessor Link Types

Descriptions for each link type are given below:

- **Started:** Predecessor must have started or been skipped. Represented by a solid yellow line.

- **Success since last run:** For external predecessors only. Predecessor must complete with a status of FINISHED since the last time this job ran. Represented by a dashed blue line.
- **Success** (default): Predecessor must complete with a status of FINISHED or be removed from the Backlog. Represented by a solid green line.
- **Success only when FINISHED:** For external predecessors only. Predecessor must complete with a status of FINISHED. Represented by a solid blue line.
- **Success (skip on failure):** Predecessor must complete with a status of FINISHED. If status is ABORTED, DIED, or TIMEDOUT, the component is skipped. Represented by a dashed green line.
- **Failure:** Predecessor must complete with a status of ABORTED, DIED, or TIMEDOUT. Represented by a solid red line.
- **Failure (skip on success):** Predecessor must complete with a status of ABORTED, DIED, or TIMEDOUT. If status is FINISHED, the component is skipped. Represented by a dashed red line.
- **Complete:** Predecessor completes with any status including FINISHED, DIED, or ABORTED. Represented by a solid black line. Predecessor links to a process flow must use this predecessor link type or the Success link type.

More details on the requirements to satisfy each link type are described in topic 5.3 *Understanding Predecessor Execution Rules* in the *Development Guide*.

Removing Predecessor Links

To remove predecessor links from either pane of the **Pending Predecessors** window, check the box in the Remove column for the task and click the **Apply** button. Applications Manager deletes the predecessor link. If there are no other predecessor links, the task should run. This has the same effect as deleting a predecessor link from the referenced task's **Flow Diagram** tab.

Note: Deleting predecessor links from this tab does not delete tasks from the Backlog.

If you wish to remove all predecessor links for a task in the Backlog, you can do so by right-clicking and selecting the **Remove All Predecessors** option from the pop-up menu. For more information, see topic 4.9.5 *Removing All Predecessors for Tasks*.

When you remove predecessor links for a task in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow. For more information on predecessor links, see chapter 5: *Working with Predecessors* in the *Development Guide*.

Removing External Predecessors by Queue

To remove a task's external predecessor links on insert to the Backlog, assign it to the REMOVE_EXT_PREDS_ON_INSERT queue. You can create the REMOVE_EXT_PREDS_ON_INSERT queue by hand or by exporting it. For more information, see topic 7.8 *Removing External Predecessors by Queue*.

4.10 Viewing and Editing Task Details

4.10.4 Successors in the Backlog: Viewing

To view the pending successors to other tasks for a task in the Backlog, right-click the task and choose the Successors option from the pop-up menu. When viewing successors for a task, you can right-click to view the referenced tasks' details.

When a task is in the Backlog, it may be a predecessor to other tasks. Other tasks that have predecessor links to a task are called its successors.

Viewing Successors

To view successors for a task, right-click the task and select **Successors** from the pop-up menu. Applications Manager displays a table listing each successor as shown in Figure A.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	12345			SALES_LOCAL	10-11:36		00:00:00	PRED WAIT	APPWOR...	SQLOPER	PROCESS_FLOW_1

Figure A. Removing pending predecessor links to make a task eligible to run

To view the task details for a task in the table, right-click the task and select an option.

4.10 Viewing and Editing Task Details

4.10.5 Task and Predecessors in a Flow Diagram: Viewing, Adding, and Editing

To view, add, or edit predecessor links for a task in the Backlog in a flow diagram (or to view them in a flow diagram for a task in History), right-click the task and choose Flow Diagram from the pop-up menu.

Predecessors must be met before a task will be eligible to run. They are evaluated prior to any BEFORE conditions the task might have. They can be viewed from the Backlog and History.

The **Flow Diagram** tab shown in Figure A has a left pane where the process flow or job is displayed, and a right pane where the **Predecessor Editor** is displayed. Process flow components in the **Predecessor Editor** box will be written in the format <process flow name>/<component name>. You can right-click a predecessor in the **Predecessor Editor** box to change or edit it. You can resize the panes by dragging the splitter bar, and minimize or maximize the panes using the arrows at the top of the splitter bar.

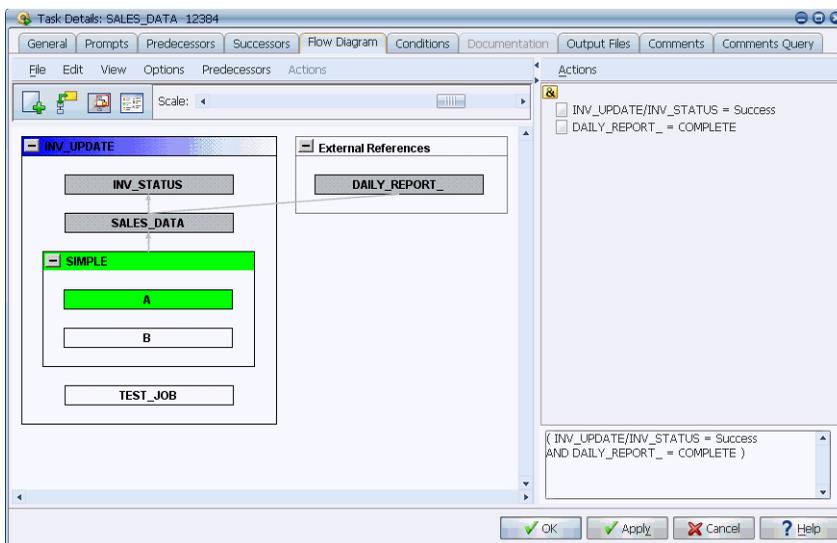


Figure A. The Predecessors tab displays the predecessors for a task.

From the **Flow Diagram** tab, you can monitor and manage objects in much the same way as from Explorer. You can edit predecessor links as well as take actions on tasks such as delete, hold, restart, and kill.

Viewing Predecessor Links in a Flow Diagram

To view the predecessor links for a task in a flow diagram, right-click the task and select **Flow Diagram** from the pop-up menu. Applications Manager displays the **Task Details** window with the **Flow Diagram** tab selected (see Figure A).

External references to scheduled tasks that are not yet in the Backlog will have a dashed border.

Adding and Editing Predecessor Links in a Flow Diagram

You can add, edit, or delete internal and external predecessor links for non-running tasks in the Backlog. An internal predecessor link is a link to a component within the parent process flow. An external predecessor is a link to a component outside the parent process flow. When you edit a link, you can change the link type, redirect the link to another component, or delete the link. You can also add external predecessor links for these tasks. You cannot add components to a process flow from the Backlog.

When you add, edit, or delete predecessor links for a task in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow. For more information on predecessor links, see chapter 5: *Working with Predecessors* in the *Development Guide*.

You can select the other tabs to view and edit the task's general task details, prompts, documentation, output, and more.

Disabling Pop-Up Tables

You can disable the pop-up tables by unchecking the **Show status info** option under the **Options** menu. The **Show status info** setting can be saved for your workstation by selecting **Save Preferences** from the **File** menu. For more information, see topic 5.10 *Saving Preferences for Creating Predecessors* in the *Development Guide*.

Taking Actions on Tasks and Viewing or Editing Task Details

You can right-click tasks in the **Flow Diagram** tab to take actions on them or to view or edit their task details the same way you would in the **Explorer** window. For more information on taking actions on tasks, see topic 4.9 *Taking Actions on Tasks in the Backlog*. For more information on viewing and editing task details, see topic 4.10 *Viewing and Editing Task Details*.

4.10 Viewing and Editing Task Details

4.10.6 Task Conditions: Viewing and Editing

To view the conditions of a task in the Backlog or History, right-click the task and choose the Conditions option from the pop-up menu. When you add, edit, or delete conditions for a job (job or process flow) in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow.

Conditions control the execution of tasks. They can be evaluated before, during, and after a task executes, and after a task is deleted. Conditions for a task can be viewed from the Backlog and History. Conditions can be added, edited, or deleted from tasks in the Backlog for a single running of the task.

Procedure

To view the conditions for a task, right-click the task and select **Conditions** from the pop-up menu. Applications Manager displays the **Task Details** window with the **Conditions** tab selected (see Figure A).

To add, edit, delete, or copy a condition for a task in the Backlog, select the appropriate button. When you make changes to conditions for a task in the Backlog, the changes are applied only to that instance of the task. They do not affect the definition of the job or process flow. For more information on defining conditions, see chapter 8: *Working with Conditions* in the *Development Guide*. You can select the other tabs to view or edit the task's general task details, prompts, documentation, output, and more.

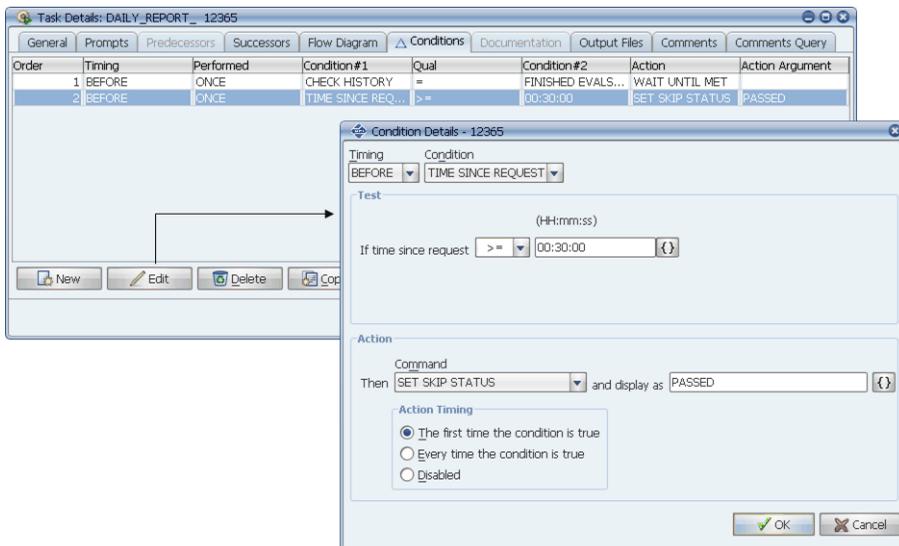


Figure A. The Conditions tab

Where Conditions Are Defined

Conditions can be defined for jobs, process flows, and process flow components. The conditions are not included when the job/process flow is assigned to a process flow unless the **Use Job Conditions** option is checked for the component.

4.10 Viewing and Editing Task Details

4.10.7 Task Documentation: Viewing

To view documentation for a task in the Backlog or History, right-click the task and choose the Documentation option from the pop-up menu. If Documentation is grayed out on the pop-up menu, the task has no documentation.

Documentation is written by the person who created the job or process flow. It provides relevant information about the processing of a task. Documentation can be comments, suggestions, or instructions. You can access documentation from the Backlog or History, when it has been included.

Documentation Assigned to Objects

Documentation can be assigned to three different objects in Applications Manager:

- **Jobs:** Job documentation is used when a job is going to be requested ad hoc, or when the documentation for a job would be useful—regardless of how it is invoked.
- **Process Flows:** Process flow documentation is used to provide information about the entire process flow.
- **Process Flow Components:** Process flow component documentation is used to provide information that is specific to a process flow component.

All documentation for a task is displayed on the **Documentation** tab of the **Task Details** window.

Types of Documentation

There are two types of documentation: abort and general. Abort documentation provides instruction or information for when the task aborts. General documentation provides information about the function of the job or process flow. Both types of documentation are available for viewing at all times regardless of task status.

Procedure

To view the documentation for a task in the Backlog or History:

1. Right-click the task in the Backlog or History and select **Documentation** from the pop-up menu. If **Documentation** is grayed out on the pop-up menu, the task has no documentation.

Note: You can right-click process flow components in the Backlog or History panes or in the icon tree.

Applications Manager displays the **Task Details** window with the **Documentation** tab selected (see Figure A).

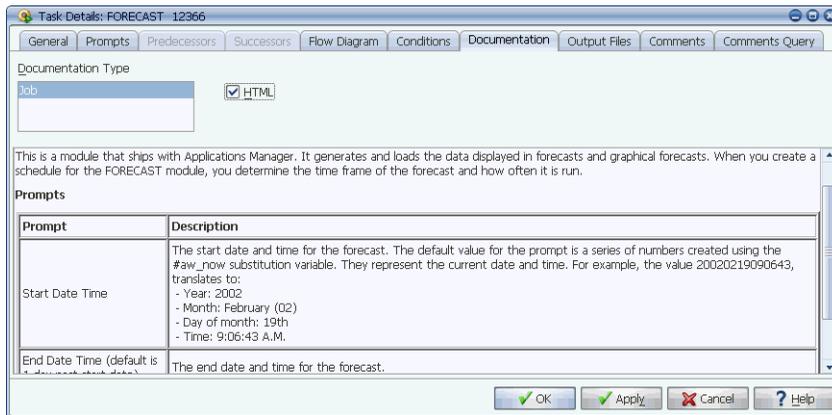


Figure A. The Documentation tab of the Task Details window

If the task has HTML documentation, you can uncheck the **HTML** box to view the source HTML code.

2. In the top portion of the window, select the type of documentation you wish to view. Applications Manager displays the documentation you selected in the bottom portion of the window.
You can select the other tabs to view and/or edit additional details for the task.
3. Click **OK** to close the window.

For information on adding documentation to jobs, process flows, and process flow components, see topic *2.8 Adding Job Documentation* in the *Development Guide*.

4.10 Viewing and Editing Task Details

4.10.8 Task Output Files: Viewing

To view the output files for task in the Backlog or History, right-click the task and choose the Output Files option from the pop-up menu. Click View on the Output Files tab to view the task's output files in the File Viewer window.

After a task finishes executing, it is moved into History. You can see how the task was executed by viewing the task's standard output file. This can be useful for troubleshooting tasks that fail. You can also view output files generated by the task.

Procedure

To view the output files generated by a task after it completes executing:

1. Right-click the task and choose **Output Files** from the pop-up menu.

Applications Manager lists the system and application output files for the task on the **Output Files** tab of the **Task Details** window.

When job definitions include program types that ship with Applications Manager, standard output and error file names begin with an 'o'. Output files generated by the task begin with a 'b' (see Figure A). If custom program types are assigned to your jobs, their output files may be named differently.

The list for process flows will include the output files of all its components.

2. To print an output file without opening the **File Viewer** window, select a task and click the **Print** button or one of the Print icons. For more information on printing output files, see topic *3.5 Printing, FTPing, and Emailing Output Files*.
3. To view a file, select the file and click **View**.

Applications Manager displays the **File Viewer** window. For information on using the **File Viewer** window and printing output files, see *topic 3.4 Viewing Output Files with the File Viewer*.

You can select the other tabs to view and/or edit additional details for the task.

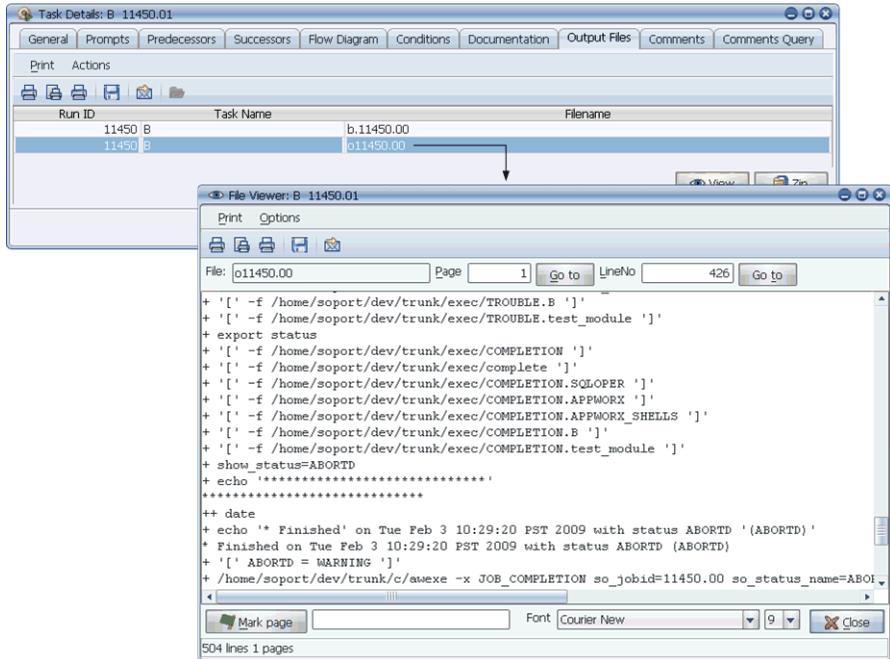


Figure A. From the Output Files tab on the Task Details window, you can access the File Viewer to view task output files.

4.10 Viewing and Editing Task Details

4.10.9 Task Comments: Adding and Viewing

To view or add comments for tasks in the Backlog or History, right-click the task and choose Comment from the pop-up menu. You can search for comments from previous runs of a task or for other jobs and process flows using the Comments Query tab on the Task Details window.

Task comments provide information about the running of a task. Applications Manager automatically creates comments that:

- Detail actions taken by an Applications Manager user.
- Tell about condition actions that affect the running of a task.
- Give output scan details when rules are met.
- Give details on tasks with a LAUNCH ERR status.

Additionally, you can include your own comments to provide relevant information about the processing of a task. You access, add, and query comments from the Backlog or History.

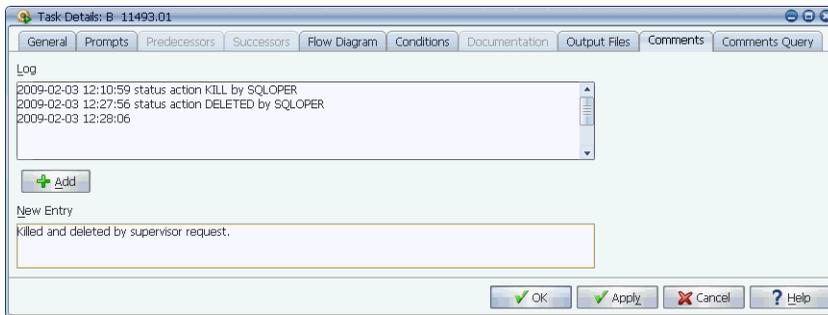


Figure A. View or add current comments for a task.

Viewing and Adding Comments for a Task

To view comments and add an comment to a task:

1. Right-click the task and choose **Comments** from the pop-up menu.

Applications Manager opens the **Task Details** window with the **Comments** tab selected (see Figure A). If there are any entries for the task, they are displayed in the **Log** box. Each entry includes the user name of the person who wrote the comment, and the date and time it was submitted. In Figure A, there are two entries associated with this task.

2. To add an entry to the task, enter text in the **New Entry** box at the top of the window and click **Add**.

Applications Manager adds the entry to the **Comment** box.

3. To save the entry and keep the window open, click **Apply**.
4. To save the entry and close the window, click **OK**.

After you have added an comment entry, you cannot change it. It becomes a permanent part of the task's history.

Querying Comments for Other Tasks

To view comments for another task:

1. From the **Task Details** window, select the **Comment Query** tab.

The table on the top of the screen displays all previous comments for the selected job or process flow (Figure B).

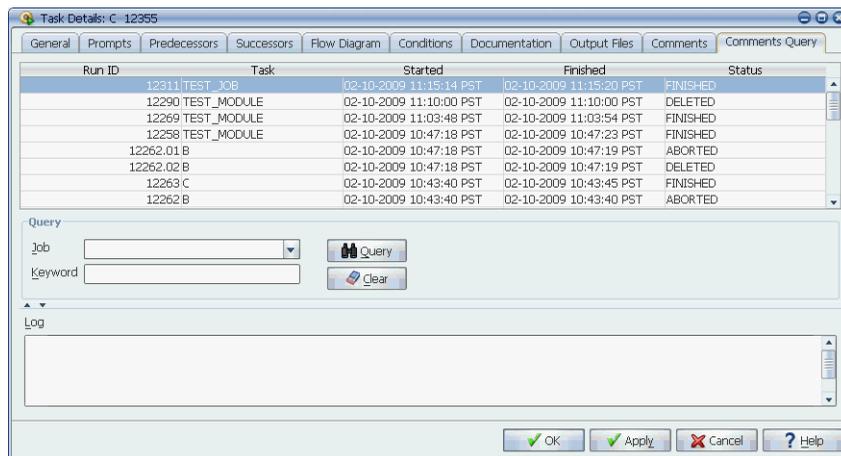


Figure B. View logs for other instances of the task or query by name or keyword to view other tasks' comments.

2. Select a comment from the table to view its text below.
3. To view comments for other jobs/process flows, select the job/process flow from the **Job** drop-down box. You can also query by keywords in the text.

Viewing a Comment Report

To view a report of comments, select **Explorer Reports** from the **Reports** menu on the **Explorer** window. This will open the **Reports** window with the Explorer reports selected. Select the **AW_OPERATOR_LOGS** report and click **Show**.

4.11 Unsatisfying Tasks as External Predecessors in History

To unsatisfy a task as a predecessor for all potential predecessor links, right-click the task listing in History and select **Unsatisfy for Predecessors**. The predecessor links of other tasks need to be satisfied by another running of this task.

There may be times when you run a task that serves as an external predecessor to one or more other tasks, and you need to rerun the task. This may happen when the task completes successfully, but is run with incomplete data.

To disallow predecessor links to this task, you must unsatisfy it as a predecessor. Once a task is unsatisfied as a predecessor, it is as if it did not run. All predecessor links to it will not be satisfied until the job, process flow, or process flow component runs again.

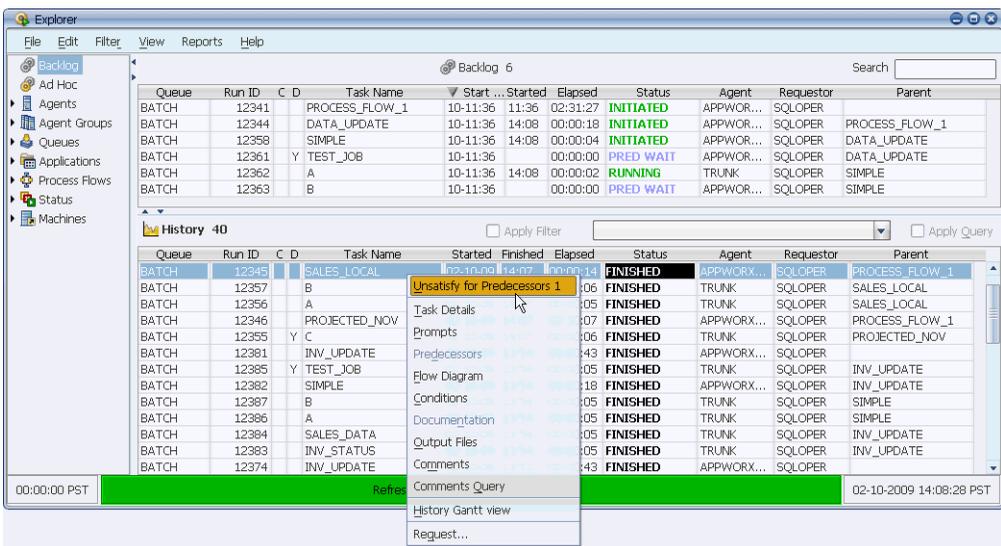
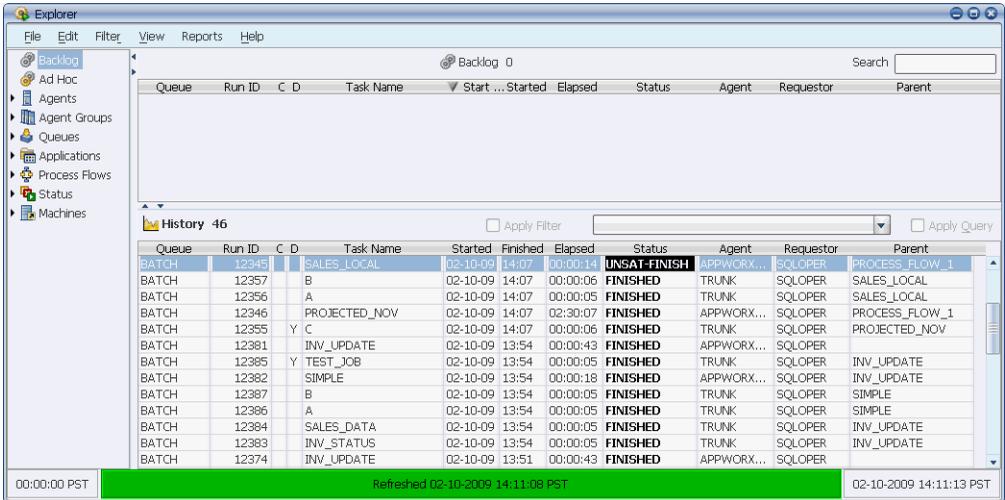


Figure A. You can unsatisfy this run of a task as a predecessor for all potential predecessor links from History.

Procedure

To unsatisfy a task as a predecessor for all potential predecessor links, right-click the task listing in History and select **Unsatisfy for Predecessors** from the pop-up menu as shown in Figure A. Applications Manager changes the task's status to UNSAT-FINISH and unsatisfies this running of the task as a predecessor for all predecessor links which reference it, as shown in Figure B. The predecessor links of other tasks will now need to be satisfied by another instance of this job, process flow, or process flow component.



Queue	Run ID	C	D	Task Name	Start	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12345			SALES_LOCAL	02-10-09 14:07	00:00:14		UNSAT-FINISH	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12357			B	02-10-09 14:07	00:00:06		FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12356			A	02-10-09 14:07	00:00:05		FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12346			PROJECTED_NOV	02-10-09 14:07	02:30:07		FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12355	Y		C	02-10-09 14:07	00:00:06		FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12381			INV_UPDATE	02-10-09 13:54	00:00:43		FINISHED	APPWORX...	SQLOPER	
BATCH	12385	Y		TEST_JOB	02-10-09 13:54	00:00:05		FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12382			SIMPLE	02-10-09 13:54	00:00:18		FINISHED	APPWORX...	SQLOPER	INV_UPDATE
BATCH	12387			B	02-10-09 13:54	00:00:05		FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12386			A	02-10-09 13:54	00:00:05		FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12384			SALES_DATA	02-10-09 13:54	00:00:05		FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12383			INV_STATUS	02-10-09 13:54	00:00:05		FINISHED	TRUNK	SQLOPER	INV_UPDATE
BATCH	12374			INV_UPDATE	02-10-09 13:51	00:00:43		FINISHED	APPWORX...	SQLOPER	

Figure B. A task in an UNSAT-FINISH status

4.12 Managing ZOS Tasks

ZOS tasks include ZOS and JCL Editor tabs. You can edit information on both tabs for tasks in the Backlog. You can edit the JCL for tasks regardless of whether they reside in the Operations Manager database or OS/390 system.

ZOS tasks include **ZOS** and **JCL Editor** tabs. You can edit the information on either (or any other tab) to make changes to the task.

The screenshot shows the 'Job Details' window for a ZOS task. The title bar reads 'Job Details: MY_UC4_GOODJOB 965387.01'. The 'ZOS' tab is selected, and the 'General' sub-tab is active. The window contains several sections for configuring the task:

- Type:** Radio buttons for 'Contained in the Operations Manager database' (selected), 'JCL from OS/390', and 'JCL include Jobcard from OS/390'. A 'Sysout' section has checkboxes for 'Database', 'File', and 'On error only'.
- Runtime options:** Fields for 'Jobname: PNASD010', 'Programmer name', 'Job Class', 'Account', 'Priority', 'MsgClass', 'MsgLevel', and 'Notify'.
- OS/390 job card parameters:** A section for 'Enter restart card here' and a 'Job parameters' field.
- Return Codes:** A 'Max return code' field with a note 'Entering a value here will deactivate Step Return Codes'.
- Step Return Codes:** A table with columns 'Step_name', 'Return_code', and 'OK'. Below the table are 'Delete', 'Up', and 'Down' buttons.
- Bottom section:** Fields for 'Step name', 'Return code', and 'Job ended OK' (a dropdown menu), along with an 'Add step condition' button.

The bottom of the window features four buttons: 'OK', 'Apply', 'Cancel', and 'Help'.

Figure A. The ZOS tab shown in the task details for a ZOS task.

Viewing and Editing Information on the ZOS Tab

The **ZOS** tab includes the following information that can be edited for tasks in the Backlog.

Field	Description
Type	<p>Determines where the JCL will reside:</p> <ul style="list-style-type: none"> • Contained in the Operations Manager database: The task information will be stored in the Operations Manager database. When this option is checked, you can use the JCL Editor tab to customize the JCL for the task. For more information on the JCL Editor tab, see Editing the JCL later in this topic. • JCL from OS/390: The JCL comes from OS/390. When this option is selected, you select a library and program from the General tab of the job's definition. • JCL include Jobcard from OS/390: The JCL includes a Jobcard from OS/390. When this option is selected, you select a library and program from the General tab of the job's definition.
Sysout	<p>Determines how output is handled:</p> <ul style="list-style-type: none"> • Database: The SYSOUT protocol is managed by UC4. It consists of the JES statistics and the complete Job output, as long as the Job output is not excluded by an entry in the INI file. After the Job execution, the SYSOUT protocol is transferred to the UC4 database via FileTransfer. • File: The SYSOUT protocol is managed by UC4. After the Job execution, the SYSOUT protocol is available as a file in the target system. • On error only: In case of Job interruption, the SYSOUT protocol is saved in the UC4 database and/or a file in the target system. This is only available when "Database" and/or "File" have been selected.
Jobname	The Job name.
Job Class	Specification of the Job class in which the Job should run.
Priority	Specification of the Job's priority. A value between 0 and 15 may be entered for priority.
Programmer name	Identifies the programmer who owns the job or its group. The name is recorded in the job card of the job.
Account	Accounting information on the job.
MsgClass	Assignment of the task log's message class.



Field	Description
MsgLevel	<p>Trace option for the task log. Possibly a numerical value for command and message separated by a comma.</p> <p>Permitted formats:</p> <ul style="list-style-type: none"> • <command number>,<message number> • ,<message number> • <command number> <p>Permitted values for outputting commands:</p> <ul style="list-style-type: none"> • 0 - Output only commands. • 1 - All job commands, JES2 or JES3 control commands, procedure commands and all IEF653I messages. • 2 - Only all job commands (JCL) and the JES2 or JES3 control commands. <p>Permitted value for outputting messages:</p> <ul style="list-style-type: none"> • 0 - Only JCL messages. For cancels, also JES control commands and operator messages. For SMS errors, also the corresponding messages. • 1 - All JCL, JES, operator and SMS messages.
Notify	Specification of a notify on OS/390.
Job parameters	Optional parameters for the job. You can enter commands such as RESTART=P020 to restart at a command number.
Max return code	Allows the task to succeed with any return code up to a given number. Entering a value here deactivates the Step Return Codes table.
Step Return Codes	<p>Optionally determine whether the task should succeed or fail based on specific return adding step conditions to the Step Return Codes table. You add step conditions by entering values in the Step name, Return code, and Job entered OK fields and clicking Add step condition.</p> <p>The Return code field allows for comma separated values or range of values written with a - between them.</p> <p>The step return codes are evaluated in the order they are listed.</p>

Editing the JCL

You can edit the JCL for tasks regardless of whether they reside in the Operations Manager database or OS/390 system with the **JCL Editor** tab shown in Figure B. Changes to the JCL are made only to this run of the task. You can use the ISPF editor by keeping the **ISPF Editor** box checked. To turn it off, simply uncheck the box.

To check the type run scan, click the **Type run scan** button. When errors occur, details are displayed in the **Type run scan results** box on the bottom of the tab.

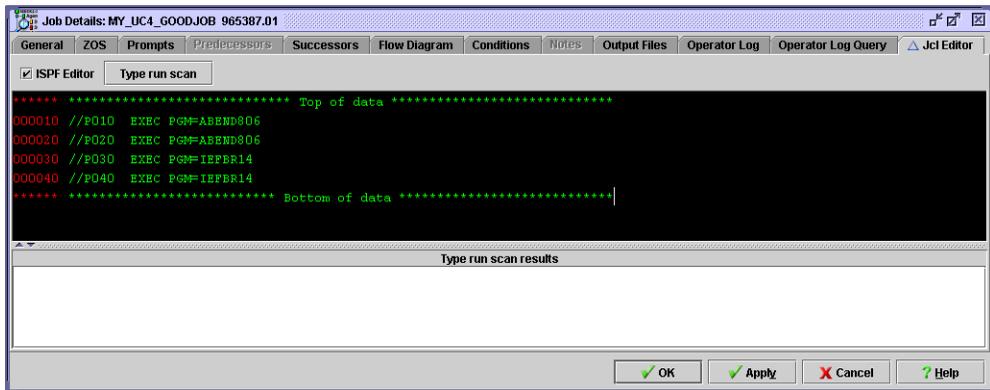


Figure B. The JCL Editor tab shown in the task details for a ZOS task.

4.13 Viewing History in a Gantt Chart

To view one or more tasks in History in a Gantt chart format, select the tasks, right-click and choose the History Gantt view option. If you select process flows or process flow components, Applications Manager displays all tasks in the corresponding process flow(s).

The History Gantt view is part of the Graphical Analysis Package add-on product of Applications Manager. You use it to display tasks in History in a Gantt chart format.

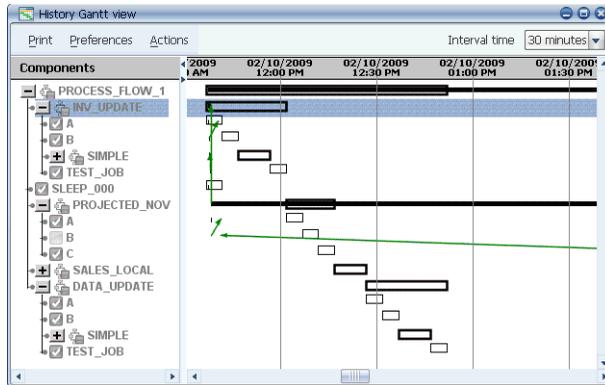


Figure A. The History Gantt view window

Procedure

To view one or more tasks in History in a Gantt chart format:

1. Select one or more tasks in History.
2. Right-click and choose the **History Gantt** view option as shown in Figure B. Applications Manager opens the **History Gantt** view window shown in Figure A.

If you select process flows or process flow components, Applications Manager displays all tasks in the corresponding process flow(s).

For detailed information on the features available in all Gantt windows, see chapter 9: *Monitoring and Managing Tasks with the Gantt View*.

3. If you wish, you can right-click a task and select **Flow Diagram** to view its predecessors in a flowchart view.

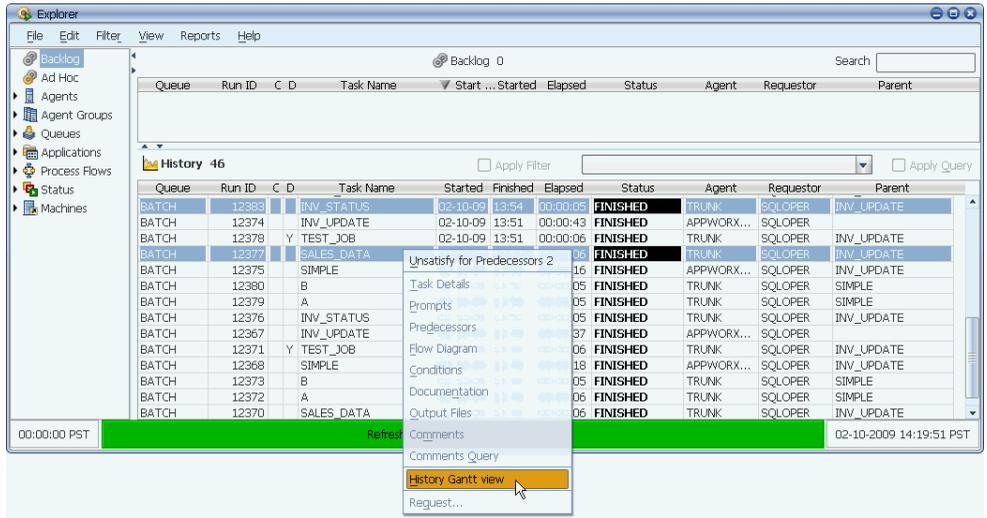


Figure B. To view one or more tasks in the History in a Gantt chart format, select the tasks, right-click and choose the History Gantt view option.

Subtopic

The following subtopic explains how to compare run times of tasks in History using the **History Gantt view** window.

4.13.1 Comparing Run Times in a Gantt Chart

4.13 Viewing History in a Gantt Chart

4.13.1 Comparing Run Times in a Gantt Chart

You can graphically compare run times of tasks in History. To do this, run a History query on a job or process flow, then view the queried tasks in the History Gantt view window. In the History Gantt view window, select Set start times to midnight from the Actions menu.

Using a History query and the **History Gantt view** window, you can compare run times of tasks in History.

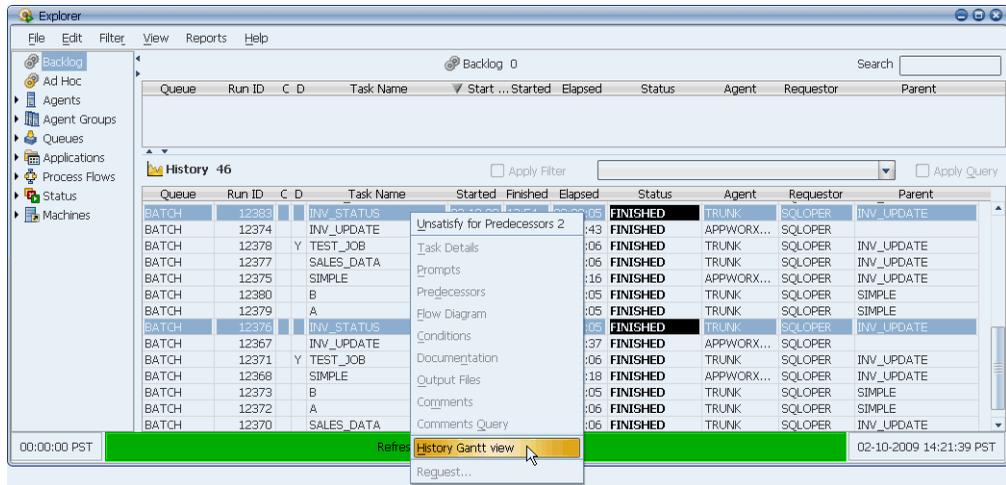


Figure A. Select History Query view for the tasks you wish to compare.

Procedure

To compare run times of tasks in History:

1. Select two or more records for jobs and/or process flows in History that you want to compare.

You may want to run a History query of the tasks you wish to compare. For information on running History queries, see [5.2 Querying for Tasks in History](#).

In Figure A, two instances of the INV_STATUS job are selected.

- Right-click the **History Gantt view** option from the pop-up window.
Applications Manager opens the **History Gantt view** window shown in Figure B.

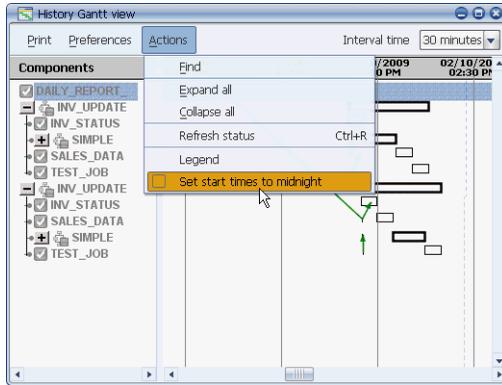


Figure B. The History Gantt view window with process flows displayed

- In the **History Gantt view** window, select **Set start times to midnight** from the **Actions** menu.
- Applications Manager displays all start times as midnight so you can compare run times as shown in Figure C.

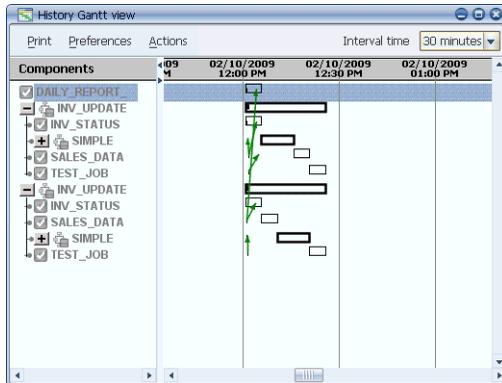


Figure C. All start times are shown as midnight for easy comparisons.

4.14 How Applications Manager Handles System Failures

The Applications Manager object-oriented architecture ensures orderly recovery after system failures.

If your system should fail for minutes, hours, or days, the Applications Manager modular process flows ensure orderly recovery. Applications Manager keeps a record in its Oracle database of each task and the task's status. When you bring your system back up, Applications Manager restores each task to the status it had at the time the system went down.

How Applications Manager Handles Tasks in the Backlog

If the machine where the Applications Manager automation engine is installed goes down, Applications Manager goes through a recovery procedure when the machine comes back up. The table below describes how Applications Manager handles tasks that have already been submitted and are displayed in the Backlog.

Task status at time of crash	Task status after recovery
Starting or Running	Applications Manager checks to see if the task process ID exists. If it exists, the status will be RUNNING. If the task process ID does not exist, the status will be DIED. You can restart the task from the Backlog.
Thread Wait	Status will be THREAD WAIT.
Date Pending	If the scheduled start date is still in the future, the status will be DATE PENDING. If the start date has passed, Applications Manager will launch the task as soon as possible after the system is brought back online.
Finished	The task will be moved to History with a status of FINISHED.
Aborted	If the Restart once on abort option is selected for the job, and this is the first time the task has aborted, Applications Manager will run the task as soon as possible after the system is brought back online.

The Effect of Agent and Network Failures

The following table describes what happens when a task is running and the agent, agent machine, or network goes down.

When a task is running and the agent	AND the machine running the agent	AND the network	THEN
is up	is up	is up	The status is RUNNING.
		goes down	The status of the task in the Backlog is not changed, however the agent will continue to monitor the task. When the network comes back up, Applications Manager checks with the agent and updates the status as RUNNING, FINISHED, or ABORTED.
	goes down	is up	The status of the task in the Backlog is not changed. When the machine and agent come back up, Applications Manager marks the task as DEAD. You can restart the task from Applications Manager.
goes down	is up	is up	The status of the task in the Backlog is not changed. When the agent comes back up, Applications Manager checks if the task completed. If the task completed, Applications Manager reports the status. If the task did not complete, Applications Manager will look for the task's PID. If it finds the PID, it will mark the status as RUNNING. If it does not find the PID, it will mark the status as DEAD.

How Schedules Impact Recovery

Jobs and process flows scheduled to run during the down time will run once when the system is brought back up. They will then return to their normal schedule. It does not matter how many times the job or process flow was scheduled to run during the down time. Each job or process flow will run only one time before returning to its normal schedule, unless a date was entered in the **Reschedule from** field. For information on schedules, see chapter 9: *Scheduling Jobs and Process Flows* in the *Development Guide*.

If the Oracle Tables Are Lost

If the Applications Manager Oracle tables are lost as a result of the system failure, all status information will be lost. You will need to restore the Oracle database and let Applications Manager resume processing based on the schedule information restored by the backup.

5

Querying and Filtering Explorer

5.1 Introduction to Querying and Filtering Explorer	128
5.2 Querying for Tasks in History	130
5.3 Filtering the Backlog and History	134

5.1 Introduction to Querying and Filtering Explorer

You run History queries and Backlog & History filters by picking an option from the Filter menu on the Explorer window.

History queries help you find records in the Applications Manager database for tasks that have run and agent/RMI statuses that have changed. Results for History queries are displayed in the History pane of the **Explorer** window. When a History query is active, the History pane is not refreshed. If you want to view updated query results, you must re-run the query.

Backlog & History filters allow you to limit the entries in the Backlog and History displays on the **Explorer** window. Results from Backlog & History filters are limited to the tasks and records currently in the Backlog and History display. When a Backlog & History filter is active, the lists in the Backlog and History panes on the **Explorer** window continue to refresh.

You run History queries and Backlog & History filters by picking an option from the **Filter** menu on the **Explorer** window as shown in Figure A.

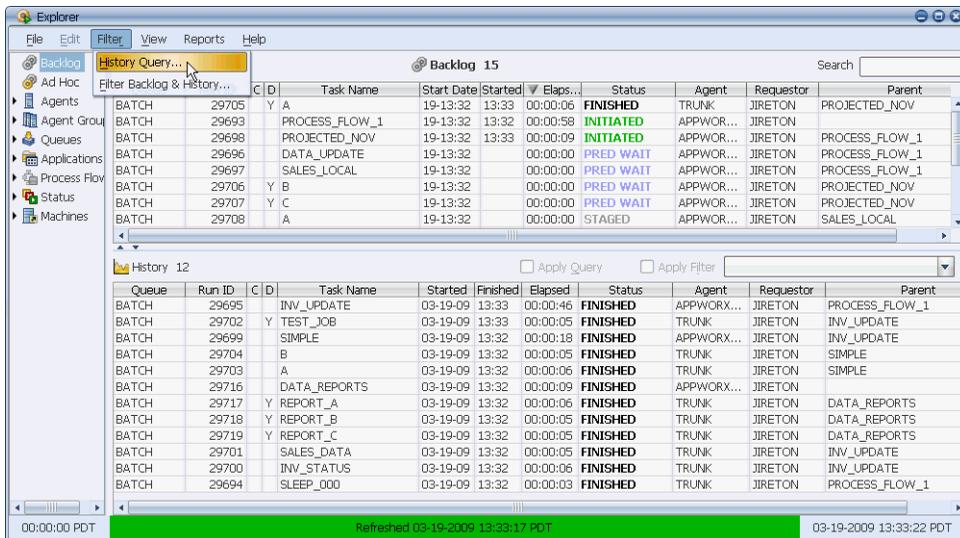


Figure A. Run History queries and Backlog & History filters by picking an option from the Filter menu on the Explorer window.

What is the Backlog?

The Backlog is a list of tasks that:

- Are waiting to run.
- Are running.
- Have run and failed, and have stayed in the Backlog for operator intervention.

To view all tasks in the Backlog in the content pane on the top right side of the screen, click the Backlog icon in the object tree shown in Figure A. In the Backlog in Figure A, some tasks are running, some are waiting in a PRED WAIT status, and one task has aborted.

Whether a task remains in the Backlog when it fails is determined by the **Stay in queue on abort** setting in its job definition.

You can type the first few letters of an task from the Backlog's name in the **Search** field, and Applications Manager will find it. The **Search** field accepts valid UNIX regular expressions. For example, to search for all jobs starting with the letters A and T, you would enter **[at]** in the **Search** field. For more information on syntax accepted by regular expressions, see *Appendix A: Regular Expression Tables* in the *Development Guide*.

What is History?

History is an audit trail including records for:

- All completed tasks and occurrences of task failure(s).
- RMI servers or agents being started, stopped, or having errors.
- **AgentService** processes being stopped.

How long task history records are archived in the Applications Manager database is determined by the prompt setting for the HISTORY_PURGE job, which is part of the SYSTEM process flow. The default value is 60 days. Your Applications Manager administrator is responsible for setting this value.

The **Explorer** window includes a partial view of History in its lower right pane.

The amount of History displayed when any user logs in to the client is determined by the **HistoryRetentionTime** setting in the **Options.properties** file. For more information, see topic *12.4 Options.properties File* in the *Administration Guide*.

How long records are displayed in the History pane while you are logged into an Applications Manager session is determined by:

- Your **History Display Minutes** desktop setting. For more information, see topic *1.4 Editing General Desktop and ToolBar Settings*.
- Whether you have a History query activated.

5.2 Querying for Tasks in History

To search for specific records in History, go to the Filter menu and select History Query. You can query by queues, jobs, process flows, task statuses, agents, requestors, start times, and run IDs. You can decide whether to limit the viewable History to the results of the query, or add the query results to the current History display. History query settings can be saved and used again.

To perform a History query for the **Explorer** window, open the **Filter** menu and choose **History Query**. Applications Manager displays the **History Query** window shown in Figure A.

You select search criteria for your query. You can query by one or more options by entering values in as many fields as you like. Fill in the fields by doing one or both of the following:

- Typing in values
- Selecting values from a list

You may select a default sort order for the query by selecting a **Sort** option at the end of a field. The sort order can be overridden from the History pane by selecting a different column name.

When you are through defining the query, click **OK**. Applications Manager displays a small animated window as it processes the query. Once the query is processed, Applications Manager displays the results in the History pane of the **Explorer** window.

Field descriptions for the **History Query** window are described in Table A. Directions for the two methods of filling in the fields follow.

Table A. History query options

Field	Description
Jobs	Searches for any task assigned to the specified job(s). To query for a task run under an alias, enter the alias name.
Process flows	Searches for process flow(s) and components.
Applications	Searches for any task assigned to the specified application(s).
Agents	Searches for any task run on the specified agent(s).
Queues	Searches for any task run on the specified queue(s).
Requestors	Searches for any task run by the specified requestor(s).

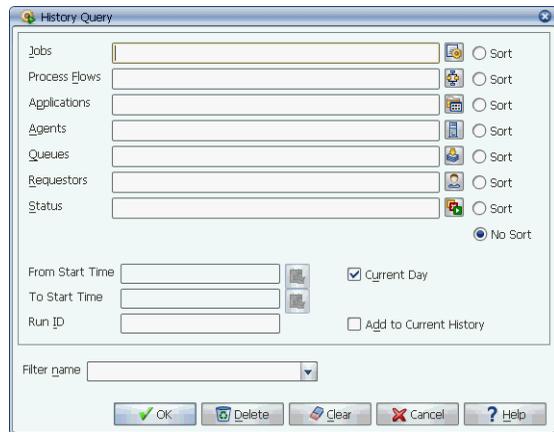


Figure A. You can limit the tasks listed in History using the History Query window.

Field	Description
Status	Searches for any task assigned the specified task status(es). For a description of the task status values, see <i>Appendix B: Task Status Values</i> .
From start time To start time	These fields accept date/time information. If the Current day option is selected, the From start time and To start time fields will be inactive. If you save a query for tasks run in the last two days, it will always run a query for the tasks in the last two days. There is no way to save a query from a specific date.
Run ID	This field references the unique number assigned to each task by Applications Manager. When using this field do not include the decimal values.
Current day	The default is to query by the current day. All tasks run from midnight to the current time will be included. If you save a query with this option checked, it will be applied each time you run the saved query. If you uncheck the option, the From start time and To start time fields become active. You can then enter specific dates and times for the query.

Typing in Values

You can type comma-separated names in the fields. These fields also allow the use of:

- **Wildcards:** The `_` wildcard is used to represent a single character, and the `%` wildcard represents an unlimited number of characters.
- **Negative filters:** The `!` character is used as a negative filter to exclude tasks from the search. For example, entering **!AW%** will exclude tasks with the letters **AW** together in their name.

Selecting Values from a List

When you click on an icon at the end of one of the applicable fields in the **History query** window, Applications Manager displays the object assignment window where you can pick one or more objects. The windows will list only the objects to which you have user group access. Use the arrow buttons to move objects between the **Unassigned** and **Assigned** tables. For information on assigning objects, see topic *1.3 Working in the Applications Manager Windows*.

Use the **Search** field to query the **Unassigned** table. You can apply the search criteria to the **Assigned** column as well by unselecting the **Show all assigned** option.

You can use negative filters to exclude tasks from the search based on the items you select by checking the **Negative Filter** box before assigning objects. When an object is added as a negative filter, it will have the `!` character before its name in the **Assigned** table.



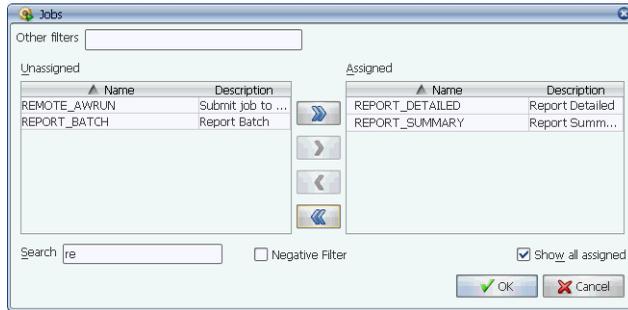


Figure B. Object assignment window for jobs

Use the **Other filters** field to type in comma-separated names. This field allows for wildcards and negative filters as described in the “Typing in Values” section above.

Any text entered in the **Other filters** field will be included in the appropriate field on the **Select filters** window.

Adding the Queried Results to History

By default Applications Manager limits the records in the History pane to the results of the query. If you would rather add the queried results to the current History display, click the **Add to Current History** box on the **History Query** window.

When you add the queried results to the current History display, the records will be added to the History pane and the **Apply Query** box on the **Explorer** window will not be checked. The records added from the query will remain in History for the number of minutes you have defined in your **History Display Minutes** desktop setting. To see them again, you can run another query. For more information on the **History Display Minutes** desktop setting, see topic *1.4 Editing General Desktop and ToolBar Settings*.

Saving a Query

You may also optionally save a History query to use later by entering a name in the **Filter name** drop-down box. The History query will be saved when you click **OK**.

Saved History queries can be recalled from the **Filter name** drop-down box for History queries, Output queries, and filters of the Backlog and History.

You can delete a saved query by selecting it and clicking **Delete**.

Viewing Query Results

When you run a query, the **Apply Query** check box will be selected and the column headers will be displayed with a light orange background (see Figure C).

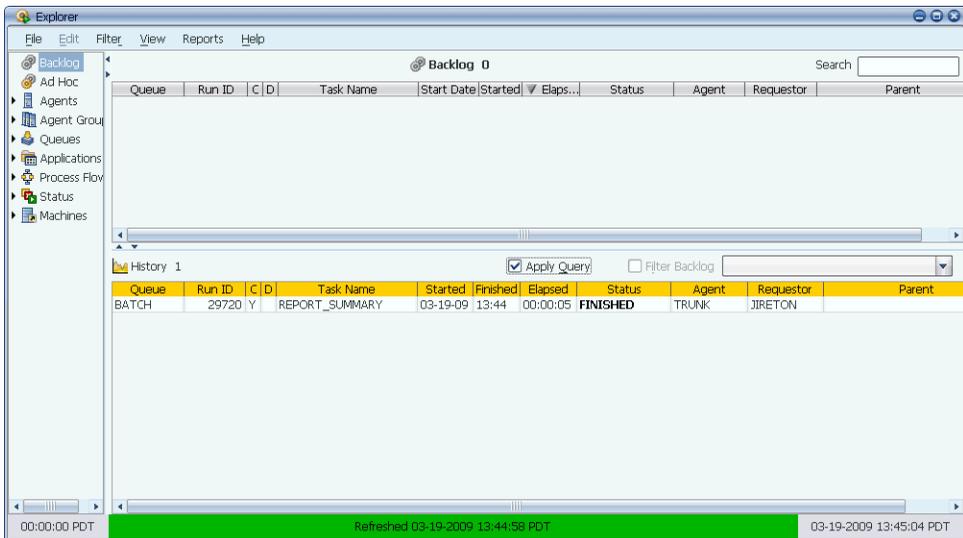


Figure C. The History is queried. The Apply Query box is checked and the column headers for History are displayed with light orange backgrounds.

Applications Manager will not refresh the query's results. If you want to view updated query results, you must re-run the query.

To view the unqueried History, uncheck the **Apply Query** box. You can view the queried results again by rechecking the **Apply Query** box. If you select the **History Query** menu item again, Applications Manager returns you to the **Query Definition** window. Applications Manager displays the search criteria you defined on your last query. To run a new query, select new data and click **OK**.

5.3 Filtering the Backlog and History

You can limit the tasks shown in the Backlog and History by opening the Filter menu and choosing Filter Backlog and History. You can filter by queues, jobs, process flows, task statuses, agents, requestors, start times, and run IDs. Filter settings can be saved and used again.

Backlog & History filters allow you to limit the entries in the Backlog and History displays on the **Explorer** window. Results from Backlog & History filters are limited to the tasks and records currently in the Backlog and History display.

To perform a Backlog & History filter of the **Explorer** window, open the **Filter** menu and choose **Filter Backlog and History**. Applications Manager displays the **Select filters** window shown in Figure A.

You select search criteria for your filter. You can filter by one or more options by entering values in as many fields as you like. Fill in these fields by doing one or both of the following:

- Typing in values
- Selecting values from a list

You may select a default sort order for the query by selecting a **Sort** option at the end of a field. The sort order can be overridden from the Backlog or History panes by selecting a different column name.

When you are through defining the filter, click **OK**. Applications Manager displays a small animated window as it processes the filter. Once the filter is processed, Applications Manager displays the results in the Backlog and History panes of the **Explorer** window.

Field descriptions for the **Select filter** window are described in Table A. Directions for the two methods of filling in the fields follow.

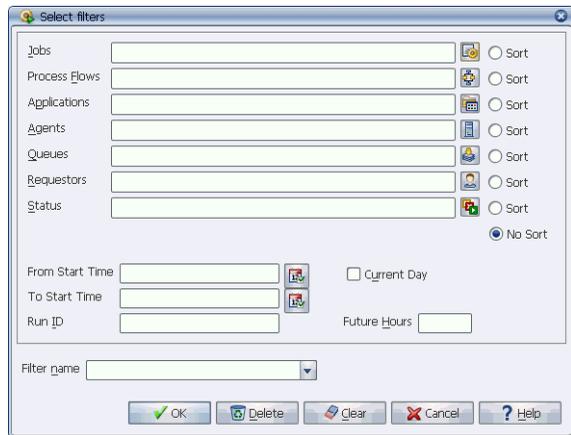


Figure A. You can select any combination of filters.

Table A. Backlog and History filter options

Field	Description
Jobs	Searches for tasks assigned to the specified job(s), including tasks running the job under an alias name. To query for a task run under an alias, enter the alias name.
Process flows	Searches for the selected process flow(s) and their components.
Applications	Searches for any task assigned to the specified application(s).
Agents	Searches for any task run on the specified agent(s).
Queues	Searches for any task run on the specified queue(s).
Requestors	Searches for any task run by the specified requestor(s).
Status	Searches for any task assigned the specified task status(es). For a description of the task status values, see <i>Appendix B: Task Status Values</i> . This is a common field where negative filters are used. For example, if !ST% is entered in this field, Applications Manager will not display components in various staged statuses in the Backlog including: STAGED, STG SKIP, STAGED HOLD, STG_PW HOLD, and STAGED_PW.
From start time To start time	These fields accept date/time information. If the Current day option is selected, the From start time and To start time fields will be inactive. If you save a filter for tasks run in the last two days, it will always run a filter for the tasks in the last two days. There is no way to save a filter from a specific date.
Run ID	This field references the unique number assigned to each task by Applications Manager. When using this field do not include the decimal values.
Current day	The default is to query by the current day. All tasks run from midnight to the current time will be included. If you save a query with this option checked, it will be applied each time you run the saved query. If you uncheck this option, the From start time and To start time fields become active. You then can enter specific dates and times for the query.
Future Hours	This field is used to look ahead X number of hours for staged tasks and requested tasks with a start date/time in the future. It works in conjunction with the From start time and To start time fields, with Applications Manager calculating the greatest time span based on both criteria.



Typing in Values

You can type in comma-separated names in the fields. These fields also allow the use of:

- **Wildcards:** The `_` wildcard is used to represent a single character, and the `%` wildcard to represent an unlimited number of characters.
- **Negative filters:** The `!` character is used as a negative filter to exclude tasks from the search. For example, entering `!AW%` will exclude tasks with the letters **AW** together in their name.

Selecting Values from a List

When you click on an icon at the end of one of the applicable fields in the **History query** window, Applications Manager displays the object assignment window where you can pick one or more objects. The windows will list only the objects to which you have user group access. Use the arrow buttons to move objects between the **Unassigned** and **Assigned** tables. For information on assigning objects, see topic *1.3 Working in the Applications Manager Windows*.

Use the **Search** field to query the **Unassigned** table. You can apply the search criteria to the **Assigned** column as well by unselecting the **Show all assigned** option.

You can use negative filters to exclude tasks from the search based on the items you select by checking the **Negative Filter** box before assigning objects. When an object is added as a negative filter, it will have the `!` character before its name in the **Assigned** table.

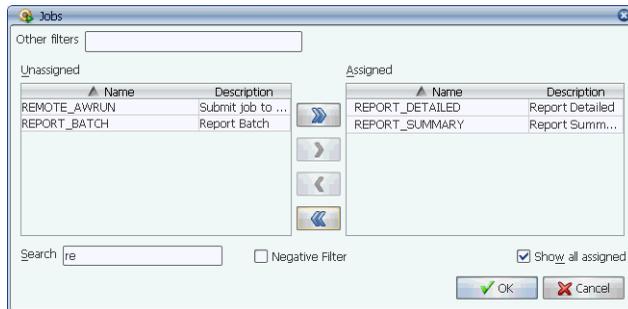


Figure B. Object assignment window for jobs

Use the **Other filters** field to type in comma-separated names. This field allows for wildcards and negative filters as described in the “Typing in Values” section above.

Any text entered in the **Other filters** field will be included in the appropriate field on the **Select filters** window.

Viewing Filter Results

Applications Manager runs the search and displays the filtered results. The **Apply Filter** check box will be selected and the column headers will be displayed with a orange background (see Figure C). To view the unfiltered Backlog and History, uncheck the **Apply Filter** box. You can view the filtered results again by rechecking the **Apply Filter** box. If you select the **Filter Backlog & History** menu item again, Applications Manager returns you to the **Select filters** window. Applications Manager displays the search criteria you defined on your last filter. To run a new filter, select new data and click **OK**. To select a saved filter, select it from the drop-down box between the two check boxes in the History pane.

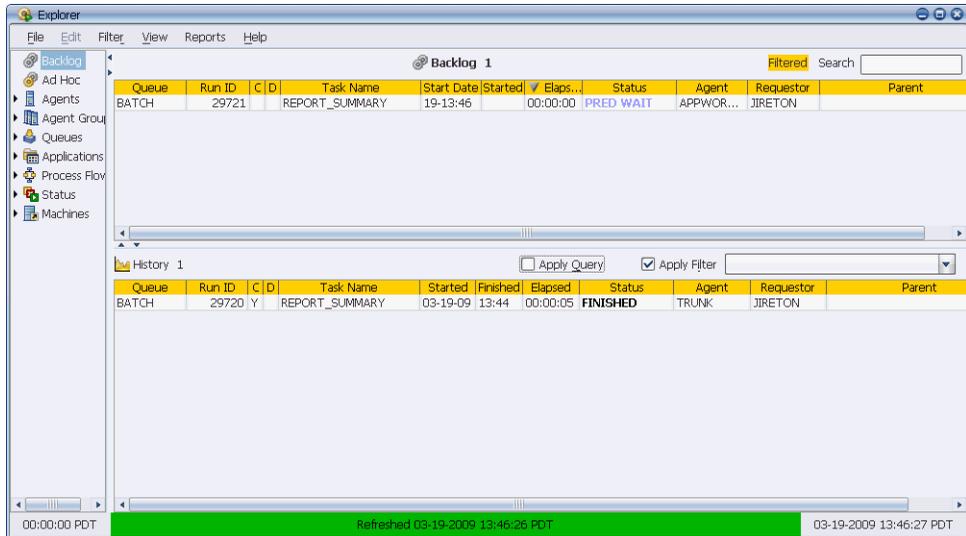


Figure C. The Backlog and History are filtered. The Apply Filter box is checked and the column headers are displayed with light orange backgrounds.

6

Staging Tasks in the Backlog

6.1 Introduction to Staging Tasks in the Backlog	140
6.2 Staging Tasks	142
6.3 Managing Staged Tasks	144

6.1 Introduction to Staging Tasks in the Backlog

Staging tasks in the Backlog allows you to edit task details in the Backlog without waiting until they are ready to run.

By default, scheduled tasks appear in the Backlog when they are ready to run. To bring them into the Backlog ahead of time, you can stage tasks up to 48 hours in the future.

Staging tasks in the Backlog gives you the opportunity to:

- View scheduled tasks in the Backlog before they run.
- Alter a task's details before it runs.
- Delete a task before it runs.

For information on altering task details, see topic *4.10 Viewing and Editing Task Details*.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	12573			SALES_LOCAL	12-07:27		00:00:00	PRED WAIT	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12572			DATA_UPDATE	12-07:27		00:00:00	PRED WAIT	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12595	Y		FORECAST	12-11:59		00:00:00	DATE PENDING	TRUNK		
BATCH	12599	Y		FORECAST	12-23:59		00:00:00	DATE PENDING	TRUNK		
BATCH	12601	Y		RMI_LOG_ROLLOVER	13-00:00		00:00:00	DATE PENDING	TRUNK		
BATCH	12602			NIGHTLY_PRODUCTION	13-00:01		00:00:00	DATE PENDING	APPWOR...		
BATCH	12625	Y		FORECAST	13-11:59		00:00:00	DATE PENDING	TRUNK		
BATCH	12600			LINA	13-12:00		00:00:00	DATE PENDING	APPWOR...		
BATCH	12626	Y		FORECAST	13-23:59		00:00:00	DATE PENDING	TRUNK		
BATCH	12624	Y		RMI_LOG_ROLLOVER	14-00:00		00:00:00	DATE PENDING	TRUNK		
BATCH	12613	Y		NIGHTLY_PRODUCTION	14-00:01		00:00:00	DATE PENDING	APPWOR...		
BATCH	12469	Y		REPORT_A	11-00:00		00:00:00	STAGED	APPWOR...		DATA_REPORTS

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12598	Y		STAGING	02-12-09 09:10	00:00:00		FINISHED	TRUNK	SQLOPER	
BATCH	12511	Y		PROJECTED_NOV	02-12-09 08:28	00:20:34		FINISHED	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12520			Y C	02-12-09 08:28	00:00:05		FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12510	Y		SALES_LOCAL	02-12-09 08:08	00:00:16		FINISHED	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12522			B	02-12-09 08:08	00:00:06		FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12519	Y		Y B	02-12-09 08:07	00:00:01		ABORTED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12519.01	Y		Y B	02-12-09 08:07	00:00:01		DELETED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12518	Y		Y A	02-12-09 08:07	00:00:05		FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12524			IMV STATUS	02-12-09 08:07	00:00:05		FINISHED	TRUNK	SQLOPER	DATA_UPDATE

Figure A. Staged tasks in the Backlog.

How Tasks Are Staged

Tasks are staged by running the either the STAGING or STAGING_BY_SCHEDULE jobs. When you run one of these jobs, you tell Applications Manager which tasks to stage by specifying prompt values. They can be scheduled or requested ad hoc. For more information, see topic *6.2 Staging Tasks*.

Staging and the Virtual Day

The virtual workday is a point in time each day that limits how far back Applications Manager will search in the Backlog and History for a predecessor. When a task is staged, its virtual day is set based on its start time. For more information on predecessors and the virtual day, see chapter *5: Working with Predecessors in the Development Guide*.

Lights Out vs. Operations-Intensive

There are two basic Applications Manager environments:

- **Lights out:** No one monitors Applications Manager. Tasks run based on their schedules, predecessor links, and conditions. An email or page is sent out when tasks or agents have trouble.
- **Operations-intensive:** Operators monitor and manage Applications Manager. Some tasks are scheduled, while others are requested ad hoc. Operators are often called to change runtimes of tasks or to edit tasks before they run.

Most customers function somewhere in the middle.

Staging for Lights Out Shops

If you are strictly a lights out shop, there is little need to stage tasks. You would not need to schedule the STAGING or STAGING_BY_SCHEDULE jobs. In the rare cases when you need to make changes for the running of a task, you could request one of them ad hoc for one task only.

Staging for Operations-Intensive Shops

If you are an operations-intensive shop, you may want to stage tasks in a few different ways. One would be to stage all tasks that will run during each operator's shift. All tasks for an eight hour period would be listed in the Backlog. This way operators can see everything that is going to run and quickly edit tasks when they are instructed to. A second method would be to stage only particular tasks. You might do this if several tasks are scheduled, but only a few typically need to be edited. A third method would be to only stage tasks when changes need to be made. Operators might do this if they do not want a lot of scheduled tasks shown in the Backlog.

6.2 Staging Tasks

Applications Manager staging allows you to edit tasks before they run. You stage tasks by running either the STAGING or STAGING_BY_SCHEDULE job. You tell Applications Manager which tasks to stage by specifying prompt values.

You tell Applications Manager which tasks to stage by specifying prompt values and running either the STAGING or STAGING_BY_SCHEDULE job. These jobs can be scheduled or requested on an ad hoc basis. Jobs and process flows should not be edited, and you should not run exports or imports while these jobs are running.

Figure A. You can submit the staging jobs on an ad hoc basis.

Two Staging Jobs

The STAGING and STAGING_BY_SCHEDULE jobs both ship with Applications Manager. They allow you to stage jobs and process flows. The difference between the two jobs is their second prompt.

Which staging job you want to run depends on whether you want to stage jobs and process flows based on all of their schedules or some of their schedules. For example, you may want to stage a job that includes two schedules that run with different prompt values for different departments. To make sure you stage the correct task, you would stage the job by running STAGING_BY_SCHEDULE.

Prompt Values

The staging jobs include the following prompts.

Prompt	Description
Applications to be Staged	Use the Select button to select one or more Applications Manager applications.
Process Flows/ Jobs Process Flows/ Jobs->Schedule Name	<p>Use the Select button to select:</p> <ul style="list-style-type: none"> • For STAGING: individual jobs and process flows with schedules from the application(s) selected in the first prompt. • For STAGING_BY_SCHEDULE: schedules from jobs and process flows with schedules from the application(s) selected in the first prompt. <p>If one or more applications are selected, but no process flows or jobs, then all process flows/jobs of the selected applications will be staged. Any scheduled process flows or jobs not staged will be inserted in the Backlog at their regularly scheduled time.</p>
Include Hour/ Minute Schedules	Determine whether you wish to include process flows/jobs with Hours or Minutes selected in their schedule's Units box.
Hours ahead to be staged	<p>Determine the number of hours ahead you want to stage tasks. By default, this prompt has a maximum value of 48 hours. This is so no one accidentally stages out too far. If you wish to stage tasks out longer, you must edit the prompts in the job's definition.</p> <p>If the Use virtual day for process flow component days of week option is selected for the automation engine, tasks cannot be staged beyond 24 hours from the start of the virtual day.</p> <p>Warning! Staging tens of thousands of tasks can affect Backlog performance.</p>

When you stage a task, the value in its schedule's **Next run date** field will be updated to its next run. For more information on the **Next run date** field, see topic *9.3 Entering General Information for Schedules* in the *Development Guide*.

Creating Multiple Schedules

You can create multiple schedules for these jobs that use different prompt values. For example, you might create the following schedules:

- **WORKDAY**: Runs Monday through Friday at 9:00 A.M. and lists all process flows and jobs for 8 hours without including hour/minute schedules.
- **EVERY_HOUR**: Runs every hour and lists all process flows and jobs including hour/minute schedules.

6.3 Managing Staged Tasks

Staged jobs and process flows are shown in the Backlog in a DATE PENDING status. Process flow components are in a STAGED status. You can edit staged tasks exactly the same way you would edit any other non-running task in the Backlog.

Staged jobs and process flows in the Backlog are shown in a DATE PENDING status as shown in Figure A. Components of a process flow in DATE PENDING status will show one of the following statuses:

- **STAGED:** The component will stay in a staged status until its process flow is initiated.
- **STAGED_PW:** The component has been staged *and* is waiting for one or more predecessor requirements to be met. It will not be eligible to run until its parent process flow is initiated *and* its predecessor requirement are met.
- **STG SKIP:** The component is part of a process flow but is not eligible to run. This happens when a day of the week is unchecked or a skip calendar is selected in the **Schedule** box on the component's **General** sub-tab. For more information, see topic 4.2 *Specifying Calendars and Eligible Run Days in the Development Guide*.

The screenshot shows the Backlog Explorer window with two tables: 'Backlog 42' and 'History 47'. The 'Backlog 42' table lists tasks with columns for Queue, Run ID, C, D, Task Name, Start Date, Started, Elapsed, Status, Agent, Requestor, and Parent. The 'History 47' table lists completed tasks with columns for Queue, Run ID, C, D, Task Name, Started, Finished, Elapsed, Status, Agent, Requestor, and Parent.

Queue	Run ID	C	D	Task Name	Start Date	Started	Elapsed	Status	Agent	Requestor	Parent
BATCH	12626	Y		FORECAST	13-23:59		00:00:00	DATE PENDING	TRUNK		
BATCH	12624	Y		RMI_LOG_ROLLOVER	14:00:00		00:00:00	DATE PENDING	TRUNK		
BATCH	12613			NIGHTLY_PRODUCTION	14:00:01		00:00:00	DATE PENDING	APPWOR...		
BATCH	12468	Y		REPORT_A	11:00:01		00:00:00	STAGED	APPWOR...		DATA_REPORTS
BATCH	12469	Y		REPORT_B	11:00:01		00:00:00	STAGED	APPWOR...		DATA_REPORTS
BATCH	12470	Y		REPORT_C	11:00:01		00:00:00	STAGED	APPWOR...		DATA_REPORTS
BATCH	12604	Y		DATA_PURGE	13:00:01		00:00:00	STAGED	APPWOR...		NIGHTLY_PRODUCTION
BATCH	12605	Y		FTP	13:00:01		00:00:00	STAGED_PW	APPWOR...		NIGHTLY_PRODUCTION
BATCH	12606	Y		LOADER	13:00:01		00:00:00	STAGED_PW	APPWOR...		NIGHTLY_PRODUCTION
BATCH	12607	Y		DATA_CLEANSER	13:00:01		00:00:00	STAGED_PW	APPWOR...		NIGHTLY_PRODUCTION
BATCH	12603			DATA_REPORTS	13:00:01		00:00:00	STAGED_PW	APPWOR...		NIGHTLY_PRODUCTION
BATCH	12610	Y		REPORT_A	13:00:01		00:00:00	STAGED	APPWOR...		DATA_REPORTS

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12506			PROCESS_FLOW_1	02-11-09 09:23	22:21:25		FINISHED	APPWOR...	SQLOPER	
BATCH	12571			INV_UPDATE	02-12-09 09:23	01:55:45		FINISHED	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12509	Y		DATA_UPDATE	02-12-09 09:23	01:15:24		FINISHED	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12508			INV_UPDATE	02-11-09 09:23	22:21:22		FINISHED	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12575	Y		SIMPLE	02-12-09 09:23	00:00:17		FINISHED	APPWOR...	SQLOPER	INV_UPDATE
BATCH	12523	Y		SIMPLE	02-12-09 09:23	00:00:17		FINISHED	APPWOR...	SQLOPER	DATA_UPDATE
BATCH	12573	Y		SALES_LOCAL	02-12-09 09:23	00:00:16		FINISHED	APPWOR...	SQLOPER	PROCESS_FLOW_1
BATCH	12512	Y		SIMPLE	02-12-09 09:23	00:00:16		FINISHED	APPWOR...	SQLOPER	INV_UPDATE
BATCH	12580			B	02-12-09 09:23	00:00:05		FINISHED	TRUNK	SQLOPER	SIMPLE

Figure A. Staged tasks in the Backlog

For a description of all task status values, see *Appendix B: Task Status Values*.

You can filter staged tasks in the Backlog using the **Future Hours** field for a Backlog & History filter. For more information, see 5.3 *Filtering the Backlog and History*.

Editing Staged Tasks

Staging tasks in the Backlog gives you the opportunity to alter a task's details before it runs. Editing staged tasks is exactly the same as editing any other non-running task in the Backlog. For information on altering task details, see topic 4.10 *Viewing and Editing Task Details*.

7

Working with Agents and Queues

7.1 Introduction to Monitoring and Managing Agents and Queues	148
7.2 Monitoring Agents	150
7.3 Managing Agents	152
7.4 Viewing and Printing Automation Engine and Agent Logs	154
7.5 Monitoring Queues	156
7.6 Changing Queue Settings	158
7.7 Administering Queues	160
7.7.1 Defining Queues	162
7.7.2 Defining Thread Schedules	164
7.8 Removing External Predecessors by Queue	166

7.1 Introduction to Monitoring and Managing Agents and Queues

You can monitor and manage agents and queues from the Explorer window. You can add, edit, or delete queues and thread schedules from the Object Admin menu.

Queues control the flow of tasks. All tasks must pass through an Applications Manager queue to be executed. You control queue throughput by assigning a queue to a thread schedule. You can define an unlimited number of queues.

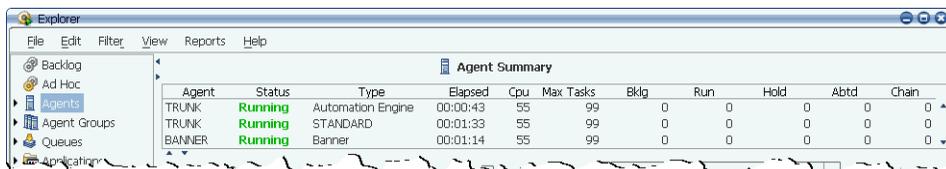
Agents are instances of Applications Manager; an agent is installed on each machine where tasks are executed. An agent can be an automation engine's local agent, or a remote agent. The automation engine is also listed along with the agents in the **Explorer** window. The automation engine schedules and controls task execution on all the agents assigned to it.

You monitor and manage agents and queues from the **Explorer** window.

Monitoring and Managing Agents

From the **Explorer** window, you can:

- View information in the Agent Summary including the status of the automation engine and agent(s). An Agent Summary is shown in Figure A.
- View tasks by automation engine, agent, or agent group.
- View agents by machine.
- Start, stop, idle, or resume the automation engine and/or agent(s).
- Reset an agent in a BUSY or TROUBLE status to display a STOPPED status if you do not want its status to affect the status bar.
- Assign thread schedules to the automation engine and agent(s).
- View and print automation engine and agent log files.
- Rollover the log file for the **AgentService** process.



The screenshot shows the Explorer window with the 'Agent Summary' table. The table has the following columns: Agent, Status, Type, Elapsed, Cpu, Max Tasks, Bklog, Run, Hold, Abtd, and Chain. The data rows are:

Agent	Status	Type	Elapsed	Cpu	Max Tasks	Bklog	Run	Hold	Abtd	Chain
TRUNK	Running	Automation Engine	00:00:43	55	99	0	0	0	0	0
TRUNK	Running	STANDARD	00:01:33	55	99	0	0	0	0	0
BANNER	Running	Banner	00:01:14	55	99	0	0	0	0	0

Figure A. You can manage agents and queues from the Explorer window.

Defining Agents

Agents are created using the **Agents** window. For detailed information, see topic 4.2 *Defining Remote Agents* in the *Administration Guide*.

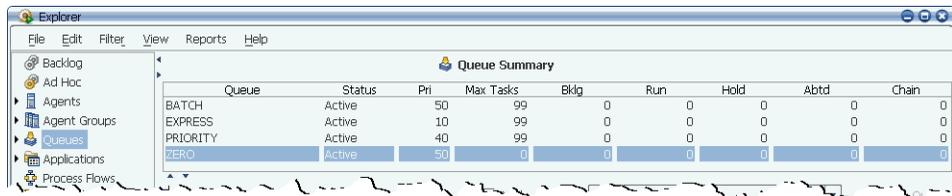
Activating/Inactivating Agents

When an agent is not active, the status of the agent is **INACTIVE**. All tasks in the Backlog and newly submitted tasks to the agent will move to History with a status of **INACTIVE**. You activate or inactivate an agent by checking or unchecking the **Active** box in that agent's definition.

Monitoring and Managing Queues

From the **Explorer** window, you can:

- View information about all queues in the Queue Summary. A Queue Summary is shown in Figure B.
- View tasks by queue.
- Activate or inactivate multiple queues.
- Change a queue's priority.
- Assign queues to thread schedules to control the number of threads the queue reserves and the number of tasks it can run concurrently.



The screenshot shows the Explorer window with the Queue Summary table. The table has the following columns: Queue, Status, Pri, Max Tasks, Bldg, Run, Hold, Abtd, and Chain. The data rows are:

Queue	Status	Pri	Max Tasks	Bldg	Run	Hold	Abtd	Chain
BATCH	Active	50	99	0	0	0	0	0
EXPRESS	Active	10	99	0	0	0	0	0
PRIORITY	Active	40	99	0	0	0	0	0
ZERO	Active	50	0	0	0	0	0	0

Figure B. You can manage queues from the Explorer window.

Defining Queues

Queues are created using the **Queues** window. For detailed information, see topic [7.7.1 Defining Queues](#).

7.2 Monitoring Agents

You can view an Agent Summary by clicking the Agents icon from the object tree.

Agents are installed on each machine where tasks are executed. For more information on agents, see chapter 4: *Working with the Automation Engine and Agents* in the *Administration Guide*.

The screenshot shows the Explorer application window. The left pane shows a tree view with 'Agents' selected. The main pane displays the 'Agent Summary' table:

Agent	Status	Type	Elapsed	Cpu	Max Tasks	Bkfg	Run	Hold	Abtd	Chain
TRUNK	Running	Automation Engine	00:00:03	55	99	0	0	0	0	0
TRUNK	Running	STANDARD	00:00:53	55	99	0	0	0	0	0
BANNER	Running	Banner	00:00:34	55	99	0	0	0	0	0
OAE_SUN28	Stopped	OAE	7 days	55	3	0	0	0	0	0

Below the Agent Summary is a 'History' table with 28 rows:

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12432			PROCESS_FLOW_1	02-10-09 15:49	02-10-09 15:49	00:00:34	FINISHED	APPWORX...	SQLOPER	
BATCH	12437	Y		PROJECTED_NOV	02-10-09 15:49	02-10-09 15:49	00:00:20	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12435	Y		DATA_UPDATE	02-10-09 15:49	02-10-09 15:49	00:00:13	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12434			INV_UPDATE	02-10-09 15:49	02-10-09 15:49	00:00:24	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12436	Y		SALES_LOCAL	02-10-09 15:49	02-10-09 15:49	00:00:11	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12438	Y		SIMPLE	02-10-09 15:49	02-10-09 15:49	00:00:11	FINISHED	APPWORX...	SQLOPER	INV_UPDATE
BATCH	12449	Y		SIMPLE	02-10-09 15:49	02-10-09 15:49	00:00:10	FINISHED	APPWORX...	SQLOPER	DATA_UPDATE
BATCH	12453		A		02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12442		A		02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12443	Y	B		02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12444	Y	A		02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12446	Y	C		02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12447		A		02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12448	Y	B		02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12450			INV_STATUS	02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12451	Y		SALES_DATA	02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12452	Y	Y	TEST_JOB	02-10-09 15:49	02-10-09 15:49	00:00:06	FINISHED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12454	Y	B		02-10-09 15:49	02-10-09 15:49	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE

The status bar at the bottom shows '00:00:00 PST', 'Refreshed 02-10-2009 15:51:09 PST', and '02-10-2009 15:51:11 PST'.

Figure A. The Agent Summary

Each automation engine has one local agent and can control numerous remote agents and application agents. Several agents are defined and the remote agent NT4 is selected in Figure A. From the **Explorer** window you can view:

- An agent summary by clicking the Agents icon in the object tree.
- Agents in agent groups by clicking an agent group under the Agent Groups icon in the object tree.
- All agents on a machine by clicking the machine name under the Machines icon in the object tree.
- Agent status based on icons in the Explorer tree and descriptions in the Agent Summary.

Column Descriptions for the Agent Summary

The Agent Summary displays the status of each agent. The columns are described below.

Column	Displays the:
Agent	Name of the agent, agent group, or automation engine.
Status	Current status of the agent. For information on possible status values, see <i>Appendix A: Automation Engine/Agent Status Values</i> .
Type	Designates each listing as an automation engine or agent type. Note: Although the automation engine and its local agent are defined as a single object in Applications Manager, they are listed separately in the Agent Summary, and separate actions can be taken on them.
Elapsed	Elapsed time of the agent status.
CPU	Percentage of CPU usage on the agent machine. The CPU usage is updated about once every minute for each agent and the automation engine. CPU percentages are rounded to the nearest five percent.
Max Tasks	Number of threads available for the agent.
Bklg	Number of tasks in the Backlog.
Run	Number of tasks RUNNING.
Hold	Number of tasks on HOLD.
Abtd	Number of tasks ABORTED in the Backlog.
Process Flow	Number of process flows in the Backlog.

You can customize many tables in Applications Manager, including the Agent Summary. When customizing tables, you determine:

- Which columns are listed.
- What each column is named.
- How each column is displayed.

Your Applications Manager administrator can set default values for tables. Therefore, the columns in the Agent Summary may be different from what is described above. For more information, see topic *1.8 Customizing Tables*.

7.3 Managing Agents

You can start, stop, idle, resume, or reset the automation engine or agents, and edit an agent's threads by selecting one or more agents (or the automation engine), right-clicking, and selecting from the menu.

You manage the automation engine and its agents in several ways. From the **Explorer** window you can:

- Take an action on a single agent or automation engine by right-clicking an agent's icon in the object tree or by right-clicking a listing in the Agent Summary.
- Take an action on one or more agents or the automation engine by highlighting them in the Agent Summary and right-clicking.
- Take an action on all agents and the automation engine by right-clicking the Agents icon in the object tree.
- Take an action on all agents on a machine by right-clicking the machine name under the Machines icon in the object tree.
- Change an agent or automation engine's thread schedule by right-clicking the agent or automation engine.

Actions you can take on agents are start, stop, idle, resume, and reset. These actions can be taken on the automation engine as well. Each action is described below.

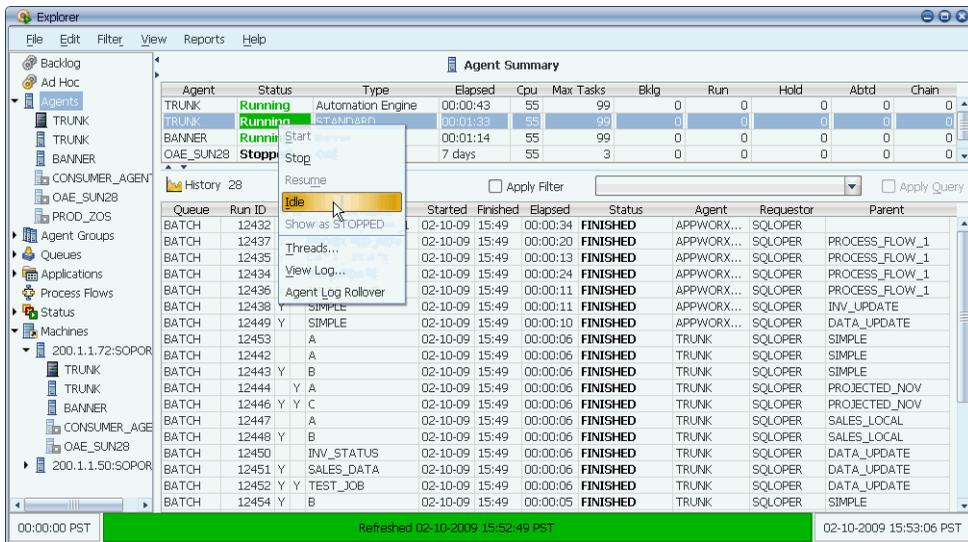


Figure A. Right-click to work with an agent.

Note: To manage agents, you must have the **Take Actions on Agents** user option assigned to you by your Applications Manager administrator. For more information on user options, see [topic 3.2.1 Setting User Options](#) in the *Administration Guide*.

Idling and Resuming Agents or the Automation Engine

If you want to stop processing newly submitted tasks through an agent you can idle it. The agent will go to an Idled status and the icon for the agent will be displayed with a yellow triangle over it in the Explorer tree. Tasks in the Backlog set to run on an agent in an Idled status will have a task status of AGENT WAIT. To take the agent out of the idle status, you resume it.

Starting Agents or the Automation Engine

Starting an agent will start processes on that agent if they are stopped and change the agent's status to Running. The agent may change to an interim Starting status before it moves to Running. Starting an agent is equivalent to issuing the **startso <agent name>** command. It may take some time to update the status when starting agents or the automation engine.

Stopping Agents or the Automation Engine

You should generally idle agents rather than stop them if you want to stop processing tasks on a particular machine. Stopping an agent will put it into a Stopped status, but it will not stop any processes. If an OAE or PEOPLESOFT agent is stopped, Applications Manager won't poll the application for task status updates. Stopping an agent is equivalent to issuing the **stopso <agent name>** command. It may take some time to update the status when stopping agents or the automation engine. When stopped, agents show a Stopped status and the icon for the agent in the Explorer tree is gray. Tasks in the Backlog set to run on an agent in a Stopped status will have a task status of AGENT WAIT.

Showing BUSY or TROUBLE Agents as Stopped by Resetting

There are times when the machine where an agent is installed is taken down for maintenance. When this happens, the agent will go into a BUSY or TROUBLE status in the Applications Manager client. If you know why the agent is in one of these statuses, and there is no need for action, you may not want the agent's status to affect the color of the status bar. You can right-click it and choose **Reset** from the pop-up menu. Resetting an agent only changes its viewable status to Stopped. The reset agent will have no effect on the status bar.

Changing Thread Schedules for the Automation Engine and its Agents

Automation engine and agent thread schedules set the maximum number of concurrent tasks that can run through any combination of queues. To change an automation engine or agent's thread schedule, right-click the agent icon and select **Threads** from the pop-up menu. Applications Manager displays the **Threads** window shown in Figure B where you select a thread schedule. Thread schedules are assigned to automation engines, agents, and queues. You can also specify a local or remote agent's thread schedule in its definition. For information on defining thread schedules, see topic 7.7.2 *Defining Thread Schedules*

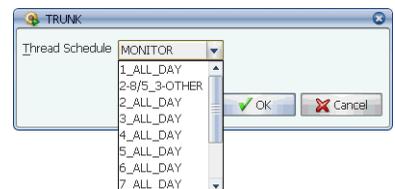


Figure B. Right-click an agent to select its thread schedule.

7.4 Viewing and Printing Automation Engine and Agent Logs

To view the process logs for an automation engine or agent in the File Viewer window, right-click an agent and select View Log from the pop-up menu. You can also roll over AgentService.log files for agents or the RmiServer.log file for the automation engine by right-clicking the agent or automation engine and selecting Agent Log Rollover or RmiServer Log Rollover from the pop-up menu.

The automation engine and agent logs in the **log** directory are the primary source of information used for diagnosing database and network connection errors, and for checking agent status. The log directory also contains server, import, install, and Applications Manager executable logs.

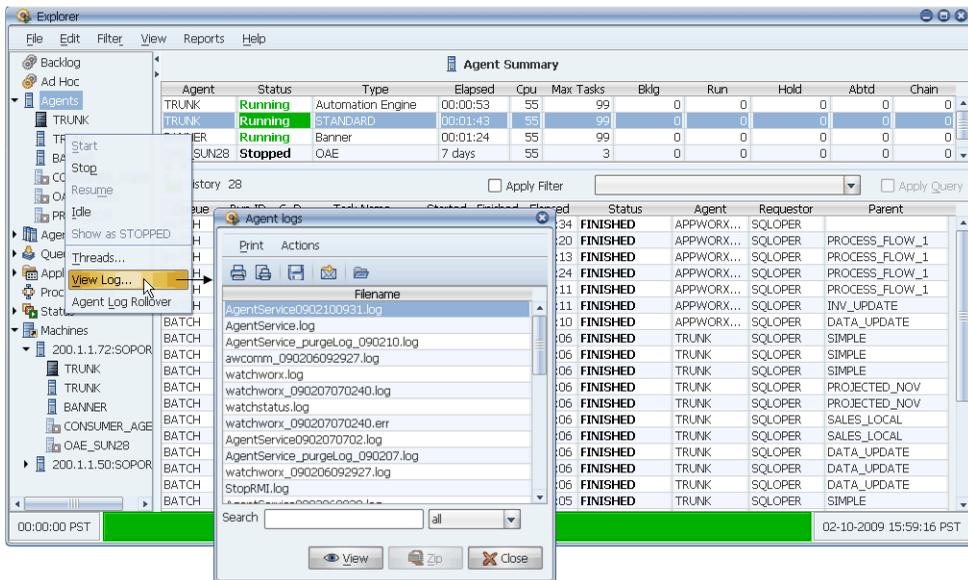


Figure A. Right-click an agent to bring up the Agent logs window.

Viewing Automation Engine/Agent Logs

To view the process logs for an automation engine or agent from Explorer:

1. Right-click on the automation engine or an agent and select **View Log** from the pop-up menu.

Applications Manager opens the **Agent logs** window. All logs will be displayed for the selected agent. Only **RmiServer.log** files will be displayed for the automation engine.

2. Select the log you wish to view.

You can limit the list using the **Search** field or by selecting a log type from the drop-down list.

3. Click the **View** button.

The log will display in the **File Viewer** window. For detailed information using the **File Viewer** window, see topic *3.4 Viewing Output Files with the File Viewer*.

For information on automation engine/agent processes, see chapter *8: Applications Manager Processes* in the *Administration Guide*.

Printing, FTPing, and Emailing Logs

To print, FTP, or email a log file without opening the file viewer, select a task and select an option from the **Print** menu or one of the Print icons. For more information on printing output, see topic *3.5 Printing, FTPing, and Emailing Output Files*.

Zippping Log Files

You can zip log files to compress them by selecting the file and clicking the **Zip** button. When the file is zipped, you will still be able to view it from the Applications Manager **File Viewer** window.

Note: You cannot zip current log files that are still receiving information.

Rolling Over AgentService.log and RmiServer.log Files

You can roll over the current file to create new **AgentService.log** files for agents or the **RmiServer.log** files for the automation engine. To rollover one of these logs, right-click on an agent or automation engine and select **Agent Log Rollover** or **RmiServer Log Rollover**. You might want to rollover a log file when debug is turned on and you want to isolate what is written in a log. You may also need to rollover the **AgentService.log** file to view current information for a VMS agent. You cannot read from the current **AgentService.log** file for a VMS agent without doing this because it is constantly being written to and VMS does not allow you to read and write to the log at the same time.

Customizing the Agent Logs Table

You can customize many tables in Applications Manager, including the table in the **Agent logs** window. When customizing tables, you determine:

- Which columns are listed.
- What each column is named.
- How each column is displayed.

Your Applications Manager administrator can set default values for tables. Therefore, the columns in the **Agent logs** window may be different from what is shown above. For more information, see topic *1.8 Customizing Tables*.

7.5 Monitoring Queues

You can view the Queue Summary in Explorer.

Controlling the load on your system is critical. In Applications Manager, you control the workload by setting the number of concurrent tasks that can pass through the queues.

The screenshot shows the Explorer application interface. The left pane shows a tree view with 'Queues' selected. The main pane is titled 'Queue Summary' and contains two tables.

Queue Summary Table:

Queue	Status	Pri	Max Tasks	Bldg	Run	Hold	Abtd	Chain
BATCH	Active	50	99	0	0	0	0	0
EXPRESS	Active	10	99	0	0	0	0	0
PRIORITY	Active	40	99	0	0	0	0	0
ZERO	Active	50	0	0	0	0	0	0

Task History Table (28 items):

Queue	Run ID	C	D	Task Name	Started	Finished	Elapsed	Status	Agent	Requestor	Parent
BATCH	12432			PROCESS_FLOW_1	02-10-09 15:49	15:49	00:00:34	FINISHED	APPWORX...	SQLOPER	
BATCH	12437	Y		PROJECTED_NOV	02-10-09 15:49	15:49	00:00:20	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12435	Y		DATA_UPDATE	02-10-09 15:49	15:49	00:00:13	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12434			INV_UPDATE	02-10-09 15:49	15:49	00:00:24	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12436	Y		SALES_LOCAL	02-10-09 15:49	15:49	00:00:11	FINISHED	APPWORX...	SQLOPER	PROCESS_FLOW_1
BATCH	12438	Y		SIMPLE	02-10-09 15:49	15:49	00:00:11	FINISHED	APPWORX...	SQLOPER	INV_UPDATE
BATCH	12449	Y		SIMPLE	02-10-09 15:49	15:49	00:00:10	FINISHED	APPWORX...	SQLOPER	DATA_UPDATE
BATCH	12453		A		02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12442		B		02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SIMPLE
BATCH	12443	Y	B		02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12444	Y	A		02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	PROJECTED_NOV
BATCH	12446	Y	C		02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12447		A		02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	SALES_LOCAL
BATCH	12448	Y	B		02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12450			INV_STATUS	02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12451	Y		SALES_DATA	02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12452	Y	Y	TEST_JOB	02-10-09 15:49	15:49	00:00:06	FINISHED	TRUNK	SQLOPER	DATA_UPDATE
BATCH	12454		B		02-10-09 15:49	15:49	00:00:05	FINISHED	TRUNK	SQLOPER	SIMPLE

The status bar at the bottom shows '00:00:00 PST', 'Refreshed 02-10-2009 16:07:49 PST', and '02-10-2009 16:07:51 PST'.

Figure A. You can monitor queues from Explorer.

Viewing the Queue Summary

You can view queue status based on icons in the Explorer tree and descriptions in the Queue Summary. To view a Queue Summary, select the Queues icon from the object tree. Applications Manager displays a list of queues in the upper right pane (see Figure A).

Column Descriptions for the Queue Summary

The queue summary displays the status of each queue. The columns are described below.

Column	Description
Queue	Name of the queue.
Status	Displays whether the queue is active or inactive. Active queues apply the thread settings. When you inactivate a queue, no tasks will be processed through it. The tasks will remain in the Backlog with a QUEUE WAIT status until the queue is activated. Note: The object tree icons for inactive queues will be covered by a yellow triangle.
Pri	The priority assigned to the queue. Priority defines the order in which the queue is scanned for task initiation. Tasks in a higher priority queue will be processed before tasks in a lower priority queue. The lower the number you assign to a queue, the higher priority it will have to run tasks. If all threads in a high priority queue are being used, Applications Manager will process tasks in lower priority queues until the maximum number of threads is reached. You can control the load on your system and the availability of computing resources by giving careful thought to how you prioritize queues and set their thread limits. For information on queue priorities, see topic <i>7.7 Administering Queues</i> .
Threads	Number of threads assigned to the thread schedule displayed in the Schedule column.
Bklg	The number of tasks in the Backlog waiting to run on the queue.
Schedule	The thread schedule assigned to a queue. Thread schedules control the maximum number of concurrent tasks that can run through the queue at any given time. For information on defining queues and thread schedules, see topic <i>7.7 Administering Queues</i> .

You can customize many tables in Applications Manager, including the Agent Summary. When customizing tables, you determine:

- Which columns are listed.
- What each column is named.
- How each column is displayed.

Your Applications Manager administrator can set default values for tables. Therefore, the columns in the Queue Summary may be different from what is described above. For more information, see topic *1.8 Customizing Tables*.

7.6 Changing Queue Settings

You can control the flow of tasks submitted to your system by assigning different thread schedules and priorities to your queues. You can also inactivate one or more queues.

You can control the number of tasks that flow through a queue in several ways:

- Select a thread schedule for the queue based on the **Min Thread** and **Max Thread** values.

Minimum threads ensure that you always have a specified number of ‘standby’ threads available for priority ‘rush’ tasks. Maximum threads control the maximum number of tasks that can run concurrently in the queue. For more information on thread schedules, see topic [7.7.2 Defining Thread Schedules](#).

- Set a priority for each queue.

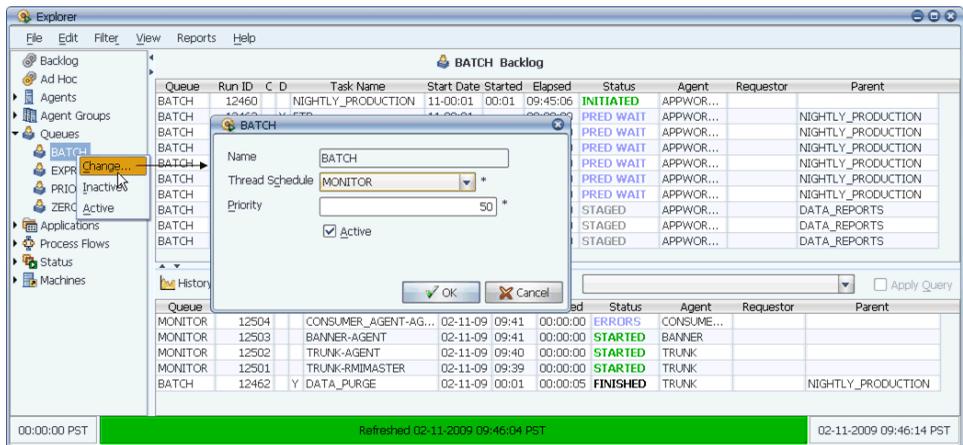


Figure A. You can manage queues by right-clicking in Explorer.

Changing Queue Settings

To change a queue’s settings, select the queue, right-click, and select **Change** from the pop-up menu (see Figure A). Edit the fields using the information provided in Table A. You can also activate or inactivate one or more queues from the Queue Summary by highlighting the queues, right-clicking, and selecting the appropriate option. When you change queue settings from the Queue Summary, the queue definition is altered in the database.

Note: Applications Manager user groups allow you to edit queues. If you cannot edit them, see your Applications Manager administrator.

Table A. *Change Queue fields*

Field	Description
Name	This non-editable field displays the name of the queue.
Thread Schedule	The thread schedule controls the maximum number of concurrent tasks that can run through the queue and the number of threads that are reserved for the queue at any given time. For more information, see topic <i>7.7.2 Defining Thread Schedules</i> .
Priority	Defines the order in which each queue is scanned for task execution if the maximum number of threads for an agent is reached. Queues are scanned starting with the number 1 and ending with 99. Execution order of tasks within a queue is determined by the priorities assigned to their job definitions. For more information on setting job priorities, see topic <i>2.6 Entering Execution Options for Jobs</i> in the <i>Development Guide</i> .
Active	Click this check box to activate the queue. Active queues apply the thread settings. When you inactivate a queue, no tasks will be processed through it. The tasks will remain in the Backlog with a QUEUE WAIT status until the queue is activated.

Creating Queues

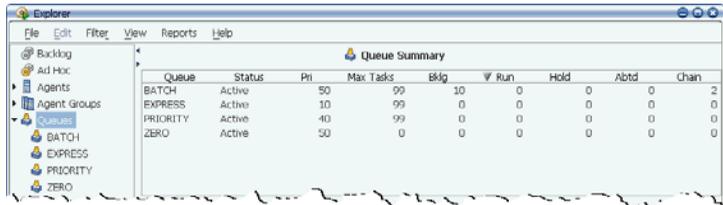
Queues are created using the **Queues** window. For detailed information, see topic *7.7.1 Defining Queues*.

7.7 Administering Queues

You control the flow of tasks to servers by using Applications Manager queues. All tasks pass through an Applications Manager queue to get to a server. You control queue throughput by assigning each queue to a thread schedule. You can define an unlimited number and type of queues.

You control the flow of tasks to servers by using Applications Manager queues. All tasks pass through an Applications Manager queue to get to a server. You control queue throughput by assigning each queue to a thread schedule. You can define an unlimited number and type of queues.

Thread schedules control the number of concurrent tasks that can run through a queue. When you define a thread schedule, you specify the number of threads, the minimum threads, and the start and stop times for the schedule. A thread schedule can be divided into sub-schedules, letting you change the number of threads for different times of the day.



Queue	Status	Pri	Max Tasks	Bklog	Run	Hold	Abtd	Chan
BATCH	Active	50	99	10	0	0	0	2
EXPRESS	Active	10	99	0	0	0	0	0
PRIORITY	Active	40	99	0	0	0	0	0
ZERO	Active	50	0	0	0	0	0	0

Figure A. The Queue Summary on the Explorer window

For example, you might assign only one thread from midnight to 6:00 A.M., four threads from 6:00 A.M. to 5:00 P.M., and two threads from 5:00 P.M. to midnight. This gives you the ability to fine-tune workloads on your system. The Queue Summary displays the current schedule in the Threads column (see Figure A).

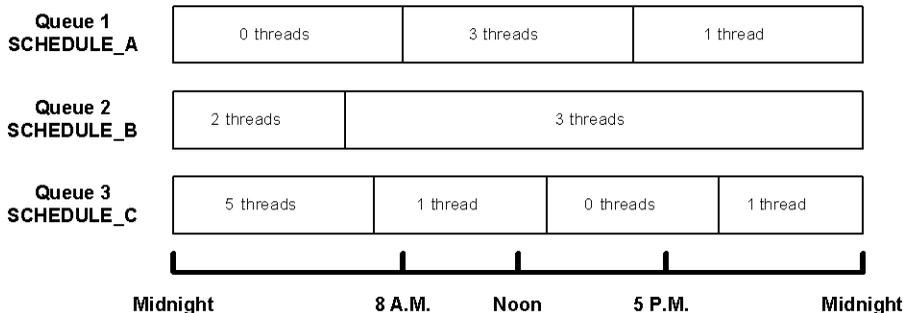


Figure B. You can balance the workload with queues.

Figure B shows several different queues. Queue 1 has zero threads from midnight to 8:00 A.M., three threads from 8:00 A.M. to 4:00 P.M., and one thread from 4:00 P.M. to 23:59:59. Queue 2 has one thread from midnight to 8:00 A.M., and three threads for the rest of the day.

When Threads Are Set to Zero

If the thread setting for a queue is zero, any tasks scheduled to run through that queue will not be launched. The tasks will be displayed in the Backlog with a status of QUEUE WAIT.

Example: You can set threads to zero to prevent end-user submissions from overwhelming the system during the working day. To do this, set up a queue with a schedule that includes zero threads from 7 A.M. to 6 P.M., and 10 threads at all other times. End-users would be able to submit tasks into the queue during the normal business day, but the tasks would simply be held until 6 P.M. when the queue opens up. This way, all tasks submitted during one day could be run overnight and made available the following day.

Selecting Minimum Threads with Thread Schedules

You can assign a minimum thread value to a thread schedule. Any queue assigned to a thread schedule will be able to have at least that number of threads available in a 'standby' mode.

For example, QUEUE_A (shown in the table below) is guaranteed to have two available threads regardless of any tasks requested or scheduled in other queues. If the total threads for the agent is set to 10, that would mean a maximum of 8 tasks could run at any time through all the other queues.

Queue	Priority	Max threads	Min threads	Cumulative	Running
QUEUE_A	1	6	2	2	
QUEUE_B	1	7	1	3	
QUEUE_C	2	8	3	6	
QUEUE_D	2	8	1	7	
QUEUE_E	3	10	0	7	3
QUEUE_F	3	10	0	7	

Queues are grouped and run by priority. For example, in the table above you have two queues in each of the three priority levels (1, 2, 3). If the Agent Thread limit is set to 10, and the minimum thread limit is set to 2 for Queue_A and 1 for Queue_B, that leaves only seven threads available to queues with other priorities. Based on the queues used in the example table above, if Queue_F were the only queue running tasks, only three tasks would be allowed to run because seven min threads with a higher priority level are already reserved.

Subtopics

The following topics explain how to define queues and thread schedules:

7.7.1 Defining Queues

7.7.2 Defining Thread Schedules

7.7 Administering Queues

7.7.1 Defining Queues

To define a queue, you must name the queue, assign it to a thread schedule, set its priority, and make the queue active or inactive.

You control the flow of tasks to servers by using Applications Manager queues. All tasks pass through an Applications Manager queue to get to a server. You control queue throughput by assigning each queue to a thread schedule.



Figure A. The Queues window

Note: Applications Manager user groups control access to queues. If you do not have access to them, see your Applications Manager administrator.

Procedure

To add a queue:

1. From the **Queues Selector** window, click **New**.
Applications Manager opens the **Queues** window shown in Figure A.
For information on using selector windows, see topic *1.5 Adding, Editing, and Deleting Applications Manager Objects* in the *Development Guide*.
2. Complete the fields using the information in Table A.

Table A. *The Queues window fields*

Field	Description
Name	The name may be up to 30 characters long.
Thread Schedule	The thread schedule controls the maximum number of concurrent tasks that can run through the queue and the number of threads that are reserved for the queue at any given time. For more information, see topic <i>7.7.2 Defining Thread Schedules</i> .
Priority	<p>Defines the order in which each queue is scanned for task execution if the maximum number of threads for an agent is reached. Queues are scanned starting with the number 1 and ending with 99.</p> <p>The execution order of tasks waiting to run in a QUEUED status is decided in the following order:</p> <ol style="list-style-type: none"> 1. Queue priority 2. Job priority 3. Start date and time <p>Therefore, if two tasks are waiting to run in different queues, and those queues have the same priority, the jobs' priority is checked. If queue and job priorities are the same, their start date and times are compared.</p> <p>For more information on setting job priorities, see topic <i>2.6 Entering Execution Options for Jobs</i> in the <i>Development Guide</i>.</p>
Active	<p>Click the Active check box to activate the queue.</p> <p>Active queues apply the thread settings. When you inactivate a queue, no tasks will be processed through it. The tasks will remain in the Backlog with a QUEUE WAIT status until the queue is activated.</p>

Editing Queues in Explorer

Applications Manager operators with the necessary user group access can alter queue definitions from Explorer. For more information, see topic *7.6 Changing Queue Settings*.

7.7 Administering Queues

7.7.2 Defining Thread Schedules

A thread schedule defines the number of concurrent tasks that can run through a queue during a specified period of time. You can set different minimum reserved and maximum thread limits for different periods of time during the day.

A thread schedule is assigned to each Applications Manager queue. Thread schedules determine the number of:

- Minimum reserved threads for a queue.
- Maximum threads that can run concurrently through a queue.

You can divide a thread schedule to cover different time periods during a day. For example, during normal work hours you may want to limit a queue to two concurrent tasks, then in the evening reset the queue to 10 concurrent tasks. Each thread schedule must cover the full 24 hours in a day.

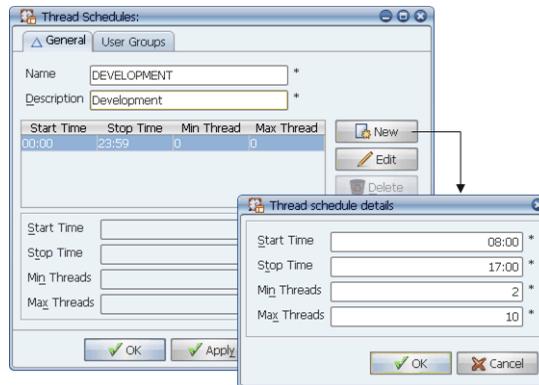


Figure A. To add an entry to thread schedule, click *New*.

Note: Applications Manager user groups control access to thread schedules. If you do not have access to them, see your Applications Manager administrator.

Procedure

To define a thread schedule:

1. From the **Thread Schedules Selector** window, click **New**.

Applications Manager opens the **Thread Schedules** window shown in Figure A.

For information on using selector windows, see topic *1.5 Adding, Editing, and Deleting Applications Manager Objects* in the *Development Guide*.

2. Enter a name and description for the thread schedule on the **General** tab of the **Thread Schedules** window shown in Figure A.

Note that there is one entry in the table on the **General** tab.

3. If you wish to specify times to set specific minimum and maximum threads, click **New**. Applications Manager opens the **Thread schedule details** window where you can specify the details for each entry in your schedule.
4. Complete the fields on the **Thread schedule details** window using the information in Table A and click **OK**.

Applications Manager adds a new entry to the table with the values you specified. You can add as many entries to the table as needed to set different minimum and maximum values for different times of the day.

Table A. *Thread Schedules window fields*

Field	Description
Start Time	The start time for this entry (hh:mm).
Stop Time	The stop time for this entry (hh:mm).
Min Thread	The number of the automation engine's threads you wish to reserve for a queue. The values can range between 0 and the maximum number of threads available on the automation engine. If one or more minimum threads are assigned to a queue's thread schedule, then even higher priority queues (queues with a lower number set in their Priority field) will have this many fewer threads available to them. This is even true when no tasks are running in the queue that is reserving the threads.
Max Thread	The maximum number of tasks that can run concurrently in the queue. The value can be between 0 and 9999. If you set the value to 0, the queue will not accept any tasks during the time period specified. Tasks assigned to this queue will show a QUEUE WAIT status. Only tasks in a RUNNING status count toward the Max thread setting.

Updating and Deleting Thread Schedule Entries

To update or delete a thread schedule entry, select the entry in the table and select **Edit** or **Delete**.

Selecting Thread Schedules for Agents

You can select a thread schedule for an agent to specify the maximum number of concurrent tasks that can run on that agent at one time in all queues. For more information, see topic *4.2 Defining Remote Agents* in the *Administration Guide*.

7.8 Removing External Predecessors by Queue

To remove a job or process flow header's external predecessors in the Backlog, assign it to the REMOVE_EXT_PREDS_ON_INSERT queue. You can create the REMOVE_EXT_PREDS_ON_INSERT queue by hand or by importing it.

If you want to remove a job or process flow header's external predecessors on insert to the Backlog, you can assign it to the REMOVE_EXT_PREDS_ON_INSERT queue. The predecessors will not be shown in the task details or evaluated. If components in a process flow that is assigned to the REMOVE_EXT_PREDS_ON_INSERT queue have internal or external predecessors, they are evaluated normally.

It does not matter how the REMOVE_EXT_PREDS_ON_INSERT queue gets assigned to the job or process flow. It can be:

- The default queue of the job or process flow definition.
- Assigned in a schedule.
- Selected for an ad hoc request on the **Submit** window.

If a task is inserted into the Backlog in the REMOVE_EXT_PREDS_ON_INSERT queue, and you reassign it to another queue, the external predecessors are still removed. You cannot change a task's queue from any other queue to the REMOVE_EXT_PREDS_ON_INSERT queue.

Creating the REMOVE_EXT_PREDS_ON_INSERT Queue

The REMOVE_EXT_PREDS_ON_INSERT does not ship with Applications Manager. If you wish to use it you can create it by hand or run an Applications Manager import and select REMOVE_EXT_PREDS_ON_INSERT. The **REMOVE_EXT_PREDS_ON_INSERT.exp** file ships in the **import** directory.

8

Viewing Forecasts and Monitoring System Performance

8.1 Introduction to Viewing Forecasts and Monitoring System Performance	170
8.2 Viewing Forecasts	172
8.3 Viewing Graphical Forecasts	174
8.4 Setting the FORECAST Job Parameters	176
8.5 Generating Production Schedules	178
8.6 Monitoring System Performance with the Dashboard	180
8.7 Editing Dashboard Properties	182

8.1 Introduction to Viewing Forecasts and Monitoring System Performance

With the Forecast, Graphical Forecast, and Production Schedule features, you can view process flows and their components in the Backlog and History and view a list of scheduled jobs and process flows. Using the Dashboard, you can monitor system performance.

Viewing Forecasts and Graphical Forecasts

Using the Forecast feature, you can view a list of scheduled jobs and process flows. An example forecast is shown in Figure A.

If you have the Graphical Analysis Package, you can view a graphical forecast of scheduled jobs and process flows. Graphical forecasts are displayed in the **Forecasted Gantt view** window shown in Figure B. For more information on graphical forecasts, see *topic 8.3 Viewing Graphical Forecasts*.

The data displayed in forecasts is generated and loaded into Applications Manager by running the FORECAST job. When you create a schedule for the FORECAST job, you determine the time frame of the forecast and how often it is run. For more information on running the FORECAST job, see *topic 8.4 Setting the FORECAST Job Parameters*.

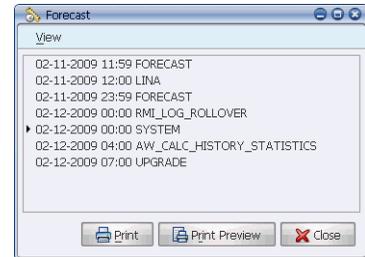


Figure A. The Forecast window

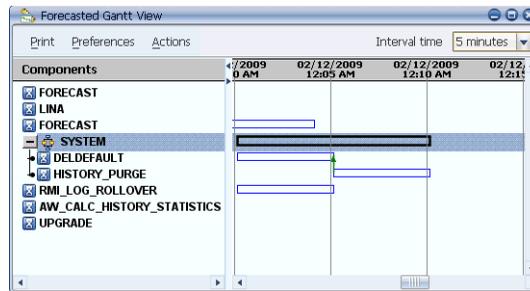


Figure B. The Forecasted Gantt view window

Running a Production Schedule

You can get a more detailed look at tasks that are scheduled to run by generating a production schedule. An example production schedule is shown below.

```

Skip {Process Flow}Report Name
-----
Saturday Feb 23 2002 00:00
{SYSTEM}Saturday Feb 23 2002 00:00
  {SYSTEM}DELDEFAULT
NDOW {SYSTEM}HISTORY_PURGE

Monday Feb 25 2002 00:00
{SALES_REPORTS}Monday FEB 25 2002 00:30
  {SALES_REPORTS}REGION_A
    B If CURRENT TIME > 06:00:00 then SKIP TASK
  {SALES_REPORTS}REGION_B
    B If CHECK FILE NO /reports/region_b.dat
  {SALES_REPORTS}REGION_C
  
```

Monitoring System Performance with the Dashboard

If you have the Graphical Analysis Package, you can monitor system performance with the Dashboard shown on the bottom of the Applications Manager desktop in Figure C. For more information on the Dashboard, see *topic 8.6 Monitoring System Performance with the Dashboard*.

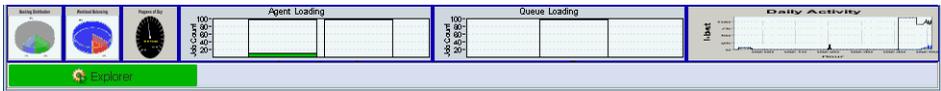


Figure C. Monitor system performance using the Dashboard.

8.2 Viewing Forecasts

To view a list of scheduled jobs and process flows, go to the Activities menu and select Forecast.

The **Forecast** window shows you a list of scheduled jobs and process flows.



Figure A. The Forecast window

Procedure

To open the **Forecast** window shown in Figure A, do one of the following:

- Open the **Activities** menu and select **Forecast**.
- Select the Forecast icon from the toolbar.

Applications Manager displays a list of forecasted jobs and process flows (see Figure A). Each scheduled job/process flow includes the start date and time and the job or process flow's name. Process flows also include a key icon used to expand or collapse them.

To view the jobs within a process flow, click the process flow's key. To expand all keys for a process flow and its children, select the process flow, go to the **View** menu and select **Expand Process Flows**. To expand the keys in all process flows, choose **Expand All**. To print or preview a forecast, use the print buttons.

Viewing Predecessors in a Forecast

Process flow components are listed based on the execution order of each tasks' predecessors. If you want to view their process flow's structure, right-click a component and select **Graphical Predecessors** from the pop-up window. Applications Manager displays a flow diagram for the predecessors as shown in Figure B.

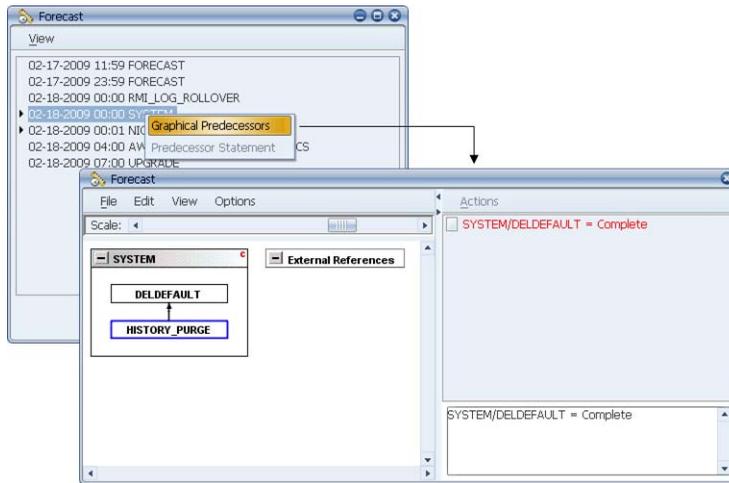


Figure B. To view a flow diagram for a process flow, right-click a component and select *Graphical Predecessors*.

You can also select **Predecessor Statement** to only view the predecessor statement(s) for a job, process flow, or process flow component as shown in Figure C. For more information on predecessor links, see chapter 5: *Working with Predecessors* in the *Development Guide*.

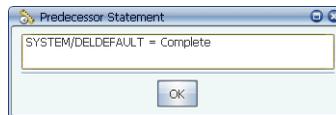


Figure C. To view the predecessors for a job or process flow, right-click and select *Predecessor Statement*.

Running the FORECAST Job

Data displayed in forecasts is generated and loaded into Applications Manager by running the FORECAST job. When you create a schedule for the FORECAST job, you determine the time frame of the forecast and how often it is run. For more information on running the FORECAST job, see topic 8.4 *Setting the FORECAST Job Parameters*.

8.3 Viewing Graphical Forecasts

To view scheduled jobs and process flows in a Gantt view, go to the Activities menu and select Graphical Forecast. The Graphical Forecast is part of the Graphical Analysis Package, an add-on product that can be purchased for Applications Manager.

The **Forecasted Gantt view** window shows you a list of scheduled jobs and process flows in a Gantt chart format. The Graphical Forecast is part of the Graphical Analysis Package, an add-on product that can be purchased for Applications Manager.

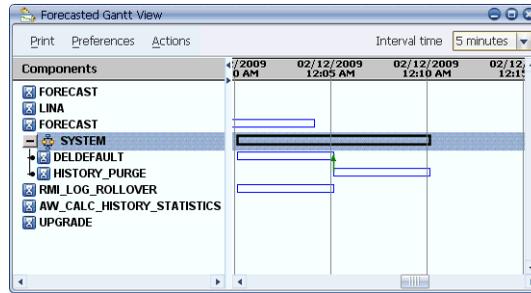


Figure A. The Forecasted Gantt view window

Procedure

To open the **Forecasted Gantt view** window shown in Figure A:

- Do one of the following:
 - Open the **Activities** menu and select **Graphical Forecast**.
 - Select the Graphical Forecast icon from the toolbar.

Applications Manager displays the **Forecast filter** window shown in Figure B.

- If you wish to filter the tasks displayed in the **Forecasted Gantt view** window, edit the options described in the table below.

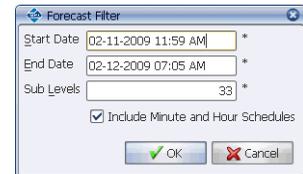


Figure B. The Forecast filter window

Field	Limits the display of data from the FORECAST job to:
Start date	Tasks scheduled after this start date.
End date	Tasks scheduled before this start date.
Sub levels	Process flow components within a maximum nested depth.
Include minute and hour	Not include tasks that are scheduled by minutes or hours (when unchecked).

Data displayed in the **Forecasted Gantt view** window is generated and loaded into Applications Manager by running the FORECAST job. When you create a schedule for

the FORECAST job, you determine the time frame of the forecast and how often it is run. For more information on running the FORECAST job, see *topic 8.4 Setting the FORECAST Job Parameters*.

By entering information into the fields on the **Forecast filter** window, you are filtering beginning with the next scheduled task and ending with the last scheduled task loaded by running the FORECAST job. You cannot enter a date/time beyond the setting from the last run of the FORECAST job.

The **Forecasted Gantt view** window will not include any tasks that are currently in the Backlog, even if the tasks are staged. For more information on staging tasks, see chapter 6: *Staging Tasks in the Backlog*.

3. Click **OK**.

Applications Manager displays a small animated window as the tasks are loaded for the **Forecasted Gantt view** window.

Applications Manager displays the graphical forecast in the **Forecasted Gantt view** window. For information on reading Gantt windows, see topic 9.2 *Reading the Gantt View Window*.

4. If you wish, you can right-click a task and select **Graphical Predecessors** to view its predecessor links in a flow diagram.

Gantt Legend

The legend describes the graphics used in the Gantt view windows. To display the legend, click the **Legend** button in the menu bar. The Legend includes some symbols not used on the **Forecasted Gantt view** window. To close the **Gantt Legend** window, click the X in the title bar.

8.4 Setting the FORECAST Job Parameters

The data displayed in a forecast is generated and loaded into Applications Manager by running the FORECAST job.

The data displayed in a forecast (see Figure A) is generated and loaded into Applications Manager by running the FORECAST job. When you create a schedule for the FORECAST job, you determine the time frame of the forecast and how often it is run.

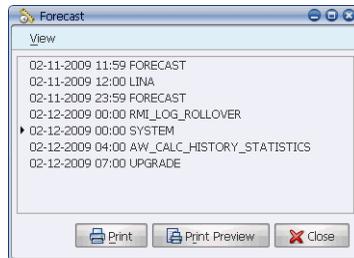


Figure A. A forecast

Depending on your organization's needs, you can schedule this job to run every day, or several times each day.

Additionally, if you want to set the forecast on an ad hoc basis, you can submit the job as shown in Figure B.

The FORECAST job includes the following prompts.

Prompt	Description
Start Date Time	<p>The start date and time for the forecast. The default value for the prompt is a series of numbers created using the #aw_now substitution variable. They represent the current date and time. In Figure B, the default value is 20090211105811. This translates to:</p> <ul style="list-style-type: none"> • Year: 2009 • Month: February (02) • Day of month: 11th • Time: 10:58:11 A.M.
End Date Time (default is 1 day past start date)	<p>The end date and time for the forecast. If no value is entered for this prompt, the default value is 24 hours past the start date. You can enter a different date using the same format as the Start Date Time prompt. (Hint: cut and paste the number from the Start Date Time field and modify.)</p>
Max Depth	<p>The levels of sub process flows you wish to show in the forecast.</p>
Minimum Schedule Units	<p>Select whether you want to limit the forecast to list tasks by day, hour, or minute.</p>

Submit

FORECAST

Task Name Suffix:

Description: Close Tab

Prompts

Start Date Time: Select...

End Date Time (default is 1 day past start date): Select...

Max Depth: *

Minimum Schedule Units: * Select...

Options

Send To: Queue: Hold Documents

Send Option: Agent:

Output Function: Requestor:

Copies: Start Date:

Submit & Close Submit Close Help

Figure B. You submit the FORECAST job to generate the forecast data.

8.5 Generating Production Schedules

To generate a production schedule report, run the PRODSCH process flow and view its output.

If you want to see a report of all jobs and process flows that are scheduled to run between specified dates, you can run the PRODSCH process flow. The process flow runs two jobs: SCHCREATE and SCHPRINT. The output for the SCHPRINT job reports the tasks by date and time. It includes the following information:

- The date and time each job and process flow is scheduled to run
- The name of each component in each process flow
- The conditions associated with each component

The report can show only the tasks that will run, or all tasks that will run and all tasks that are eligible to run but will not run due to conditions defined for the job or process flow. The sample production schedule report shown in this topic displays two process flows: SYSTEM and SALES_REPORTS. The Skip column in the analyst's report displays an abbreviation indicating why the job will not be run. Notice that NDOW displays for HISTORY_PURGE. Process flow names are in {braces}. Job names follow the process flow names. The SALES_REPORTS process flow runs three jobs: REGION_A, REGION_B, and REGION_C. The first two jobs each have a BEFORE condition.

Generating a Production Schedule

To generate a production schedule report:

1. Request and submit the PRODSCH process flow and enter the start and end dates.
2. Choose **Yes** or **No** for the analyst's status values.

Choose **Y** to show all tasks including those that will not run due to the days of the week settings and conditions. This is useful for analysts that are reviewing schedules to make sure they will do what was intended. Choose **N** to display only those tasks that will run. This report is most useful for operators who are monitoring the system.

3. Enter the minimum schedule number.

To display	Use this value
Tasks scheduled to run daily	-3
Tasks scheduled to run hourly	-4
Tasks scheduled to run on minute intervals	-5

Note: If selecting an interval other than -3, you should review your start and end dates because the shorter interval settings will produce larger reports.

4. Submit the job and view the output for the SCHPRINT job.

Sample Production Schedule

```
Skip {Process Flow}Report Name
```

```
-----  
Saturday Feb 23 2009 00:00
```

```

{SYSTEM}Saturday Feb 23 2009 00:00
  {SYSTEM}DELDEFAULT
NDOW {SYSTEM}HISTORY_PURGE
Monday Feb 25 2009 00:00
{SALES_REPORTS}Monday FEB 25 2009 00:30
  {SALES_REPORTS}REGION_A
    B If CURRENT TIME > 06:00:00 then SKIP TASK
  {SALES_REPORTS}REGION_B
    B If CHECK FILE NO /reports/region_b.dat
  {SALES_REPORTS}REGION_C

```

Production Schedule Output Abbreviations

The five abbreviations used in the Skip column of the production schedule are described below.

Abbreviation	Definition
NACT	Not active
NDOW	Not run, day of week
SONNHD	Skip, not in calendar (being run using a calendar and it is not in the calendar)
RONHD	Run, in calendar (being run using a calendar and it is in the calendar)
SONHD	Skip, in calendar (skip using a skip calendar)

8.6 Monitoring System Performance with the Dashboard

The Dashboard provides information about system performance.

If you want to monitor system performance, activate the Dashboard shown in Figure A. The Dashboard is included in the add-on Graphical Analysis Package product.

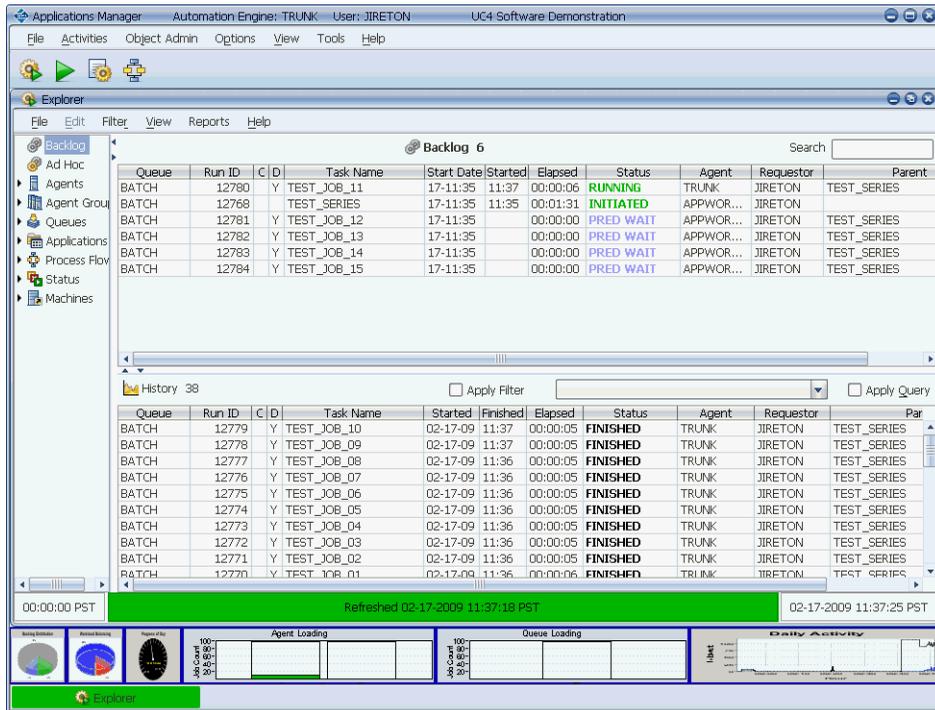


Figure A. Monitor system performance using the Dashboard on the bottom of the Applications Manager desktop.

Displaying the Dashboard

To display the Dashboard on the bottom of the Applications Manager desktop, do one of the following:

- Open the **Activities** menu and select **Dashboard**.
- Select the Dashboard icon from the toolbar.

When the Dashboard is displayed at on the bottom of the Applications Manager desktop, some windows such as the **Process Flows** window may not fit on the viewable screen without scrolling.

Viewing Dashboard Windows

To enlarge a dashboard window, double-click the item in the Dashboard.

The information displayed in the Dashboard is described in the table below.

Item	Description
Backlog Distribution	Percentage of tasks in the Backlog by status. Each task status is color-coded. ToolTips provide status names, number of tasks per status and total tasks when you rest the mouse pointer over a segment of the pie chart.
Workload Balancing	Percentage of running tasks by agent. ToolTips provide agent names, number of tasks per agent and total tasks when you rest the mouse pointer over an agent.
Progress of Day	Number of finished tasks for the day and the number tasks currently in the Backlog.
Agent Loading	Total task count and thread capacity used for each agent. Agents are color-coded to show yellow for caution and red for alert based on their capacity. ToolTips provide the number of tasks on each agent when you rest the mouse pointer over an agent.
Queue Loading	Total task count and thread capacity used for each queue. Agents are color-coded to show yellow for caution and red for alert based on their capacity. ToolTips provide the number of tasks running on each queue when you rest the mouse pointer over a queue.
Daily Activity	Graph of the number of tasks running and waiting throughout the day. Black: Resource-dependent tasks waiting with PRED WAIT, STAGED, and DATE PENDING statuses. Also includes all tasks listed below. Blue: Resource-dependent tasks waiting with AGENT WAIT, QUEUE WAIT, or CONDITN WAIT statuses. Also includes running tasks. Green: Running tasks. You can right-click in this box and select Properties to set an option to zoom in or out of this window's display.

Displaying Dashboard Windows on Top of Other Windows

You can keep your dashboard windows above other Applications Manager windows on the desktop by right-clicking the window and selecting **Always on Top**.

Editing Dashboard Properties

You can edit the dashboard properties by selecting **Dashboard Properties** from the **Options** menu. For more information see topic *8.7 Editing Dashboard Properties*.

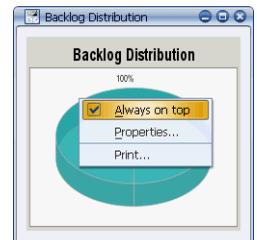


Figure B. Selecting *Always on Top*

8.7 Editing Dashboard Properties

Dashboard properties allow you to customize the display of the Dashboard. To edit the dashboard properties, right-click the Dashboard or one of the Dashboard windows.

You can use Dashboard properties to customize the display of the Dashboard.

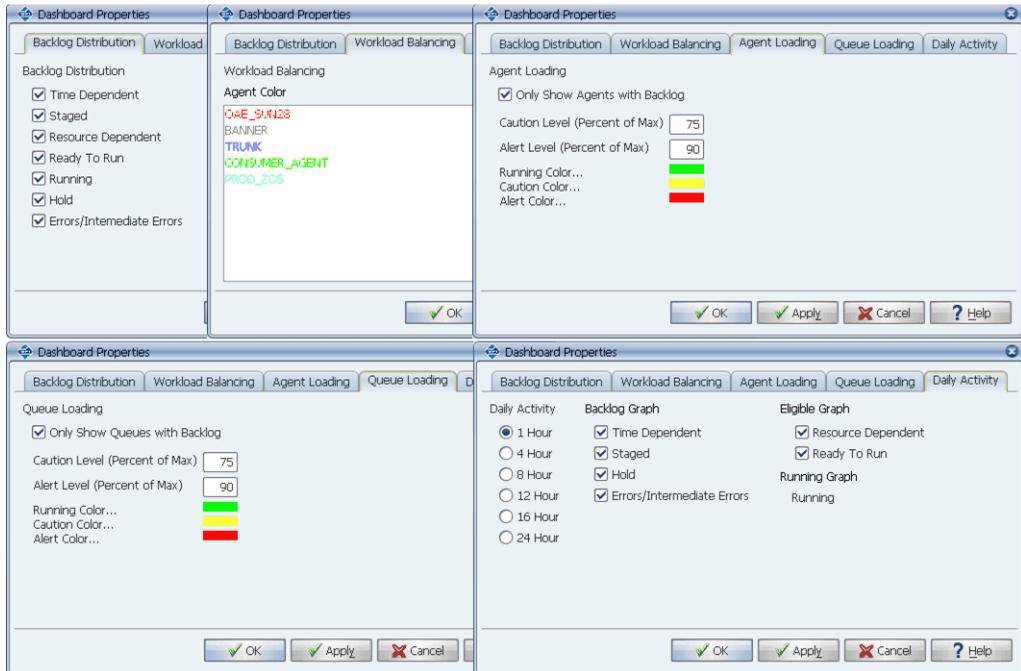


Figure A. The five tabs of the Dashboard Properties window

Procedure

To edit the dashboard properties:

1. Right-click the Dashboard or one of the Dashboard windows.
Applications Manager displays the **Dashboard Properties** window with the appropriate tab selected.
2. Select settings on the tab using the information included in this topic.
3. If you wish, you can edit the information on the other tabs in the **Dashboard Properties** window at this time.
4. Click **Apply** to save the changes, or **OK** to save the changes and close the **Dashboard Properties** window.

Selecting Task Statuses for Backlog Distribution

Uncheck the task statuses groups on the **Backlog Distribution** tab that you wish to exclude from the **Task Statuses** window.

Setting Agent Colors for Workload Balancing

Double-click an agent name on the **Workload Balancing** tab to assign it a particular color in the **Workload Balancing** window.

Setting Agent Loading Levels

Uncheck the **Only Show Agents with Backlog** box on the **Agent Loading** tab to show agents with no running tasks in the Backlog in the **Agent Loading** window. Also, select what percent of your agents' thread capacity you want to use to trigger a change in the color of their bars in the **Agent Loading** window. When the percent of in-use threads is greater than or equal to the setting in the **Caution Level** field, Applications Manager displays the agent's bar in yellow. When the percent of in-use threads is greater than or equal to the setting in the **Alert Level** field, Applications Manager displays the agent's bar in red.

Setting Agent Loading Levels

Uncheck the **Only Show Queues with Backlog** box on the **Queue Loading** tab to show agents with no running tasks in the Backlog in the **Queue Loading** window. Also, select what percent of your queues' thread capacity you want to use to trigger a change in the color of their bars in the **Queue Loading** window. When the percent of in-use threads is greater than or equal to the setting in the **Caution Level** field, Applications Manager displays the queue's bar in yellow. When the percent of in-use threads is greater than or equal to the setting in the **Alert Level** field, Applications Manager displays the queue's bar in red.

Setting Daily Activity Options

Select the time frame on the **Daily Activity** tab for the **Daily Activity** window. Also, uncheck the task status groups you wish to exclude from the **Daily Activity** window. Unchecking status groups from the **Backlog Graph** list will remove those groups from the Backlog graph list. Unchecking status groups from the **Eligible Graph** list will remove the resource-dependent and/or ready-to-run listings from their graphs.

9

Monitoring and Managing Tasks with the Gantt View

9.1 Introduction to Monitoring and Managing Tasks with the Gantt View	186
9.2 Reading the Gantt View Window	188
9.3 Interpreting Adjusted Start and End Times	190
9.4 Finding Tasks in the Gantt View Window	192
9.5 Setting the Gantt View Preferences	194
9.6 Printing from the Gantt View	196

9.1 Introduction to Monitoring and Managing Tasks with the Gantt View

The Gantt view displays the contents of the Backlog in a Gantt chart format. All actions that can be taken against tasks in the Backlog can be taken against tasks in the Gantt view.

The Gantt view is part of the Graphical Analysis Package add-on product for Applications Manager. It displays the contents of the Backlog in a Gantt chart format. It is real-time and updated based on the **Explorer Refresh Seconds** setting. All actions that can be taken against tasks in the Backlog can be taken against tasks in the Gantt view.

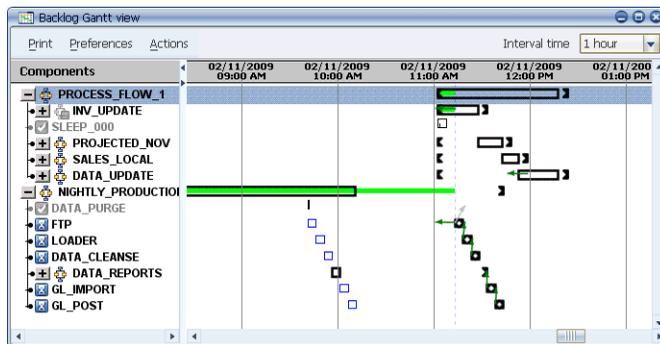


Figure A. The Backlog Gantt view window

The **Backlog Gantt view** window displays an expandable task tree on the left, and the Gantt chart on the right. You can change the size of the two panes by dragging the vertical splitter bar that divides the panes.

Each task (job or process flow) is displayed on its own row. Rectangles represent the expected run times of the tasks: black for process flows and blue for jobs. Arrows drawn between the rectangles indicate predecessor links.

Displaying the Gantt View

To open the **Backlog Gantt view** window shown in Figure A, do one of the following:

- Open the **Activities** menu and select **Backlog Gantt view**.
- Select the Backlog Gantt view icon from the toolbar.

Applications Manager displays a small animated window as the tasks are loaded for the **Backlog Gantt view** window.

Finding Tasks in the Gantt View

You can find a task in the **Backlog Gantt view** window by going to the **Actions** menu and selecting **Find**. Regular expression searches help you find jobs and process flows by name. For more information, see topic *9.4 Finding Tasks in the Gantt View Window*.

Gantt Legend

The legend describes the graphics used in the Gantt view. To display the legend, go to the **Actions** menu and click the **Legend**.

Taking Actions on Tasks and Viewing/Editing Task Details

You can right-click tasks in the **Backlog Gantt view** window to take actions on them or to view or edit their task details the same way you would in the **Explorer** window. For more information on taking actions on tasks, see topic *4.9 Taking Actions on Tasks in the Backlog*. For more information on viewing and editing task details, see topic *4.10 Viewing and Editing Task Details*.

Displaying Gantt Task Summaries

When you are working in the **Backlog Gantt view** window, a pop-up menu is displayed when you hover over a task as shown in Figure C. You can customize the information displayed in this menu by selecting **Tables** from the **Options** menu and picking the **Gantt task summary** option. For more information, see topic *1.8 Customizing Tables*.

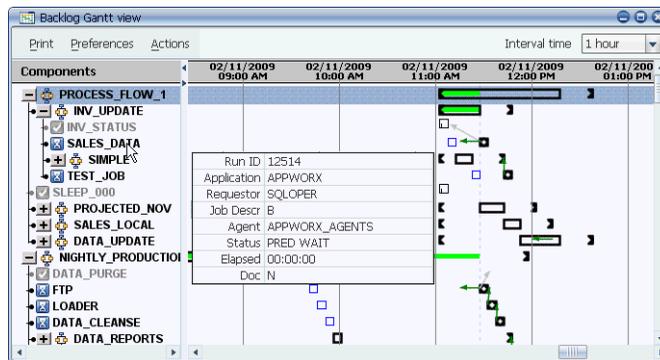


Figure B. Hovering the mouse pointer over an object in the tree displays information about the object in a pop-up window.

9.2 Reading the Gantt View Window

The Gantt view window displays tasks in chronological order with time displayed horizontally.

The Gantt view provides a good deal of information about the tasks running in the Backlog.

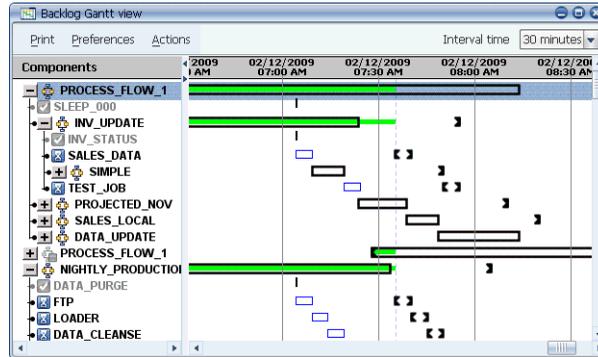


Figure A. The Backlog Gantt view window

Process Flows

Process flows are represented by a rectangle with a black border. The rectangle extends from the scheduled start time to the scheduled completion time based on the average run time for the process flow. The average run time is based on the sum of the average run times of all tasks in the process flow.

When a process flow is initiated, a green bar is displayed in the rectangle. The green bar indicates the current run time for the process flow. The green bar is displayed until the process flow completes or is killed. When a process flow completes, the run time bar turns black.

If a task in a process flow aborts, a red X is placed over the process flow name in the task tree. Note a process flow never aborts, only the components in a process flow.

From an operations standpoint, you can display only the unexpanded process flows in the Gantt chart and easily monitor the system. If a problem arises with a process flow, or you want to see more details about individual components in a process flow, you can expand the process flow.

Jobs

Jobs are represented by a rectangle with a blue border. The rectangle extends from the scheduled start time to the completion time based on the average run time for the job.

Actual run times for process flows and jobs are represented by solid bars running through the center of the rectangles. The color of the bar indicates the status of the task.

Bar Color	Description
No color bar	Task is waiting to run.
Green	Task is running.
Yellow	Task is on hold.
Red	Task has aborted.
Black	Task has completed successfully.

Adjusted Start and End Times

Adjusted start and end times for process flows and jobs are represented by the Start  and End  symbols. Before the time a task is scheduled to run, these symbols will align with the start and end times of a process flow or job. If a process flow or job starts earlier or later than scheduled, these symbols move to reflect the difference in times. For a complete discussion of the adjusted start and end times, see topic *9.3 Interpreting Adjusted Start and End Times*.

Displaying Predecessor Links

You can display predecessor links for a task in the Gantt view by hovering the mouse pointer over the task's bar in the Gantt chart as shown in Figure B.

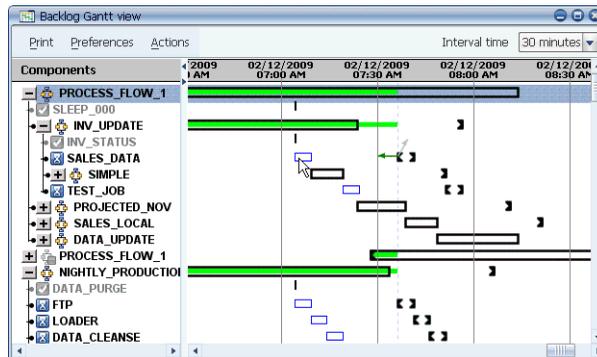


Figure B. To see the predecessor links for a task, hover the mouse pointer over the task's bar in the Gantt chart.

9.3 Interpreting Adjusted Start and End Times

Adjusted start and end times show you calculated start and end times based on the current information available to Applications Manager.

The Gantt view represents planned start and end times with rectangles: black for process flows, blue for jobs. If a process flow is running ahead or behind schedule, the adjusted start and end times are indicated by the symbols shown below:

Adjusted start time: 

Adjusted end time: 

These same symbols apply to jobs.

Process Flow Examples

To help you interpret the start and end time symbols as they relate to process flows, several examples are given below.

When a process flow is:	The bar looks like this:
Waiting to run and is still on schedule	
Waiting to run and is expected to start ahead of schedule	
Waiting to run, but is behind schedule	
Running on schedule	
Running ahead of schedule	
Running behind schedule	

Job Examples

To help you interpret the start and end time symbols as they relate to jobs, several examples are given below.

When a job is:	The bar looks like this:
Waiting to run and is still on schedule	
Waiting to run and is expected to start ahead of schedule	
Waiting to run, but is behind schedule	
Running on schedule	
Running ahead of schedule	
Running behind schedule	

9.4 Finding Tasks in the Gantt View Window

You can find a task in the Backlog Gantt view window by going to the Actions menu and selecting Find. Regular expression searches help you find jobs and process flows by name.

The Find feature of the **Backlog Gantt view** window allows you to easily find any task in the Backlog.

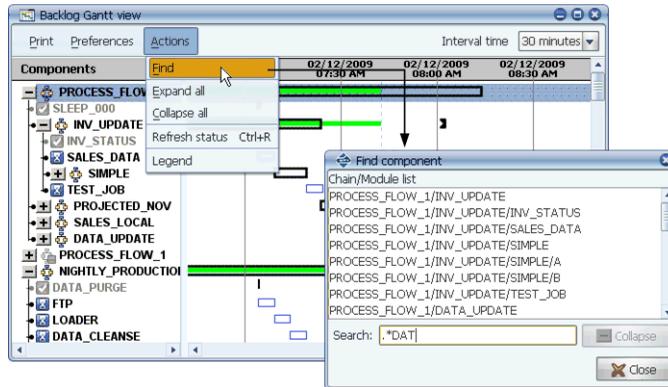


Figure A. Use the Find component window to search for tasks.

Procedure

To find a task in the **Backlog Gantt view** window:

1. Go to the **Actions** menu and select **Find**.

Applications Manager opens the **Find component** window shown in Figure A. The **Find component** window lists all jobs and process flows alphabetically. Process flow components including sub process flows are listed starting with their initial parent process flow.

You can enter a valid UNIX regular expression in the **Search** field to have Applications Manager filter the list of tasks. In Figure A, ***.DAT** is entered in the **Search** field to limit the list of tasks to ones with the letters 'DAT' in their name. For information on syntax accepted by regular expressions, see *Appendix A: Regular Expression Tables* in the *Development Guide*.

2. Select a task from the **Find component** window.

Applications Manager highlights the task in the **Backlog Gantt view** window.

9.5 Setting the Gantt View Preferences

Use the options under the Preferences menu to customize the Gantt chart.

You can customize the Gantt chart by selecting the options under the **Preferences** menu.

Keep History

When selected, this option will keep completed process flows in the Gantt view. Normally, completed process flows are not displayed in the view. The process flows will remain in the Gantt view until you close the **Gantt view** window.

Show Horizontal Lines

When selected, this option displays horizontal lines across the Gantt view.

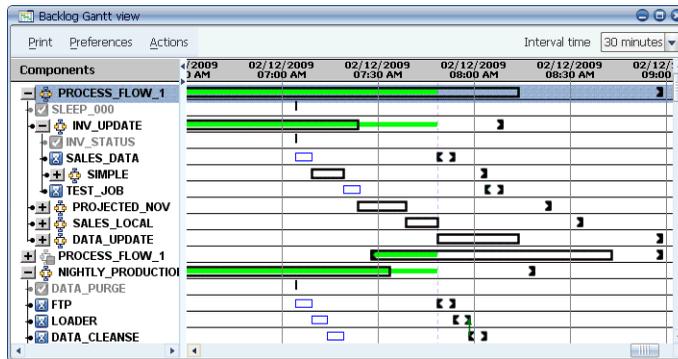


Figure A. Gantt view with horizontal lines displayed

Show All Predecessors

When selected, predecessor links are shown at all times.

Show Only Selected Predecessors

When selected, you must select a task from the tree to show its predecessor links.

Show Predecessors When Dragged Over

When selected, you must drag the mouse over a task's bar in the Gantt view to display its predecessor links.

9.6 Printing from the Gantt View

You can print the Gantt chart, preview it before printing, and set page options.

Using the commands under the **Print** menu on the **Gantt view** window, you can set page options, preview the printed chart, and print the chart.

Page Setup

The **Page Setup** command will display a dialog similar to the one shown in Figure A. Use this dialog to set the paper size, orientation, and margins.

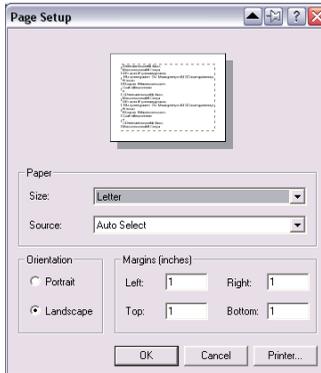


Figure A. Page setup options

Print Preview

The **Print Preview** command displays the dialog shown in Figure B. You can print directly from this dialog if you wish.

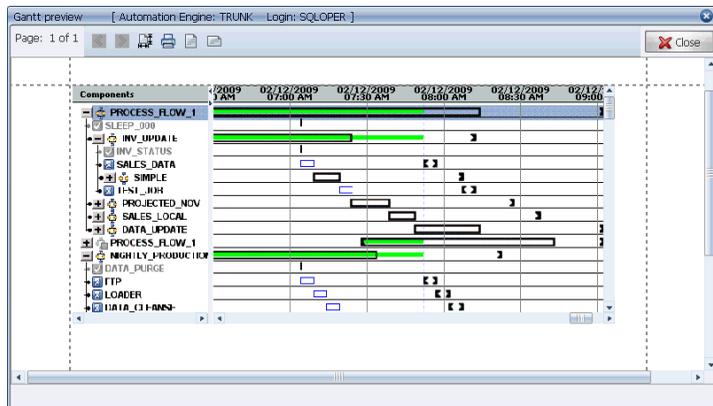


Figure B. You can preview the printed Gantt chart.

Print Gantt

The **Print Gantt** command displays the standard Windows print window shown in Figure C where you can set various output options.

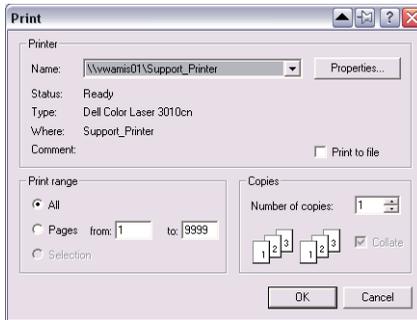


Figure C. Print window

10

Monitoring Multiple Automation Engines and Agents with AppMaster

10.1 Introduction to Monitoring with AppMaster	200
10.2 Monitoring AppMaster Views	202
10.3 Viewing the Agent Summary or Properties for an Icon	204
10.4 Monitoring Statuses with AppMaster	206

10.1 Introduction to Monitoring with AppMaster

AppMaster monitors two or more Applications Manager automation engines on different hosts. AppMaster is an add-on product for Applications Manager.

AppMaster is an add-on product for the Applications Manager product. From the AppMaster window, you monitor one or more views of any combination of the following as defined in your system:

- Automation engines
- Agents
- Tasks by application

An AppMaster window is shown in Figure A.

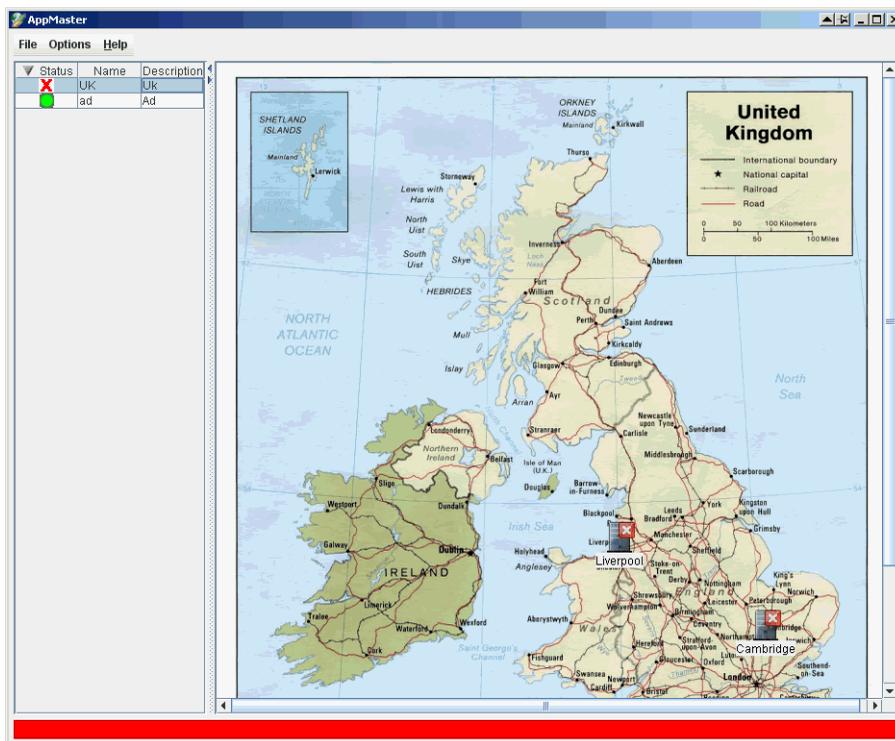


Figure A. You can view multiple automation engines from a single AppMaster client.

Note: To use AppMaster, you must have the same version of Applications Manager on all automation engines.

In the views, links to other views, automation engines, agents, and tasks by application are represented by icons. Automation engine, agent, and view icons change to indicate status. Clicking on an automation engine, agent, or application icon will launch the Applications

Manager client for the appropriate automation engine. From there you can perform all Applications Manager operations functions.

Launching the AppMaster Client

You launch the AppMaster client by going to the Applications Manager intro page and clicking the AppMaster link for use with Java Web Start or the Java Plug-in. For more information, see topic *1.12 Launching the Applications Manager Client*.

Creating AppMaster Views

AppMaster views are created by using the **AppMaster Administration** window. The views can be geographical, logical, architectural, or any other design. The AppMaster views must be created in collector automation engine's client (under **AppMaster Administration**), and that view must have icons that have the correct properties. For more information, see chapter *12: Host and Client Customization* in the *Administration Guide*.

Prerequisites

To use AppMaster, you must have the same version of Applications Manager on all automation engines and all processes must be running for all automation engines. Additionally, the **Masters.properties** file must be configured for each automation engine you wish to work with. For more information, see topic *12.6 Configuring Masters.properties for AppMaster* in the *Administration Guide*.

10.2 Monitoring AppMaster Views

The AppMaster client includes two panes that display a selectable list of views on the left, and the selected view on the right.

The AppMaster client includes two panes that display:

- A selectable list of views on the left. The default sort order for the views is by status.
- The selected view on the right. A view is comprised of a background image with icons placed on top of the image.

To display a view, select its name from the list on the left. The panes can be expanded by dragging the splitter bar, or clicking the splitter bars arrows.

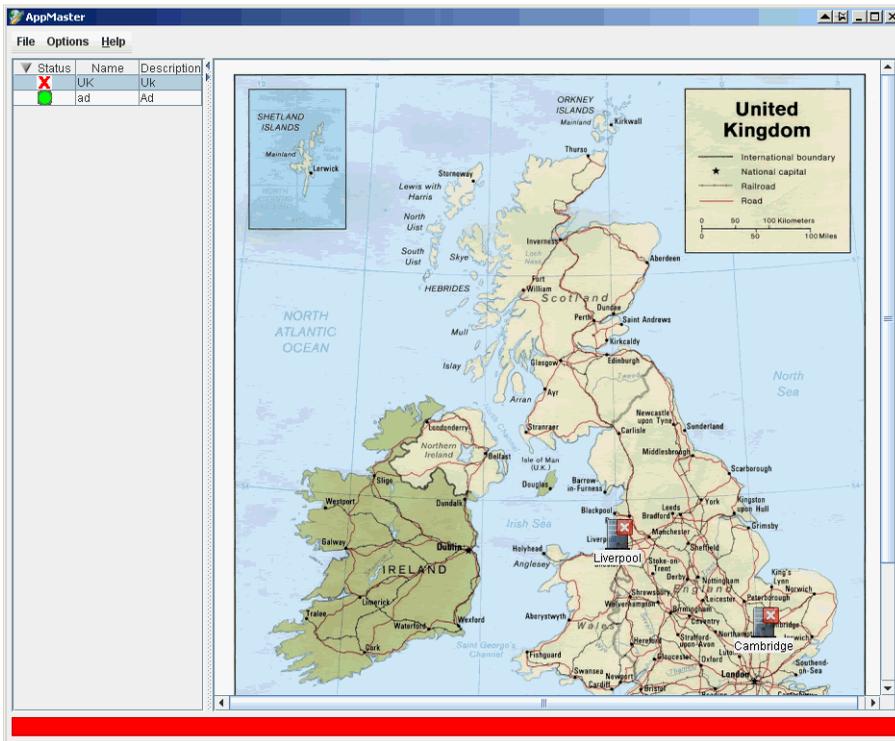


Figure A. AppMaster displays a list of views on the left, and the selected view on the right.

Note: Applications Manager user groups control access to AppMaster. If you do not have access to it, see your Applications Manager administrator.

Automation Engine, Agent, and View Icons

Views include icons that link to automation engines, agents, or other views. Icons can be small, medium or large based on how they were defined when the view was created.

Sorting Columns and Changing Column Order

You can display the items in the columns in a preferred order. Click the header of a desired column to view its jobs in descending order. Click a second time to view the jobs in ascending order. Notice that the arrow to the left of the column name reflects this change. You can also change a column's width by dragging the column's header.

To change the order of the columns, move the mouse cursor over the header of the column you want to move, hold down the left mouse button, and drop the column where you want it.

10.3 Viewing the Agent Summary or Properties for an Icon

You can view an agent summary for automation engine and agent icons by hovering the mouse cursor over them. You can view an icon's properties by right-clicking the icon and selecting Properties.

Viewing an Agent Summary for an Icon

You can view an agent summary for automation engine and agent icons by hovering the mouse cursor over them as shown in Figure A.

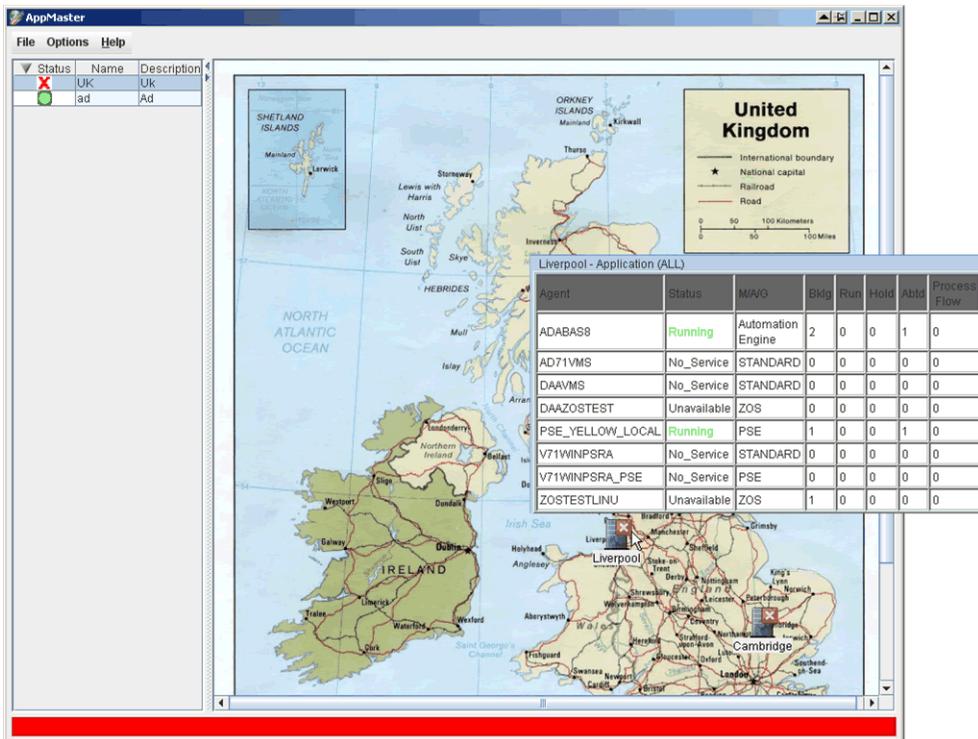


Figure A. You can view an agent status tooltip for each automation engine or agent by hovering the mouse cursor over its icon.

The agent summary columns are described below.

Column	Description
Agent	Displays the name of the agent.

Column	Description
Status	Displays the current status of the agent. For information on possible status values, descriptions, and a suggested course of action, see <i>Appendix A: Automation Engine/Agent Status Values</i> in the <i>User Guide</i> .
M/A/G	Identifies the agent as an automation engine, agent, or group.
Bklg	Specifies the number of tasks in the Backlog.
Run	Specifies the number of tasks RUNNING.
Hold	Specifies the number of tasks on HOLD.
Abtd	Specifies the number of tasks ABORTED in the Backlog.

Viewing an Icon's Properties

You can view an icon's properties by right-clicking the icon and selecting Properties. AppMaster displays the **Icon Properties** window shown in Figure B.



Figure B. The *Icon Properties* window

Each of the fields is described below.

Field	Description
Name	Name of the icon
Description	Description of the icon
Link	The view this icon links to (if applicable)
Automation Engine	The automation engine this icon links to (if applicable)
Agent	The agent this icon links to (if applicable)
Application	The Applications Manager application this icon links to (if applicable)
X and Y	Displays the coordinate points of the icon on the view

10.4 Monitoring Statuses with AppMaster

You can monitor task status using the status bar, icons in the Status column, and automation engine, agent and view icons on AppMaster views.

In AppMaster, you can monitor task statuses by viewing:

- The status bar
- Icons in the Status column
- Icons for automation engines, agents and views on an AppMaster view

Using the Status Bar

The status bar is displayed across the bottom of the AppMaster screen. Its color alerts you to the status of all agents and tasks running on any of the automation engines that AppMaster is monitoring.

The status bar colors and descriptions are described in the table below.

Color	Description
Green	All automation engines, agents and tasks are running satisfactorily.
Yellow	An automation engine or agent is idled, or a task is on hold. Note: If the requirements for both a yellow and red status bar are met, the status bar will be red.
Red	An automation engine or agent has stopped due to a BUSY or TROUBLE status, or a task has aborted or otherwise not completed with a status of FINISHED.

For descriptions of the agent and task status values, see *Appendix A: Automation Engine/Agent Status Values* and *Appendix B: Task Status Values* in the *User Guide*.

Viewing the Status Column

Just as the status bar displays the rolled-up status of all views, the icons in the status column display the rolled-up status of all automation engines, agents, and views that are children (or sub-children) of that view.

Icon	Description
	All automation engines, agents and tasks in this view are running satisfactorily.
	An automation Engine or agent is idled, or a task is on hold in this view. Note: If the requirements for both a yellow and red status are met, the icon will be red.

Icon	Description
	An automation engine or agent has stopped due to a BUSY or TROUBLE status, or a task has aborted or otherwise not completed with a status of FINISHED .

Linking and Drilling Down with Icons

AppMaster icons change to reflect their status. You can double-click any AppMaster icon to drill down to additional views or clients.

Logging into Operations Clients from AppMaster

To drill down to an Operations client:

1. From the AppMaster view, double-click an automation engine or agent icon.

AppMaster displays the **Login** window shown in Figure A.



Figure A. The Login window.

2. Enter your name and password and click **OK**.

Applications Manager opens the Applications Manager client for the automation engine or agent.

If you log into the Applications Manager client again during the same AppMaster session, you will not be required to enter your name and password again.

Clearing Logins

If you log into an Applications Manager client and do not want AppMaster to remember your name and password, select **Clear Login** from the **Options** menu. AppMaster clears all stored logins.

Appendices

Appendix A: Automation Engine/Agent Status Values	210
Appendix B: Task Status Values	213

Appendix A: Automation Engine/Agent Status Values

The possible agent status values are listed, along with a description of the status and a suggested course of action.

Status	Description/Action
BUSY	<p>Description: The automation engine died abnormally. The automation engine and/or agent(s) may go into BUSY status from time to time when there is high Applications Manager activity or the system is experiencing high loads. An agent might also go into a BUSY status if the file system is full.</p> <p>Action: If the automation engine/agent(s) stay in BUSY statuses for extended periods when the system load is low and the Applications Manager activity is low, the logs of each should probably be reviewed for any exceptions. Also, check to see if the RMI server process is running. If the RMI server is not running, look at the automation engine log file before restarting.</p>
CHECK LOG	<p>Description: The automation engine or an agent has an error.</p> <p>Action: Check the automation engine or agent's log file for detailed information.</p>
CPU WAIT	<p>Description: The automation engine or agent does not have enough CPU capacity available to process additional tasks. The CPU capacity is set for the automation engine and each agent with the CPU Limit setting. For more information, see topic <i>4.2 Defining Remote Agents</i> in the <i>Administration Guide</i>.</p> <p>Action: Task will be processed as soon as there is available CPU capacity.</p>
Unavailable	<p>Description: An agent encountered an error while running.</p> <p>Action: Look at the agent log files in log directory. Check the files for errors and verify that all parameters are set correctly for the agent.</p>
IDLED	<p>Description: The agent is running but not processing.</p> <p>Action: To allow processing to continue, right-click the agent and select the Resume option.</p>
INACTIVE	<p>Description: The agent is inactivated; all tasks will go to History with an INACTIVE task status.</p> <p>Action: To set tasks to run normally again, check the Active field in the automation engine or agent definition. For more information, see topic <i>4.2 Defining Remote Agents</i> in the <i>Administration Guide</i>.</p>
MGRSTOPPED	<p>Description: The agent processes of a Java agent have been stopped by the AgentService process.</p> <p>Action: You can restart the Java agent from Explorer, or from the command line by issuing the startso <agent name> command.</p>

Status	Description/Action
No_Service	<p>Description: The AgentService process is down and the agent has been stopped.</p> <p>Action: Restart the agent from the command line.</p>
Running	<p>Description: The automation engine or agent is presently executing on the system.</p> <p>Action: No action is required.</p>
START_ERROR	<p>Description: The process necessary to run tasks could not be launched.</p> <p>Action: Check that there are adequate system processes and disk space where Applications Manager is installed. Also, check for adequate disk space in the /temp directory. Check ulimit to ensure that the Applications Manager user account does not have a process limit assigned to it (UNIX only).</p>
START_FAILED	<p>Description: The agent did not get a response indicating that a task was launched successfully (no Process ID was returned).</p> <p>Action: Possible error with pm file. Check that there are adequate system processes and disk space where Applications Manager is installed. Also, check for adequate disk space in the /temp directory (UNIX only).</p>
STARTING	<p>Description: The automation engine or agent is starting on the system. This is an interim status that will change to RUNNING.</p> <p>Action: No action is required.</p>
Stopped	<p>Description: The automation engine or agent is stopped. This does not mean that RmiServer, AgentService or any other process is stopped, only that the thread for the automation engine or agent is stopped.</p> <p>Action: You can restart the automation engine or agent from Explorer, or from the command line, by issuing startso <agent name> for an agent or startso <automation engine> for the automation engine.</p>
Srcv_Down	<p>Description: The AgentService process went down while the agent was running.</p> <p>Action: Stop and restart the AgentService process with a startso agentservice command from the command line.</p>

Status	Description/Action
TROUBLE	<p>Description: Set by the automation engine when it decides that the agent is not doing its task (for example, the automation engine sent it a task to start 5 minutes ago, but the agent never started it). The so_back_process.so_last_activity has not been updated for the amount set in the Sleep time field + 60 seconds.</p> <p>In the case of a Zeke agent, it indicates the zabroker is down.</p> <p>Action: Check the following:</p> <ul style="list-style-type: none"> • Make sure the RMI server is running. • Automation engine: Locked row in database. May need to run listpids.sql to find any hung Oracle processes and stop them. • Agent: Verify that there is adequate disk space. • Look at the automation engine and agent log files in log directory. Check the files for errors and verify that all parameters are set correctly for the agent. • Look into system CPU and memory usage for other processes that might be impacting Applications Manager operation.
Unavailable	<p>Description: An agent encountered an error when starting up.</p> <p>Action: Look at the agent log files in log directory. Check the files for errors and verify that all parameters are set correctly for the agent.</p>

Appendix B: Task Status Values

The possible task status values are listed, along with a description of the status and a suggested course of action. Statuses that are unique to a particular extension are described in that extension's documentation. Be aware, too, that statuses may be renamed by some condition actions and run time scripts.

Status	Description/Action
ABORTD	Description: The task has terminated in an unsuccessful manner on the agent. This is an interim status that will change almost immediately to ABORTED. Action: Wait for the status to change to ABORTED.
ABORTED	Description: Applications Manager has processed the task and it terminated unsuccessfully. Action: To see why the task aborted, check the system output file and view/edit the task details in the Backlog.
AGENT WAIT	Description: The task is assigned to an agent that does not have enough threads or CPU available to process the task. Action: The task will be processed as soon as there are available threads/CPU capacity. If this status occurs often, you may want to change the thread schedule assigned to the agent.
BAD BATCH	Description: There is no defined application information for BATCH registered in Applications Manager. Action: Define a BATCH application.
BAD CONDITN	Description: A SQL statement or check file BEFORE or AFTER condition has returned an error in the task. Action: Edit the conditions and/or their SQL statements for the task in the Backlog and in the job/process flow definition. Make sure you have sufficient tablespace where applicable.
BAD CONNECT	Description: The host login and password combination that is specified for the task is in error. Action: Check the login and password assigned to the job or process flow component.
BAD DATE PRM	Description: The date format required by the argument type is incompatible with the prompt. Action: Check the dates entered for a prompt if one exists, or check the dates passed to a prompt or condition by a substitution variable.
BAD LIBR	Description: The library associated with this job includes a path that cannot be found. Action: Edit the library's path.
BAD LOGIN	Description: The login specified for the task is invalid. Action: There may be a database problem. Check with your DBA to make sure the correct Database ID is specified in the job definition.



Status	Description/Action
BAD MJN	<p>Description: The task's job sequence number is incorrect and does not match the currently registered job known to Applications Manager.</p> <p>Action: Have your DBA check the Applications Manager database to see if there is a bad entry in the so_job_table table.</p>
BAD MODULE	<p>Description: A bad job name was entered for a REQUEST JOB action in a condition.</p> <p>Action: Edit the condition that generated the entry in the Backlog.</p>
BAD QUEUE	<p>Description: A condition with the CHANGE QUEUE action has been met. The designated alternate queue, however, does not exist in Applications Manager.</p> <p>Action: Edit the condition that generated the entry in the Backlog.</p>
BAD SQL STMT	<p>Description: A SQL statement associated with a dynamic substitution variable used by this task is incorrect.</p> <p>Action: Dynamic substitution variables can be used in prompts and conditions. Check what substitution variables are used in the prompts and conditions for this job or process flow.</p>
BAD TYPE	<p>Description: The data type specified for the task is incorrect.</p> <p>Action: Check the data type definition assigned to the prompt.</p>
BAD_AGENT	<p>Description: The agent assigned to the job does not exist. This status will only occur if the agent was defined through a direct entry into the Applications Manager database.</p> <p>Action: Select an agent for the job.</p>
CANCELLED	<p>Description: A condition on this task, or on a previous component in the process flow, has canceled the remaining process flow components.</p> <p>Action: Check the conditions specified in the components of this process flow.</p>
CONDITN WAIT	<p>Description: The task is waiting for a condition to be met before executing.</p> <p>Action: No action is required. You can check the conditions for this task in the Backlog.</p>
DATE PENDING	<p>Description: This task is not yet ready to run. Tasks are not ready to run if:</p> <ul style="list-style-type: none"> • They have been staged by running either the STAGING or STAGING_BY_SCHEDULE jobs and selecting prompts. • Someone post-dated the start date/time for a job or process flow when requesting it. • A condition with a DELAY TASK action prohibits the task from running. <p>Action: No action is required. The task will run when its reaches its start date and time, or when its conditions allow it to. You can edit the task details of the job or process flow in the Backlog.</p>

Status	Description/Action
DB ERROR	<p>Description: An internal database error has occurred while processing this task. Possible causes include:</p> <ul style="list-style-type: none"> • Subvars in prompts or conditions that use SQL have returned an error when run from the command line, such as SQL with a bad database link. • The inability of the Applications Manager processes were unable to connect to the automation engine's database (network problems). • A database or database server crashed. <p>Action: Try resetting the task—if that works, then the error was resolved prior to the reset. Useful troubleshooting information can be found in the following locations:</p> <ul style="list-style-type: none"> • The system output file (viewable from the Output Files tab of the Task Details window). • The comments (viewable from the Comments tab of the Task Details window). • The AgentService and RmiServer process logs in the log directory.
DEAD	<p>Description: The process associated with this task can no longer be found on the host system. This is an interim status that will change almost immediately to DIED.</p> <p>Action: Wait for the status to change to DIED.</p>
DELETED	<p>Description: The task has been deleted from the Backlog.</p> <p>Action: Find out why the operator deleted the task and resubmit the task if necessary.</p>
DIED	<p>Description: The process associated with this task can no longer be found on the host system. This happens if a process takes more than five minutes to begin execution after initiation. Usually there is a problem with the agent that prevents the task from executing. If the task's status is still RUNNING at the time that the process disappears from the host system, the task may have been killed from the operating system.</p> <p>Action: Check to see if the agent is running. Check to see if the task was killed from the operating system.</p>
ERRORS	<p>Description: If you see this status in the Backlog, Applications Manager detected an error in a condition. You may also see listings for the RMI server or your agents in History with an ERRORS status. These are informational only. For more information, see the status of your automation engine and agents.</p> <p>Action: To see why the task with a bad condition went into this status, check the system output file and view/edit the task details in the Backlog.</p>
FILE ERROR	<p>Description: The tmp file could not be created.</p> <p>Action: Check that the disk is not full or for improper file and directory permissions.</p>



Status	Description/Action
FINISHED	<p>Description: The task has successfully completed its operation.</p> <p>Action: No action required.</p>
HOLD	<p>Description: The task has had its execution delayed indefinitely because:</p> <ul style="list-style-type: none"> • The task has a condition with a HOLD TASK action. • The Hold Task box was checked for a job/process flow that was requested on an ad hoc basis. • The task in the Backlog has been put on hold. <p>Action: The task will remain on hold until the status is changed by an action associated with another condition or by a user.</p>
HOLD PRED WT	<p>Description: The task is on hold <i>and</i> is waiting for one or more predecessor requirements to be met.</p> <p>Action: The task will not be eligible to run until both of the following occur:</p> <ul style="list-style-type: none"> • The hold status is changed by an action associated with another condition or by a user. • The predecessor requirements for the task are met.
HOST FAILURE	<p>Description: An error occurred when the host attempted to execute the command required to perform the task. This usually indicates a lack of process slots on the system or an inadequate sub process limit for the Applications Manager account.</p> <p>Action: Check with your Applications Manager administrator.</p>
INACTIVE	<p>Description: This task was skipped because the Active option in its job or process flow definition is unchecked.</p> <p>Action: No action required. For information on inactivating jobs, see topic <i>2.6 Entering Execution Options for Jobs</i> in the <i>Development Guide</i>.</p>
INITIATED	<p>Description: One or more of the components in this process flow have been initiated and all the components in the process flow have not yet finished.</p> <p>Action: No action required.</p>
KILL	<p>Description: A request to terminate the task while it was executing on the host was issued by a user or by an action associated with a condition. This is an interim status that changes almost immediately to KILLED.</p> <p>Action: See the explanation for the KILLED status.</p>
KILL1	<p>Description: Used by the OAE extension when the automation engine is evaluating a task that is being killed. When the agent successfully kills the task, it sets the task's status to KILL. The automation engine evaluates any post-processing conditions and sets its status to KILLED.</p> <p>Action: See the explanation for the KILLED status. If you wish, you can resubmit the task.</p>

Status	Description/Action
KILLED	<p>Description: Applications Manager has processed the task after a request for termination has been made for it. The task has therefore been removed from the host system.</p> <p>Action: If the task is still in the Backlog, you can reset it.</p>
KILLING	<p>Description: Used by the OAE extension when the automation engine has sent the command to the agent. When the agent successfully kills the task, it sets the status to KILL. The automation engine evaluates any post-processing conditions and sets the status to KILLED.</p> <p>Action: See the explanation for the KILLED status. If you wish, you can resubmit the task.</p>
LAUNCH ERR LAUNCH ERROR	<p>Description: The automation engine had an error launching the task. Possible causes include:</p> <ul style="list-style-type: none"> • Oracle errors when launching the task • Machine disk space issues • Machine performance issues, or network issues (such as a hung port, network slowness, or firewall changes) <p>With regard to network issues, LAUNCH ERR can mean that the task start command didn't reach the agent (automation engine--> agent), or it can mean that the agent didn't respond back (automation engine <--agent).</p> <p>Action: Before calling UC4 support, check the following for errors:</p> <ul style="list-style-type: none"> • Task's comments (in the Backlog or History, right-click the task and go to Comments) • Unregistered task log files on the machine. (Check in the out directory on the machine where the task was supposed to run. It may have started running, but couldn't register the output.) • The RmiServer.<time stamp>.log file in the automation engine's log directory. This file may include errors starting with AwE. • The latest AgentService log files for the local or remote agent. These may include errors starting with ERR. <p>If you find errors, search for them in the Knowledge Base on the UC4 Support Web site or call Support. Before contacting Support, have the log files listed above ready to send.</p>
LAUNCHED	<p>Description: The task has been launched, but its status has not yet been determined.</p> <p>Action: No action required.</p>
MAX RESTARTS	<p>Description: The task has been restarted 99 times. This is the maximum number of times a task can be restarted.</p> <p>Action: To run the task, delete and resubmit.</p>
MGRSTOPPED	<p>Description: This status is displayed only in History. It is associated with the agents. It indicates the date and time the AgentService process stopped.</p> <p>Action: No action required. This is only a historical record.</p>



Status	Description/Action
Min Run Time	<p>Description: The task finished more quickly than the time specified in the Min run time field of the job's definition. Applications Manager developers specify a min run time when they expect a job to run for at least the time they specify.</p> <p>Action: Investigate why the task finished so quickly.</p>
NO PRIORITY	<p>Description: This task has been scheduled with a priority of zero. Since no priority has been assigned to the task, it cannot be executed until a priority is set.</p> <p>Action: Change the priority for the task in the Backlog and/or edit the job/process flow definition.</p>
PRED WAIT	<p>Description: The task is waiting for a predecessor requirement to be met before executing.</p> <p>Action: No action required. Predecessors can be edited for the running of a task in the Backlog if the task is in a non-running status.</p> <p>For a list of predecessor execution rules for tasks in a PRED WAIT status, see topic <i>5.3 Understanding Predecessor Execution Rules</i> in the <i>Development Guide</i>.</p>
PW-DELETE	<p>Description: The component in a process flow was waiting for a predecessor requirement to be met before executing and it has been deleted. The component remains in the Backlog as a placeholder for predecessor inheritance.</p> <p>Action: No action required.</p>
PW-SKIP	<p>Description: The task was waiting for a predecessor requirement to be met before executing and it has been skipped.</p> <p>Action: No action required.</p>
QUEUE WAIT	<p>Description: The job is assigned to a queue that does not have enough threads available to process the task.</p> <p>Action: The task will be processed as soon as there is an available thread. If this task should be running, make sure that:</p> <ul style="list-style-type: none"> • The queue has not been inactivated. • The thread schedule assigned to the queue has an adequate number of threads in its Max run time setting to allow the appropriate number of concurrently running tasks. <p>Queue definitions can be altered from the Explorer window or from the Queues window.</p> <p>You can change the queue for the particular running of a task in the Backlog on the Task Details window.</p>

Status	Description/Action
QUEUED	<p>Description: The task has been sent to an Applications Manager queue, but has not been processed by the automation engine to determine execution eligibility. The status should quickly be updated.</p> <p>The execution order of tasks waiting to run in a QUEUED status is decided in the following order:</p> <ol style="list-style-type: none"> 1. Queue priority 2. Job priority 3. Start date and time <p>Therefore, if two tasks are waiting to run in different queues, and those queues have the same priority, the jobs' priorities are checked. If queue and job priorities are the same, their start dates and times are compared.</p> <p>Action: No action required.</p>
RECURSIVE	<p>Description: The components within this process flow are recursive, calling one another in an infinite loop. This only happens in process flows that were created in a previous Applications Manager version.</p> <p>Action: Edit the process flow to change its components' predecessor requirements.</p>
RESV THRDS	<p>Description: The job's queue has reserved threads but none are available.</p> <p>Action: The task will be processed as soon as there is available threads.</p>
SELF WAIT	<p>Description: The Single run option is set for the job or process flow, and there is another instance of the task running. The first must complete before the second instance will be initiated.</p> <p>Action: No action required. If you want to allow two instances of the task to run concurrently (even within a process flow), uncheck the Single run option in the job/process flow definition.</p>
Skip!Active	<p>Description: This process flow component was skipped because its Component active option is unchecked.</p> <p>Action: No action required. For information on inactivating process flow components, see chapter 4: <i>Editing Process Flow Component Information</i> in the <i>Development Guide</i>.</p>
Skip!DayofWk	<p>Description: This process flow component was skipped because the corresponding day of the week was not assigned to it.</p> <p>Action: No action required. For information on selecting days of the week for process flow components, see topic 4.2 <i>Specifying Calendars and Eligible Run Days</i> in the <i>Development Guide</i>.</p>



Status	Description/Action
Skip!RunCal	<p>Description: This process flow component was skipped because a run calendar assigned to it did not include this day.</p> <p>Action: No action required. For information on removing or editing the run calendars for process flow components, see topic 4.2 <i>Specifying Calendars and Eligible Run Days</i> in the <i>Development Guide</i>.</p>
SkipCal	<p>Description: This process flow component was skipped because a skip calendar including this day was assigned to it.</p> <p>Action: No action required. For information on removing or editing the skip calendars for process flow components, see topic 4.2 <i>Specifying Calendars and Eligible Run Days</i> in the <i>Development Guide</i>.</p>
SkipCond	<p>Description: The task will not be run because an action associated with a condition has specified that the task be skipped.</p> <p>Action: Check the conditions for the job/process flow.</p>
STAGED	<p>Description: This process flow component is part of a process flow that has been staged. Tasks are staged by:</p> <ul style="list-style-type: none"> • Running either the STAGING or STAGING_BY_SCHEDULE jobs and selecting prompts. • Post-dating the start date/time for a job or process flow when requesting it on an ad hoc basis. <p>The components will stay in a staged status until their process flow is initiated.</p> <p>Staged and post-dated jobs and process flows in the Backlog will be shown in a DATE PENDING status.</p> <p>Action: No action is required. The task will run when its reaches its start date and time. You can edit the task details of the process flow or its components in the Backlog.</p>
STAGED HOLD	<p>Description: This process flow component is on hold <i>and</i> has been staged.</p> <p>Action: The task will not be eligible to run until both of the following occur:</p> <ul style="list-style-type: none"> • The hold status is changed by an action associated with another condition or by a user. • The task reaches its start date and time.
STAGED_PW	<p>Description: This process flow component has been staged <i>and</i> is waiting for one or more predecessor requirements to be met.</p> <p>Action: The task will not be eligible to run until both of the following occur:</p> <ul style="list-style-type: none"> • The task reaches its start date and time. • The predecessor requirements for the task are met.

Status	Description/Action
STARTED	<p>Description: This status is displayed only in History. It is associated with the RMI server or an agent. It indicates the date and time the RMI server or agent started.</p> <p>Action: No action required. This is only a historical record.</p>
STG SKIP	<p>Description: This process flow component has been staged <i>and</i> is being skipped in the process flow. This happens when a day of the week is unchecked or a skip calendar is selected in the Schedule box on the component's General sub-tab. For more information, see topic <i>4.2 Specifying Calendars and Eligible Run Days</i> in the <i>Development Guide</i>. When its process flow runs, this task will move to History with a Skip!Active status.</p> <p>Action: No action required.</p>
STG_PW HOLD	<p>Description: This process flow component is on hold <i>and</i> has been staged <i>and</i> is waiting for one or more predecessor requirements to be met.</p> <p>Action: The task will not be eligible to run until all of the following occur:</p> <ul style="list-style-type: none"> • The hold status is changed by an action associated with another condition or by a user. • The task reaches its start date and time. • The predecessor requirements for the task are met.
STOPPED	<p>Description: This status is displayed only in History. It is associated with the RMI server or an agent. It indicates the date and time the RMI server or agent stopped.</p> <p>Action: No action required. This is only a historical record.</p>
TIMEDOUT	<p>Description: The automation engine has processed the task after it has exceeded its permitted run-time allotment.</p> <p>Action: Determine why the task was taking so long to run. If appropriate, change the maximum run time for the job, or change the task's conditions.</p>
TIME-OUT	<p>Description: The task has taken longer than the maximum run-time period specified in the job definition or a maximum run-time period specified in a condition. This is an interim status that should change quickly to TIMEDOUT.</p> <p>Action: See TIMEDOUT for actions.</p>
UNAVAILABLE	<p>Description: The required agent is not running.</p> <p>Action: Start the agent.</p>
UNSAT-FINISH	<p>Description: Someone has removed this task as a predecessor to all referenced tasks. The predecessor links of other tasks need to be satisfied by another running of this task. For more information, see topic <i>4.11 Unsatisfying Tasks as External Predecessors in History</i> in the <i>User Guide</i>.</p> <p>Action: No action required.</p>



Status	Description/Action
WARNING	<p>Description: An Applications Manager run-time extension changed the status of a job to WARNING. Usually this status is assigned to a task that has errors but has gone to completion.</p> <p>Action: Check the log for the task to see what errors occurred.</p>

Index

Symbols

.netrc file

- description, A-17
- using, D-398

.profile file description, A-17

-A-

Abort if no output option, setting for jobs, D-70

ABORT TASK, value for condition action, D-292

ABORTD task status, U-213

ABORTED task status, U-213

aborted tasks

- resetting to run again, U-86
- settings alerts for, U-10

aborting tasks, with conditions, D-310

Action field

- using arguments with, D-292
- values available for conditions, D-292

action timing, setting for condition actions, D-296

actions, taking multiple actions for a condition, D-283

activating/inactivating

- agents, A-102
- jobs, D-38
- process flow components, D-143
- process flows, D-107
- queues, U-163
- schedules, D-331
- users, A-49

ad hoc jobs and process flows, requesting, U-38

adding objects. See individual object names.

adding, editing, and deleting Web Service methods, D-520

adjusted start and end times, viewing in the Backlog Gantt view window, U-189

AFTER conditions, defining, D-287

AFTER timing, setting for conditions, D-287

agent groups

- adding, editing, and deleting, A-116
- assigning agents to agent groups, A-117
- dynamic load balancing, A-118
- load factor for agents in an agent group, setting, A-118
- multi-execution agent groups, A-117
- priority for agents in an agent group, setting, A-118
- Use Task Count Load Balancing vs. CPU% setting for agents, A-102

agent icons, adding to an AppMaster view, A-306

Agent Logs, customizing table columns for the Agent Logs window., U-18

agent status values (status and description/action), U-210

Agent Summary

- column descriptions, U-151
- customizing table columns for, U-18

agent variable, A-288

AGENT WAIT task status, U-213

AgentClientPort, description, A-288

agents

- {agent} replacement value, D-256
- {node} replacement value, D-257
- {operator} replacement value, D-257
- activating/inactivating agents, A-102
- ad hoc requests, selecting for, U-41
- agent groups, adding, A-116
- agent loading, monitoring with the dashboard, U-181
- assigning thread schedules to thread schedules, A-101
- assigning to
 - agent groups, A-117
 - jobs, D-37
 - process flow components, D-146
 - schedules, D-331

- automation engine's time zone, setting, A-106
- BUSY or TROUBLE agent, taking offline, U-153
- changing
 - status colors for agents, U-20
 - status colors for agents (for all users), A-57
 - thread schedules for agents and automation engines, U-153
- configuring, A-98
- connections, viewing reports of agents
 - connected to an automation engine, A-9
- CPU Limit, setting, A-101
- debugging, A-102
- dynamic load balancing, A-118
- filtering the Backlog and History for agents, U-135
- idling and resuming, U-152
- IP address, setting, A-101
- log listings for agents, viewing, U-154
- logging agent events, A-166
- multi-execution agent groups, A-117
- OS type, setting, A-101
- output directory, setting, A-102
- querying
 - History for, U-130
 - Output window for, U-51
- remote agents, adding, A-100
- resetting, U-153
- sleep time, setting, A-101
- starting and stopping, U-152
- status, viewing, U-151
- thread schedules, adding to agents, U-164
- Use Task Count Load Balancing vs. CPU%, setting, A-102
- viewing and editing for tasks, U-96
- agents, assigning users to agents**, A-102
- agents, naming conventions**, A-258
- AgentService process**
 - description, A-190
 - details, A-208
- AHA reports running**, A-154
- alerts, setting for**
 - aborted tasks, U-10
 - agents in TROUBLE status, U-10
 - on hold tasks, U-10
- aliases**
 - {module} replacement value, D-257
 - {task} replacement value, D-258
 - process flow components, using in, D-270
 - setting for process flow components, D-142
- Allow aborted task to block single threaded queue option, setting for the automation engine**, A-110
- Allow changes option, setting for prompts**, D-222
- Allow deleted status to satisfy Success since last run option, setting for the automation engine**, A-110
- Allow requests from non active users option, setting for the automation engine**, A-111
- alternate device, setting**, A-23
- alternative viewers**
 - sharing for all users, U-60
 - using, U-58
- Always evaluate subvars in process flow prompts at component run times, setting for the automation engine**, A-112
- ALWAYS TRUE, value for conditions, selecting**, D-288
- AND/OR logic, changing for predecessors**, D-196
- app_path environment variable**, D-442
- application environment variable**, D-442
- Application Summaries, viewing all running tasks by application**, U-74
- applications**
 - {application} replacement value, D-256
 - adding, editing, and deleting, D-40
 - assigning to
 - environment variables, D-40
 - jobs, D-37
 - notifications, D-40
 - process flows, D-102
 - filtering the Backlog and History for applications, U-135
 - querying History for applications, U-130
- Applications Manager**
 - administrative tasks, A-256
 - customizing, A-56
 - launching, U-26
 - reserved words, D-446
 - security, working with user groups, A-64
 - shutting down with SUSOSHUTP, D-510

- Technical Support, contacting, A-4
- Web site, connecting from Applications Manager, U-25
- Applications Manager directories, introduction to**, A-16
- Applications Manager Help window, changing size and location**, A-318
- Applications Manager History Analysis reports, running**, A-154
- AppMaster**
 - configuring collectors, A-298
 - configuring distributors, A-298
 - features, U-30
 - viewing the Masters.properties file from the Applications Manager client, A-11
- AppMaster Administration**, A-300
- appworx command line interface, using**, D-478
- appworx_port variable**, A-289
- appworxj, launching Applications Manager from the command line**, U-27
- arranging internal predecessor links**, D-172
- assigned objects, viewing**, A-14
- assigning objects to user groups**, A-68
- associated file viewers**
 - sharing for all users, U-60
 - using, U-58
- audio alerts, setting for tasks and agents**, U-10
- auditing**
 - Applications Manager objects, A-114
 - imports, D-378
- audits, assigning user login audits to enforce rules for selecting passwords**, A-58
- Authentication mechanism, LDAP option, setting for the automation engine**, A-113
- authoriz.lis file**
 - assigning ownership, D-455
 - creating, D-454
- auto output options, setting**, A-23
- Automatically assign new user group objects to themselves option, setting for the automation engine**, A-110
- automation engine**
 - {engine} replacement value, D-256
 - agent groups, assigning to, A-117
 - configuring, A-98
 - deferring schedules, D-358
 - dynamic load balancing, A-118
 - logging on to a automation engine, U-28
 - options, setting, A-106
 - process logs
 - file naming conventions, A-238
 - rollover interval, A-239
 - remote agents, adding to, A-100
 - RMI server, adding to, A-10
 - role
 - after program executes, A-230
 - in task execution, A-220
 - setting
 - Allow requests from non active users option, A-111
 - Disable clearing of login passwords on re-login option, A-111
 - Force password change if reset by another user option, A-111
 - load factor for agents (including the automation engine) in an agent group, A-118
 - login type, A-108
 - priority for agents (including the automation engine) in an agent group, A-118
 - Require password length of 6 characters option, A-111
 - time zones, A-106
 - thread schedules, changing, U-153
- Automation Engine Debug option, setting for the automation engine**, A-109
- automation engine icons, adding to an AppMaster view**, A-306
- automation engine process logs, retention days**, A-239
- Ave run time option**
 - calculating, D-66
 - setting for
 - jobs, D-49
 - process flow components, D-147
 - process flows, D-107
- aw_audit_table, creating for Applications Manager audits**, A-114
- AW_HOME environment variable**, D-444
- awcomm process**
 - description, A-190

AWCOMM process, details, A-206
AWCOMM_PORT, description, A-289
awenv.ini environment initialization file, A-286
awexe
 command line syntax, D-468
 process details, A-214
 range, setting for users, A-50
awexe process description, A-191
AWFILES.Z file description, A-17
AWJAVA program type interface script, explanation of, D-512
awop_api.awrun
 procedure for requesting tasks through Oracle, D-556
AWOS400CMD program type, using, D-86
awrun
 AWRUN_NO_PASSWORD, using to run without a password, D-467
 command line syntax, D-464
 examples, D-467
 procedure for requesting tasks through Oracle, D-556
 security, D-466
 supported options, D-464
awrun process description, A-191
AWRUN_NO_PASSWORD, using to run awrun without a password, D-467
AWS400PGM program type, using, D-86
AWTCPD process
 configuring, A-208

-B-

background images (custom), adding, A-304
Background Manager variables
 DURING_WAIT, A-284
 JOB_START_LIMIT, A-284
 SOSTOP, A-284
Backlog
 customizing table columns for the Backlog, U-18
 jobs
 deleting, U-88
 killing tasks, U-84
 limiting the list of tasks, U-74
 removing all predecessors for a task in the Backlog, U-90

reviewing tasks waiting in each queue, U-68, U-70
 staging tasks, U-140
 status values (status and description/action), U-213
 taking actions with predecessors, U-104
 tasks
 resetting, U-86
 using, U-68, U-70
Backlog distribution, monitoring with the dashboard, U-181
Backlog task summaries
 customizing table columns for in the pop-up table, U-18
 viewing, U-73
BAD BATCH task status, U-213
bad conditions, evaluating, D-279
BAD CONDITN task status, U-213
BAD CONNECT task status, U-213
BAD DATE PRM task status, U-213
BAD LIBR task status, U-213
BAD LOGIN task status, U-213
BAD MJN task status, U-214
BAD MODULE task status, U-214
BAD QUEUE task status, U-214
BAD SQL STMT task status, U-214
BAD TYPE task status, U-214
BAD_AGENT task status, U-214
balancing loads, A-118
BEFORE conditions, defining, D-286
BEFORE timing, setting for conditions, D-286
best practices, naming conventions, D-8
BODY script, role in
 task execution, A-224
 task execution after program executes, A-229
BODY.bat, A-224
bookmarking output pages for printing, U-55
break, setting for report columns, A-135
broadcasts, sending broadcast messages to users, A-7
browsing the Applications Manager database from the client, A-156
BULK_CHANGES job, changing job/process flow characteristics, D-82

BUSY, automation engine/agent status,
U-210

-C-

CALC_AVE_RUN job, running, D-66

CALC_HISTORY_STATISTICS job,
running, A-154

calendars

adding, editing, and deleting, D-346
assigning to

jobs and process flows, D-333

process flow components, D-144

CANCEL PROCESS FLOW condition
action, D-292

CANCEL SUB PROCESS FLOW condition
action, D-292

CANCELLED task status, U-214

capacity, setting the factor for agents in an
agent group, A-118

chain ID, {chain_id} replacement value,
D-256

chain sequence number, {chain_seq}
replacement value, D-256

chain_id environment variable, D-442

chain_seq environment variable, D-442

CHANGE Q value for condition action,
D-292

change revisions, implementing for
process flow components, D-134

changes, updating unsaved changes, D-20

characteristics, changing bulk job/process
flow characteristics, D-82

CHECK CONNECTION condition,
description, D-288

CHECK FILE condition

description, D-288

example, D-304

CHECK FILE FTP condition

description, D-288

CHECK HISTORY condition

description, D-289

example, D-316

CHECK LOG automation engine/agent
status, description, U-210

CHECK PROCESS condition, description,
D-289

Check SQL option for

data types, D-228

substitution variables, D-251

CHECK_FILE {file_line} replacement
value, D-257

check_interval variable, A-289

CLEAN environment variable, using to
delete process files when the process
exists, D-442

clone option, for adding components to a
process flow, D-127

closing windows, U-5

COBOL programs, running with the
SOCOBOL program type interface script,
D-504

CollectorMaster, configuring for the
Masters.properties file, A-296

collectors

configuring for the Masters.properties file,
A-297

defining for AppMaster, A-298

color descriptions for status bar in

AppMaster, U-206

Explorer, U-76

column order, changing, U-6

columns

customizing tables in Applications Manager
windows, U-18

customizing tables in Applications Manager
windows (for all users), A-57

order, changing, U-6

reports, adding to, A-132

reports, editing in, A-134

sorting, U-6

Comma Separated, setting for prompts,
D-221

command environment variable, D-442

command line

interface

setting the awexe range for a user,
A-50

using, D-478

launching Applications Manager, U-27

command path

{command_path} replacement value, D-256
program types, assigning to, D-46

command, setting for output interfaces,
A-29

command_dir environment variable, D-442

comments

- querying, U-112
 - viewing for
 - tasks, U-112
 - complete predecessors, description of,** D-163
 - completion run-time extension,** D-438
 - component groups, creating,** D-130
 - components, maximum number in a process flow,** D-100
 - conditions**
 - Action field, using arguments with, D-292
 - adding, editing, and deleting, D-282
 - AFTER timing, setting, D-287
 - BEFORE timing, setting, D-286
 - continuous setting for actions, D-296
 - copying, D-298
 - DELETED timing, setting, D-287
 - DURING timing, setting, D-287
 - DURING_WAIT variable
 - setting, D-280
 - editing in the Backlog, U-106
 - evaluating bad conditions, D-279
 - qualifier value, D-290
 - setting
 - timing for conditions, D-286
 - static substitution variables, defining with a SET SUBVAR action, D-249
 - taking more than one action for a condition, D-283
 - types available for conditions, D-288
 - using to
 - abort a task, D-310
 - check elapsed time, D-302
 - check History, D-316
 - check if a file exists, D-304
 - check if process is running, D-306
 - trigger two or more actions, D-314
 - values available for conditions, D-284
 - viewing for a task, U-106
 - CONDITN WAIT task status,** U-214
 - configuring agents and automation engines,** A-98
 - Connect string, {net_connect} replacement value,** D-257
 - connection information, viewing for**
 - agents connected to an automation engine, A-9
 - users connected to a automation engine, A-6
 - connection information, viewing for RMI servers connected to an automation engine,** A-8
 - contacting technical support,** A-4
 - copies environment variable,** D-442
 - copying**
 - Applications Manager objects, D-12
 - conditions, D-298
 - output scan rules, D-54
 - process flow components, D-134
 - prompts, D-238
 - prompts from another job or process flow, D-238
 - CPU limit, setting for agents,** A-101
 - CPU WAIT, automation engine/agent status, description,** U-210
 - crashes, how Applications Manager recovers from,** U-124
 - Create Procedure SubVars user option,** A-53
 - current day**
 - filtering the Backlog and History for, U-135
 - querying by
 - in Output window, U-51
 - querying by in
 - History, U-131
 - CURRENT QUEUE condition,** D-289
 - CURRENT TIME condition,** D-289
 - customizing**
 - Applications Manager, A-56
 - table columns in Applications Manager windows, U-18
 - table columns in Applications Manager windows (for all users), A-57
- D-**
- daily activity, monitoring with the dashboard,** U-181
 - dashboard, monitoring system performance,** U-180
 - data types**
 - adding, editing, and deleting, D-226
 - prompts, assigning, D-221
 - prompts, using in, D-226
 - SQL statements
 - adding, D-228

- checking, D-228
- database logins, adding, editing, and deleting**, A-88
- database times, setting default date/time format**, A-57
- database, browsing the Applications Manager database from the client**, A-156
- Date input/output formats, setting for data types**, D-227
- DATE PENDING task status**, U-214
- date/time formats, setting defaults**, A-57
- daylight savings time, scheduling during daylight savings time changes**, D-360
- days process flow components will run, setting**, D-145
- DB ERROR task status**, U-215
- db_login environment variable**, D-442
- db_password environment variable**, D-442
- db_type environment variable**, D-442
- DBA user group**, A-70
- DEAD task status**, U-215
- debug**
 - activating, A-237
 - agent debug, setting, A-102
 - debugging SURUN, D-458
 - environment variable, D-442
 - masks
 - creating in awenv.ini, A-286
 - setting client, RMI server, all agent, and Oracle trace options, A-240
 - troubleshooting with, A-234
 - turning on for select programs, A-237
- debug code, adding to program type scripts**, D-430
- debug_mask variable**, A-289
- decimal values, for run IDs**, U-72
- default output device, setting for users**, A-50
- default output directory, assigning to a user**, A-51
- default requestor, assigning to a process flow component in the User field**, D-153
- Default value, setting for prompts**, D-221–D-222
- DEFAULT_USER, creating**, A-56
- Defer schedules on startup option, setting for the automation engine**, A-112
- Deferring schedules**, D-358
- DELAY TASK condition action**, D-292
- DELDEFAULT, deleting output files**, A-122
- DELETE SUBVAR condition action**, D-292
- DELETED conditions, defining**, D-287
- DELETED task status**, U-215
- DELETED timing, setting for conditions**, D-287
- deleting objects**
- desktop settings, specifying**, U-9
- desktop, restoring the display when error dialogs are out of view**, U-6
- details, viewing for a job after execution**, U-110
- DIED task status**, U-215
- Disable clearing of login passwords on re-login option, setting for the automation engine**, A-111
- Disable initial predecessor inheritance option, setting for the automation engine**, A-110
- Disable user after 3 consecutive failed login attempts option, setting for the automation engine**, A-111
- disabling**
 - Backlog queries, U-133
 - Output queries, U-53
- Distinguished name (dn), setting for the automation engine**, A-113
- distribution lists**
 - adding, A-24
 - output option, setting, A-25
- distribution, monitoring Backlog distribution with the dashboard**, U-181
- distributors, defining for AppMaster**, A-298
- Do not require awrun passwords option, setting for the automation engine**, A-111
- documentation**
 - defining for jobs and process flows, D-72
 - viewing for a task, U-108
 - viewing for ad hoc requests, U-42
- DURING conditions, defining**, D-287
- DURING timing, setting for conditions**, D-287
- DURING_WAIT variable**
 - Background Manager, A-284
 - in awenv.ini, A-289
 - setting, D-280

dynamic load balancing, with agent groups, A-118

dynamic substitution variables

- adding, editing, and deleting, D-250
- definition of, D-246
- logins, setting, D-251
- procedures, defining, D-252

-E-

Edit Other Users' Tasks user option, A-53

editing

- agent for a task, U-96
- conditions in the Backlog, U-106
- import maps, D-380
- login for a task, U-96
- max run time for a task, U-96
- output function for a task, U-97
- predecessors for a task, U-100
- priority for a task, U-96
- prompts for a task, U-98
- queue for a task, U-96
- start date and time for a task, U-96
- the output device for a task, U-96

editing objects. See individual object names.

elapsed time, checking with conditions, D-302

eligibility, determining for jobs, D-557

email

- {email} replacement value, D-256
- assigning
 - attachments to notifications, D-59
 - recipients to notifications, D-59
- output devices, adding, A-20
- specifying for users, A-51

email output interface, creating, A-38

emailing, task output files, U-56

Enable auditing of backlog changes option, setting for the automation engine, A-110

Enable full condition debugging option, setting for the automation engine, A-109

Enable TRUE condition debugging option, setting for the automation engine, A-109

ended time, viewing for tasks, U-95

environment initialization file

- awenv.ini, A-286

environment variables

adding, editing, and deleting, D-62

app_path, D-442

application, D-442

assigning to

- agents, A-101

- assigning to applications, D-40

- assigning to process flow components, D-147

- assigning to program types, D-45

- AW_HOME, D-444

- chain_id, D-442

- chain_seq, D-442

- CLEAN, using to delete process files when the process exits, D-442

- command, D-442

- command_dir, D-442

- copies, D-442

- db_login, D-442

- db_password, D-442

- db_type, D-442

- DEBUG, D-442

- file, D-443

- function, D-443

- host_command, D-443

- job_number, D-443

- jobid, D-443

- log_run, D-443

- login, D-443

- login_sid, D-443

- module, D-443

- net_connect, D-443

- orig_log_run, D-443

- OUTPUT, D-443

- output_required, D-443

- par, D-443

- printer, D-443

- printer_type, D-443

- program, D-443

- queue, D-443

- rpf_options, D-444

- seq_no, D-444

- setting

- for jobs, D-48

- with the pm file, A-222

- SO_OPERATOR, D-444

- so_par, D-444

- source, D-444

- status, D-444

- stdout, D-444
- user, D-444
- using in
 - library paths, D-43
 - printer interface scripts, A-30
 - shell scripts, D-442
- using in prompts, D-222
- viewing for tasks, U-95
- envvar.bat, role in task execution**, A-221
- error dialogs, restoring the display when error dialogs are out of view**, U-6
- error trapping in**
 - program type scripts, D-426
 - UNIX program type scripts, D-427
 - Windows program type scripts, D-428
- Errors agent status**, U-210
- ERRORS task status**, U-215
- events**
 - logging agent events, A-166
 - logging task events, A-164
- exception method, setting for schedules**, D-334
- exceptions adding, editing, and deleting for schedules**, D-342
- executing your environment**, A-285
- execution options, setting for**
 - jobs, D-48
 - process flow components, D-146
 - process flows, D-102, D-106
- existing scripts**
 - getting started with, D-6
 - pros and cons, D-32
- expire interval, setting for user passwords**, A-49
- Explorer Refresh Seconds, desktop setting**, U-9
- export file, Applications Manager definition of (for exports and imports)**, D-368
- export lists**
 - Applications Manager definition of (for exports and imports), D-368
 - saving, D-374
- exports**
 - jobs and process flows, D-370
 - process flow components, D-371
- exports, Oracle vs. Applications Manager**, A-257

- external option, for adding components to a process flow**, D-127
- external predecessor links**
 - adding, D-188
 - adding to
 - tasks in the Backlog, U-105
 - virtual day, setting, D-184
- EXTRACT VALUE condition action**, D-292

-F-

- factor variable, WatchWorx**, A-284
- Failure (skip on success) predecessors, description of**, D-163
- failure predecessors, description of**, D-163
- fax**
 - fax number for users, specifying, A-51
 - output devices, adding, A-20
- fax output interface, creating**, A-40
- fax_no, {fax_no} replacement value**, D-256
- fields**
 - editing with the translator editor, A-12
 - setting for report columns, A-134
- file associations, adding**, U-58
- file environment variable**, D-443
- FILE ERROR task status**, U-215
- file extension, assigning to program types**, D-46
- file naming conventions, automation engine process logs**, A-238
- file option, setting for data types**, D-234
- file viewer text size, changing from the file viewer**, U-55
- FILESIZE, role in task execution**, A-228
- filtering, the Backlog and History**, U-134
- FINISHED task status**, U-216
- first name, {first} replacement value**, D-257
- fiscal calendar schedules, creating**, D-338
- fiscal calendars, creating**, D-340
- font size, setting for the user interface**, U-12
- Force password change if reset by another user option, setting for the automation engine**, A-111
- Force password change on new users option, setting for the automation engine**, A-111

Force password to contain both alpha and numeric characters, setting for the automation engine, A-111

forecasts, viewing for jobs and process flows, U-172

Frequency

notifications, assigning to, D-58

schedules, setting for, D-330

FTP

FTP job, description, D-396

FTP_JAVA job, description, D-390

SFTP_JAVA job, description, D-394

FTP job

host login, using with, D-402

FTP Output Files user option, A-53

FTP.SH script, D-402

FTP_JAVA job, description, D-390

FTPing, task output files, U-56

function environment variable, D-443

future hours, filtering the Backlog and History, U-135

-G-

Gantt chart

using with Graphical Forecasts, U-174

viewing for process flows, D-136

Gantt legend, viewing, U-187

Gantt task summaries

customizing table columns for the in the pop-up table, U-18

viewing, U-187

Gantt view

adjusted start and end times, viewing, U-189

History Gantt view window, viewing, U-120

keeping History, U-194

printing, U-196

generating production schedule reports, U-178

GOTO CONDITION condition action, D-293

grant for sys, prior to install, A-270

Graphical Analysis Package, features, U-30

Graphical Forecasts, viewing for jobs and process flows, U-174

groups, creating in a process flow, D-130

-H-

heading, setting for report columns, A-134

hidden tasks in the Output window, hiding and displaying, U-49

Hide Files on the Output Window user option, A-53

History

checking with conditions, D-316

completed tasks, reviewing, U-130

Gantt view window, viewing tasks, U-120

keeping in the Gantt view, U-194

querying, U-130

records, deleting, A-123

status values (status and description/action), U-213

table columns, customizing, U-18

task output, viewing, U-110

History Display Minutes, desktop setting, U-9

HISTORY_PURGE, deleting history records, A-123

Hold option for ad hoc requests, U-42

HOLD PRED WT task status, U-216

HOLD TASK condition action, D-293

HOLD task status, U-216

hold tasks, settings alerts for, U-10

home directory files, UNIX, A-17

host command

{host_command} USER replacement value, D-257

assigning to program types, D-46

host command environment variable, D-443

HOST FAILURE task status, U-216

host login, using with the FTP job, D-402

HTML documentation, D-72

-I-

icons, adding to an AppMaster view, A-306

IDLED automation engine/agent status, U-210

idling agents, U-152

import file, Applications Manager

definition of (for exports and imports), D-368

importing

- Applications Manager History Analysis objects, A-155
- auditing imports, D-378
- import file and map, selecting, D-376
- jobs and process flows, D-376
- maps, editing, D-380
- inactivating/activating**
 - agents, A-102
 - jobs, D-38
 - process flows, D-107
 - queues, U-163
 - schedules, D-331
 - users, A-49
- INACTIVE status**
 - automation engine/agents, U-210
 - tasks, U-216
- ineligible statuses, definition of**, D-162
- initial_sleep variable, WatchWorx**, A-198
- INITIATED task status**, U-216
- Insert components into process flow's queue option, setting for the automation engine**, A-112
- installed program types and paths**, D-432
- interface scripts for output interface objects**, A-29
- interim failure statuses, definition of**, D-162
- internal predecessor links, arranging**, D-172
- IP address, setting for agents**, A-101

-J-

- Java JNDI Factory class, LDAP option, setting for the automation engine**, A-113
- JAVA programs, running with the AWJAVA program type**, D-512
- JDBC, specifying JDBC requirements for logins**, A-90
- JMS messages**
 - retrieving as subvars, D-542
 - sending with conditions, D-546
- Job execution, description of**, A-212
- job ID, {jobid} replacement value**, D-257
- Job/process flow option, using with user groups**, A-69
- job_number environment variable**, D-443
- job_start_limit variable**, A-289

- JOB_START_LIMIT variable, Background Manager**, A-284

- jobid environment variable**, D-443
- jobs**

- {job} replacement value, D-257
- {module} replacement value, D-257
- Abort if no output option, setting, D-70
- activating/inactivating, D-38
- adding, editing, and deleting, D-28
- aliases, setting in process flows, D-142
- assigning to
 - agents, D-37
 - applications, D-37
 - calendars, D-333
 - libraries, D-39
 - logins, D-50
 - output devices, D-68
 - output groups, D-68
 - program options, D-70
 - program types, D-39
 - prompts, D-220
 - queues, D-37
 - skip calendars, D-333
- assigning to, schedules, D-328
- Ave run time option, setting, D-49
- changing bulk job/process flow characteristics, D-82
- Comma Separated option for prompts, setting, D-221
- conditions, adding to, D-282
- copying, D-12
- default date/time format, setting, A-57
- Default value option for prompts, setting, D-221–D-222
- defining, D-28
- deleting from Explorer, U-88
- determining eligibility, D-557
- documentation, defining for, D-72
- environment variables, setting, D-48
- execution options, setting, D-48
- exporting, D-370
- filtering the Backlog and History for jobs, U-135
- FTP host login, using with, D-402
- importing, D-376
- Keep system output option, setting, D-49
- List of Values option for prompts, setting, D-221

- LOADER job, description, D-404
 - login options, setting, D-48
 - login source options, setting, D-51
 - Max # of revisions option, setting, D-69
 - Max length option for prompts, setting, D-222
 - Max run time option, setting, D-49
 - maximum number in a process flow, D-100
 - Min run time option, setting, D-49
 - minimum/maximum values for prompts, setting, D-222
 - Multi Select option for prompts, setting, D-221
 - notifications, setting, D-48
 - output directory, setting, D-70
 - output function, setting, D-69
 - output options, setting, D-68
 - output scans, setting for, D-48
 - passing values through a process flow, D-264
 - predecessors, jumping to, D-193
 - predecessors, removing all in the Backlog, U-90
 - Print system output logs option, setting, D-70
 - priority, setting for, D-49
 - program information, defining, D-36
 - programs, assigning to, D-39
 - prompts, adding, D-212
 - prompts, overriding in a schedule, D-344
 - querying for in
 - History, U-130
 - Output, U-50
 - reports, running with a job, A-152
 - requesting, U-38
 - Restart once on abort option, setting, D-50
 - Retention days option, setting, D-69
 - running under other host logins, D-450
 - schedules, adding to, D-328
 - sequence number, {job_seq} replacement value, D-257
 - sequence number, {mjn} replacement value, D-257
 - setting
 - execution options for process flow components, D-146
 - Single run option, setting, D-37
 - status colors
 - changing for jobs for all users, A-57
 - status, monitoring and managing, U-77
 - Stay in queue on abort option, setting, D-38
 - submitting, U-40
 - successors, jumping to, D-193
 - time zones, setting, D-331
 - user groups, assigning to, D-76
 - Variable name option for prompts, setting, D-221
 - viewing
 - details after execution, U-110
 - output from History, U-110
 - the next run date for a schedule, D-330
 - justify, setting for report columns, A-135**
- K-**
- Keep system output option, setting for jobs, D-49**
 - keyboard navigation, U-7**
 - Keystroke password, LDAP option, setting for the automation engine, A-113**
 - Keystroke path, LDAP option, setting for the automation engine, A-113**
 - KILL TASK condition action, D-293**
 - KILL task status, U-216**
 - KILL1 task status, U-216**
 - KILLED task status, U-217**
 - KILLING task status, U-217**
 - killing tasks, U-84**
- L-**
- Labels.properties file, copying and editing for language translation, A-12**
 - language**
 - setting for users, A-51
 - translating for Applications Manager field names, A-12
 - last name, {last} replacement value, D-257**
 - LAUNCH ERR task status, U-217**
 - LAUNCH ERROR task status, U-217**
 - LAUNCHED task status, U-217**
 - launching Applications Manager, U-26**
 - launching Applications Manager, from the command line, U-27**
 - LDAP**
 - authorization, setting for users, A-49
 - setting LDAP options, A-113

libraries

- {application_path} replacement value, D-256
- adding, editing, and deleting, D-42
- jobs, assigning to, D-39
- paths, assigning to, D-43

limiting the list of tasks in the Backlog,
U-74**List of Values, setting for prompts,** D-221**list option, setting for data types,** D-233**load balancing,** A-118**load factor, setting for an agent in an agent group,** A-118**LOADER job**

- description, D-404
- prompt descriptions, D-405

local substitution variables, creating for a process flow, D-260**log and error files,** A-286**log file naming conventions,** A-237**Log Locks Encountered option, setting for the automation engine,** A-109**log_run environment variable,** D-443**logging on to Applications Manager under different user names and automation engines,** U-28**login environment variable,** D-443**login source options, setting for jobs,** D-51**login type**

- automation engine, setting for, A-108
- logins, setting for, A-89
- program types, assigning to, D-45

login, {db_type} replacement value, D-256**login, setting for users,** A-50**login_sid environment variable,** D-443**logins**

- {oracle_sid} replacement value, D-257
- adding, editing, and deleting, A-88
- assigning a JMS login to the automation engine, D-548
- creating for JMS, D-544
- creating for Web services, D-518
- options, setting for jobs, D-48
- Oracle login, changing the password for, A-94
- password, setting the login for, A-89
- port and Sid, setting, A-89
- setting for

- data types, D-228
- dynamic substitution variables, D-251
- jobs, D-50
- process flow components, D-146
- reports, A-129
- specifying JDBC requirements for logins, A-90
- viewing and editing for tasks, U-96

logs

- background processes log information, A-238
- viewing for agents, U-154

look and feel, specifying the system look and feel, A-333**lp print spooler**

- a review, A-34
- specifying arguments for, A-36

-M-**maintenance user group, setting for users,** A-50**managing output**

- SURUN, capturing output from, D-458

map file, Applications Manager definition of (for exports and imports), D-368**map, Applications Manager definition of (for exports and imports),** D-368**mapping support objects for imports,** D-376**master variable,** A-290**master, {master} replacement value,** D-257**Master_IP_Address variable,** A-290**Masters, configuring in the****Masters.properties file,** A-297**Masters.properties file**

- detailed description, A-296
- viewing from the Applications Manager client, A-11

MasterServerPort, description, A-290**Max # of revisions option, setting for jobs,** D-69**Max length, setting for**

- data types, D-227
- prompts, D-222

max run time

- option, setting for jobs, D-49
- viewing and editing for tasks, U-96

max_cycles variable, WatchWorx environment variable, A-198

max_cycles variable, WatchWorx variable, A-284

MAX_RESTARTS task status, U-217

max_time_reboot variable, WatchWorx environment variable, A-198

max_time_reboot variable, WatchWorx variable, A-284

maximum/minimum values, setting for prompts, D-222

message templates, adding, editing, and deleting, D-60

message text, assigning to notifications, D-58

messages, sending broadcast messages to users, A-7

MGRSTOPPED task status in History, U-217

MGRSTOPPED, automation engine/agent status, U-210

min run time option, setting for jobs, D-49

Min Run Time task status, U-218

Min Threads, setting, U-157

Min/Max values, setting for data types, D-227

min_time_reboot variable
 WatchWorx environment variable, A-198
 WatchWorx variable, A-284

minimum threads allowed for queues, setting, U-157

minimum/maximum values, setting for prompts, D-222

mnemonics, editing with the translator editor, A-12

module environment variable, D-443

MODULE REQUESTED condition, selecting, D-289

MODULE RUNNING condition, selecting, D-289

mult_factor variable, WatchWorx, A-198

multi option, setting for data types, D-231

Multi Select, setting for prompts, D-221

multi-execution agent groups, A-117

multi-execution agent groups, adding, A-116

-N-

naming conventions for agents, A-258

naming conventions, best practices, D-8

navigating process flows, D-132

nesting process flows within process flows, D-100

net_connect environment variable, D-443

netrc file, using, D-398

NetWork alias, setting for logins, A-89

Next run date, viewing for schedules, D-330

no preds option for adding components to a process flow, D-127

no print option, setting for report columns, A-135

NO PRIORITY task status, U-218

No_Service, automation engine/agent status, U-210

nodes, see **agents**

notifications
 adding, editing, and deleting, D-56
 assigning
 applications to, D-40
 email attachments to, D-59
 email recipients to, D-59
 email subjects to, D-58
 frequency to, D-58
 output device to, D-59
 process flow components to, D-147
 program types to, D-45
 status trigger to, D-58
 message text, adding to, D-58
 viewing for tasks, U-95

notifications, assigning to
 jobs, D-48

ntspawn, using to run Windows jobs, D-420

numeric qualifiers for conditions, D-290

-O-

object icons, definition of, U-67

object keys, definition of, U-67

object tree, definition of, U-67

objects
 adding, editing, and deleting, D-10
 assigning to user groups, A-74
 auditing Applications Manager objects, A-114

- copying, D-12
- offline, taking a BUSY or TROUBLE agent offline**, U-153
- once, evaluating conditions the first time the condition is true**, D-297
- options**
 - assigning (generic), U-7
 - automation engine, setting for, A-106
 - setting for LDAP, A-113
 - user, setting for, A-52
- Options.properties file, description of parameters**, A-292
- Oracle export vs. Applications Manager export**, A-257
- Oracle login, changing the password for**, A-94
- Oracle Sid, setting for logins**, A-89
- orig_log_run environment variable**, D-443
- OS type, setting for agents**, A-101
- OS/400**
 - jobs, creating, D-84
 - program types, using, D-86
- outage, scheduling behavior after an outage**, D-327
- Output**
 - auto output options, setting, A-23
 - file viewer text size, changing, U-55
 - format, changing, U-55
 - hiding tasks, U-49
 - limiting to tasks submitted by user, U-48
 - pages, bookmarking for printing, U-55
 - previewing print tasks, U-56
 - printing, FTPing, and emailing, U-56
 - querying the Output window, U-50
 - text, finding, U-55
 - viewing
 - by page and line numbers, U-55
 - from History, U-110
 - task output, U-55
- output devices**
 - ad hoc requests, selecting for, U-40
 - adding, editing, and deleting, A-22
 - assigning
 - output function to, A-25
 - output groups to, A-23
 - output interfaces to, A-23
 - users to, A-25
 - assigning to
 - jobs, D-68
 - notifications, D-59
 - process flows, D-109
 - auto output options, setting for, A-23
 - output option, setting, A-23
 - querying the Output window for output devices, U-51
 - static options, setting, A-23
 - troubleshooting output problems, A-42
 - users, setting for, A-50
 - viewing and editing for tasks, U-96
- output directory, assigning a different output directory to**
 - agents, A-102
 - jobs, D-70
 - users, A-51
- output distribution lists, adding, editing, and deleting**, A-24
- OUTPUT environment variable**, D-443
- output files**
 - deleting, A-122
- output function**
 - ad hoc requests, setting for, U-41
 - assigning to
 - jobs, D-69
 - output devices, A-25
 - process flow components, D-153
 - process flows, D-109
 - querying the Output window for output function, U-51
 - viewing and editing for tasks, U-97
- output groups**
 - adding, editing, and deleting, A-26
 - assigning to
 - jobs, D-68
 - output devices, A-23
 - process flows, D-109
- output interfaces**
 - adding, editing, and deleting, A-28
 - command, setting, A-29
 - output devices, assigning to, A-23
 - output option, setting, A-32
 - space character, setting, A-29
 - static options, setting, A-29
 - title or banner page, setting, A-29
- output interfaces, creating for email**, A-38
- output interfaces, creating for faxing**, A-40
- output option, setting for**

- distribution lists, A-25
- output devices, A-23
- output interfaces, A-32
- process flow components, D-152
- process flows, D-108
- output options, setting for jobs**, D-68
- output scans**
 - adding, editing, and deleting, D-52
 - jobs, setting for, D-48
 - process flow components, assigning to, D-147
 - program types, assigning to, D-45
 - viewing for tasks, U-95
- Output window**
 - customizing the table columns, U-18
 - using to access the File Viewer, U-48
- output required environment variable**, D-443
- overriding prompts in a schedule**, D-344

-P-

- par environment variable**, D-443
- parameter format, assigning to program types**, D-45
- parameter passing in program type scripts**, D-422
- password**
 - assigning user login audits to enforce rules for selecting passwords, A-58
 - changing for a user, A-49
 - changing your password, U-28
 - logins, setting for, A-89
- password option, setting for data types**, D-236
- paths, assigning to libraries**, D-43
- phone number, specifying for users**, A-51
- phone_no, {phone_no} replacement value**, D-257
- plain subvars, definition of**, D-246
- pm file, role in task execution**, A-222
- pop-up tables**
 - customizing for the Backlog and Gantt views, U-18
 - displaying on the Predecessors tab of the Task Details window, U-105
- port, setting for logins**, A-89
- PRED WAIT task status**, U-218
- predecessor links**

- AND/OR logic, changing, D-196
- definition of, D-160
- editing, D-192
- evaluating on select days of the week, D-202
- external, adding to
 - process flows, D-188
 - tasks in the Backlog, U-105
- interim failure statuses, definition of, D-162
- removing
 - external predecessors with the REMOVE_EXT_PREDS_ON_INSERT queue, U-166
- rules governing their behavior, D-162
- tracing, D-174
- understanding, D-163
- unsatisfying
 - for other tasks in History, U-114
 - viewing and editing for a task, U-100
 - viewing in the Gantt view, U-189
 - virtual day, setting for external predecessors, D-184
- predecessors. See predecessor links.**
- prefix run-time extension**, D-438
- Print system output logs option, setting for jobs**, D-70
- printer environment variable**, D-443
- printer groups, see output devices**
- printer_type environment variable**, D-443
- printers, see output devices**
- printing**
 - Explorer tables, U-67
 - Gantt view, U-196
 - object tree, U-67
 - previewing, U-56
 - process flow diagrams, D-115
 - run date calendars, D-351
 - task output files, U-56
 - to an Applications Manager output device, U-56
- priority**
 - setting for
 - agent in an agent group, A-118
 - jobs, D-49
 - process flows, D-107
 - queues, U-157, U-163
 - viewing and editing for tasks, U-96

procedures, defining in dynamic**substitution variables**, D-252**process flow components**

adding using drag-and-drop, D-124

definition of, D-100

environment variables, assigning to, D-147

notification, assigning to, D-147

output scan, assigning to, D-147

process flow name, viewing for tasks, U-95**process flow order no., viewing for tasks**, U-95**process flow sequence number, {flow_seq}****replacement value**, D-257**process flow simulation, viewing for****process flows**, D-176**Process Flow Summaries**

customizing table columns for the Process Flow Summary, U-18

viewing all tasks in a process flow with one or more running components, U-74

process flows

{subflow_id} replacement value, D-258

{top_flow_id} replacement value, D-258

activating and inactivating

process flow components, D-143

process flows, D-107

adding, editing, and deleting, D-102

aliases, setting for components, D-142

arranging using internal predecessor links, D-172

Ave run time option, setting, D-107

change revisions, implementing for, D-134

Comma Separated option for prompts, setting, D-221

components

adding using drag-and-drop, D-124

adding using the add buttons, D-126

maximum number in a process flow, D-100

replicating, D-134

conditions, adding, D-282

copying, D-12

documentation, defining for, D-72

execution options, setting, D-106

execution options, setting for

process flow components, D-146

process flows, D-102

exporting, D-370

process flow components, D-371

process flows, D-370

filtering the Backlog and History for process flows, U-135

forecasts, viewing for, U-172

Graphical Forecasts, viewing, U-174

importing, D-376

List of Values option for prompts, setting, D-221

local substitution variables, creating, D-260

maximum levels of sub process flows, D-100

Multi Select option for prompts, setting, D-221

navigating process flows, D-132

nesting

maximum levels, D-100

within other process flows, D-100

next run date for a schedule, viewing, D-330

output options, setting for

process flow components, D-152

process flows, D-108

passing values through a process flow, D-264

priority, setting for, D-107

process flow simulation, viewing, D-176

prompts for process flow components, D-154

querying

History for process flows, U-130

Output window for process flows, U-51

replicating process flow components, D-134

requesting, U-38

retention days, overriding, D-110

run days, setting, D-145

running process flows, D-100

schedule end date, setting, D-330

schedule exceptions, adding, D-342

scheduling

eligible days for process flow components, D-144

Reschedule from (date) option, D-334

Single run option, D-107

start date for a schedule, setting, D-330

start times for a schedule, setting, D-330

subprocess flowing

within other process flows, D-100

- time zones, setting, D-331
- Use job condition option for process flow components, setting, D-147
- Use request output option for process flow components, setting, D-147
- Variable name option for prompts, setting, D-221
- process flows, viewing in Gantt chart**, D-136
- process ID, viewing for tasks**, U-95
- processes**
 - AgentService process
 - description, A-190
 - details, A-208
 - AWCOMM process
 - details, A-206
 - awcomm process
 - description, A-190
 - awexe, A-191
 - awexe, details, A-214
 - awrun, A-191
 - RMI server process
 - details, A-210
 - RmiServer process
 - description, A-191
 - starting and stopping, A-192
 - WatchWorx process
 - description, A-190
- production schedule**
 - output abbreviations, U-179
 - reports, running, U-178
- program environment variable**, D-443
- program execution, how to initiate**, D-418
- program information, setting for jobs**, D-36
- program name, assigning to jobs**, D-39
- program options, assigning to jobs**, D-70
- program type scripts**
 - AWJAVA, explanation of, D-512
 - debug code, adding, D-430
 - error trapping
 - general information, D-426
 - UNIX, D-427
 - Windows, D-428
 - how they are executed, D-418
 - parameter passing, D-422
 - SOCOBOL, explanation of, D-504
 - SQLP, explanation of, D-500
 - SUSOSHUTP, explanation of, D-510
 - what they do, D-414
- program type, role in task execution**, A-228
- program types**
 - {command_type} replacement value, D-256
 - adding, editing, and deleting, D-44
 - command path, assigning to, D-46
 - creating, D-412
 - environment variables, assigning to, D-45
 - file extension, assigning to, D-46
 - host command, assigning to, D-46
 - jobs, assigning to, D-39
 - login type, assigning to, D-45
 - notification, assigning to, D-45
 - output scan, assigning to, D-45
 - parameter format, assigning to, D-45
 - require login option, D-46
 - role in task execution, A-226
 - role in task execution after program executes, A-228
- programs**
 - {command} replacement value, D-256
 - defining in jobs, D-36
 - how to execute, D-418
 - role in task execution, A-227
- progress of day, monitoring with the dashboard**, U-181
- prompts**
 - adding
 - to a job, D-212
 - assigning
 - data types to prompts, D-221
 - to jobs and process flows, D-220
 - copying, D-238
 - duplicating from another job or process flow, D-238
 - in reports, A-135
 - prompts, overriding in a schedule, D-344
 - setting for process flow components, D-154
 - upper case option, setting, D-222
 - uppercase, forcing, D-227
 - Value required option, setting, D-222
 - viewing and editing for tasks, U-98
- PW-DELETE task status**, U-218
- PW-SKIP task status**, U-218

-Q-

qualifier value, for conditions, D-290

querying

- disabling
 - Backlog queries, U-133
 - Output queries, U-53
 - Output window, U-50
 - task comments, U-112
 - queue environment variable**, D-443
 - Queue Summaries**
 - column descriptions, U-157
 - customizing table columns for, U-18
 - QUEUE WAIT task status**, U-218
 - QUEUED task status**, U-219
 - queues**
 - {batch_queue} replacement value, D-256
 - {queue} replacement value, D-257
 - activating/inactivating queues, U-163
 - ad hoc requests, setting for, U-41
 - adding, editing, and deleting, U-162
 - assigning
 - to schedules, D-331
 - assigning to
 - jobs, D-37
 - process flows, D-107
 - filtering the Backlog and History for, U-135
 - prioritizing, U-157
 - priority, assigning to, U-163
 - querying History for, U-130
 - queue loading, monitoring with the dashboard, U-181
 - removing external predecessors with the REMOVE_EXT_PREDS_ON_INSERT queue, U-166
 - reviewing status of, U-156
 - thread schedules, adding to, U-164
 - thread schedules, assigning to, U-163
 - viewing and editing for tasks, U-96
 - Quote char, setting for prompts**, D-222
- R-**
- read_timeout variable**, A-290
 - Receive RmiServer Error Broadcasts user option**, A-54
 - recovery, from system failures**, U-124
 - RECURSIVE task status**, U-219
 - referenced objects**
 - Applications Manager definition of (for exports and imports), D-368
 - viewing for an export, D-372
 - references, viewing where an object is used**, D-18
 - referential checking**
 - data types, setting for, D-227
 - refresh time, setting default date/time format**, A-57
 - regular agent groups, adding**, A-116
 - regular expressions**
 - file associations, using in, U-58
 - syntax for, D-552
 - release notes file description**, A-17
 - remote agents, adding, editing, and deleting**, A-100
 - remote automation engines, running jobs remotely**, A-172
 - removing, predecessors for a task in the Backlog**, U-90
 - replacement values**
 - conditions, adding to, D-254
 - SQL, adding to in
 - data types, D-228
 - dynamic subvars, D-251
 - Subvar Replacement Values window, using, D-254
 - replacement variables used in spooler and printer definitions.**, A-30
 - replicating process flow components**, D-134
 - reports**
 - adding, editing, and deleting, A-128
 - creating from existing SQL, A-136
 - creating jobs to run reports, A-152
 - setting the login for reports, A-129
 - showing in the Reports window, A-150
 - steps for creating, A-128
 - viewing object reports, D-14
 - viewing operations reports, U-14
 - request date and time, viewing for tasks**, U-95
 - REQUEST JOB**
 - using arguments with the REQUEST JOB action, D-312
 - value for condition action, D-293
 - request options. See prompts.**
 - requestors**
 - assigning to schedules, D-331
 - filtering the Backlog and History for requestors, U-135

- querying
 - History for requestors, U-130
 - Output window for requestors, U-51
 - setting for ad hoc requests, U-41
 - viewing the user for tasks, U-95
 - Requests**
 - putting on hold, U-42
 - requesting jobs and process flows, U-38
 - setting the start date and time, U-41
 - submitting jobs and process flows, U-40
 - require login option, setting for a program type**, D-46
 - Require password length of 6 characters option, setting for the automation engine**, A-111
 - Reschedule from date, setting for schedules**, D-334
 - RESCHEDULE TASK condition action**, D-293
 - reserved words in Applications Manager**, D-446
 - RESET_FLOW_RETENTION_DATES job, adding to process flows**, D-110
 - resetting**
 - agents, U-153
 - tasks, in the Backlog, U-86
 - resetting aborted jobs**, U-86
 - ResponseTimeout variable**, A-290
 - RESTART ON ABORT condition action**, D-293
 - restart on abort option**, U-97
 - Restart once on abort option, setting for jobs**, D-50
 - restoring the display, when error dialogs are out of view**, U-6
 - result format, setting for data types**, D-227
 - resuming agents**, U-152
 - RESV THRDS task status**, U-219
 - retention days for automation engine process logs**, A-239
 - Retention days option**
 - overriding in process flows, D-110
 - setting for jobs, D-69
 - RETURN CODE condition**, D-289
 - revisions, implementing for process flow components**, D-134
 - RME, running jobs on remote automation engines**, A-172
 - RMI connections, viewing reports of users and RMI servers connected to an automation engine**, A-8
 - RMI server process**
 - details, A-210
 - RmiServer process**
 - description, A-191
 - rollover interval for automation engine process logs**, A-239
 - rpf_options environment variable**, D-444
 - run date calendars, printing**, D-351
 - run dates, displaying for schedules**, D-350
 - RUN HOST COMMAND condition action**, D-294
 - run ID**
 - {run_id} replacement value, D-257
 - decimal values, U-72
 - filtering the Backlog and History for, U-135
 - querying
 - History for, U-131
 - Output window for, U-51
 - viewing for tasks, U-95
 - run id, unique task identification number**, A-222
 - RUN TASK condition action**, D-294
 - RUN TIME condition**, D-289
 - RUNNING automation engine/agent status**, U-211
 - run-time extensions**, D-436
 - execution order, D-439
 - flagging non-fatal errors by changing job status, D-440
 - general vs. specific, D-438
 - how they work, D-438
 - mail to completion script, D-441
 - modifying output paths, D-441
 - overriding statuses, D-440
 - role in task execution, A-224
 - types of, D-438
- S-**
- Scale slider, using in Components window**, D-114
 - schedule creep, avoiding with the Next run date option**, D-334
 - schedule exceptions, adding, editing, deleting**, D-342
 - schedule forecasts, viewing**, U-172

schedule jobs

adding, D-96

using, D-94

Scheduled end date, setting for schedules,
D-330**Scheduled start date, setting for**
schedules, D-330**schedules**

activating/inactivating, D-331

adding

exceptions, D-342

thread schedules, U-164

thread schedules to queues, U-163

to jobs and process flows, D-328

assigning to

agents, D-331

jobs and process flows, D-328

queues, D-331

users, D-331

behavior after an outage, D-327

daylight savings time, scheduling for,
D-360

deferring, D-358

deleting for jobs and process flows, D-328

editing for jobs and process flows, D-328

end date, setting, D-330

multiple jobs and process flows, running on
a schedule, D-326

next run date, viewing, D-330

overriding prompts in a schedule, D-344

printing run date calendars, D-351

run dates, displaying, D-350

time zones, setting, D-331

Schedules submitted as a group, A-110**scheduling**eligible days for process flow components,
D-144Reschedule from (date) option, selecting,
D-334**Select Queues for Requests user option,**
A-54**Select Requestors user option, A-53****selector windows, adding, editing, and**
deleting objects, D-10**SELF WAIT task status, U-219****SEND JMS MESSAGE condition action,**
D-294**SEND NOTIFICATION condition action,**
D-294**seq_no environment variable, D-444****seq_no, {seq_no} replacement value, D-257****servers, viewing reports of users and RMI**
servers connected to an automation
engine, A-8**SET ABORT STATUS condition action,**
D-294**SET FINISHED STATUS condition action,**
D-294**SET HOLD STATUS condition action,**
D-295**SET SKIP STATUS condition action, D-295****SET SUBVAR condition action, D-295****Set Task Name Suffixes user option, A-54****SFTP_JAVA job, description, D-394****shell scripts, using environment variables**
in, D-442**Show Read-Only Prompts user option,**
A-53**shutting down Applications Manager with**
the SUSOSHUTP script, D-510**SID, setting for logins, A-89****Single run option, setting for**
jobs, D-37

process flows, D-107

SKIP TASK condition action, D-295**Skip!Active task status, U-219****Skip!DayofWk task status, U-219****Skip!RunCal task status, U-219****SkipCal task status, U-220****SKIPPED task status, U-220****sleep time, setting for agents, A-101****sleep_wait variable, A-290****so_ext_action variable, A-290****SO_OPERATOR environment variable,**
D-444**so_par environment variable, D-444****SOCOBOL program type interface script,**
explanation of, D-504**SODELETE, deleting output files, A-122****sorting columns, U-6****SORUN_PASSWORD environment**
variable, setting, D-466**sosched_flag variable, A-290****ssosite**

role in task execution, A-221

- using to execute your environment, A-285
- SOSTOP Background Manager variable**, A-284
- source environment variable**, D-444
- space character, setting for output interfaces**, A-29
- spoolers, see output interfaces**
- SQL statements**
 - adding to data types, D-228
 - checking for data types, D-228
 - checking for substitution variables, D-251
- SQL Trace Debug option, setting for the automation engine**, A-109
- SQL*Loader program, running with the LOADER job**, D-404
- SQL*Plus programs, running with the SQLP program type script**, D-500
- SQLP program type script, explanation of**, D-500
- Srvc_Down, automation engine/agent status**, U-211
- SSL Enabled, LDAP option, setting for the automation engine**, A-113
- STAGED HOLD task status**, U-220
- STAGED task status**, U-220
- STAGED_PW task status**, U-220
- staging tasks in the Backlog**, U-140
- Standard log files, using to troubleshoot**, A-236
- standard out, role in task execution**, A-227
- start date and time**
 - ad hoc requests, setting for, U-41
 - filtering the Backlog and History for, U-135
 - querying
 - History for, U-131
 - Output window for, U-51
 - viewing and editing for tasks, U-96
- Start times, setting for schedules**, D-330
- START_ERROR, automation engine/agent status**, U-211
- START_FAILED, automation engine/agent status**, U-211
- start_timeout variable**, A-291
- started predecessors, description of**, D-163
- STARTED task status in History**, U-220
- started time, viewing for tasks**, U-95
- starting and stopping agents**, U-152
- starting and stopping processes**, A-192
- starting Applications Manager Windows processes**, A-264
- STARTING automation engine/agent status**, U-211
- startso client, launching Applications Manager from the command line**, U-27
- static options, setting for**
 - output devices, A-23
 - output interfaces, A-29
- static substitution variables**
 - adding, editing, and deleting, D-248
 - definition of, D-246
- status**
 - {status} replacement value, D-257
 - agents, viewing, U-151
 - automation engines, viewing, U-151
 - filtering the Backlog and History for task status, U-135
 - History, querying for, U-131
 - jobs, monitoring and managing, U-77
- status bar**
 - color descriptions for AppMaster, U-206
 - color descriptions for Explorer, U-76
 - viewing in AppMaster, U-206
- status colors**
 - changing for
 - jobs and agents (for all users), A-57
 - tasks and agents, U-20
- STATUS condition**, D-289
- Status Details, viewing for tasks**, U-95
- status environment variable**, D-444
- Status Summary, customizing table columns for the Status summary**, U-18
- status trigger, assigning to notifications**, D-58
- STAY IN QUEUE ON ABORT condition action**, D-295
- Stay in queue on abort option, setting for jobs**, D-38
- stdout environment variable**, D-444
- STG SKIP task status**, U-221
- STG_PW HOLD task status**, U-221
- STOPPED automation engine/agent status**, U-211
- STOPPED task status in History**, U-221
- stopping and starting processes**, A-192
- string qualifiers for conditions**, D-290
- SU_TYPE column in authoriz.lis file**, D-454

subject, assigning email subjects to notifications, D-58

subprocess flowing within process flows, D-100

substitution variables, D-520

aliases, using in, D-270

conditions, adding to, D-254

defining with a condition statement, D-249

dynamic, definition of, D-246

Login, setting, D-251

making local to a process flow, D-260

passing values through a process flow, D-264

plain subvars, D-246

SQL statements, checking, D-251

static, definition of, D-246

Subvar Replacement Values window, using, D-254

types, D-246

Subvar Replacement Values window, using, D-254

Success (skip on failure) predecessors, description of, D-163

Success only when FINISHED

predecessors, description of, D-163

success predecessors, description of, D-163

success run-time extension, D-438

Success since last run predecessors, description of, D-163

successor links

definition of, D-160

tracing, D-174

successor option, for adding components to a process flow, D-127

successors

definition of, D-160

viewing and editing for a task, U-102

support objects, Applications Manager definition of (for exports and imports), D-368

support Web site, connecting from Applications Manager, U-25

SURUN

debugging SURUN, D-458

error messages, D-458

introduction, D-450

managing output, D-458

program types, D-452

SURUNP program type, D-453

SURUNP_REQ program type, D-453

switching users, D-454

using to initiate tasks from other logins, D-450

SURUNP program type, D-453

SURUNP_REQ program type, D-453

SUSOSHUTP program type interface script, explanation of, D-510

SUSQLP program type, D-452

SYSOUT script, using to alter file names, A-104

system failures, how Applications Manager handles, U-124

system performance, monitoring with the dashboard, U-180

SYSTEM process flow, running, A-122

SYSTEM_OUTPUT_NAME variable, using to specify output file names, A-104

-T-

tables

adding tables and views to reports, A-130

browsing the Applications Manager

database from the client, A-156

customizing columns in Applications Manager windows, U-18

customizing columns in Applications Manager windows (for all users), A-57

Tail option for viewing output, U-55

Take Actions on Agents user option, A-53

task execution diagram, A-218

Task Output Files, customizing table

columns for the Output Files tab on the Task Details window, U-18

task status definitions, U-213

taskbar, using, U-5

tasks

{task} replacement value, D-258

adding

comments, U-112

external links to tasks in the Backlog, U-105

killing, U-84

logging task events, A-164

querying History for, U-130

restart on abort option, setting, U-97

running ad hoc requests, U-38

- staging in the Backlog, U-140
 - status colors
 - changing for tasks, U-20
 - status definitions, U-213
 - viewing
 - comments, U-112
 - ended times, U-95
 - process flow names, U-95
 - process flow order numbers, U-95
 - process IDs, U-95
 - prompts, U-98
 - request dates and times, U-95
 - run IDs, U-95
 - started times, U-95
 - Status Details, U-95
 - task conditions, U-106
 - task documentation, U-108
 - task predecessors, U-100
 - task successors, U-102
 - users (requestors), U-95
 - viewing and editing
 - agents, U-96
 - logins, U-96
 - max run times, U-96
 - output devices, U-96
 - output functions, U-97
 - priorities, U-96
 - queues, U-96
 - start dates and times, U-96
 - tasks, initiating from a variety of logins,**
D-450
 - technical support**
 - contacting, A-4
 - emergency (24 by 7), A-4
 - standard hours, A-4
 - text message email, specifying for users,**
A-51
 - text messages, {text_msg} replacement
value, D-258**
 - text, finding in output, U-55**
 - the first time the condition is true,
evaluating conditions once, D-297**
 - theme**
 - specifying a color theme for the client,
A-333
 - specifying the ocean theme for the client,
A-333
 - thread schedules**
 - adding, editing, and deleting, U-164
 - assigning to
 - agents, A-101
 - queues, U-163
 - changing for agents and automation
engines, U-153
 - TIME SINCE REQUESTED, value for
conditions, selecting, D-289**
 - time zones**
 - automation engines, setting for, A-106
 - schedules, setting for, D-331
 - time/date formats, setting defaults, A-57**
 - TIMEDOUT task status, U-221**
 - TIME-OUT task status, U-221**
 - timing, setting for conditions, D-286**
 - title, setting a banner page for output
interfaces, A-29**
 - toolbar, using toolbar icons, U-5**
 - ToolTips**
 - editing with the translator editor, A-12
 - viewing and disabling, U-4
 - tracing predecessors and successors,**
D-174
 - translating languages for Applications
Manager field names, A-12**
 - triangle, for unsaved changes, D-20**
 - TROUBLE**
 - automation engine/agent status, U-212
 - setting alerts for agents, U-10
 - trouble run-time extension, D-438**
 - troubleshooting**
 - newly created jobs, D-78
 - output problems, A-42
 - with
 - log files and DEBUG, introduction,
A-234
 - standard log files, A-236
- U-**
- Unavailable agent status, U-212**
 - UNAVAILABLE task status, U-221**
 - undoing and redoing actions in process
flows, D-115**
 - UNIX, home directory files, A-17**
 - UNSAT-FINISH task status, U-221**
 - unsatisfying**
 - predecessor references for other tasks in
History, U-114

updating unsaved changes, D-20

Upper case option, setting for

data types, D-227

prompts, D-222

URL, LDAP option, setting for the automation engine, A-113

usage, viewing where an object is referenced, D-18

Use Database Time Zone, desktop setting, U-9

Use job condition option, setting for process flow components, D-147

Use job max revisions option, setting for the automation engine, A-110

Use request output option, setting for process flow components, D-147

Use Task Count Load Balancing vs. CPU%, setting for agents, A-102

Use virtual day for process flow component days of week option, setting for the automation engine, A-112

user authorities, defining, A-72

USER DEFINED

{condition1} replacement value, D-256

{condition2} replacement value, D-256

value for conditions, selecting, D-288

user environment variable, D-444

user groups

assigning objects to, A-68

assigning to

jobs, D-76

objects, A-74

DBA user group, A-70

defining, A-66

edit user group, creating, A-66

end-user user groups, creating, A-86

general guidelines for creating, A-80

job/process flow option, setting, A-69

operator edit user group, creating, A-84

operator no_edit user group, creating, A-84

organizing, A-64

programmer edit user group, creating, A-82

programmer no_edit user group, creating, A-83

user authority defined, A-72

user ID {requestor} replacement value, D-257

user options, setting, A-52

user password, changing, A-49

users

activating/inactivating, A-49

ad hoc requests, selecting for, U-41

adding, A-48

assigned objects, viewing, A-14

assigning to

agents, A-102

output devices, A-25

output directory, A-51

process flow components, D-153

schedules, D-331

user login audits to enforce rules for

selecting passwords, A-58

awexe range, setting, A-50

connections, viewing reports of users

connected to a automation engine, A-6

default output directory, assigning to, A-51

email address, specifying for, A-51

expire interval for user passwords, setting, A-49

fax number, specifying for, A-51

filtering the Backlog and History for requestors, U-135

language for, setting, A-51

LDAP authorization, setting, A-49

logging on to Applications Manager, U-28

login, setting, A-50

maintenance user group, setting, A-50

output device, setting, A-50

phone number, specifying, A-51

querying

History for requestors, U-130

Output window for requestors, U-51

sending broadcast messages to, A-7

text message emails, specifying for, A-51

user options, setting, A-52

-V-

Value required option, setting for prompts, D-222

Variable name, setting for prompts, D-221

Variable Print option, A-35

variables

agent, A-288

appworx_port, A-289

Background Manager variables, A-284

check_interval, A-289

- debug_mask, A-289
 - during_wait, in awenv.ini, A-289
 - eligible processes, A-288
 - initial_sleep, A-198
 - job_start_limit, A-289
 - master, A-290
 - Master_IP_Address, A-290
 - max_cycles, A-198
 - max_time_reboot, A-198
 - min_time_reboot, A-198
 - mult_factor, A-198
 - read_timeout, A-290
 - ResponseTimeout, A-290
 - sleep_wait, A-290
 - so_ext_action, A-290
 - sosched_flag, A-290
 - start_timeout, A-291
 - watch_sleep, A-198
 - watch_wait, A-198
 - watchstatus_file, A-199
 - WatchWorx, A-284
 - variables, used as replacements in spooler and printer definitions, A-30**
 - view icons, adding to an AppMaster view, A-306**
 - view names. See aliases.**
 - View Other Users' Jobs user option, A-54**
 - View Other Users' Output user option, A-54**
 - View SYSOUT Device Output Files user option, A-54**
 - viewing**
 - agent for a task, U-96
 - agent logs, U-154
 - assigned objects, A-14
 - Backlog task summaries (pop-up menus), U-73
 - conditions for a task, U-106
 - documentation for
 - a task, U-108
 - ad hoc requests, U-42
 - end of files with the output viewer, U-55
 - ended time for a task, U-95
 - environment variables for a task, U-95
 - Gantt chart for process flows, D-136
 - Graphical Forecasts, U-174
 - login for a task, U-96
 - max run time for a task, U-96
 - notifications for a task, U-95
 - object reports, D-14
 - operations reports, U-14
 - output
 - by page and line numbers, U-55
 - end of files, U-55
 - file viewer text size, changing, U-55
 - from History, U-110
 - Tail option, U-55
 - output device for a task, U-96
 - output function for a task, U-97
 - output scans for a task, U-95
 - predecessors for a task, U-100
 - priority for a task, U-96
 - process flow name for a task, U-95
 - process flow order number for a task, U-95
 - process flow simulation, D-176
 - process ID for a task, U-95
 - prompts for a task, U-98
 - queue for a task, U-96
 - reports of users and RMI servers connected
 - to an automation engine, A-8
 - request date and time for a task, U-95
 - run ID for a task, U-95
 - schedule forecasts, U-172
 - start date and time for a task, U-96
 - started time for a task, U-95
 - Status Details for a task, U-95
 - successors for a task, U-102
 - tasks in the
 - Backlog Gantt view window, U-188
 - History Gantt view window, U-120
 - user (requestor) for a task, U-95
 - views, adding tables and views to reports, A-130**
 - virtual day, start times**
 - setting, D-184
 - setting default date/time format, A-57
 - viewing, D-184
- W-**
- WAIT UNTIL MET condition action, D-295**
 - WARNING task status, U-221**
 - watch_sleep variable, WatchWorx, A-198**
 - watch_wait variable, WatchWorx, A-198**
 - watchstart.bat script for customizing WatchWorx, A-202**

watchstatus_file variable, WatchWorx,

A-199

WatchWorx

actions taken based on process and time differences, A-204

customizing with a watchstart.bat script, A-202

environment variables and terms, A-198

process description, A-190

variables

initial_sleep, A-198

max_cycles, A-198

max_time_reboot, A-198

min_time_reboot, A-198

mult_factor, A-198

watch_sleep, A-198

watch_wait, A-198

watchstatus_file, A-199

WatchWorx.notify, A-200

WatchWorx_max_idle WatchWorx

variable, A-285

Web service logins, adding, editing, and deleting, D-518

Web service methods, adding, editing, and deleting, D-520

Web services

introduction, D-528

methods

defaultsForRequestJob, D-530

deleteJob, D-530

getJobData, D-530

holdJob, D-531

killJob, D-531

requestJob, D-531

resetJob, D-532

Web Start, launching Applications

Manager with, U-26

where used, viewing where an object is referenced, D-18

width, setting for report columns, A-134

Windows jobs, running with ntspawn, D-420

windows, closing, U-5

workday schedules, creating, D-336

workload balancing, monitoring with the dashboard, U-181

wrap, setting for report columns, A-135

-Z-

ZOS, jobs, creating, D-90

