

CA Workload Automation iXp

User Guide
Release 11.3.5, Third Edition

This Documentation, which includes embedded help systems and electronically distributed materials, (hereinafter referred to as the "Documentation") is for your informational purposes only and is subject to change or withdrawal by CA at any time. This Documentation is proprietary information of CA and may not be copied, transferred, reproduced, disclosed, modified or duplicated, in whole or in part, without the prior written consent of CA.

If you are a licensed user of the software product(s) addressed in the Documentation, you may print or otherwise make available a reasonable number of copies of the Documentation for internal use by you and your employees in connection with that software, provided that all CA copyright notices and legends are affixed to each reproduced copy.

The right to print or otherwise make available copies of the Documentation is limited to the period during which the applicable license for such software remains in full force and effect. Should the license terminate for any reason, it is your responsibility to certify in writing to CA that all copies and partial copies of the Documentation have been returned to CA or destroyed.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, CA PROVIDES THIS DOCUMENTATION "AS IS" WITHOUT WARRANTY OF ANY KIND, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. IN NO EVENT WILL CA BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, FROM THE USE OF THIS DOCUMENTATION, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOST INVESTMENT, BUSINESS INTERRUPTION, GOODWILL, OR LOST DATA, EVEN IF CA IS EXPRESSLY ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE.

The use of any software product referenced in the Documentation is governed by the applicable license agreement and such license agreement is not modified in any way by the terms of this notice.

The manufacturer of this Documentation is CA.

Provided with "Restricted Rights." Use, duplication or disclosure by the United States Government is subject to the restrictions set forth in FAR Sections 12.212, 52.227-14, and 52.227-19(c)(1) - (2) and DFARS Section 252.227-7014(b)(3), as applicable, or their successors.

Copyright © 2014 CA. All rights reserved. All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

Contact CA Technologies

Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information that you need for your Home Office, Small Business, and Enterprise CA Technologies products. At <http://ca.com/support>, you can access the following resources:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

Providing Feedback About Product Documentation

If you have comments or questions about CA Technologies product documentation, you can send a message to techpubs@ca.com.

To provide feedback about CA Technologies product documentation, complete our short customer survey which is available on the CA Support website at <http://ca.com/docs>.

TABLE OF CONTENTS

1	INTRODUCTION	9
2	ARCHITECTURE	10
2.1	Processing Example.....	12
2.1.1	Data Refresh Cycle	12
2.1.2	On-Demand Activity Example.....	12
2.1.3	Log File Retrieval	12
2.2	Security	13
3	VIEWING JOBS.....	14
3.1	Customizing the GUI.....	14
3.2	Graphical Views.....	15
3.2.1	The Console View.....	15
3.2.1.1	Sort Order in Console View	18
3.2.2	Time View	19
3.2.2.1	Setting Chart Duration	20
3.2.2.2	Retrieve Run Data.....	20
3.2.3	Job Flow View	22
3.2.3.1	Zoom	23
3.2.3.2	Job Flow View Order	24
3.2.3.3	Names in Job Flow View	25
3.2.3.4	Global Variable Symbol	26
3.2.4	The Job Detail View.....	28
3.2.5	The Tree View	32
3.3	Selecting Multiple Jobs	34
4	iXp MENU BAR.....	35
4.1	File Menu:.....	35
4.1.1	File►User Command	35
4.1.1.1	File►UserCommand►Job.....	37
4.1.1.2	File►UserCommand►Alarm	38
4.1.1.3	File►UserCommand►Context Free	38
4.1.2	File►CLI.....	39
4.1.3	File►Print.....	41
4.1.3.1	Print Tiling	42
4.1.4	File►Save Session Settings	42
4.1.5	File►Save View as JIL.....	42
4.1.6	File►Set Time Zone	42
4.1.7	File►Go Offline	43
4.1.8	File►Change Password.....	43
4.1.9	File►Sendevent.....	44
4.1.9.1	Sendevent►Standard.....	44
4.1.9.2	Sendevent►Multi-Select.....	46
4.1.9.3	Sendevent►CHANGE_STATUS	47
4.1.9.4	Sendevent►ALARM	48
4.1.9.5	Sendevent►COMMENT	49

4.1.9.6 Sendevent►SET_GLOBAL.....	50
4.1.9.7 Sendevent►CHANGE_PRIORITY	51
4.1.9.8 Sendevent►SEND_SIGNAL.....	52
4.1.9.9 Sendevent►MACHINE	53
4.1.10 File►Retrieve Run Data.....	53
4.1.11 File►Retrieve Alarm Data	53
4.2 Edit Menu	54
4.2.1 Edit►Undo:	54
4.2.2 Edit►Edit Filters	54
4.2.3 Edit►Edit Preferences.....	54
4.2.3.1 Color Editor	58
4.2.3.2 Filter Editor.....	58
4.3 View Menu	60
4.3.1 View►Find Job By Name	60
4.3.2 View►Find Job By	61
4.3.3 View►Find Admin Filter	62
4.3.4 View►Find Personal Filter	63
4.3.5 View►Find Group Filter	63
4.3.6 View►Hide Selected Jobs.....	63
4.3.7 View►Global Variables	63
4.3.8 View►Job Overrides.....	66
4.3.9 View►Expand	66
4.3.10 View►Expand All	67
4.3.11 View►Transitive Closure.....	67
4.3.12 View►Display Alarm Button.....	67
4.3.13 View►Alarm Manager on Top.....	67
4.3.14 View►Lock Job Name Column.....	67
4.4 View►Flow View	67
4.4.1 View►FlowView►Display Flow View	67
4.4.2 View►FlowView►Show Print Grid	68
4.4.3 View►FlowView►Stream Jobs	68
4.4.4 View►FlowView►Show Job Names.....	68
4.4.5 View►FlowView►Truncate Job Names.....	69
4.4.6 View►FlowView►Keep First 8 Letters.....	69
4.4.7 View►FlowView►Hide Job Names	69
4.4.8 View►FlowView►Show Arrows.....	69
4.4.9 View►FlowView►Hide Out of Box Arrows	69
4.4.10 View►FlowView►Hide All Arrows	70
4.4.11 View►FlowView►Hide Icons	70
4.4.12 View►FlowView►Enable Arrow Routing	70
4.5 Migrate.....	72
4.6 Report Menu	72
4.6.1 Report Editor.....	72
4.6.1.1 Report Management.....	72
4.7 Definition Menu	76
4.7.1 Edit Calendars	76
4.7.1.1 Menu options	77

4.7.1.2 Manage Standard Calendars	78
4.7.1.3 Manage Cycles.....	79
4.7.1.4 Managing Extended Calendars	81
4.7.2 Edit Jobs.....	82
4.7.2.1 Menu icons.....	83
4.7.2.2 Basic page	83
4.7.2.3 Date/Time page	84
4.7.2.4 Alarm page.....	84
4.7.2.5 Execution page.....	84
4.7.2.6 Runtime page	84
4.7.2.7 Resource page	84
4.7.2.8 Permission page	85
4.7.2.9 Box page	85
4.7.2.10 File Watcher page.....	85
4.8 Help Menu	85
4.8.1 Graphics Help	85
4.9 Quick Find	85
5 iXp TOOL BAR.....	87
5.1 Instance Monitor.....	87
5.2 Alarm Manager.....	88
5.2.1 Job Control Pop-up menu in Alarm Manager	90
5.2.2 Sort Order in Alarm Manager	91
5.3 Current Filter	92
5.4 Flow View Buttons	93
6 JOB FILTERS	94
6.1 Filters Defined	94
6.1.1 Attribute Filters	94
6.1.2 Job Dependency Filters	95
6.2 How Filters Work	95
6.2.1 Filter Logic Sequence	96
6.2.2 Example Filtration Sequence	96
6.3 Filter Editor.....	97
6.3.1 Filter Editor File Menu	102
7 JOB TOOLS POP-UP	103
7.1 Expand, Collapse, and Hide	103
7.2 Job Control	104
7.2.1 Update Job	105
7.2.2 Override Job.....	105
7.2.3 Change Status.....	105
7.3 New Filter and Update Filter	107
7.3.1 Job Dependency Filters Definitions.....	107
7.4 User Command	108
7.5 Job Information.....	109
7.5.1 Job Definition.....	110
7.5.2 Detailed Report	110
7.5.3 Run Data	110
7.5.3.1 View Detail	111

7.5.3.2 Create Report	111
7.5.4 Log Files	113
7.5.4.1 STDOUT, STDERR, STDIN	113
7.5.4.2 Job Profile	114
7.5.4.3 Remote Agent Log	115
7.5.5 Calendars.....	116
7.6 View Statistics	117
8 iXp CLIENT CLI.....	120
8.1 Installation	120
8.2 Commands	122
8.2.1 ixautorep	122
8.2.2 ixsendevent	123
8.2.3 ixjil	124
8.2.4 ixautostatus	126
8.2.5 ixjob_depends	126
8.2.6 ixautocal_asc.....	127
8.2.7 ixflags.....	128
8.2.8 ixuserjobcmd.....	128
9 INTERACTIVE FORECASTING.....	130
9.1 Go Offline	130
9.1.1 Rewind, Play, Pause	131
9.2 Forecast Configuration	131
9.2.1 Time Settings	132
9.2.2 EP Latencies.....	133
9.2.3 Log Files	134
9.2.4 Run Times	134
9.2.5 End Statuses.....	136
9.2.6 Sendevents	137
9.2.7 Return iXp to Online Mode	138
9.3 View Forecast Run Data	139
9.4 Errors and Warnings	139
9.4.1 Warning for old data	139
9.4.2 No Activity Warning	140
9.4.3 iXp Client is “Out Of Memory”.....	140
9.4.4 iXp Client gets “EOF” Exceptions	141
10 MIGRATING WORKLOAD OBJECTS	142
10.1 Scenario: How to Migrate Workload Objects in CA Workload Automation iXp	142
10.1.1 Prerequisites.....	144
10.1.2 Preparing the Migration Package	144
10.1.2.1 Create a Migration Package	145
10.1.2.2 Select an Existing Package	147
10.1.3 Verify that the Appropriate Workload Objects are Included in the Package	148
10.1.4 Validate the Integrity of the Workload Objects in the Package	149
10.1.5 Migrate the Package.....	151
11 GLOSSARY	153

11.1	CA Workload Automation iXp Related Terms	153
11.2	CA Workload Automation AE Terms	154
11.3	Symbols in this Guide.....	155
11.4	Related Documents	156

1 INTRODUCTION

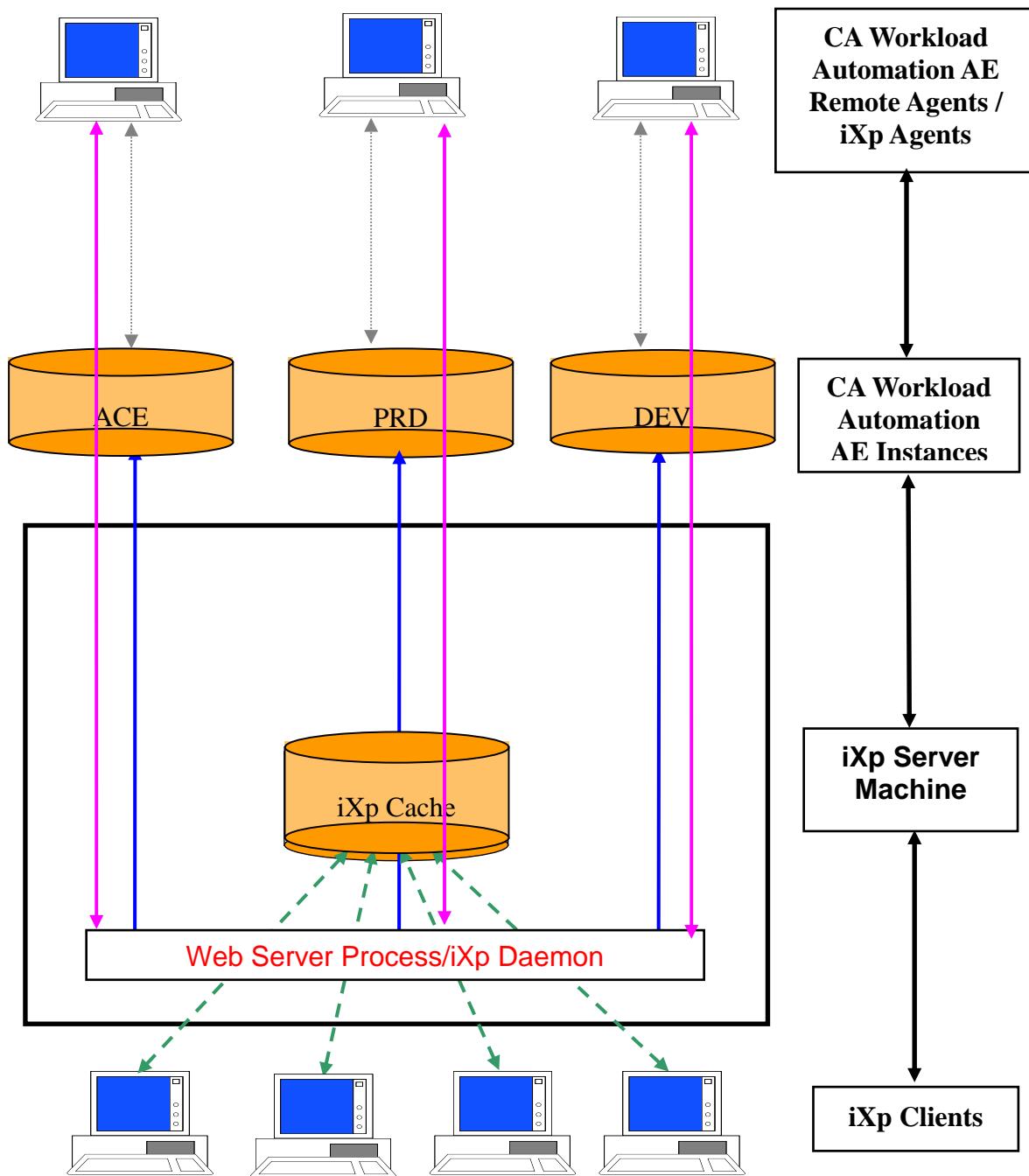
CA Workload Automation iXp is a JavaTM-based graphical interface that can be opened from Java Web Start. With CA Workload Automation iXp users can monitor, control, update, forecast, simulate, report on, and print CA Workload Automation AE job streams across multiple instances. The iXp Admin Tool lets you manage privileges for users by defining authorization roles.

The iXp Command Line Interface lets users view, report, control, create, update, and delete CA Workload Automation AE jobs. The commands interface with the CA Workload Automation iXp security model and do not require a local installation of the CA Workload Automation AE software.

The wizard-style migration assistant enables users to migrate jobs and other related objects from a Unicenter AutoSys JM 4.5.1 instance to a CA Workload Automation AE r11.3 or higher instance. Users can visualize, build, validate, and upload packages containing the appropriate set of jobs and their related global variables and calendars.

This guide assumes familiarity with CA Workload Automation AE. Companion to this **CA Workload Automation iXp User Guide** is the **CA Workload Automation iXp Administration Guide**.

2 ARCHITECTURE



ARCHITECTURE ELEMENT	DESCRIPTION
iXp Daemon	<p>This process runs on the iXp Server machine and is the only process that runs constantly. The iXp Daemon is a multi-threaded Java process that performs the following functions:</p> <ul style="list-style-type: none"> ▪ Collects all the relevant job data from the CA Workload Automation AE instances ▪ Maintains the iXp Cache ▪ Supplies the data to all the iXp clients <p>The iXp Daemon runs as a servlet within a Web Application Server (for example, Tomcat).</p>
iXp Cache	<p>These highly compressed data files in proprietary binary format include all the CA Workload Automation AE data required by the iXp Daemon and the iXp clients.</p>
iXp Client	<p>The iXp Client is the Java™-based GUI that can be opened on any Java-supported system, and the CLI that can be opened on supported systems.</p> <p>The GUI provides the capability to monitor, report, forecast, control and update job processing across the CA Workload Automation AE instances. Because the GUI is a Java application, there is no software installation required on the machine that will open the client.</p> <p>The CLI provides the capability to run CA Workload Automation AE commands, such as <i>sendevent</i>, <i>autorep</i>, <i>jil</i>, and <i>job_depends</i>, from any machine without installing the CA Workload Automation AE client software.</p>
iXp Agent	<p>The iXp Agent is a Java program that runs on a CA Workload Automation AE Remote Agent. The iXp Agent lets iXp Clients retrieve the output files that CA Workload Automation AE jobs create.</p> <p>iXp also provides a PERL-based agent that has been deprecated. The iXp Daemon can start this program automatically when needed, or it can be started as a job from CA Workload Automation AE. The iXp Server can install this program automatically, or the iXp administrator can install it manually.</p> <p>NOTE: The iXp Agent is not required with CA Workload Automation AE r11.3 and higher.</p>

2.1 Processing Example

2.1.1 Data Refresh Cycle

The processing done by each component of the architecture and the interaction between them during a normal data refresh cycle for the iXp Daemon and the Client are described as follows:

- 1) The iXp Daemon reads data from the CA Workload Automation AE databases for each instance.
- 2) It updates the iXp Cache with the newly fetched data.
- 3) The iXp Client contacts the web application server during its refresh cycle, and reads the iXp Cache for the data refresh. Since the iXp application is a multi-threaded software, it can service multiple client requests simultaneously.

2.1.2 On-Demand Activity Example

The processing done by each component and the interaction between them when an iXp Client performs an on-demand activity such as putting a job on hold are described as follows:

- 1) The iXp Client contacts the web application server.
- 2) The web application server associates the request with a thread and asks it to perform the action to put the job on hold.
- 3) The thread uses the *sendevent* command to perform the action and reports the status back to the web application server.
- 4) The web application server then reports the status back to the iXp Client and the thread exits.

2.1.3 Log File Retrieval

The processing of each component and the interaction between them when an iXp Client requests retrieval of a log file (e.g. STDOUT) created by a job running in Unicenter AutoSys JM r11 or older are described as follows:

- 1) The iXp Client contacts the iXp Daemon via the web application server.
- 2) The iXp Daemon then requests the iXp Agent on the CA Workload Automation AE Agent machine (where the job ran) to read the

Security

appropriate log file and send the contents back to the iXp Server. If the iXp Agent is not running, then the iXp Daemon sends a message back to the Client indicating that the Agent is not running.

- 3) Once it receives the contents, the iXp Server sends the contents back to the requesting iXp Client. The iXp Client displays the contents in a browser window.

2.2 Security

There are two security methods available for controlling access to iXp.

- 1) Native iXp security
- 2) Single Sign-On (SSO)

iXp provides a native multi-layered security model that encompasses data encryption, user authorization, and optional user authentication. The same security model is applied to both the iXp GUI and the iXp CLI.

In the first model, user access to iXp requires validation of the user identity and password. All user identities and passwords are managed within iXp and have no relation to system/domain IDs and passwords.

In the second model, iXp leverages the user ID already authenticated to the Active Directory Domain or the local machine. This requires no user/password maintenance in iXp.

In either case, iXp security includes the following features:

- Data transmission between the server and client machines can be secured and encrypted through current secure HTTP technology. Also, the sensitive data stored by iXp is encrypted.
- Roles can be assigned to the iXp user identities to provide read, update, and control privileges for the CA Workload Automation AE objects.
- The security model is very dynamic and user policies can be changed on the fly. Changes immediately take effect and a user logout is not necessary.
- The iXp administrator can easily manage the security role policies through the iXp Admin Tool.

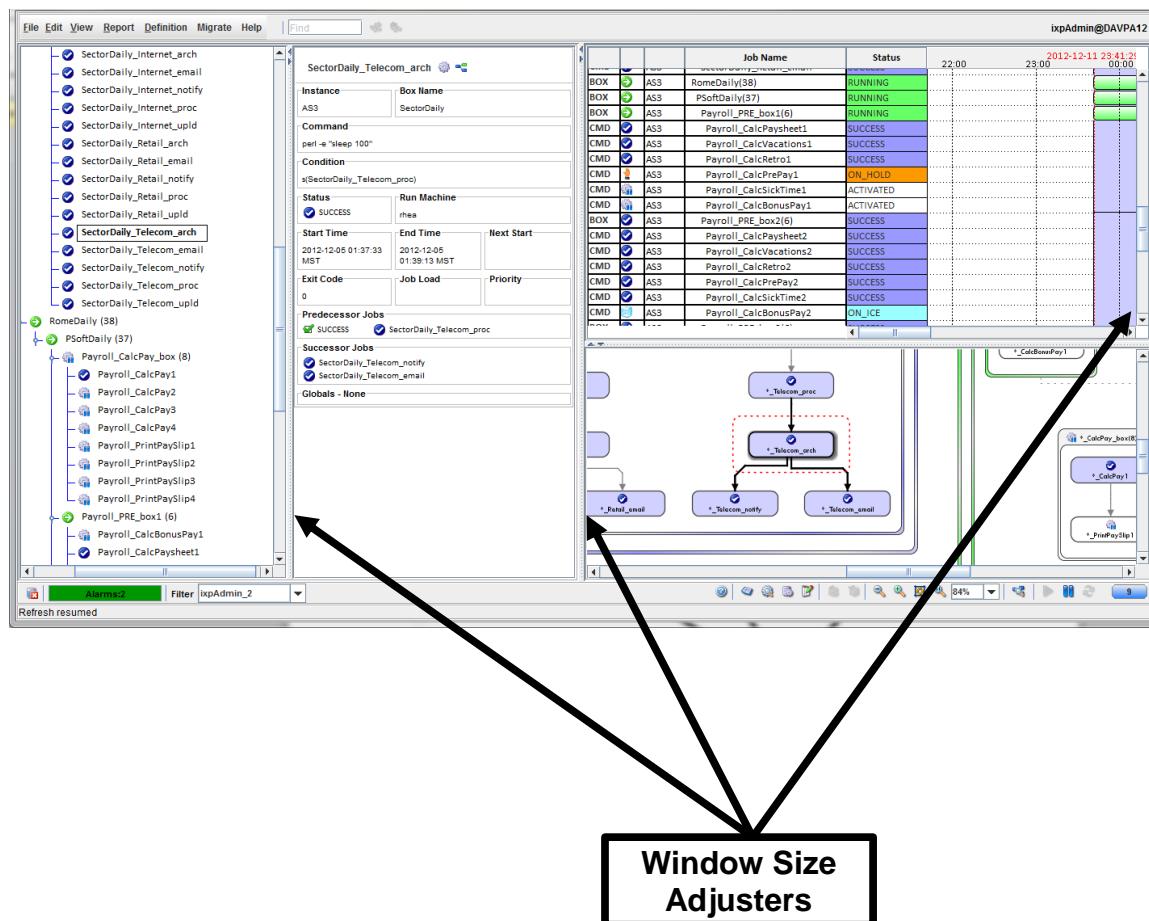
3 VIEWING JOBS

3.1 Customizing the GUI

Contact your iXp administrator for the URL of the iXp server and login information. After logging in, you should see iXp application as shown below.

You can verify the version of iXp by selecting the **Help▶About** menu option.

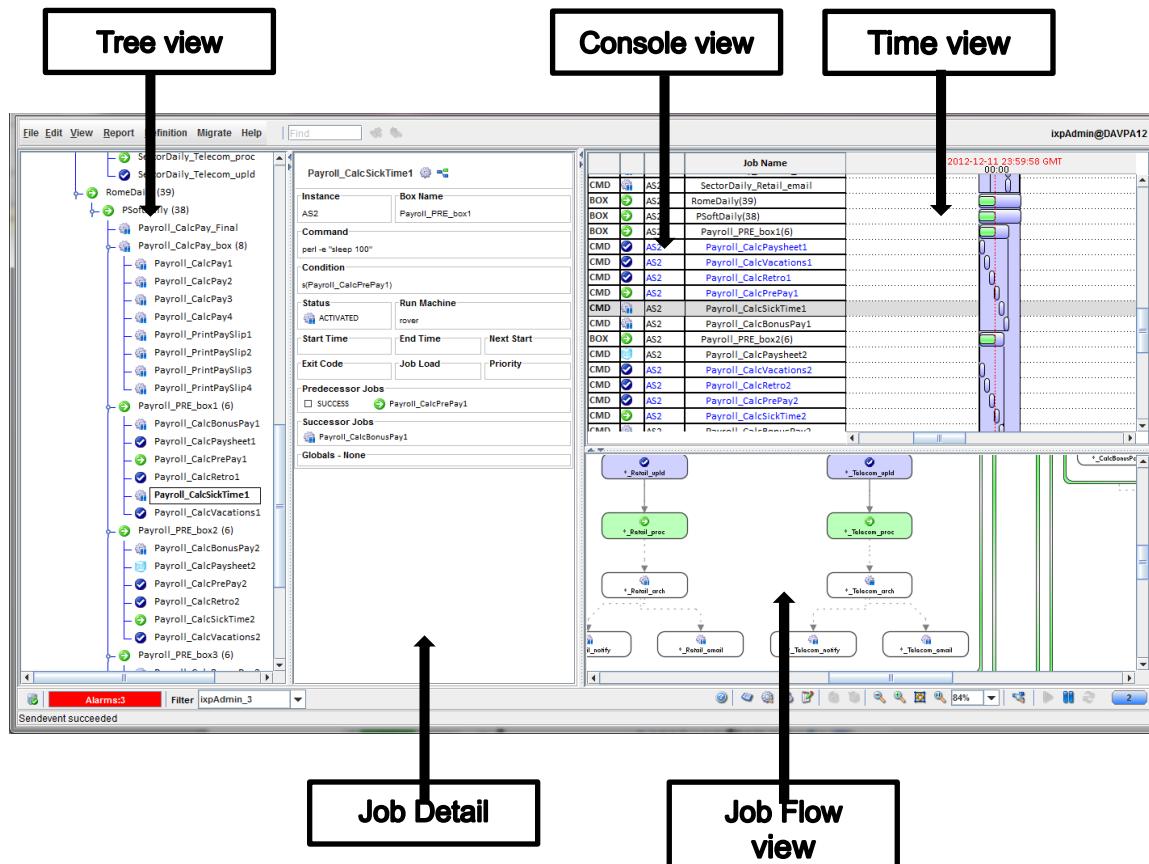
On the main GUI, shown below, drag the window size adjusters with your mouse to view all four iXp windows. A left-click on the arrow indentation on any size adjuster will move the panel all the way to the edge of the GUI window, collapsing any views in that direction. For example, a left-click on the down arrow indentation on the size adjuster between the Console View and the Job Flow View will completely hide the Job Flow View and enlarge the Console View.



3.2 Graphical Views

There are five graphical views in iXp. Each view shares context with all the other views. All the views show the same data. The five views are as follows:

1. Tree View
2. Job Detail View
3. Console View
4. Time View
5. Job Flow View



3.2.1 The Console View

The **Console View** provides an ordered list of jobs and their vital details.

COLUMN NAME	DESCRIPTION
Job Type	The job type: CMD, BOX, FW, or new job type
Icon	The type of job or its state represented pictorially.

COLUMN NAME	DESCRIPTION
Instance	The 3 letter CA Workload Automation AE instance that contains the displayed job.
Job Name	The job name, a CA Workload Automation AE attribute.
Status	The most current job status with its defined color.
<i>Time View</i>	A Gantt chart that shows past and future job runs based on the Past Hours and Future Hours settings for the user. The future job runs are based on the real-time forecast performed by the iXp Server.
Run Machine	The name of the physical machine that the job last ran on or is currently running on.
Start Time	The time the job last started.
End Time	The time the job last ended.
Duration	End Time minus Start Time, accurate to the second. For currently running jobs, this column shows Current Time minus Start Time.
Next Start	The next start date/time for jobs that are defined with date conditions.
Estimated End Time	For currently running jobs, this column shows the forecasted end time as calculated by the iXp Server.

The column widths in the Console View may be adjusted, for example to read the entire start time, by dragging the edges of the column heading labels (e.g. "Start Time") with the left mouse button.

The order of the columns can be modified by dragging them individually to the appropriate positions. The order of the first four columns that show the job type, job icon, instance and job name respectively, cannot be changed. These columns are locked in size and position. They can be unlocked, only for resizing, from the *Lock Job Name Column* check box on the View menu.

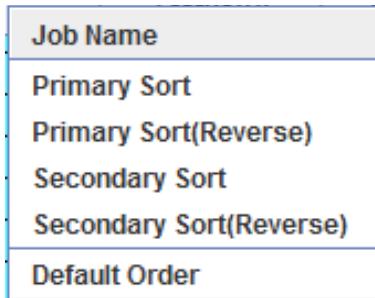
Each job row has an icon that indicates the status of the job. The icon meanings are shown in the following screen (use the Graphics Help selection on the Help menu in the iXp GUI):

Graphical Views

Status Icons	
	A job with a status of ACTIVATED
	A job with a status of FAILURE
	A job with a status of TERMINATED
	A job with a status of INACTIVE
	A job with a status of ON_HOLD
	A job with a status of ON_ICE
	A job with a status of ON_NOEXEC
	A job with a status of RUNNING
	A job with a status of STARTING
	A job with a status of RESTART
	A job with a status of SUCCESS
	A job with a status of WAIT_REPLY
	A job with a status of QUE_WAIT
	A job with a status of PEND_MACH
	A job with a status of RESWAIT
	The job has an out-of-box predecessor or successor
	The job has an one-time override defined
	The job references a global variable in its condition or its command calls sendevent with -E SET_GLOBAL
	A "success" dependency that has been satisfied, that is, the predecessor job has a status of SUCCESS .
	A "success" dependency that has not been satisfied, that is, the predecessor job has not gone to SUCCESS status.
	A "failure" or "terminated" dependency that has been satisfied, that is, the predecessor job has a status of FAILURE or TERMINATED .
	A "failure" or "terminated" dependency that has not been satisfied, that is, the predecessor job does not have a status of FAILURE or TERMINATED .
	A dependency of any other type (NOTRUNNING , DONE , EXITCODE) which has been satisfied. That is, the predecessor job is currently in one those states.
	A dependency of any other type (NOTRUNNING , DONE , EXITCODE) which has not been satisfied. That is, the predecessor job is not currently in one those states.
	A red dashed line is used to outline a selected job.

3.2.1.1 Sort Order in Console View

Rearrange the listing order in the Console View by selecting on a column heading with the right mouse button. The sort order selection (box) pop-up will appear:



If no sort order is selected, and if there are no open ALARMS for any of the jobs in the Console View, then the jobs will be displayed in the **Default Order**, which is a hierarchical sort order, very similar to the Tree View.

If any of the jobs in the Console View has even one Open Alarm, then that job would be listed at the top of the view. If multiple jobs have Open Alarms, then those jobs will be sorted by the time the Alarm was generated, with the job with the most recent Alarm at the top. As soon as all the Open Alarms for such a job have been Acknowledged or Closed, the job would move to its default position.

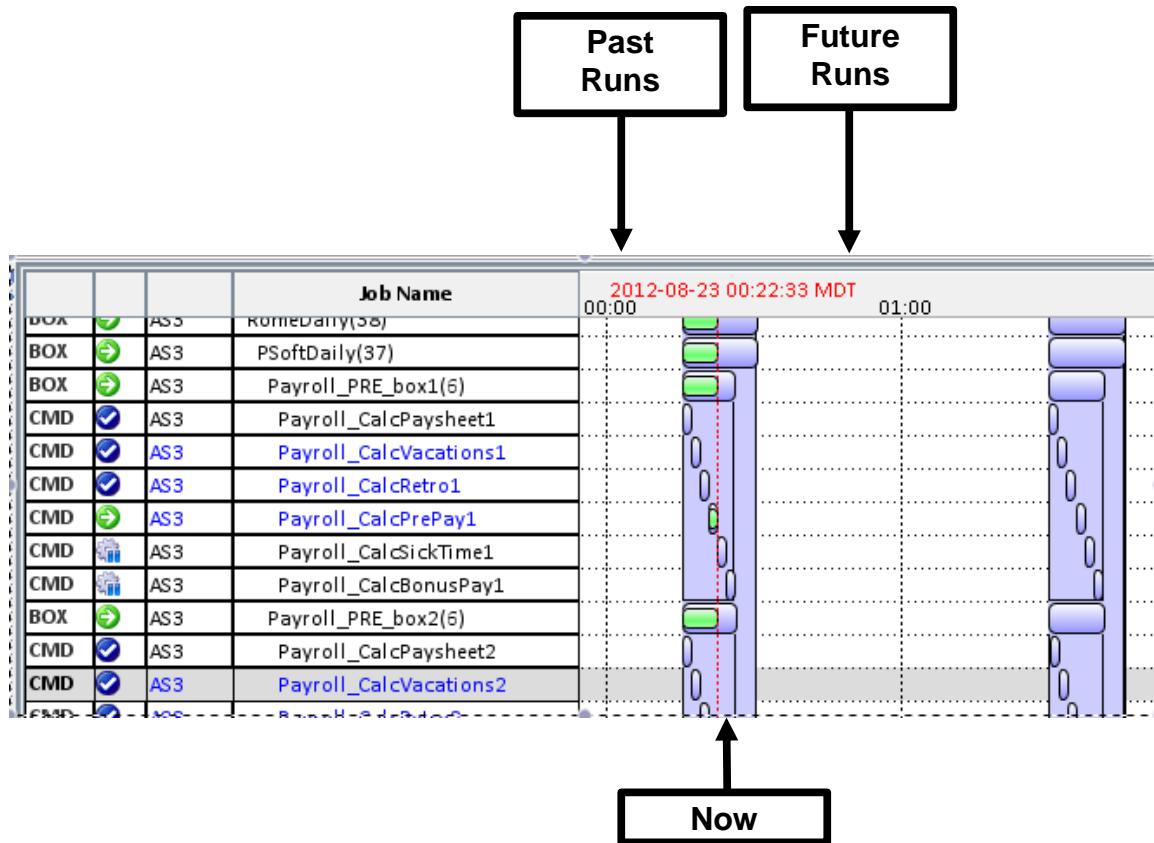
The Console View lets you specify primary and secondary sort criteria. For example, jobs could be sorted first by Job names and then by Start Times.

Sorting by Status gives the following order:

- FAILURE/TERMINATED
- RESTART
- QUE_WAIT
- PEND_MACH
- RESWAIT
- WAIT_REPLY
- STARTING
- RUNNING
- ACTIVATED
- ON_HOLD
- ON_ICE
- ON_NOEXEC
- SUCCESS
- INACTIVE

3.2.2 Time View

The Time View displays the past and forecasted job runs for all jobs listed in the Console View.



The job runs are displayed as colored rectangular bars, where the boundaries of the bars are based on start and end times of that run. The color of the bar indicates the completion status of the run. For forecasted runs, this would always match the color for a successful run. The colors can be edited by accessing the [Preference Editor](#) dialog. A smaller solid bar within the boundaries of the job run shows the progress of currently running jobs. The color of that bar matches the color of the RUNNING status. If the job has been running much longer than average, the color of that bar turns red. If the job has not run beyond its average duration, the distance between the end of the solid bar and the end of the job run boundary shows the estimated time left for the completion of the job.

The Time View has vertical line markings by the hour and the current time is displayed in red with a vertical red line going down the view. All job runs shown to the right of the red line of the current time are the forecasted runs.

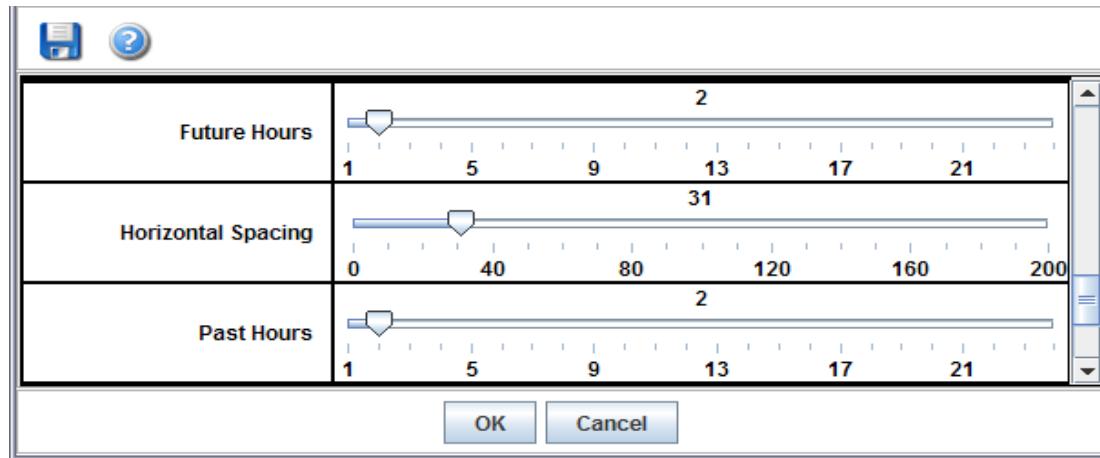
The iXp Server generates a real-time forecast for all the configured CA Workload Automation AE instances. To generate an accurate forecast, the iXp Server takes

into account the current statuses of all jobs, job dependencies, date/time conditions, and average job durations as stored in the CA Workload Automation AE database. The iXp Server performs a forecast of each CA Workload Automation AE instance as per their forecasting properties listed in the *iXp Admin Tool*. The iXp Server also accounts for all the major CA Workload Automation AE latencies and hence the duration for forecasted runs may be greater than the average job duration, which does not account for any latencies. If a past job run lasted much longer than the average duration for that job, the job run is marked with a red 'X' in the Time View. This provides a visual alert on all job runs that lasted longer than average.

Jobs that run much longer than scheduled, or are predicted to run much longer than scheduled, are also marked with a red X.

3.2.2.1 Setting Chart Duration

Use the "Past Hours" and "Future Hours" settings in the *Preference Editor* to set the duration of the Time View chart. For example, by setting the Past Hours and Future Hours to 2 Hours, the Time View would depict any runs within the last two hours for the jobs in the Console View and also show all forecasted runs for the next two hours for the same jobs.

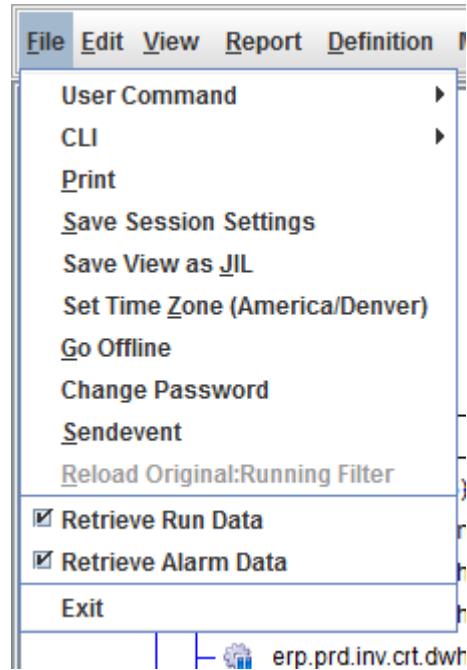


Use the "Time Window" tab on the *Filter Editor* window to select jobs to be displayed according to their past and future run times. For example, adjusting "Past Hours" to 2 and "Future Hours" to 10, *in the Filter Editor*, and then applying the resulting filter, will contain jobs that have run in the past 2 hours, are currently running, or are forecasted to run in the next 10 hours. Adjusting the Time Window in the Filter Editor does not affect the Time View Chart duration set in the Preference Editor.

3.2.2.2 Retrieve Run Data

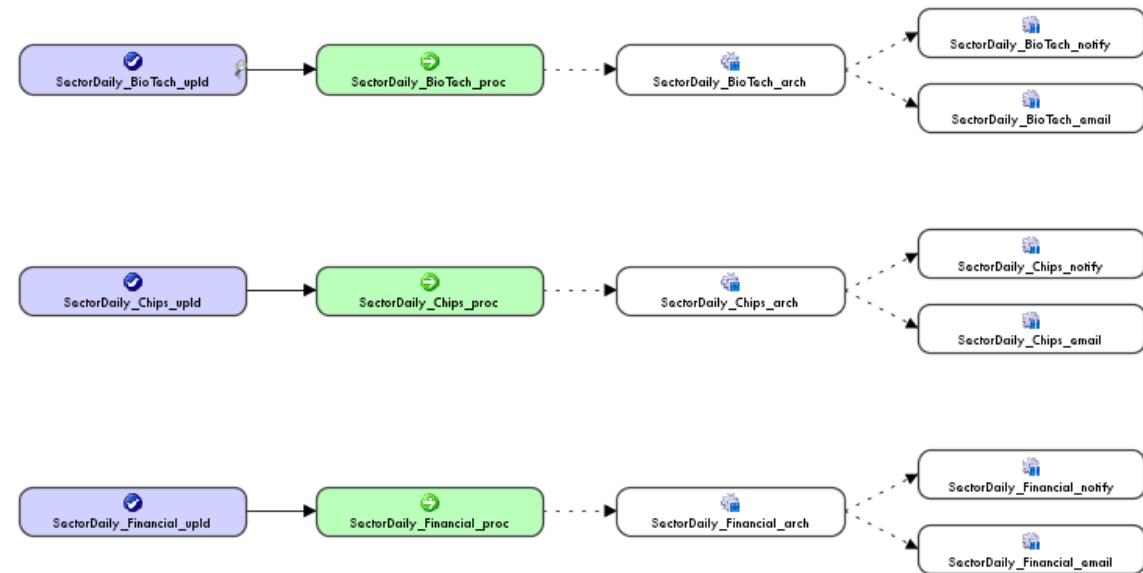
Graphical Views

If the “**Retrieve Run Data**” check box is not selected, no job run data will be displayed and hence the Time View would not show any runs. In order for the client to display past and forecasted job runs, the “**Retrieve Run Data**” check box MUST be selected.

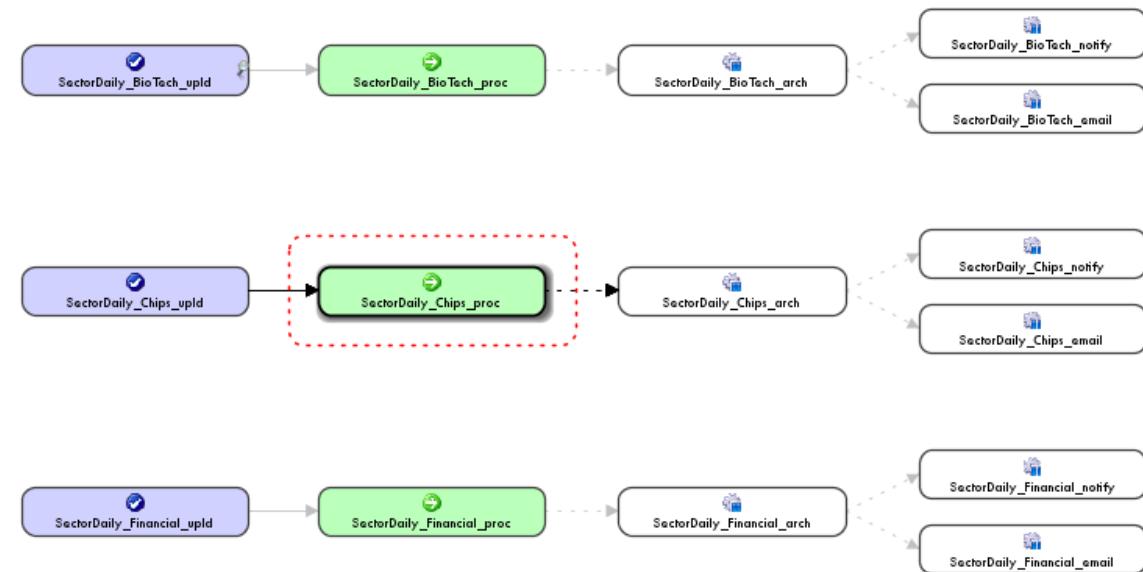


3.2.3 Job Flow View

The **Job Flow View** shows the predecessor and successor job relationships for each job and the box hierarchy.



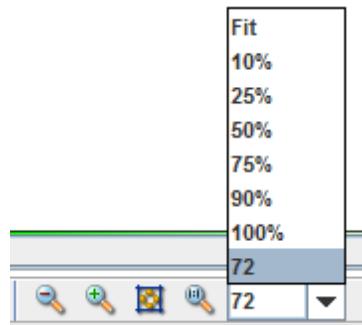
Left-click a job in the Job Flow View to show the selected job with a red border, and highlight its predecessor and successor relationship arrows. All other jobs and arrows will be grayed out. Once a job is selected, any right-click actions will affect that job.



3.2.3.1 Zoom

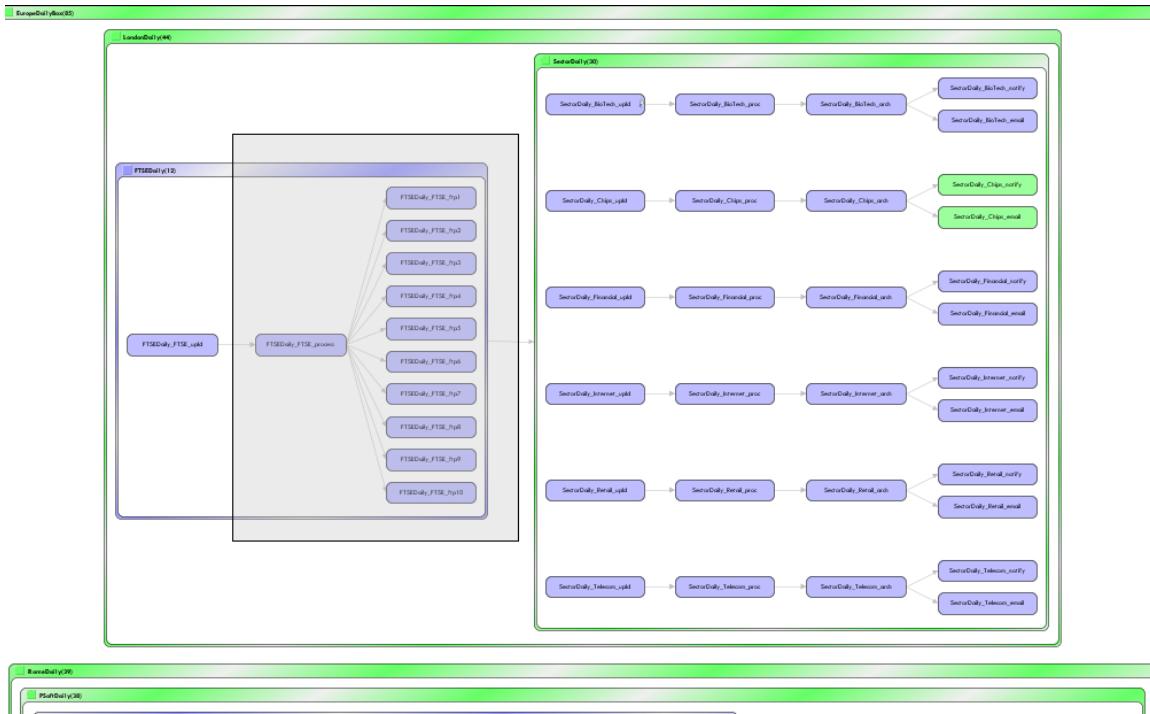
Use the **Zoom** buttons on the iXp toolbar to adjust the size of the Job Flow View.

The **Fit** icon sizes the Job Flow View to show the entire structure. You can select the zoom value from the drop-down list or by clicking the icon. The zoom value of 100% gives a font size for the Job Flow View about equal to the other view fonts.



The default sizing layout in the Job Flow View (Zoom 100%) is derived from the job name font, horizontal spacing, and vertical spacing as set in the preferences (see the Section 4.2.3 *Edit▶Edit Preferences* of this document).

Other sizing options are the + and - icons on the Flow View Toolbar, and the “rubber-band” function—use the mouse to select an area that you want to view in more detail (this works best when refresh is paused). Finally, it is possible to simply type numbers in the zoom drop-down list.



3.2.3.2 Job Flow View Order

In the Job Flow View, the jobs are arranged in the following ways:

1. Largest job streams (set of related jobs—jobs in boxes and jobs that depend on each other) at top left.
2. Smaller job streams are spaced across the top (or side if streaming top to bottom). Additional job streams are centered under each job stream in the top row.
3. All jobs with no dependencies are grouped together
4. All other things being equal (size, number and position of predecessors, number and position of successors, how many joids occur between the two compared joids), jobs with a higher JOID (i.e. jobs that were defined later) will be below or to the right of jobs with lower JOIDs.

Jobs that are contained in the same box or Level-0 jobs, once they have been grouped, are positioned using the following criteria:

- size of job or box
- number and position of predecessors
- number and position of successors
- the presence of out-of-box predecessors or successors
- the presence of circular dependency logic

Graphical Views

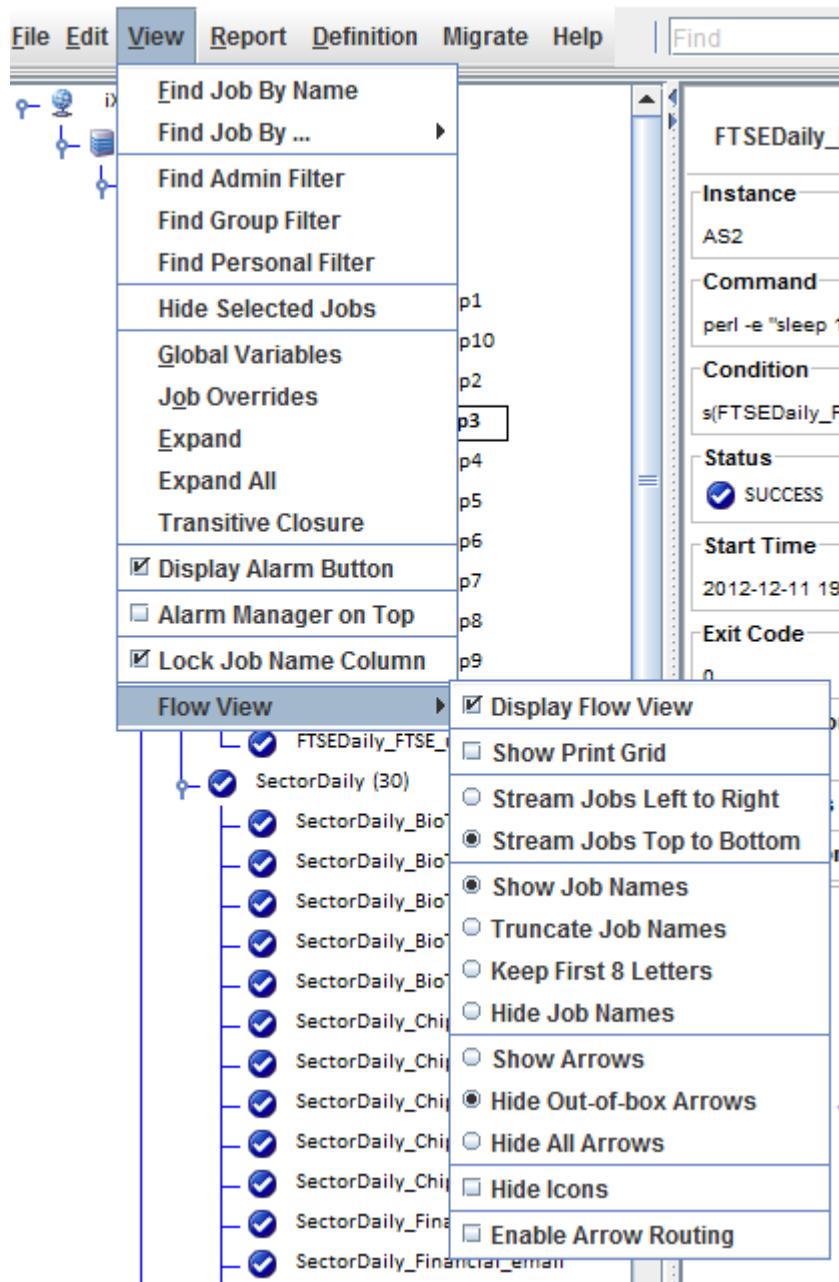
If all the listed criteria are equivalent for two jobs in the same box, a job with a higher JOID (i.e. jobs that were defined later) will be below or to the right of a job with a lower JOID.

The *Stream Jobs* option on the View menu can be used to toggle between a left to right job flow and a top to bottom job flow.

3.2.3.3 Names in Job Flow View

In the Job Flow View, job names can be abbreviated in several ways. This preserves View space in the event of commonly used naming practices. The abbreviation functions are as follows:

- 1) Truncate Job Names, based on shared prefixes of sibling jobs existing on the iXp Client. Example: jobs named abc101 and abc102 are abbreviated to *1 and *2. The three special characters (., _ and –) are special delimiter characters, and are kept in the abbreviated job names. Example: abc.101 and abc.102 are abbreviated as *.101 and *.102.
- 2) Keep First 8 letters, which is a simple numerical cut of everything from character 9 on.
- 3) Hide Job Names, which reduces each job to an icon.
- 4) Show Job Names displays the entire job name for each job.



These options are accessed on the View menu, using the Flow View sub-menu.

3.2.3.4 Global Variable Symbol

Jobs that have dependency relationship on a *Global Variable* show a white “map pin” in the upper-right corner. This indication is shown for two kinds of jobs.

- 1) Jobs that have an explicit dependency on one or more global variables, as defined in their starting conditions.

Graphical Views

- 2) Jobs that set the value of one or more global variables. The appropriate sendevent syntax for setting global variables must be defined in the command field.

The screenshot shows a graphical user interface for managing jobs. At the top is a window titled "Testbox_a(3)" containing three buttons:

- "Testbox_a_1" (green button with checkmark)
- "Testbox_a_4" (grey button with gear icon)
- "ThisIsATest" (green button with checkmark)

Below this is a configuration dialog with the following fields:

Basic	
SE2	Job Name: GR_DLY-success
	Box Name: <input type="text"/>
	Owner: autosys@czpr-wcc-as-se2
Job Type: CMD	
Description: http://google.com	
Condition: s(GR_DLY)	
Command: sleep 120	
Machine: localhost	
Group: <input type="text"/>	
Application: GRDLY	

3.2.4 The Job Detail View

The **Job Detail View** shows details of the selected job.

Note. Clicking on the **Status**, **Box name**, **Run machine**, **Application**, or **Group** attributes automatically creates a temporary job filter that shows all jobs with the same attributes.

Detail View Item	Description
Selected Jobs	Lists the jobs that have been selected in the Console View, the Job Flow View, or the Tree View. If more than one job is selected, only the selected job names will appear; the remaining fields in the Detail View will be blank.
Instance/icons	The name of the CA Workload Automation AE Instance where this job is defined, and icons that provide detail about the job. In the example above, the icons show that this is a Command (rather than Box or File Watcher) job, that it has date/time conditions, that it has a dependency, and that it uses a Global Variable.
Box Name	The name of the Box Job that contains the selected job. Jobs that are not in boxes will show N/A.
Description	The contents of the CA Workload Automation AE JIL description attribute.
Command / Watch File	The contents of the CA Workload Automation AE JIL command attribute to be executed for command jobs, and may be the name of any command, executable, UNIX shell script or batch file, and its arguments. If the job is a Box Job, this field is not shown. If the job is a File Watcher, then the contents of the CA Workload Automation AE JIL watch_file attribute is shown.
Condition	The contents of the CA Workload Automation AE JIL condition attribute specifies when the job can or cannot run relative to other jobs. If this attribute is blank, then this field is not shown.
Group	Displays the group that the job is associated to.
Application	Displays the application that the job is associated to.

Graphical Views

Detail View Item	Description
Status, Machine, Start Time, End Time, and Next Start	The same attributes as described for the Console View.
Exit Code	The exit code returned by the operating system for the most recent run of the job.
Job Load	The CA Workload Automation AE JIL <code>job_load</code> attribute data; default value is 0 if not defined. This field is not shown for Box jobs.
Priority	The CA Workload Automation AE JIL <code>priority</code> attribute data; default value is 0 if not defined. This field is not shown for Box jobs.
Days of Week/Run Calendar	The CA Workload Automation AE JIL <code>days_of_week</code> or <code>run_calendar</code> attribute of the selected job. If this attribute is not defined, then this field is not shown.
Exclude Calendar	The CA Workload Automation AE JIL <code>exclude_calendar</code> attribute of the selected job.
Start Times / Start Mins	The CA Workload Automation AE JIL <code>start_times</code> or <code>start_mins</code> attribute of the selected job. If this attribute is not defined, then this field is not shown.
Time zone	Displays the CA Workload Automation AE JIL time zone attribute of the selected job. If this attribute is not defined, then this field is not shown.
Run Window	The CA Workload Automation AE JIL <code>run_window</code> attribute of the selected job. If this attribute is not defined, then this field is not shown.
Predecessor Jobs	<p>The predecessors to the selected jobs, as shown in the Job Flow View. A check box in front of the predecessor job name indicates whether the condition between that job and the selected job has been met or not.</p> <p>Selecting a job in the Predecessor Jobs list will highlight that job in all the views, including the Job Detail View. This is one way to easily trace through</p>

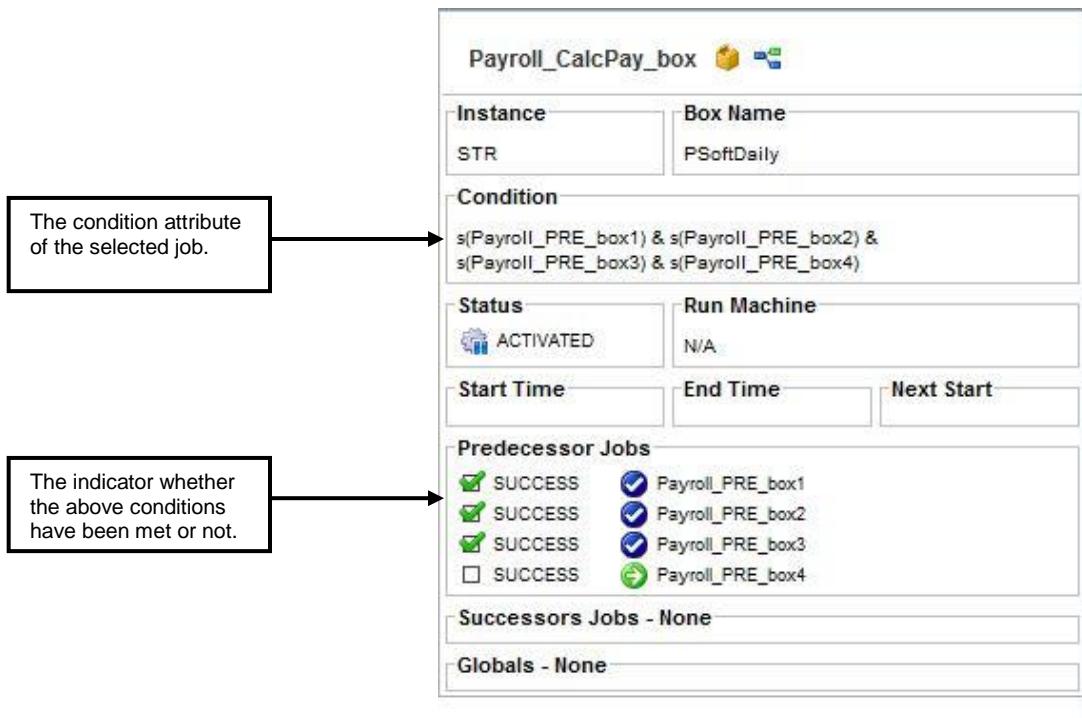
Detail View Item	Description
	job dependency relationships.
Successor Jobs	The successors to the selected job, as shown in the Job Flow View. Each successor job is listed with an icon that shows its current status. Selecting a job in the Successor Jobs list will highlight that job in all the views, including the Job Detail View. This is one way to easily trace through job dependency relationships.
Global Variables	If the selected job is dependent on <i>GlobalVariables</i> , or is setting the value for any, then the current value of the global variables will be displayed here.

If any of the following attributes are displayed, you can click the values shown to perform the associated actions:

Attribute	Associated Action
Run Calendar	View the calendar dates in the graphical Calendar dialog.
Exclude Calendar	View the calendar dates in the graphical Calendar dialog.
Predecessor Job	Change the selection to the job that was clicked.
Successor Job	Change the selection to the job that was clicked.
Global Variable	Open the Global Variable dialog to view the list of jobs associated with the clicked Global variable, set the value or delete the Global variable.

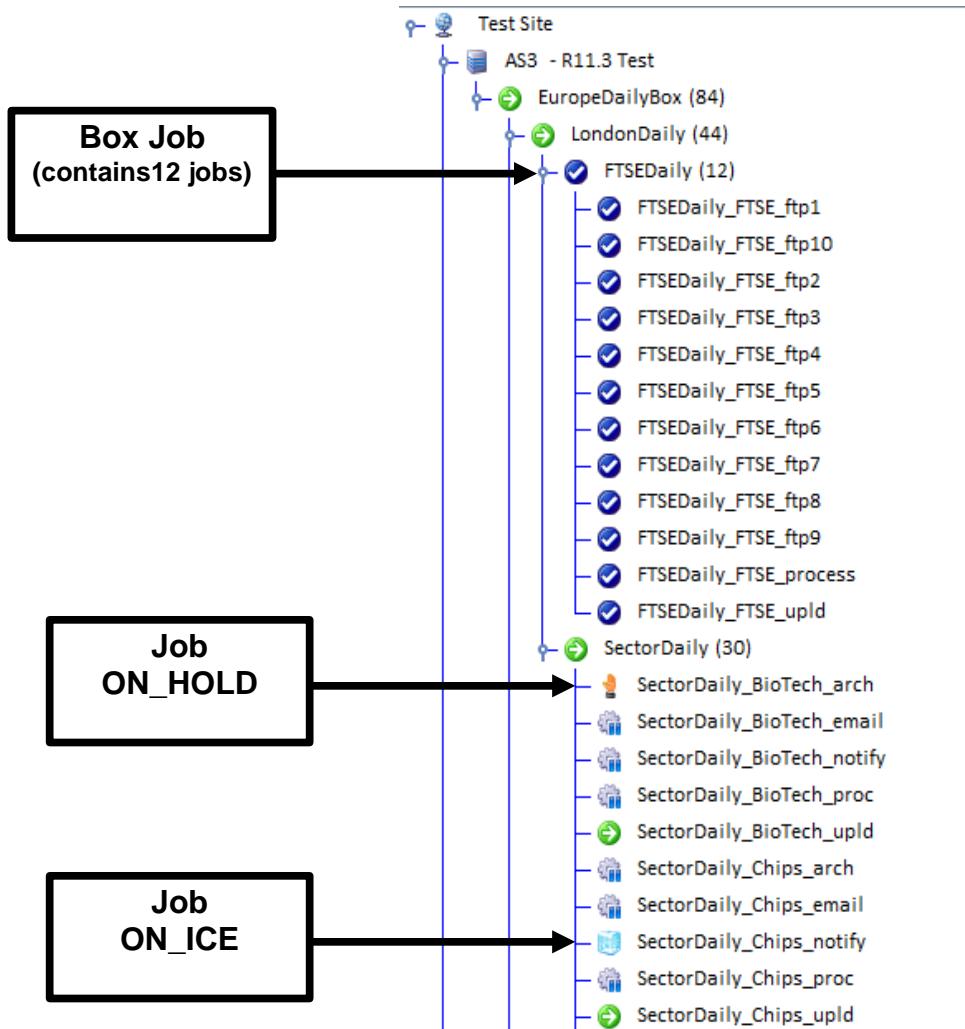
The following screen shows the atomic conditions being displayed in the Detail View. If a dependency has been met, then the Predecessor jobs field shows a checkmark for that job.

Graphical Views



3.2.5 The Tree View

The **Tree View** depicts the hierarchical box structure of the jobs. Box Job icons look like a box and open when the Tree View displays the jobs contained in the Box Job. Left-click the knob next to a Box Job or double-click the box to expand one level and show the contents of the Box Job in the Tree View.



Use the right mouse button to select **Expand** to expand the view one level, or **Expand All** to view the entire Tree View. The Expand or Expand All option can be applied to a Box Job, an Instance or the whole Site. Expanding a Box job shows all the jobs at the next level within the selected Box job. Expanding an instance shows all Level Zero jobs (i.e. all jobs that are NOT within a Box job), including top-level Box jobs. When an Expand All is performed, all jobs within the selected Instance or Box or Site are shown. This could result in quite a large number of jobs.

Graphical Views

Each job has an icon that displays the status of the job. Icon meanings are listed on the Graphics Help page under the Help menu, as shown below:

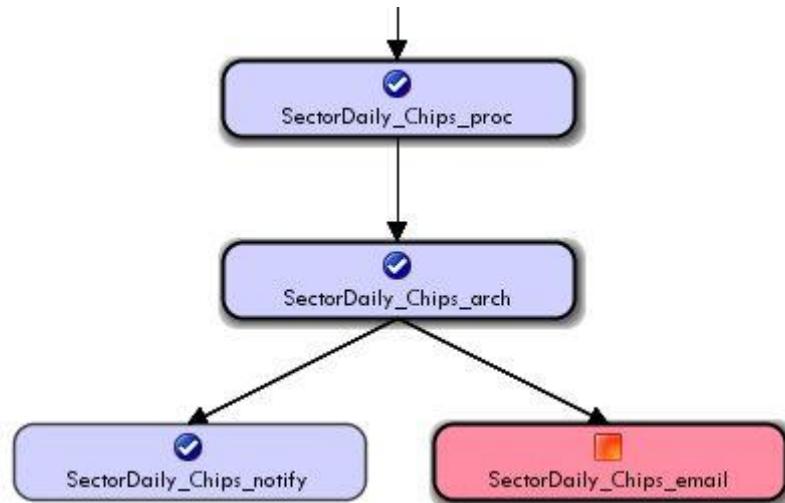
	A job with a status of ACTIVATED
	A job with a status of FAILURE
	A job with a status of TERMINATED
	A job with a status of INACTIVE
	A job with a status of ON_HOLD
	A job with a status of ON_ICE
	A job with a status of ON_NOEXEC
	A job with a status of RUNNING
	A job with a status of STARTING
	A job with a status of RESTART
	A job with a status of SUCCESS
	A job with a status of WAIT_REPLY
	A job with a status of QUE_WAIT
	A job with a status of PEND_MACH
	A job with a status of RESWAIT
	The job has an out-of-box predecessor or successor
	The job has an one-time override defined
	The job references a global variable in its condition or its command calls sendevent with -E SET_GLOBAL
	The job has predecessors or successors that are not in the current view
	A "success" dependency that has been satisfied, that is, the predecessor job has a status of SUCCESS .
	A "success" dependency that has not been satisfied, that is, the predecessor job has not gone to SUCCESS status.
	A "failure" or "terminated" dependency that has been satisfied, that is, the predecessor job has a status of FAILURE or TERMINATED .
	A "failure" or "terminated" dependency that has not been satisfied, that is, the predecessor job does not have a status of FAILURE or TERMINATED .
	A dependency of any other type (NOTRUNNING , DONE , EXITCODE) which has been satisfied. That is, the predecessor job is currently in one those states.
	A dependency of any other type (NOTRUNNING , DONE , EXITCODE) which has not been satisfied. That is, the predecessor job is not currently in one those states.
	A red dashed line is used to outline a selected job.

3.3 Selecting Multiple Jobs

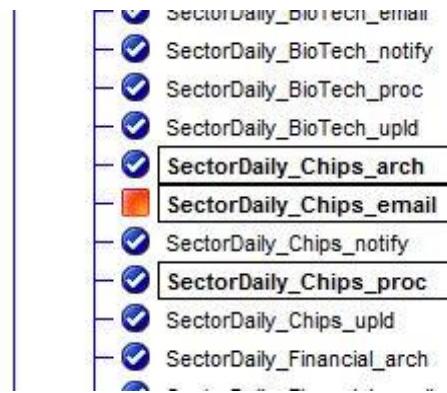
You can select a job in any view by left-clicking the job name.

<Ctrl>left-click adds jobs to those selected—two or more jobs at the same time—this applies in the Tree View, the Console View, and the Job Flow View.

The following screen shows the Job Flow View with 3 jobs selected:



The following screen shows a section of the Tree View with the same jobs selected:



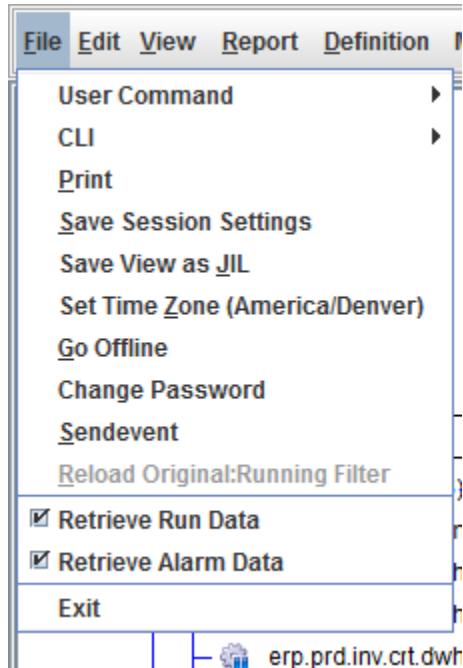
<Shift>left-click selects all jobs between the two mouse click locations—this applies in the Tree View and the Console View.

Once jobs are selected, right-click to bring up the **Job Tools** pop-up for all of the selected jobs. (See Chapter 7: *JOB TOOLS POP-UP* of this document.) Note that in multi-selected mode, right-click does not bring up the Expand and Collapse selections of the menu.

File Menu:

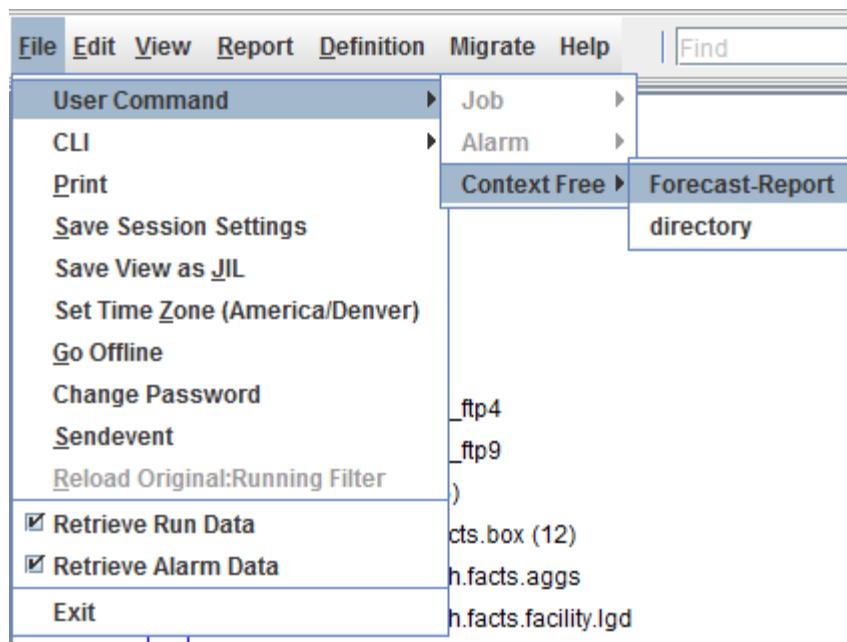
4 iXp MENU BAR

4.1 File Menu:



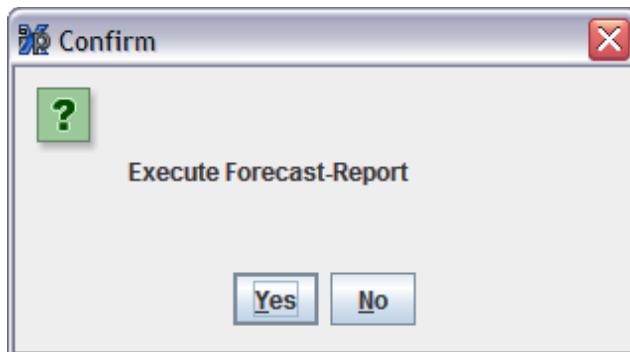
4.1.1 File ► User Command

Select the **File ► User Command** menu option to bring up the User Command pick list. This menu option is visible only if you are allowed to execute User Commands. You will only see those User Commands that are either shared globally, or shared with your groups.



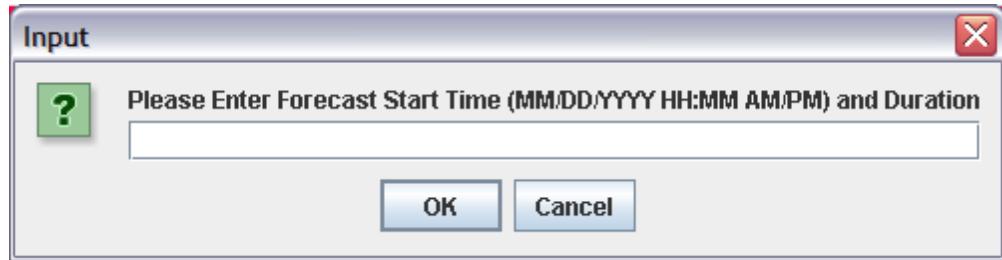
User Commands are created by the iXp administrator. User Commands are a way for iXp to pass job data to existing UNIX or Windows scripts, commands, or program interfaces on the iXp Server (see example in the *Chapter 5: iXp ADMIN TOOL of the CA Workload Automation iXp Administration Guide*). Once User Commands are created, they appear on the pick list. When a User Command is run, iXp sets appropriate environment variables on the iXp Server, for the type of command, and then opens the specified command. See the list of environment variables in the Section 5.7 *User Commands* of the *CA Workload Automation iXp Administration Guide*.

By default, the user has to confirm the execution of the User Command (this requirement may be disabled by the administrator—in which case the command will execute immediately):



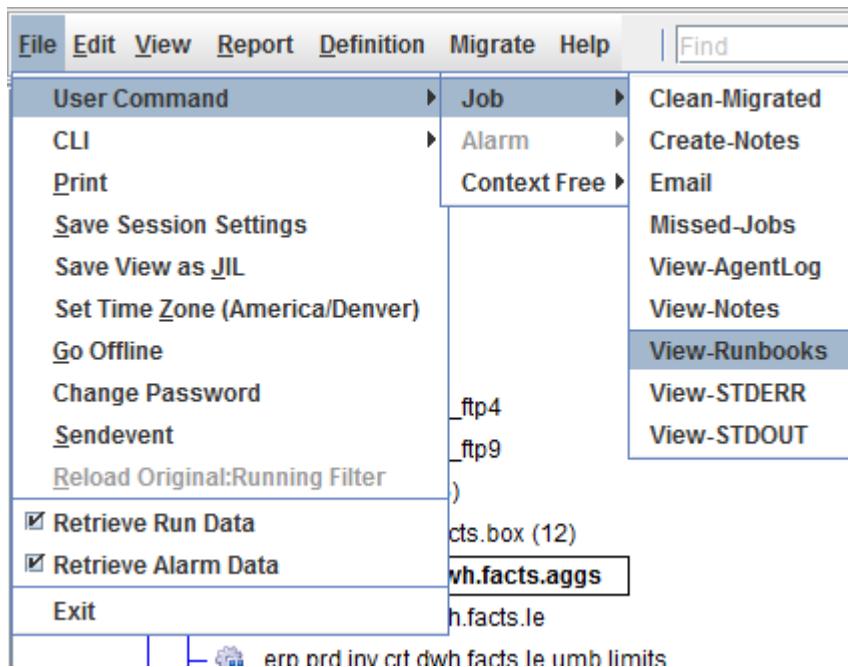
User Commands may require input from the user (again, as defined by the administrator). If that is the case, the prompt will appear as follows:

File Menu:



4.1.1.1 File ► UserCommand ► Job

User Commands of type **Job** may be run when a job is selected in the iXp views. Select “**Job**” to run a User Command of type Job after selecting a chosen job in the iXp views. Job User Commands can ONLY be run when a job has been selected. If no job is selected, the Job User Command menu item will be grayed out. User commands can be set up such that you can select multiple jobs and then execute the same command on each of the selected jobs. If a User Command is executed on multiple jobs, iXp will run the user command on each job consecutively, and then show the concatenated output.



When a user command is executed, some relevant information about the selected job is set in the environment. The following example lists some of the environment variables that are set and their values:

```
IXP_HOME=opt/CA/ixp
IXP_USERCOMMAND_INPUT_PROMPT=
IXP_USERCOMMAND_INPUT=
IXP_USERCOMMAND_JOB_JOID=757
IXP_USERCOMMAND_JOB_LAST_END=5/7/07 11:31 AM
IXP_USERCOMMAND_JOB_LAST_RUN_MACHINE=aragorn
```

```
IXP_USERCOMMAND_JOB_LAST_START=5/7/07 11:11 AM
IXP_USERCOMMAND_JOB_NAME=FTSEDaily_FTSE_process
IXP_USERCOMMAND_JOB_STATUS=INACTIVE
IXP_USERCOMMAND_USER_NAME=ixpAdmin
ixp.home=opt/CA/ixp
```

The results of any user command are shown in a web browser. This enables the user to leverage the functionality of the browser to save, print, email, or search the output.

4.1.1.2 File►UserCommand►Alarm

User Commands of type Alarm are available when an Alarm Job is selected in the Section 5.2 *Alarm Manager*. The procedure to execute Alarm User commands is the same as that for Job User commands.

If a Job Alarm is selected in the Alarm manager, right-clicking it will bring up the Alarm Pop-up menu, which includes Alarm User Commands. The Pop-up is not supported for other types of alarms (Rollover, and so on).

4.1.1.3 File►UserCommand►Context Free

For User Commands of type Context Free, the iXp Request Server executes the command without setting any job or alarm specific information. To run context free commands, it is not required to click and select a job or an alarm. Two default context free user commands supplied with iXp are as follows:

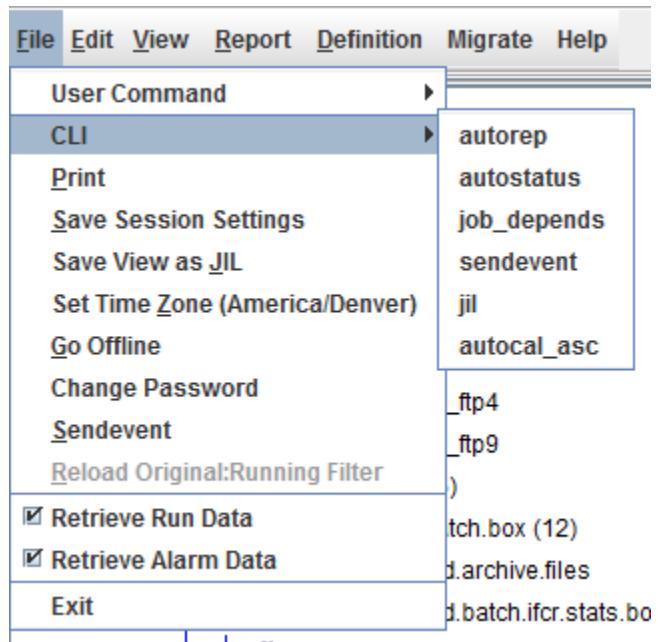
- Forecast_Next_48hrs
- Forecast_Next_24hrs.

The Forecast_Next_24Hrs and the Forecast_Next_48Hrs commands provide a text report of all the forecasted runs in the next 24 and 48 hours respectively.

File Menu:

INST	JOB NAME	START TIME	END TIME	DURATION	MACHINE	REASON
VS4	Payroll_CalcPay_box	1/24/03 11:54 AM	1/24/03 11:55 AM	01m44s		
VS4	Payroll_CalcSickTime9	1/24/03 11:54 AM	1/24/03 11:54 AM	00m03s	venus	
VS4	Payroll_PRE_box9	1/24/03 11:54 AM	1/24/03 11:54 AM	00m37s		
VS4	SAPDaily	1/24/03 11:54 AM	1/24/03 11:55 AM	01m45s		
VS4	bigbox	1/24/03 11:54 AM	1/24/03 2:38 PM	2h44m41s		
VS4	m_job_9_6_24	1/24/03 11:54 AM	1/24/03 12:00 PM	06m34s	mercury	delayed
VS4	job_9_5_13	1/24/03 11:54 AM	1/24/03 12:03 PM	09m45s	mercury	delayed
VS4	box_9	1/24/03 11:54 AM	1/24/03 2:09 PM	2h15m54s		
VS4	m_job_8_6_24	1/24/03 11:54 AM	1/24/03 12:02 PM	08m11s	mercury	delayed
VS4	job_8_5_15	1/24/03 11:54 AM	1/24/03 12:02 PM	08m10s	mercury	delayed
VS4	box_8	1/24/03 11:54 AM	1/24/03 2:10 PM	2h16m55s		
VS4	m_job_7_6_24	1/24/03 11:54 AM	1/24/03 11:59 AM	05m00s	mercury	delayed
VS4	box_7	1/24/03 11:54 AM	1/24/03 2:09 PM	2h15m09s		
VS4	m_job_1_2_24	1/24/03 11:54 AM	1/24/03 12:03 PM	09m46s	mercury	delayed
VS4	job_1_1_5	1/24/03 11:54 AM	1/24/03 12:02 PM	08m09s	mercury	delayed
VS4	box_1	1/24/03 11:54 AM	1/24/03 2:38 PM	2h44m41s		
VS4	Payroll_CalcBonusPay9	1/24/03 11:54 AM	1/24/03 11:54 AM	00m30s	venus	conditio
VS4	testjob	1/24/03 11:54 AM	1/24/03 11:55 AM	01m06s	mercury	date/tim
VS4	Payroll_CalcPay9	1/24/03 11:54 AM	1/24/03 11:55 AM	00m30s	venus	conditio
VS4	Payroll_PrintPaySlip9	1/24/03 11:55 AM	1/24/03 11:55 AM	00m30s	venus	conditio
VS4	job_7_7_0	1/24/03 11:59 AM	1/24/03 12:07 PM	08m46s	mercury	conditio
VS4	job_7_7_1	1/24/03 11:59 AM	1/24/03 12:07 PM	08m44s	mercury	conditio
VS4	job_7_7_2	1/24/03 11:59 AM	1/24/03 12:07 PM	08m43s	mercury	conditio
VS4	job_7_7_3	1/24/03 11:59 AM	1/24/03 12:07 PM	08m41s	mercury	conditio

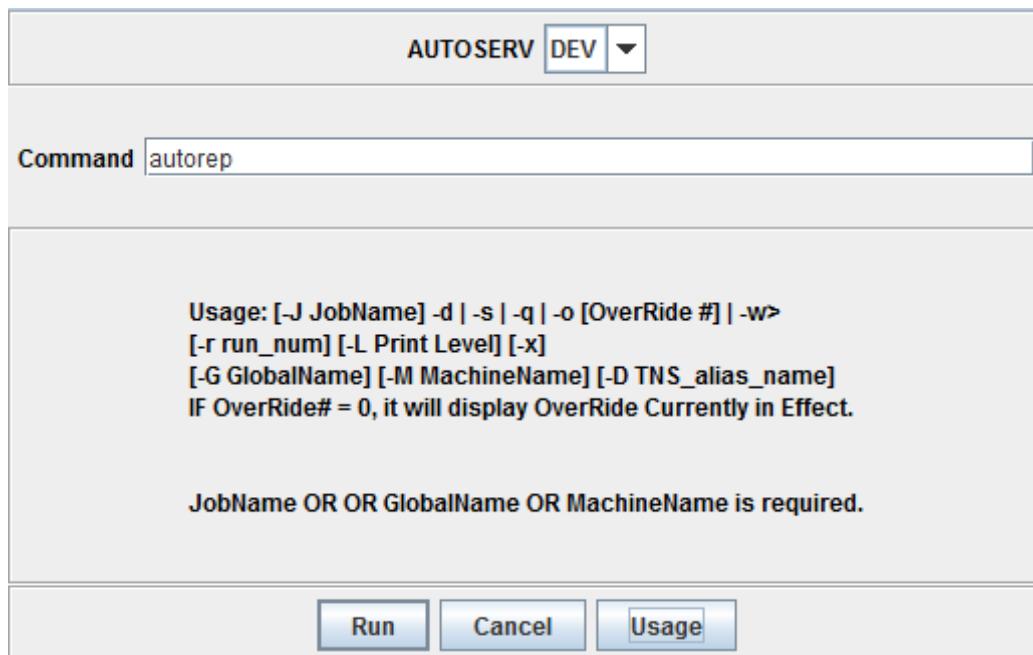
4.1.2 File ► CLI



Select the **File▶CLI** menu option to execute Command Line utilities from the GUI. For example, to run an autorep command, select the **File▶CLI▶autorep** menu option as shown below:



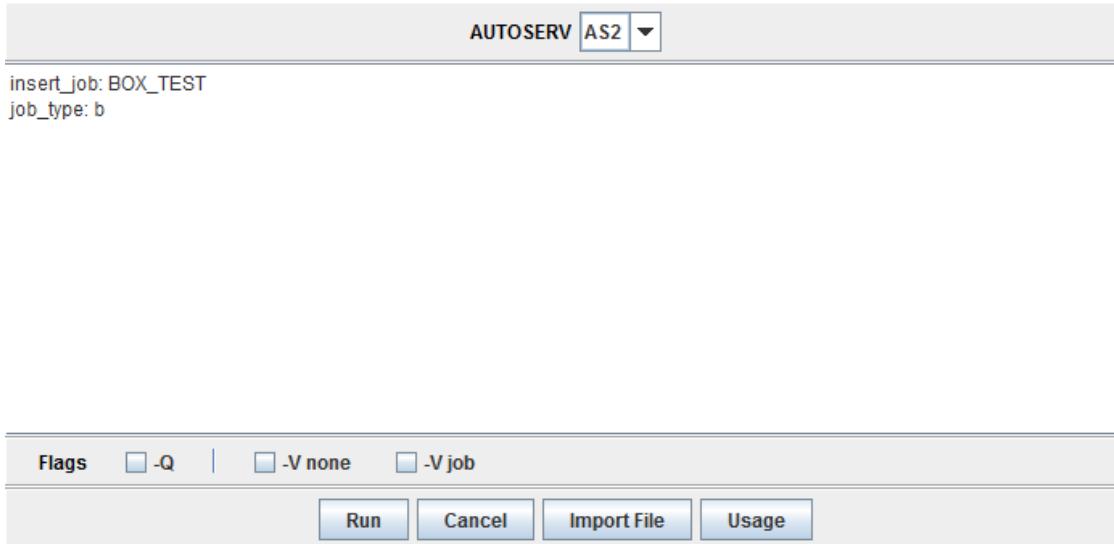
For specifics regarding the command line options, click the **Usage** button.



Supported commands are autorep, autostatus, job_depends, sendevent, jil. The user's security privilege setting will control what jobs and what actions are allowed.

The “jil” option is slightly different:

File Menu:

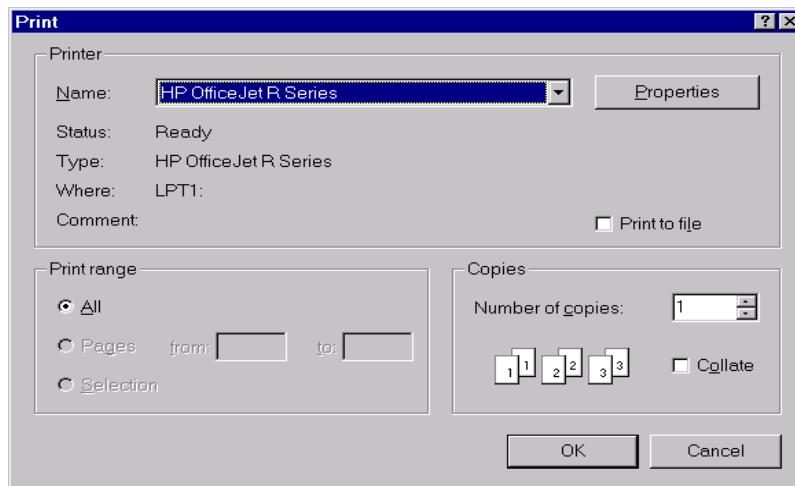


Options include the “quiet” (-Q) and verification (-V) check boxes, and the **Import File** button.

4.1.3 File►Print

Selecting the **File►Print** menu option brings up the standard operating system Print window. This will print the Job Flow View, with paging controlled by the **Print Grid**. Select the *Show Print Grid* check box, under the **iXp View** menu, to see the Print Grid in the Job Flow View window.

NOTE: The entire Job Flow View will be printed, not only what you see in the Job Flow View’s scrolling area.



Adjust Properties for your printer if necessary, and select “OK” to print the Job Flow View.

NOTE: The Print Dialog is provided by your underlying operating system and differs across platforms. The above graphic is a Windows NT® dialog.

Currently, the print size and print orientation is not configurable. Hence, the print size is always 8.5 x 11 inches, and in portrait orientation. If the print layout exceeds one page, iXp will print out the job flow across multiple pages.

4.1.3.1 Print Tiling

Multi-page prints are tiled, with tile row and column numbers printed in the lower left of the pages.

4.1.4 File►Save Session Settings

This saves the user preferences to the iXp Server. Save Session Settings results in saving of the user preferences, as listed in the preference dialog, and the start-up filter setting, as dictated by the Current Filter. Also the current iXp windows layout, the size, position and sort order of columns in the Console View and the Alarm Manager will be saved. Some other options under the View menu item will be saved too. The next time that user opens iXp, the saved settings will determine the display format and the data shown.

4.1.5 File►Save View as JIL

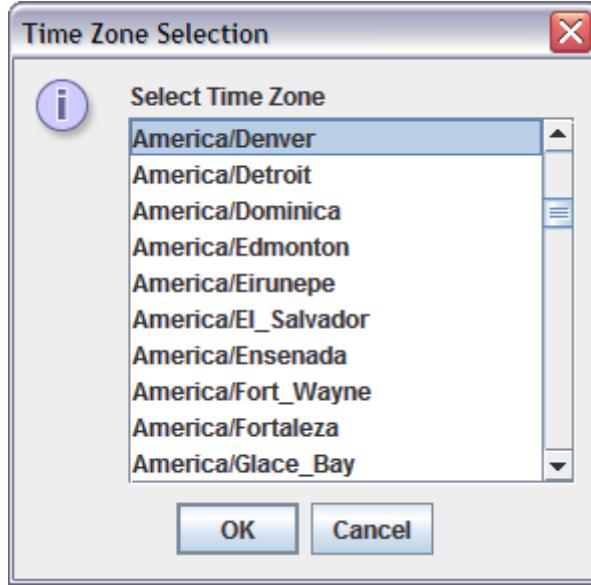
This lets you generate a text file with JIL definition of all the jobs that are currently in view. This feature will generate the file as long as every job in view passes the user's JOB_DETAIL privilege. By default, the file will be shown in a web-browser.

4.1.6 File►Set Time Zone

By default, the job run information displayed throughout the iXp Application is shown based on the time zone of the iXp client machine. For example, users opening the iXp client in Malaysia for CA Workload Automation AE jobs running in Chicago will see all the job run times in the corresponding Malaysian time zone. Using this menu option, you can set your time zone preference, and the job run data will be displayed based on the selected time zone.

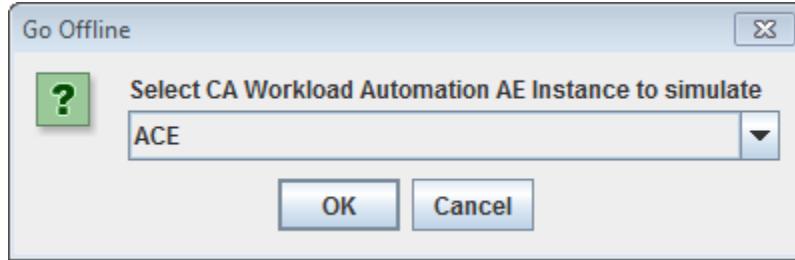
NOTE: iXp administrators can use the iXp Admin Tool to assign a timezone for each CA Workload Automation AE instance. In that case, iXp will always show the information in that timezone, irrespective of the value here.

File Menu:



4.1.7 File►Go Offline

Offline mode enables the *Interactive Forecasting* tool. Selecting the **File►Go Offline** menu option will bring up the Confirmation dialog box.



In Offline mode, all filtration and navigation actions derive results from the in-memory snapshot, not from the server. Offline mode provides a means to perform filter and view customization without the cost of roundtrip server invocations. After customizing the iXp setup, you can save your preferences and filters, and then go back Online with those preferences and filters.

In the Offline mode, Job Control actions such as job definition updates or sendevents are not possible.

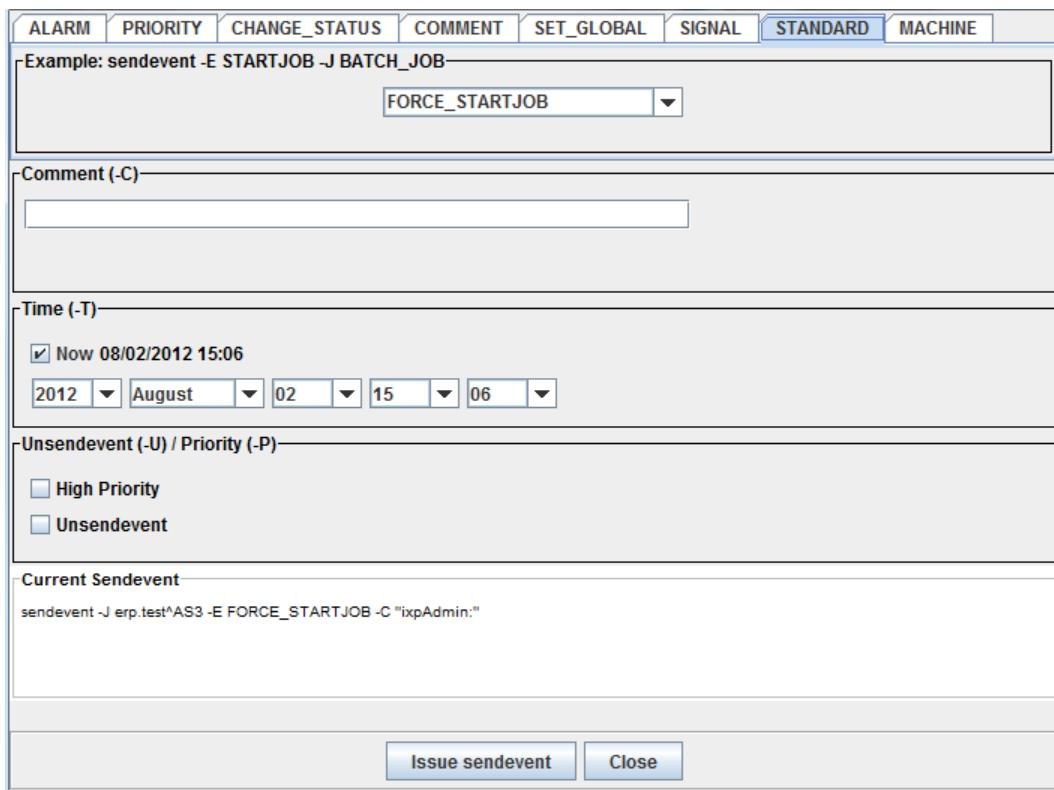
To take the iXp session back online, select the **File►Go Online** menu option.

4.1.8 File►Change Password

Selecting the **File►Change Password** menu option brings up the Password dialog box to change the iXp password for the current user

4.1.9 File►Sendevent

The **File►Sendevent** menu option opens the sendevent dialog for creation of custom sendevents. This menu option is visible only if you are allowed to control jobs.



Select the tabs in the Sendevent Dialog to create a custom sendevent. Select the **Issue Sendevent** button to issue the event to CA Workload Automation AE. Select the **Close** button to close the Sendevent Dialog.

Future Sendevent: The option **Time (-T)** provides a mechanism to issue events for a later date and time in advance, rather than doing it in person at that time. For example, a job may have been put ON_HOLD a few minutes ago and you want the job to be taken OFF_HOLD later that night. It would be easier to issue a **future OFF_HOLD** event on that job for that night, rather than to open iXp to issue the command exactly at the appropriate time.

Clear the Now check box to enter a time when the sendevent will occur.

4.1.9.1 Sendevent►Standard

The Sendevent►Standard tab creates default sendevents as does the *Job Tools Pop-up►Job Control*, with the option to alter the Sendevent time.

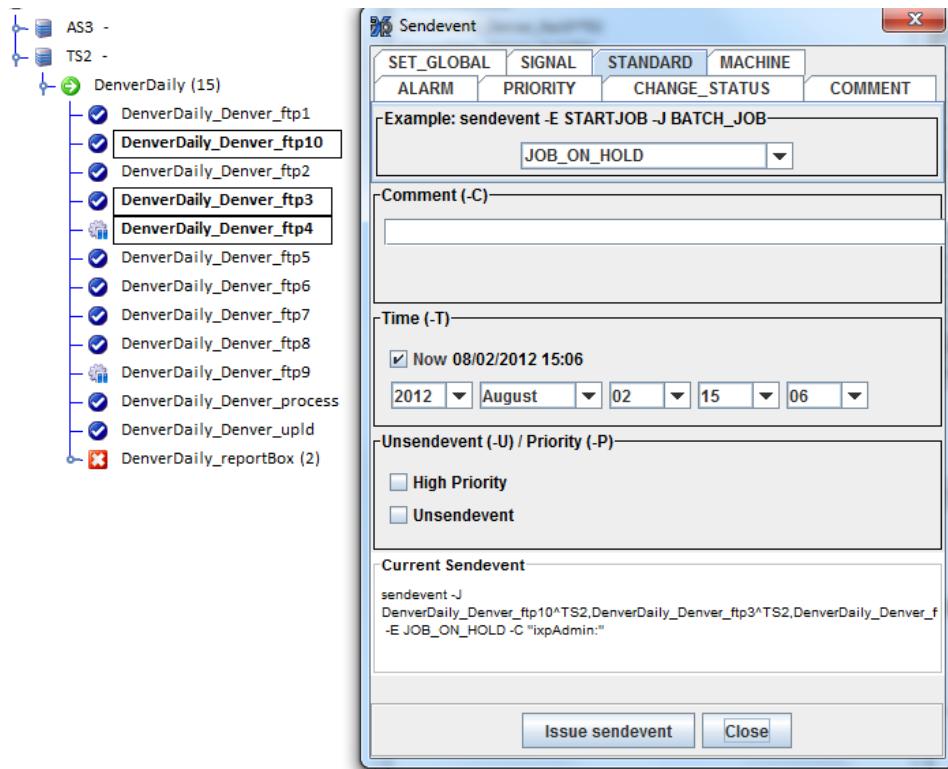
File Menu:

Standard Tab Item	Description
Example: Sendevent	Pick from the standard Sendevent listing: FORCE_STARTJOB, JOB_ON_HOLD, JOB_OFF_HOLD, JOB_ON_ICE, JOB_OFF_ICE, JOB_ON_NOEXEC, JOB_OFF_NOEXEC, KILLJOB, STARTJOB. These are as in <i>Job Control▶STARTJOB</i> .
Comment (-C)	Type a comment to be associated with the Sendevent.
Time (-T)	Select a time for the Sendevent, or select Now (the default time).
Current Sendevent	Lists the Sendevents that have been selected. Select Issue Sendevent to issue to CA Workload Automation AE, or select Close to close the window without issuing any events.

4.1.9.2 Sendevent► Multi-Select

Jobs may be multi-selected in the Tree View or the Console View, for customization in the Sendevent Window. If more than ten jobs are selected, they are denoted in the Current Sendevent window as **J*** rather than a complete listing.

The illustration below shows a JOB_ON_HOLD event being sent to 3 jobs.



File Menu:

4.1.9.3 Sendevent►CHANGE_STATUS

ALARM PRIORITY CHANGE_STATUS COMMENT SET_GLOBAL SIGNAL STANDARD MACHINE

-Example: sendevent -E CHANGE_STATUS -s SUCCESS -J BATCH_JOB

SUCCESS

Comment (-C)

Time (-T)

Now 12/11/2012 18:20
2012 December 11 18 20

Unsendevent (-U) / Priority (-P)

High Priority
 Unsendevent

Current Sendevent

sendevent -E EU.D2.DAILYRUN.B^AS2 -E CHANGE_STATUS -s SUCCESS -C "davpa12;"

Issue sendevent Close

CHANGE_STATUS Tab Item	Description
Example: sendevent	Pick from the CHANGE_STATUS types: FAILURE, INACTIVE, RUNNING, SUCCESS, TERMINATED, as are in the <i>Job Control Pop-up</i> .

4.1.9.4 Sendevent►ALARM

ALARM PRIORITY CHANGE_STATUS COMMENT SET_GLOBAL SIGNAL STANDARD MACHINE

Example: sendevent -E ALARM -A MAXRUNALARM

Comment (-C): JOBNOT_ONICEHOLD

Time (-T): Now 08/02/2012 15:06

Unsendevent (-U) / Priority (-P): High Priority

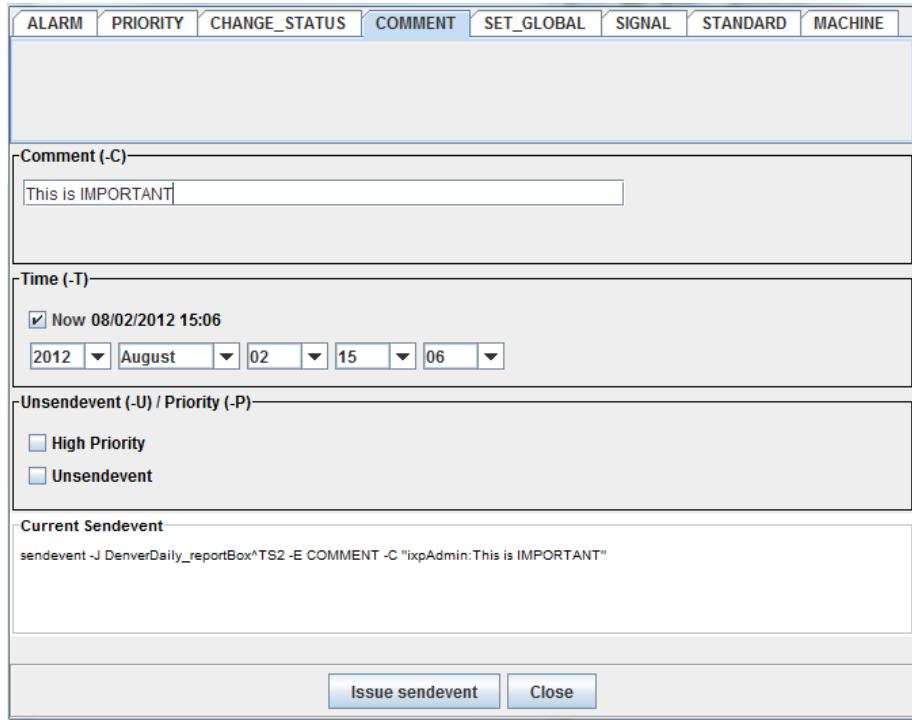
Current Sendevent: sendevent -J DenverDaily_reportBox^TS2 -E ALARM -A JOBFAILURE -C "ixpAdmin;"

Issue sendevent Close

ALARM Tab Item	Description
Example: sendevent	Pick from the ALARM type that is listed as per the selected version of CA Workload Automation AE.

File Menu:

4.1.9.5 Sendevent►COMMENT



COMMENT Tab Item	Description
Comment (-C)	Type a comment -- for standalone COMMENT if no job is selected, or to go with selected jobs.

4.1.9.6 Sendevent►SET_GLOBAL

The screenshot shows the 'Set_Global' dialog box. The 'SET_GLOBAL' tab is selected. The 'Global Variables' section contains 'SYSTEMSGO'. The 'Values' section contains 'YES'. The 'Comment (-C)' section contains 'Setting the value as we are up and running'. The 'Time (-T)' section has a checked checkbox 'Now' and a date/time selector showing '2012 August 02 15:06'. The 'Unsendevent (-U) / Priority (-P)' section has two unchecked checkboxes: 'High Priority' and 'Unsendevent'. The 'Current Sendevent' section displays the command: 'sendevent -E SET_GLOBAL -G "SYSTEMSGO=YES" -C "ixpAdmin:Setting the value as we are up and running"'.

Set_Global Tab Item	Description
Global Variables	Select <i>Global Variables</i> that must be created or updated. All existing variables are provided in the drop-down list.
Values	Select Values for the Global Variables. All the values for the existing global variables are provided in the drop-down list.

File Menu:

4.1.9.7 Sendevent►CHANGE_PRIORITY

The screenshot shows a software window titled "Sendevent►CHANGE_PRIORITY". At the top, there is a horizontal menu bar with tabs: ALARM, PRIORITY, CHANGE_STATUS, COMMENT, SET_GLOBAL, SIGNAL, STANDARD, and MACHINE. The "PRIORITY" tab is currently selected. Below the menu bar, there is a section labeled "Example: sendevent -E CHANGE_PRIORITY -q 10" with a dropdown menu containing the value "1".

Below this, there is a "Comment (-C)" section with a text input field containing the text "This will EXPEDITE the job in the queue".

Underneath that is a "Time (-T)" section with a checkbox labeled "Now 08/02/2012 15:06" which is checked. To its right is a date and time selector with dropdown menus for year (2012), month (August), day (02), hour (15), and minute (06).

Further down is a "Unsendevent (-U) / Priority (-P)" section with two checkboxes: "High Priority" and "Unsendevent", neither of which is checked.

At the bottom of the dialog, there is a "Current Sendevent" section containing the command "sendevent -J DenverDaily_reportBox^TS2 -E CHANGE_PRIORITY -q 1 -C "ixpAdmin:This will EXPEDITE the job in the queue"".

At the very bottom of the dialog are two buttons: "Issue sendevent" and "Close".

CHANGE_PRIORITY Tab Item	Description
Priority	Select the priority value to be assigned to the chosen job. You can pick a value from the drop-down menu or type it in.

4.1.9.8 Sendevent►SEND_SIGNAL

ALARM PRIORITY CHANGE_STATUS COMMENT SET_GLOBAL SIGNAL STANDARD MACHINE

Example: sendevent -E SEND_SIGNAL -k SIGTERM

2

Comment (-C)

Send a kill 2 signal to the Running job

Time (-T)

Now 08/02/2012 15:06
2012 August 02 15 06

Unsendevent (-U) / Priority (-P)

High Priority
 Unsendevent

Current Sendevent

sendevent -J DenverDaily^TS2 -E SEND_SIGNAL -k 2 -C "ixpAdmin:Send a kill 2 signal to the Running job"

Issue sendevent Close

SEND_SIGNAL Tab Item	Description
Kill Signal	Select the kill signal to be sent to the chosen job. You can pick a value from the drop-down menu or type it in.

File Menu:

4.1.9.9 Sendevent►MACHINE

ALARM PRIORITY CHANGE_STATUS COMMENT SET_GLOBAL SIGNAL STANDARD MACHINE

Example: sendevent -E MACH_OFFLINE -N mozart

AS3 MACH_OFFLINE dione

Comment (-C)

Taking the Machine Offline as requested

Time (-T)

Now 08/02/2012 15:06

2012 August 02 15 06

Unsendevent (-U) / Priority (-P)

High Priority

Unsendevent

Current Sendevent

sendevent -E MACH_OFFLINE -N dione -C "ixpAdmin:Taking the Machine Offline as requested"

ixpAdmin:Taking the Machine Offline as requested

Issue sendevent Close

MACHINE Tab Items	Description
Event Name	Select the event that you want to send to the machine.
Machine Name	Select the name of the machine that you want to send the event to.

4.1.10 File►Retrieve Run Data

If the *Retrieve Run Data* check box is not selected, the historical and forecasted job runs would not be retrieved by the client. If it is selected, then the run data will be retrieved by the client and appear in the *Time View Chart*. Turning off Retrieve Run Data can improve the application speed especially for dial-up use.

4.1.11 File►Retrieve Alarm Data

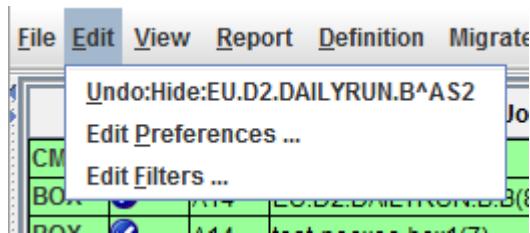
If this check box is selected, the user will receive the alarm data for all the jobs allowed. By clearing this check box, you can speed-up the client, especially over slower networks. This menu item is available only if the user has been assigned with the privilege to see CA Workload Automation AE Alarms.

4.2 Edit Menu

4.2.1 Edit▶Undo:

Select the **Edit▶Undo** menu option to undo the most recent iXp *view function* performed, such as Expand or Include. Then, sequentially, the previous functions become available for Undo.

In the example, the SectorDaily job was hidden by selecting it and using the right-click menu Hide option.



Selecting **Undo** then returns the job to the view.

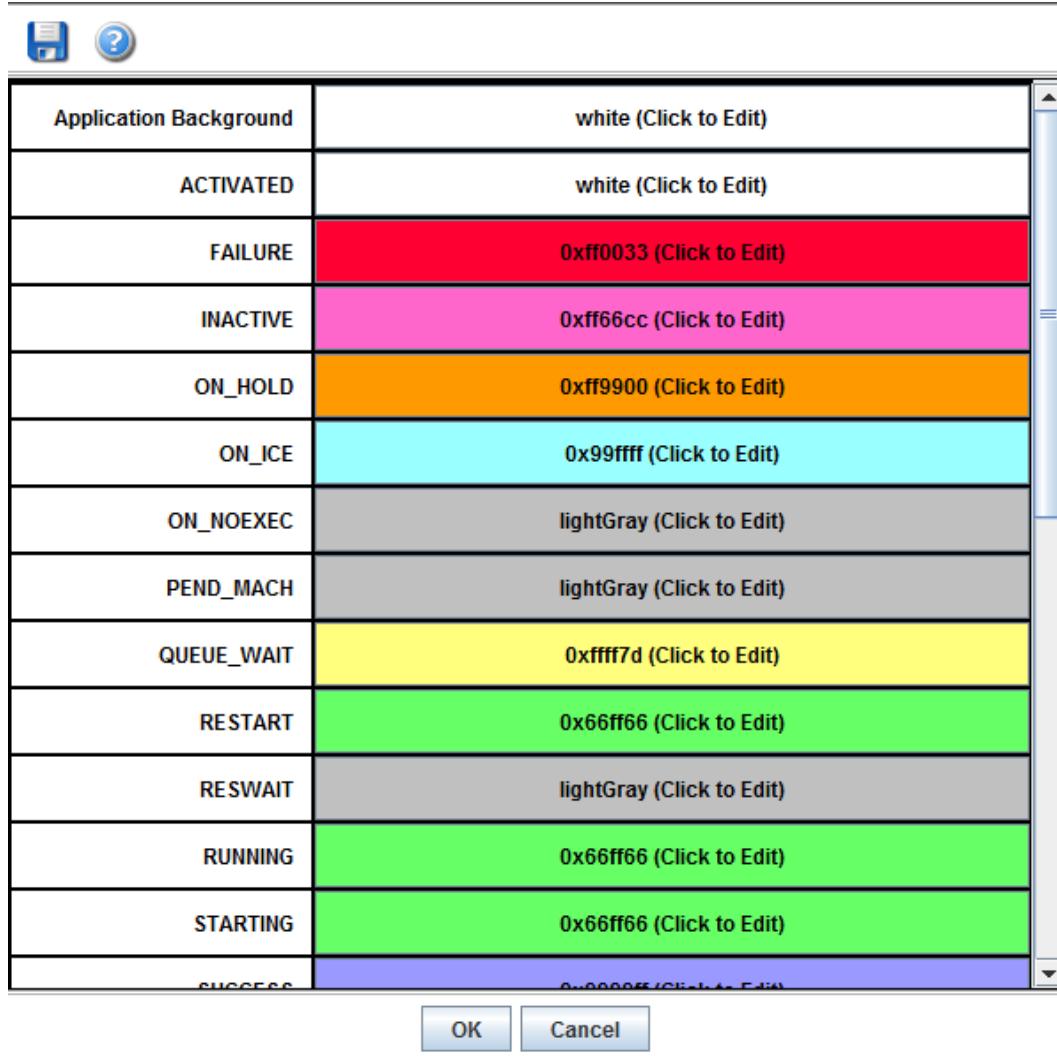
4.2.2 Edit▶Edit Filters

The **Edit▶Edit Filters** menu option brings up the *Filter Editor*. For more information about Filter Editor, Filter configurations, and Filter use, see Chapter 6: [JOB FILTERS](#).

4.2.3 Edit▶Edit Preferences

The **Edit▶Edit Preferences** menu option brings up the **Preference Editor** dialog, shown below. The Preference Editor allows you to set job status colors and to adjust other iXp job view parameters.

Edit Menu

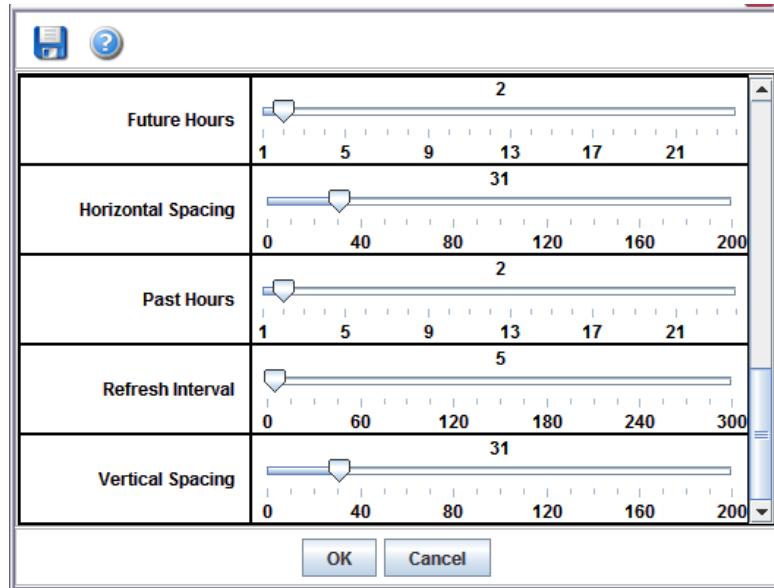


Preference Name	Description
ACTIVATED Color	Color for the job icon in all Views when the job is in ACTIVATED status.
Application Background	Background color for iXp. Lets you visually differentiate between multiple iXp windows.
FAILURE Color	Color for the job icon in all Views when the job is in FAILURE status.
INACTIVE Color	Color for the job icon in all Views when the job is in INACTIVE status.
ON_HOLD Color	Color for the job icon in all Views when the job is in ON_HOLD status.

Preference Name	Description
ON_ICE Color	Color for the job icon in all Views when the job is in ON_ICE status.
ON_NOEXEC Color	Color for the job icon in all Views when the job is in ON_NOEXEC status.
PEND_MACH Color	Color for the job icon in all Views when the job is in PEND_MACH status.
QUEUE_WAIT Color	Color for the job icon in all Views when the job is in QUEUE_WAIT status.
RESWAIT Color	Color for the job icon in all Views when the job is in RESWAIT status.
RESTART Color	Color for the job icon in all Views when the job is in RESTART status.
RUNNING Color	Color for the job icon in all Views when the job is in RUNNING status.
STARTING Color	Color for the job icon in all Views when the job is in STARTING status.
SUCCESS Color	Color for the job icon in all Views when the job is in SUCCESS status.
TERMINATED Color	Color for the job icon in all Views when the job is in TERMINATED status.
WAIT_REPLY Color	Color for the job icon in all Views when the job is in WAIT_REPLY status.

Aside from colors, the following Preferences can be specified:

Edit Menu



Preference Name	Description
Filter	The Filter specifies to the iXp Daemon about the kind of data the user wants to view. See the Chapter 6: JOB FILTERS of this document.
Job Name Font	Sets the font type for the job names in the Job Flow View. Click Job Name Font to bring up the font chooser window.
Table Font	Sets the font type for iXp table views.
Tree Font	Sets the font type for iXp tree views.
Future Hours	Sets the number of hours of forecast data visible in the Time View chart window.
Horizontal Spacing	Sets the horizontal spacing between jobs in the Job Flow View window.
Past Hours	Sets the number of hours of historical data visible in the Time View chart window.
Refresh Interval	Sets the number of seconds between iXp client refreshes.
Vertical Spacing	Sets the vertical spacing between jobs in the Job Flow View window.

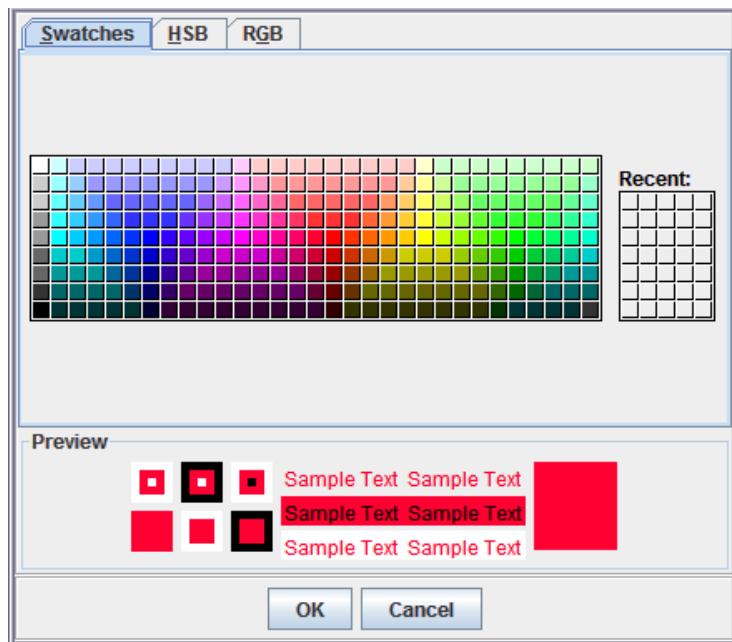


After setting new preferences, click the Save icon to save the new preferences.

Once preferences are saved, you can change them by saving new ones.

4.2.3.1 Color Editor

Left-click the mouse on the value for a status color, such as “FAILURE Color” to bring up the **Color Editor**:



Use the Swatches, HSB or RGB tabs to choose the color for the chosen status. In the Swatches tab, select on a color swatch. In the HSB tab, drag the marker around in the color selection square. In the RGB tab use the scroll bars to select the color.

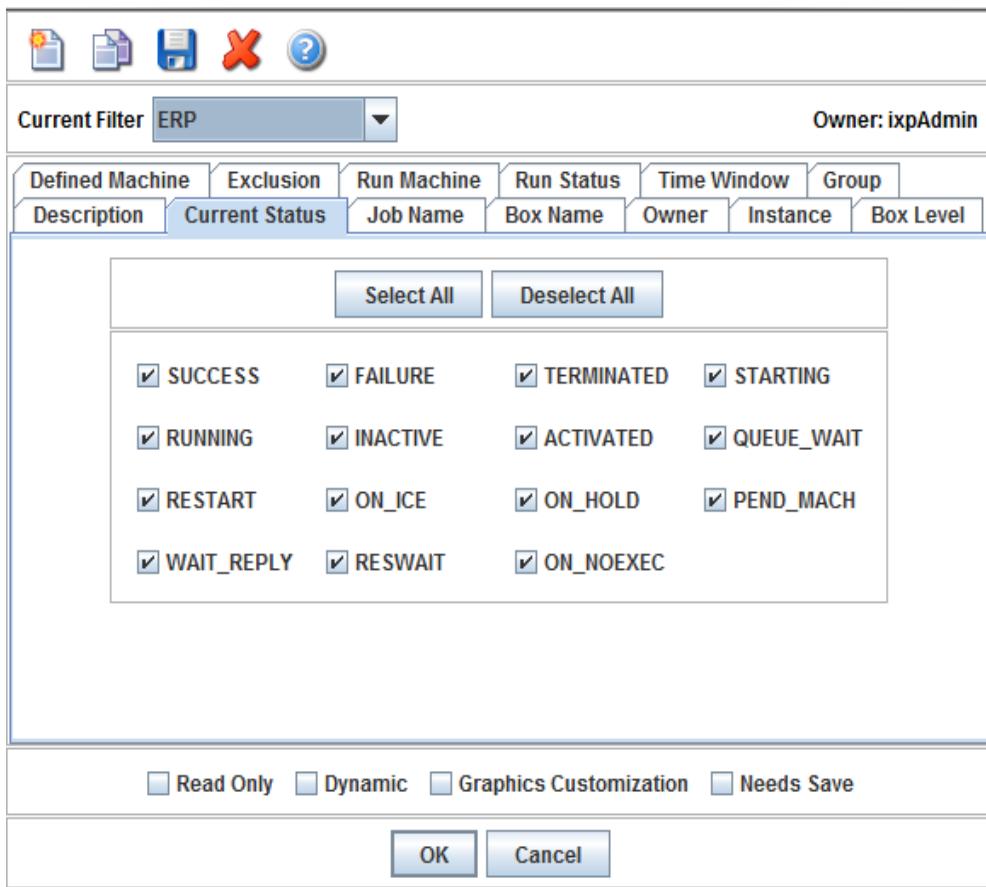
Select **OK** in the Color Editor to show the color in the Preferences Editor window. Select OK again in the Preferences Editor to apply the new status color to the iXp views.

4.2.3.2 Filter Editor

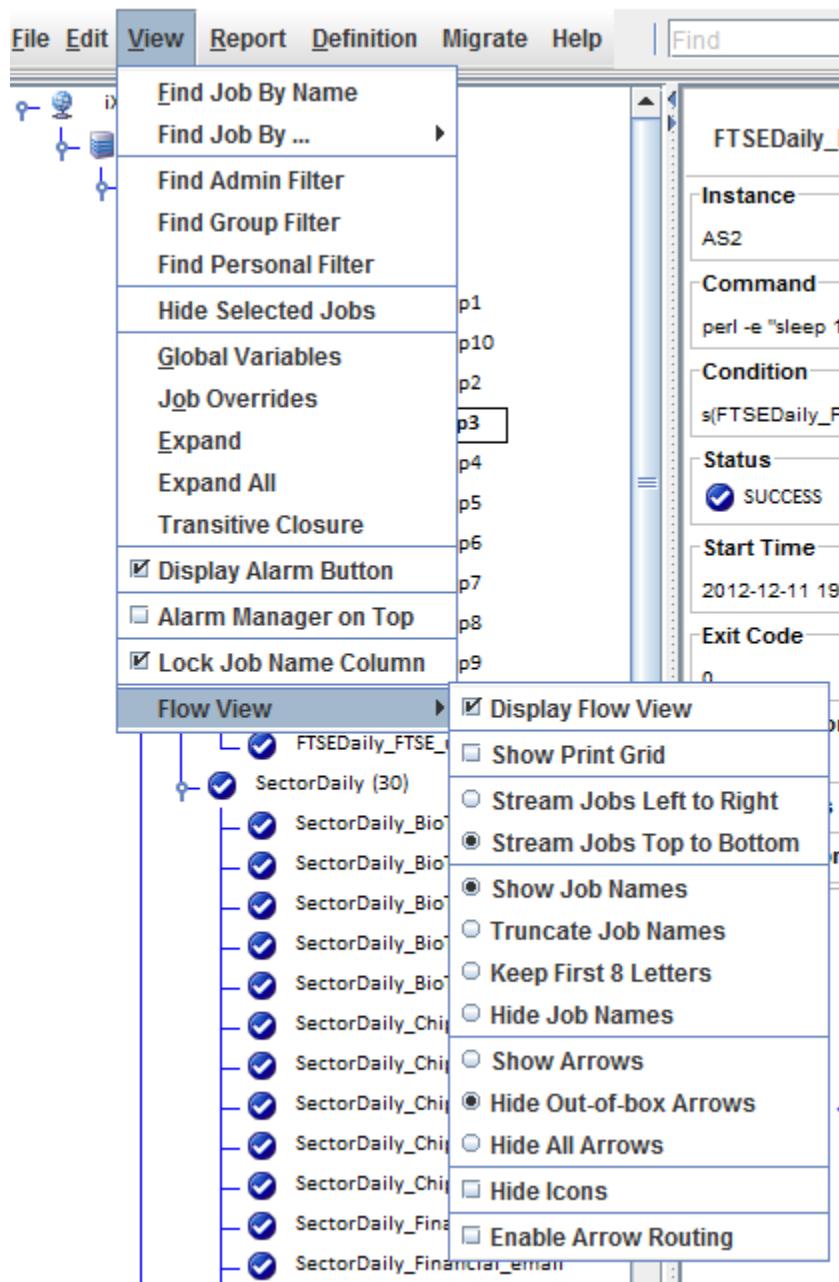
Click the Filter Value in the Preference Editor to bring up the **Filter Editor**. Use the filter editor to adjust the configurations of the job attributes for any filter. The iXp Daemon sends only that data to the iXp client that passes the Current Filter.

NOTE: For more information about the Filter Editor, Filter configurations, and Filter use, see Chapter 6: [JOB FILTERS](#).

Edit Menu



4.3 View Menu



4.3.1 View ► Find Job By Name

The **View ► Find Job By Name** menu option brings up the Find By Name window. Enter a wild-card string and press **<Enter>** to see the list of jobs whose name matches the string.

Select one or more jobs and choose **OK** to highlight the jobs in the job view windows. If the selected jobs are not in the job views, the job views will expand to

View Menu

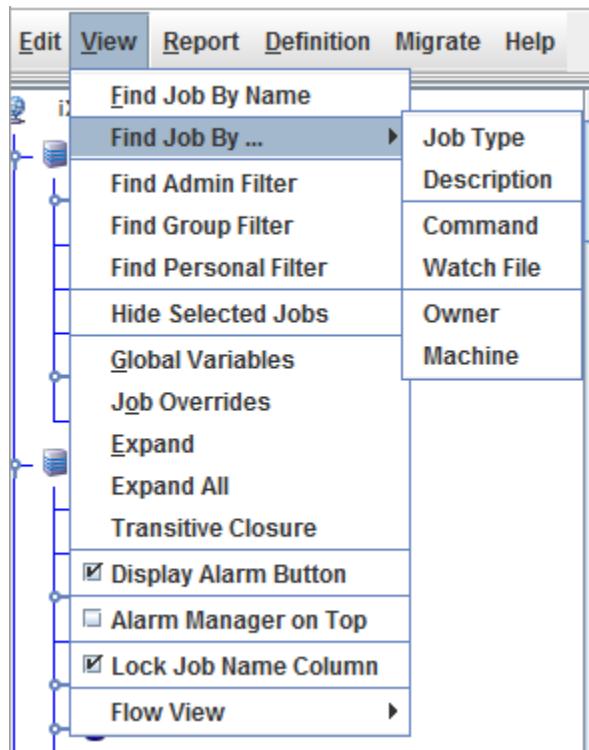
include the selected job. Also, double-clicking a job selects that job in the Views. Select the **Refresh** button on the Find By Name window to refresh the list of job names. Select **Cancel** to exit the Find By Name window without selecting any jobs.

Narrow the names on the Find By Name list by typing a wildcard name string in the “Job Name” field and then pressing the **Enter** key on the keyboard. iXp assumes you are searching for job names rather than instances. A ^ denotes the instance name following each job name. The job name matching is **not** case-sensitive.

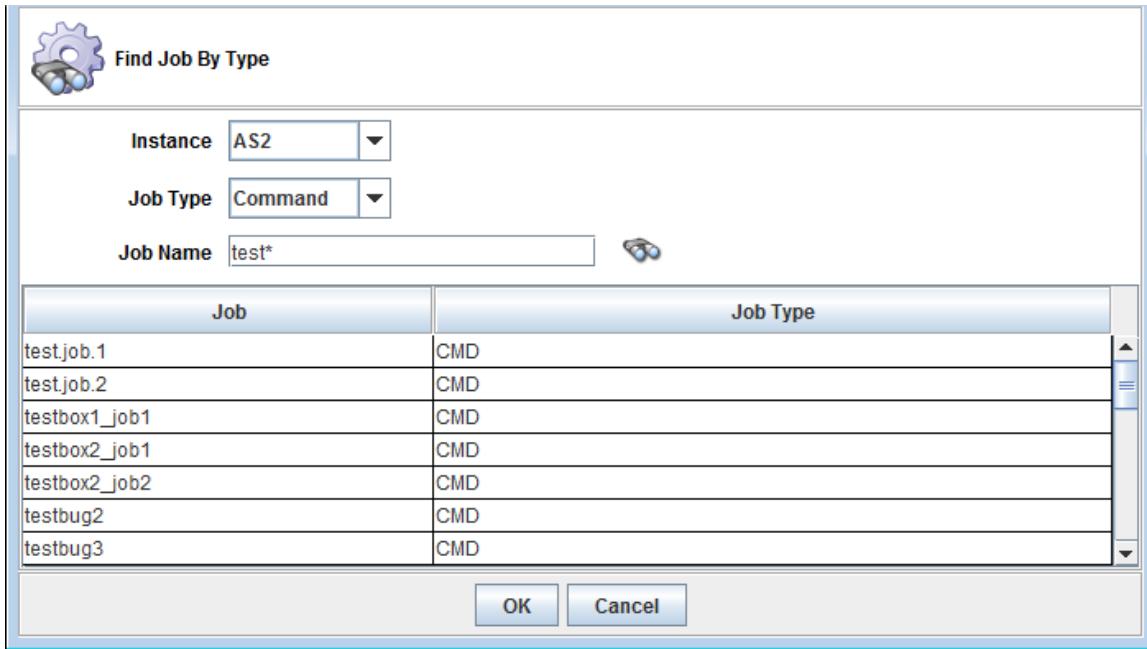
Typing one or more characters after a * finds the job names ending in that character, not the instance name (E*2 finds job names ending in 2, regardless of whether on instance JU2 or JU3). That is, *xyz expands to *xyz^*.

4.3.2 View ► Find Job By...

The **View ► Find Job By...** menu option provides options for locating a particular job.



Options provided are Job Type (command, box, file watcher), Description, Command, Watch File (name), Owner, or Machine. Instance is an option for each search as is Job Name. Find by Job Type example is shown below:



After entering the search conditions (in this case Job Type is “command” and Job Name is “test*”) click the search icon to find matching jobs, then select one and click OK. The specified job will become the highlighted/selected job in all iXp views.

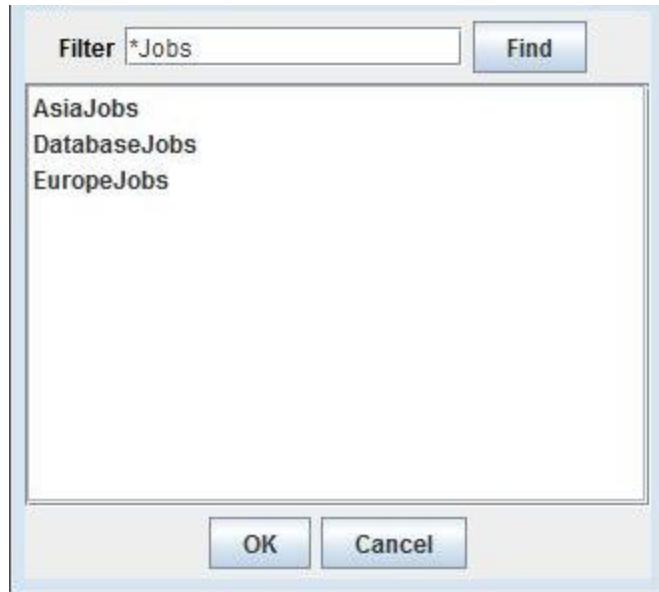
4.3.3 View▶Find Admin Filter

The **View▶Shared Filter** menu option shows a dialog where you can find all or any of the Shared Filters that have been created and shared by the administrators. These filters can be modified only by the administrators. You can search for a filter by providing a name with wild cards.

You will see only those filters that have been either shared globally, or have been assigned to one or more of your groups.

Some filters may not provide any data for some users, as their security settings may not allow them to view the jobs specified in the filters. To import newly created shared filters, iXp clients must be re-opened.

View Menu



4.3.4 View►Find Personal Filter

The **View►Personal Filter** menu option shows a dialog with all the filters created by the user, and the standard filters provided by iXp. If the user is an administrator, then this dialog will show those filters that have been created by the user and not shared with other users. This dialog is similar to the Shared Filters dialog.

4.3.5 View►Find Group Filter

The **View►Find Group Filter** menu option shows a dialog with all the filters for the group, and the standard filters provided by iXp.

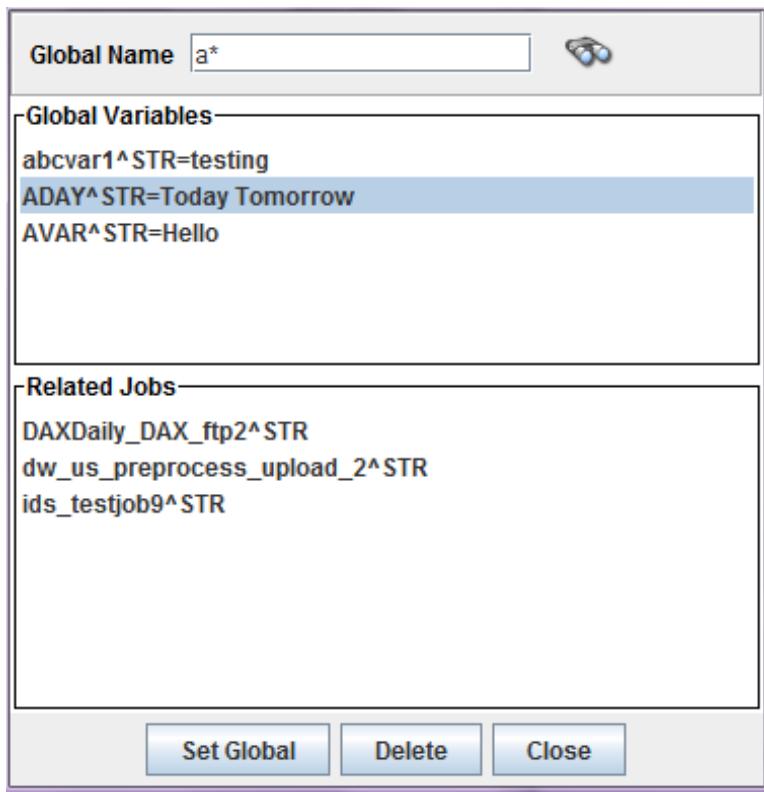
4.3.6 View►Hide Selected Jobs

The **View►Hide Selected Jobs** menu option enables users to create or select rule sets that define criteria to hide jobs from the current view or to apply when performing migrations. When the rule set is applied to the current view, jobs matching the rule will be hidden, until the user changes the filter or restarts the UI.

For more information about these rule sets, see *Chapter 7: MANAGING WORKLOAD MIGRATION* in the [CA Workload Automation iXp Administration Guide](#).

4.3.7 View►Global Variables

The **View►Global Variables** menu option brings up the Global Variables information window.



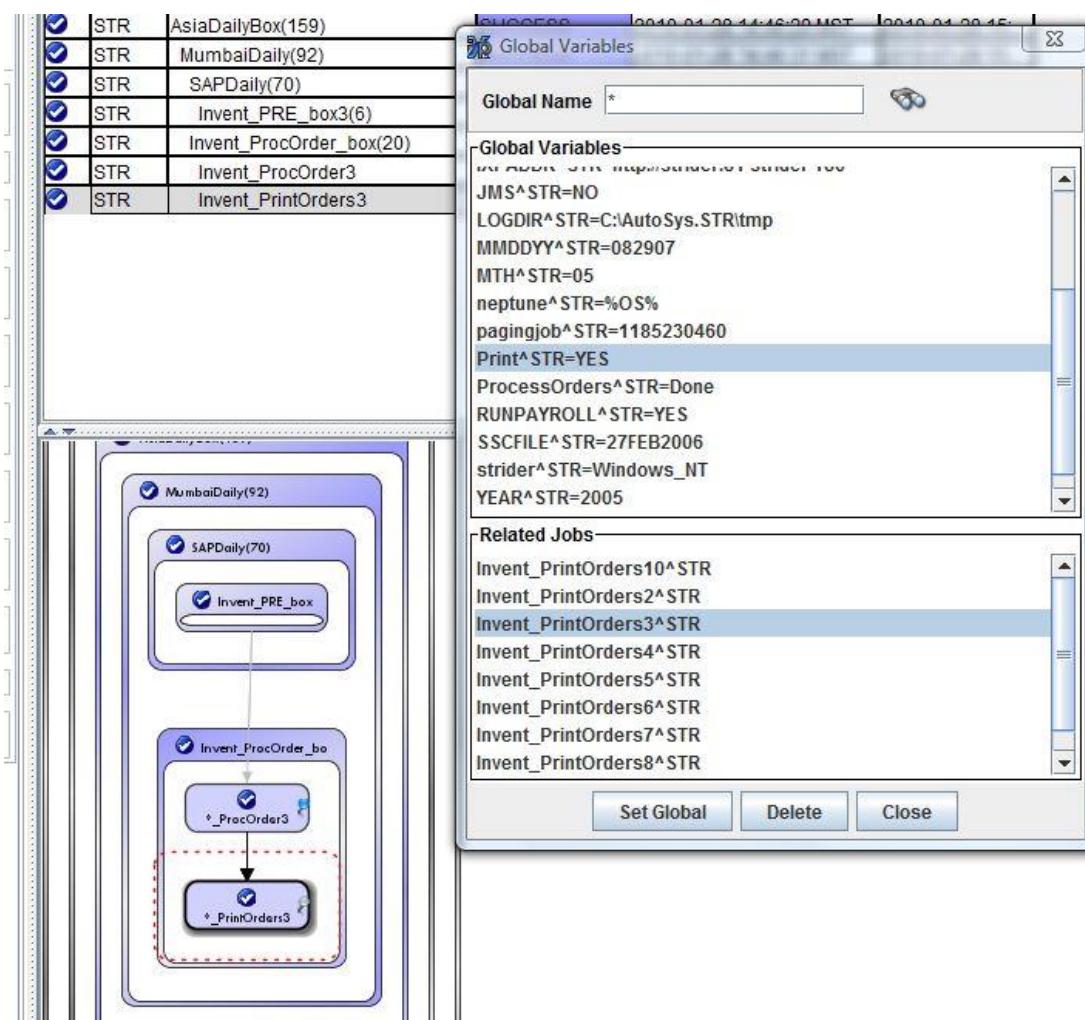
By default, all Global Variables that a user is allowed to view are displayed, along with their current values. To search for a specific variable, type a string in the box (* wildcard is supported) and click the search icon. The search is not case-sensitive.

Select a Global Variable in the top section of the window to view Related Jobs in the lower section of the window.

Related Jobs are jobs that depend on the Global Variable, or jobs that set the Global Variable (using a sendevent in the job definition command line). Global Variables are set using the CA Workload Automation AE sendeventSET_GLOBAL command.

Select a job in the lower section to select that job in the iXp job view windows.

View Menu



4.3.8 View►Job Overrides

Select the **View►Job Overrides** menu option to bring up the *Job Overrides* view window, populated with job names of jobs that have current Overrides. Select a job name and then select **View Override** to see the Overrides for that job.

To delete an override, click the Delete button. You will be required to confirm that you want to delete the override.

The Close button lets you close the dialog without affecting any of the jobs and overrides listed.

4.3.9 View►Expand

Select the **View►Expand** menu option to expand all the box jobs in the current view by one more level. This is an easy way to drill down in all the displayed box jobs one level at a time. See also Section 7.1 *Expand, Collapse, and Hide*.

4.3.10 View►Expand All

Select the **View►Expand All** menu option to expand all the box jobs in the view to show all the jobs contained in the box. This is an easy way to drill all the way down in all the displayed box jobs. See also Section 7.1 *Expand, Collapse, and Hide*.

4.3.11 View►Transitive Closure

Select the **View►Transitive Closure** menu option to show the transitive closure of all the jobs in the view. This could result in jobs being imported in to the view to display the complete closed set of jobs for all the jobs in the view.

For more information about Transitive Closure, see Section 7.3.1 *Job Dependency Filters Definitions*.

4.3.12 View►Display Alarm Button

Deselect the **View►Display Alarm Button** menu option to hide the Alarm Button from the bottom section of the GUI.

4.3.13 View►Alarm Manager on Top

If you are viewing the Alarm Manager (which can be opened by clicking the Alarm button) and you click the main GUI screen, then the Alarm Manager will be sent to the background. You will have to click the icon for “iXp” on the taskbar to bring it to the foreground. If you enable this menu option, then the Alarm Manager will never be sent to background, even if you are working in the main GUI.

4.3.14 View►Lock Job Name Column

The **View►Lock Job Name Column** menu option controls the sizing of the first three columns in the Console View. When this option is deselected, you can resize the first three columns. To lock in the selected size, just select this option.

4.4 View►Flow View

4.4.1 View►FlowView►Display Flow View

Deselect the **View►FlowView►Display Flow View** menu option. This option is useful when you are looking at thousands of jobs, as showing them in the Flow View will increase the consumption of system resources on your client machine.

4.4.2 View►FlowView►Show Print Grid

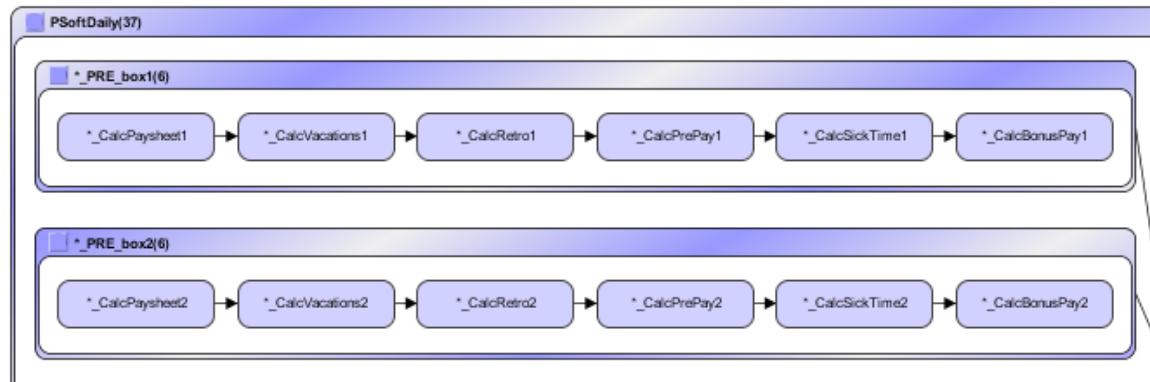
Select the **View►FlowView►Show Print Grid** menu option to display the Print Grid in the Job Flow View. The Print Grid shows the resulting layout of print pages for the **File►Print** functionality.

The advantage of Show Print Grid is that after seeing the print layout, you can customize the print by zooming in or out. The print grid can be turned off by deselecting the option.

4.4.3 View►FlowView►Stream Jobs

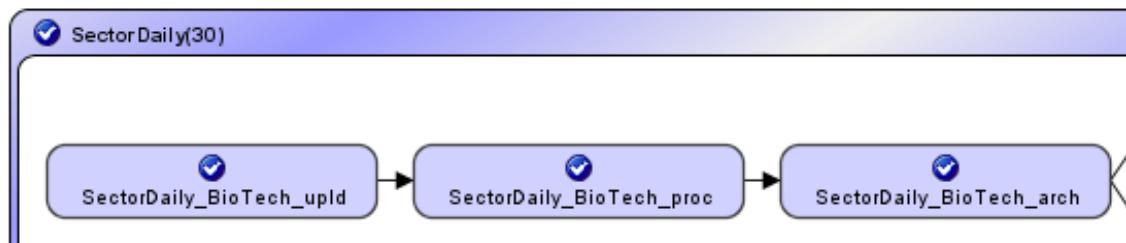
The **View►FlowView►Stream Jobs** menu option controls the orientation of the **Job Flow View**. If the default setting, **Stream Jobs Top to Bottom**, is selected, jobs in the Flow View flow primarily top to bottom.

If **Stream Jobs Left to Right** is selected, jobs in the Flow View flow primarily in that direction.



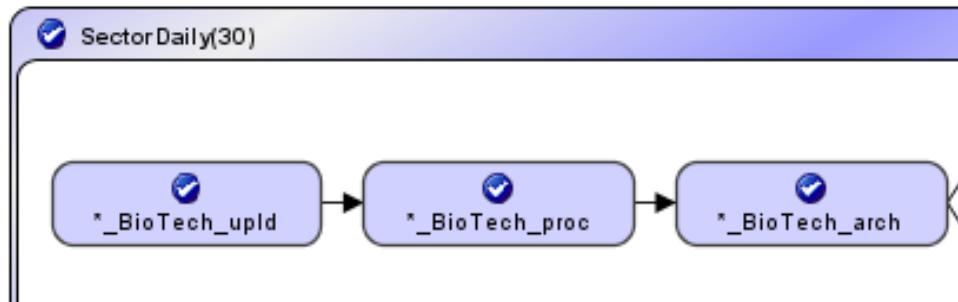
4.4.4 View►FlowView►Show Job Names

The **View►FlowView►Show Job Names** menu option lets you show the entire job name in the Flow View. This could increase the size of the job representation in the view.



4.4.5 View►FlowView►Truncate Job Names

The **View►FlowView►Truncate Job Names** menu option controls the abbreviation of job names as they appear in iXp. If the “Truncate Job Names” check box is selected, job names are abbreviated in the Flow View based on the shared prefixes of sibling jobs. The following screen shows the same jobs as in the previous option, but with this setting turned on:



Notice how the letters “Invent” are replaced with an “*”.

4.4.6 View►FlowView►Keep First 8 Letters

The **View►Flow View►Keep First 8 Letters** is another menu option to control the abbreviation of job names as they appear in iXp. After truncating the job name (see the Truncate Job Names option, above) only the next 8 characters are shown. The rest of the job name is also truncated.

4.4.7 View►FlowView►Hide Job Names

The **View►FlowView►Hide Job Names** menu option does away with job names in Flow View leaving just the icons. This is useful for getting a “big picture” view of a job stream.

4.4.8 View►FlowView►Show Arrows

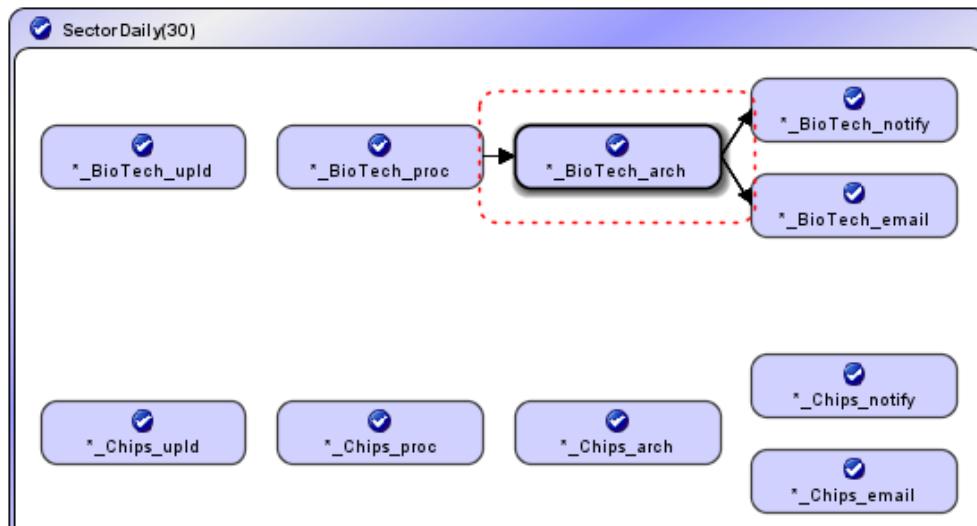
The **View►FlowView►Show Arrows** menu option controls the drawing of arrows in the Job Flow View. If it is selected, the view displays all job relationship arrows. This is the default option.

4.4.9 View►FlowView►Hide Out of Box Arrows

The **View►FlowView►HideOut of Box Arrows** menu option controls the drawing of arrows for out-of-box dependencies. If this option is selected, then the Flow View will not display arrows for such dependencies.

4.4.10 View►FlowView►Hide All Arrows

The **View►FlowView►Hide All Arrows** menu option controls the drawing of all arrows in the Flow View. If this option is selected, then the Flow View will not display any arrows between jobs. If you select a job, then the arrows to the immediate predecessors and successors of that job will be shown.



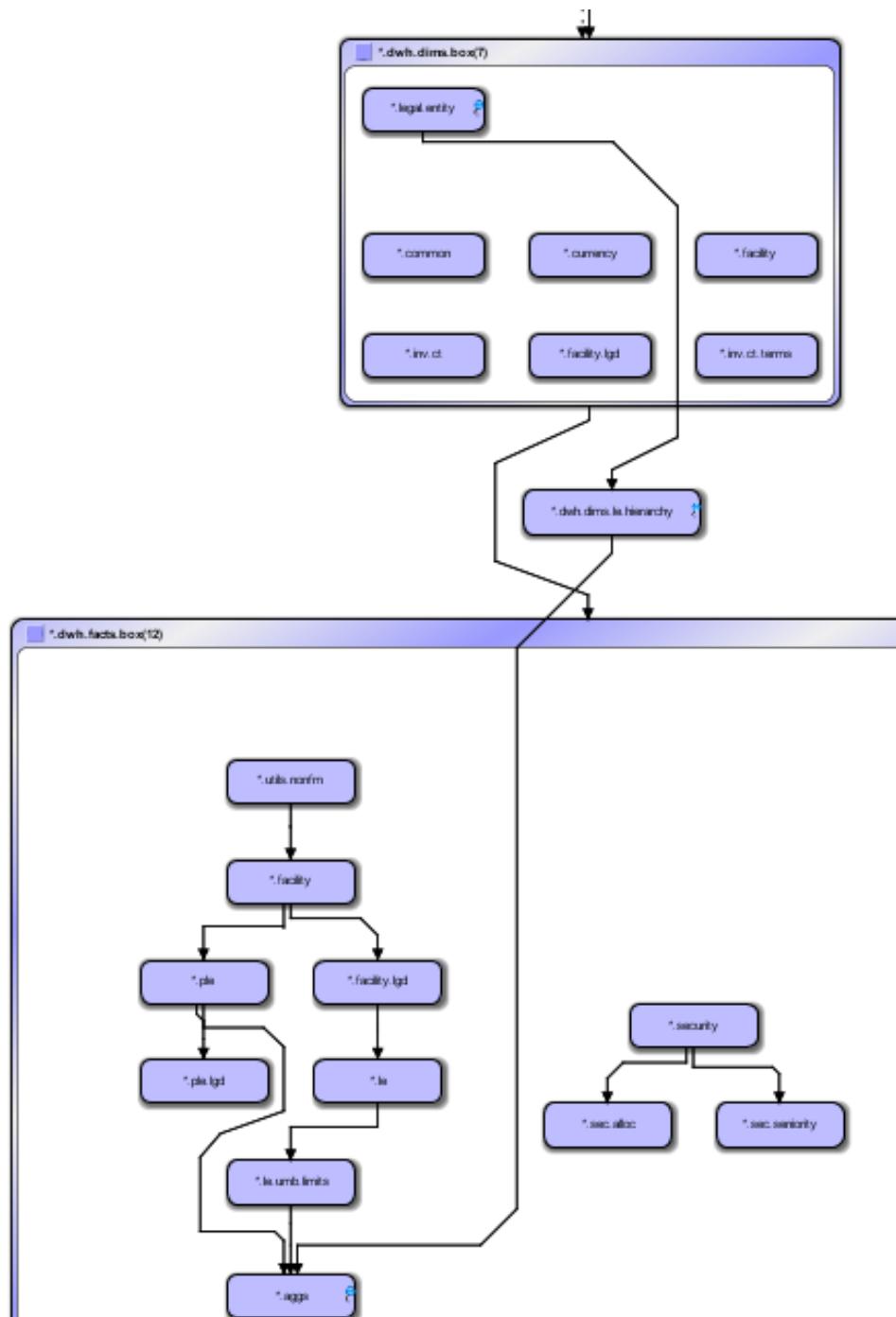
4.4.11 View►FlowView►Hide Icons

The **View►FlowView►Hide Icons** menu option shows the job representations in the Flow View without any status icons or pins. This option reduces the size of the job representations so you can fit more jobs in the Flow View window.

4.4.12 View►FlowView►Enable Arrow Routing

The **View►FlowView►Enable Arrow Routing** menu option applies an “arrow-routing” algorithm to the Flow View. When this option is selected, the arrows will go around jobs, rather than over or behind them. This option can be selected only when jobs are being streamed from Top to Bottom.

View ► Flow View



4.5 Migrate

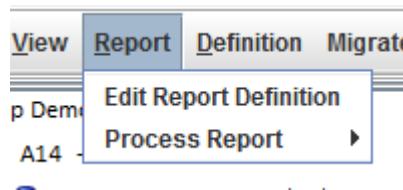
If the iXp server has the “migration” feature enabled, then this menu option can be used to open the graphical migration assistant to migrate jobs and other related objects from a Unicenter AutoSys JM 4.5.1 instance to a CA Workload Automation AE r11.3 or higher instance.

The **Edit Migration** menu option opens the migration assistant.

For more information about how to use the migration assistant, see Chapter 10: *MIGRATING WORKLOAD OBJECTS*.

4.6 Report Menu

Reports list selected job runs of special interest. You can filter job runs based on relative or absolute times, job names, box names, machine names, and job run statuses. The resulting data can be sorted by job name, job start time, or job hierarchy. All the reports are generated in HTML format and are returned to the user in a web browser.

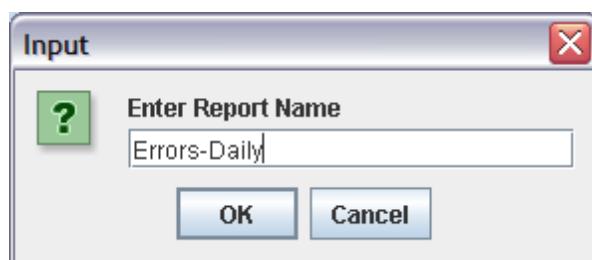


4.6.1 Report Editor

Select the **Report▶Edit Report Definition** menu option to bring up the Reports Editor:

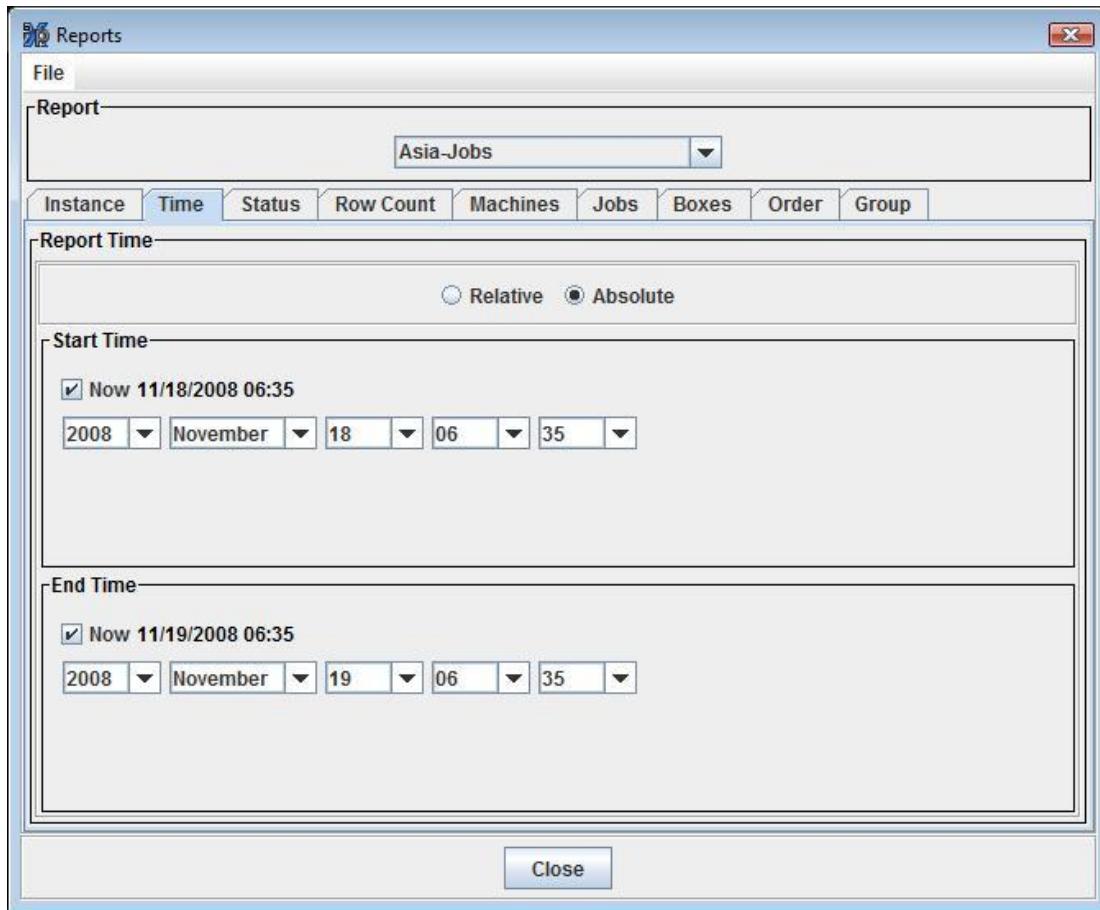
4.6.1.1 Report Management

Use the Reports Editor File menu to create and delete report types. Select the **File▶Create New Report** menu option, and enter a name in the Input box to begin a report creation.



Report Menu

Then use the different tabs on the Report Editor to define the Report.



<u>Reports Tab</u>	<u>Usage</u>
Instance	Select CA Workload Automation AE instance of jobs to be reported.
Time	Identify the times of jobs to be reported. Select Absolute to specify an absolute start time to end time window. Select Relative to choose a time window in the past from the present time.
Status	Select the run status(es) of jobs to be reported: SUCCESS, FAILURE, TERMINATED, ON_NOEXEC, RUNNING.
Row Count	Select number of rows to be reported, to limit the report length, or select "No Limit".
Machines	Insert and delete expressions for machine names of job runs to be reported.

<u>Reports Tab</u>	<u>Usage</u>
Jobs	Insert and delete expressions for job names to be reported.
Boxes	Insert and delete expressions for box names of job runs to be reported. If a box name is specified here, the report will be generated on the box job and all of the jobs within that box job. This is an easier and intuitive way to generate reports for sets of box jobs.
Order	Select order of jobs in the report: autorep (the default order), alphabetical, by start time, or “Last Run Only” for only the most recent.
Group	Select Groups to be included in the Report.

Select the **File▶Save** menu option to save the report creation.

Select the **File▶Delete** menu option to delete the report name shown in the Report window.

Select the **File▶Copy** menu option to create a copy of the report name populated in the Report window.

Select the **File▶Process** menu option to process the report name populated in the Report window. The result will appear in a new browser window.

Report Menu

The screenshot shows a Mozilla Firefox browser window with the title "IXP Job Report DailyErrors - Mozilla Firefox". The address bar displays "file:///c:/temp/ixp_1178642991.html". The main content area is titled "DailyErrors" and contains the following report statistics:

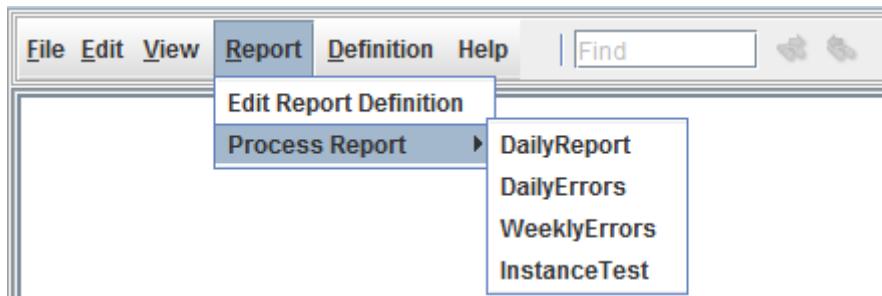
Report Generated At	05/08/07 10:49
Start Time	05/07/07 10:49
End Time	05/08/07 10:49
Total No. Of Job Runs	4
Total No. Of Jobs In Failure	1
Total No. Of Jobs In Terminated	3
Total No. Of Rows Returned	4/4

Below the statistics is a table showing job runs:

Job Name	Start Time	End Time	Total Duration	Status	Exit Code	Machine Name
FTSEDaily^STR	05/08/07 10:39	05/08/07 10:43	03m57s	FAILURE	1	N/A
FTSEDaily_FTSE_ftp3^STR	05/08/07 10:41	05/08/07 10:42	01m02s	TERMINATED	-1073741824	strider
FTSEDaily_FTSE_ftp7^STR	05/08/07 10:41	05/08/07 10:42	00m59s	TERMINATED	-1073741824	strider
FTSEDaily_FTSE_ftp10^STR	05/08/07 10:41	05/08/07 10:42	00m55s	TERMINATED	-1073741824	strider

At the bottom left of the browser window, there is a "Done" button.

From the main menu, select the **Report▶Process Report** menu option to choose a report for processing from the picklist.



Three “out of the box” reports are delivered with iXp: **DailyErrors**, **DailyReport** and **WeeklyErrors**. These cannot be edited, and ixp Admin-created reports cannot be edited by any user other than ixp administrator.

The **DailyErrors** report shows all job runs that resulted in FAILURE and TERMINATED in the last 24 hours.

The **DailyReport** report shows all job runs that occurred over the last 24 hours.

The **WeeklyErrors** report shows all job runs that resulted in FAILURE and TERMINATED in the last 7 days.

This list will also show the following reports:

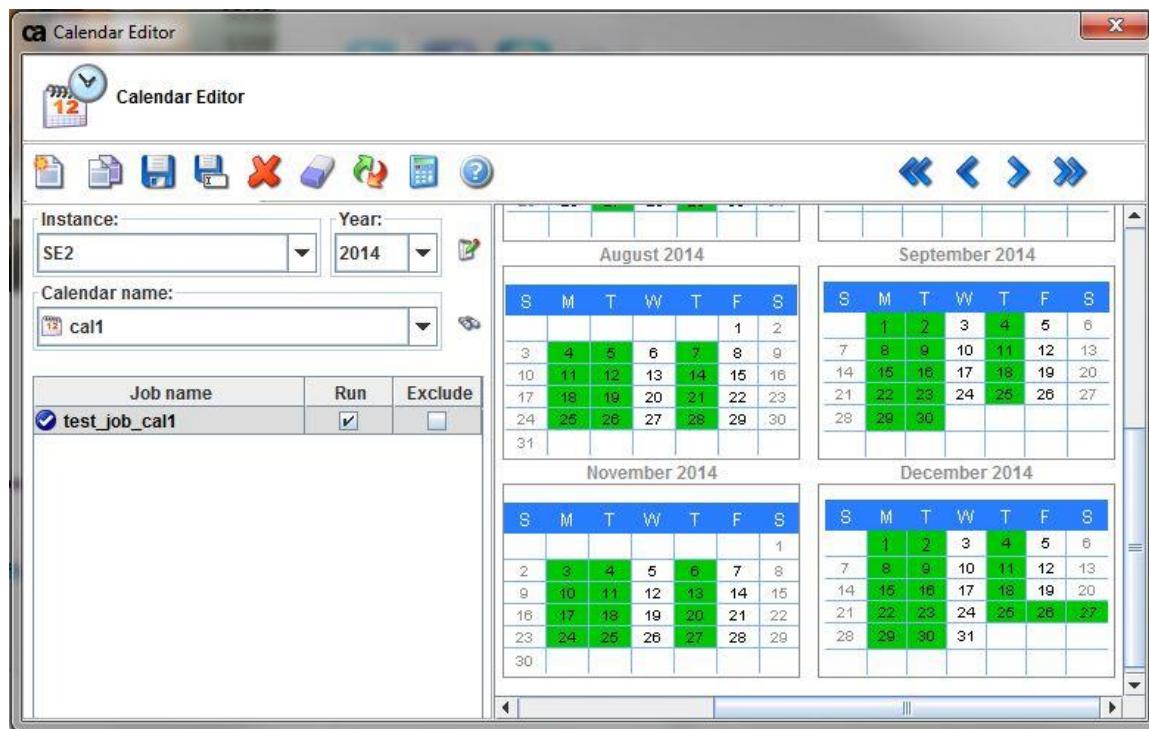
- Reports that have been created by you.
- Reports that have been globally shared by the administrators.
- Reports that have been assigned to one or more of your groups.

4.7 Definition Menu

The **Definition Menu** selections lets you create and edit CA Workload Automation AE calendars and jobs.

4.7.1 Edit Calendars

The Edit Calendars selection provides a GUI-based editor for CA Workload Automation AE calendars. If you use Unicenter AutoSys JM r11 or higher, you can use this editor to manage extended calendars and cycles.



To manage an existing calendar, select the calendar name and the CA Workload Automation AE instance from the respective drop-down list.

AS1	▼
WORKDAYS	▼

Definition Menu

The panel below the calendar name displays the job and box jobs that the selected calendar is applied to.

Note. Right click the job name in the and click 'Select in Console' to open the job in the main iXp window.

The default view shows all 12 months of the current calendar year. You can change the view by selecting the year from the drop-down list.



In addition, the forward/reverse buttons can move through the calendar:



The forward and reverse buttons move by 3 months at a time, the fast forward/fast reverse move by 1 year at a time.

When you are managing a standard calendar, clicking a date toggles the inclusion of that date in the calendar. When the date is included, it is displayed in green by default. If the date is excluded, there is no background color. In the example below, November 10, 2009 and November 20, 2009 are included in the displayed calendar.



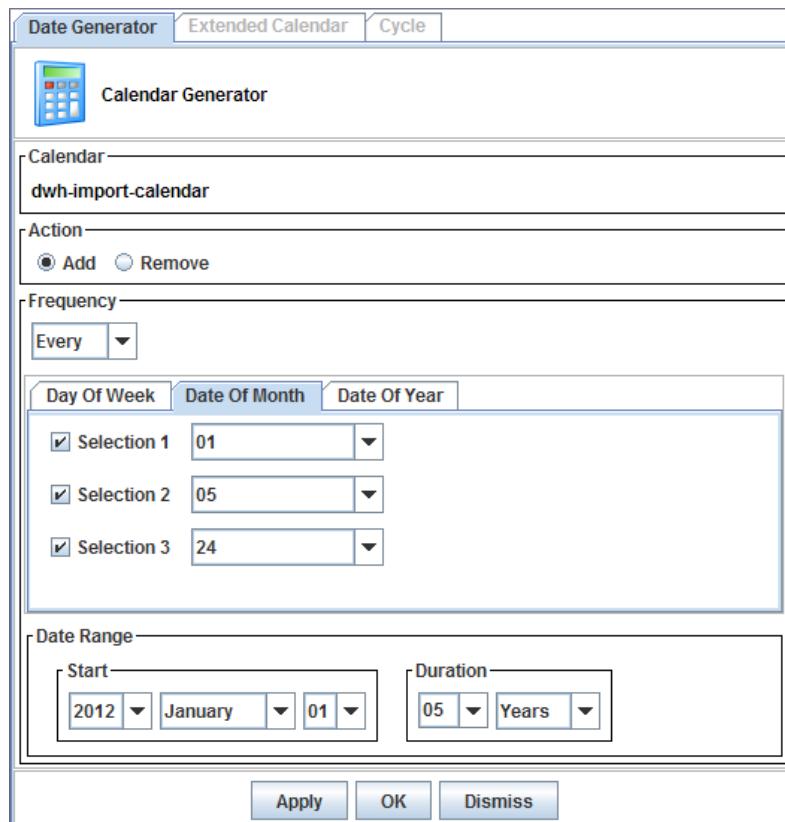
4.7.1.1 Menu options

<u>Menu Icon</u>	<u>Functionality</u>
	Create new calendar
	Copy current calendar to new name (requires save)
	Save current calendar

Menu Icon	Functionality
	Save On Alternate Instance—copy this calendar to a different CA Workload Automation AE instance
	Delete current calendar
	Clear all dates in current calendar
	Reload calendar from the CA Workload Automation AE database—all unsaved changes will be lost.
	Generate standard calendar dates by rule (see “Calendar Generator Dialog” in the next section).
	Display Help.

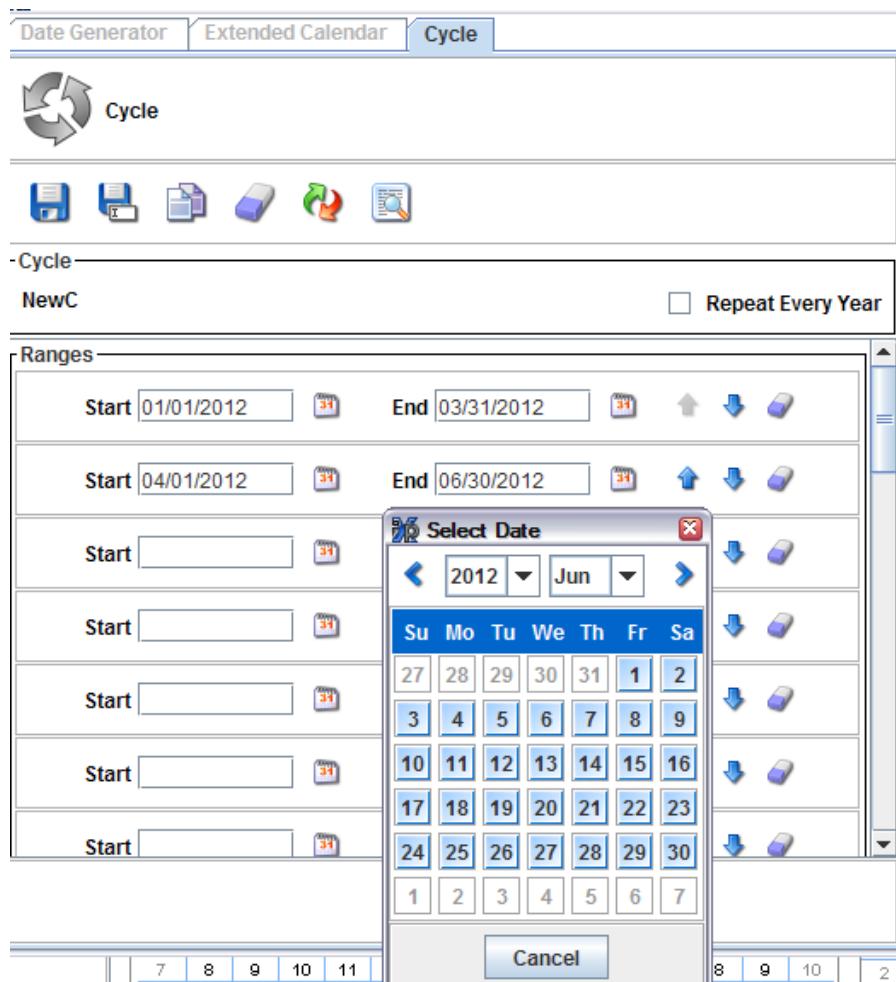
4.7.1.2 Manage Standard Calendars

Clicking the calculator icon brings up the Date Generator Dialog. You can use this tool to create standard calendars with dates that follow a pattern. For example, you can create a calendar that includes the 10th, 20th, and 30th of every month with the following settings:



4.7.1.3 Manage Cycles

If you use Unicenter AutoSys JM r11 or higher, you can create cycles that extended calendars can leverage. To create a cycle, set the appropriate Instance and select the **New▶Cycle** menu option. Enter the name of the cycle. The date generator dialog shows the parameters to manage a cycle.

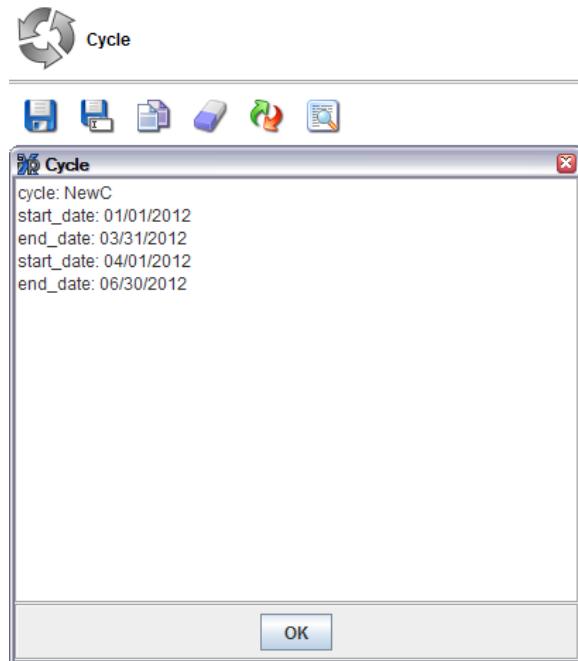


You can specify the date ranges for the cycle by entering the Start and End dates for each period. You can type in the dates manually, or you can select them visually by clicking the date icon next to the date field.

If you want to set the cycle to repeat every year, omit the year or select the year “1972” when entering the dates.

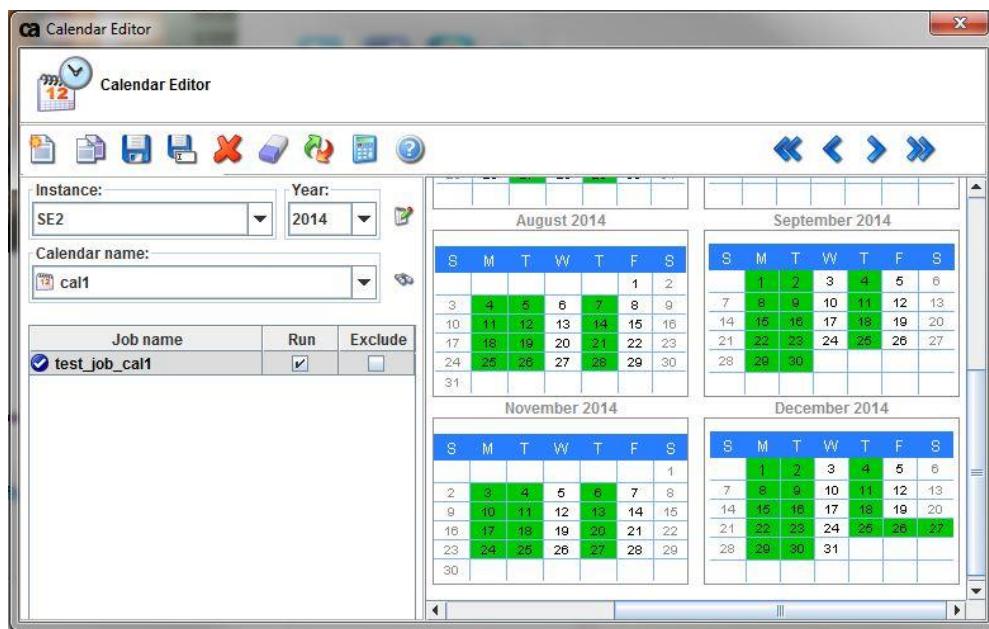
You can move the periods up and down. You can also delete them by using the up/down arrows and the delete icon.

You can view the cycle definition in the format the “autocalasc” command supports by clicking the  icon.



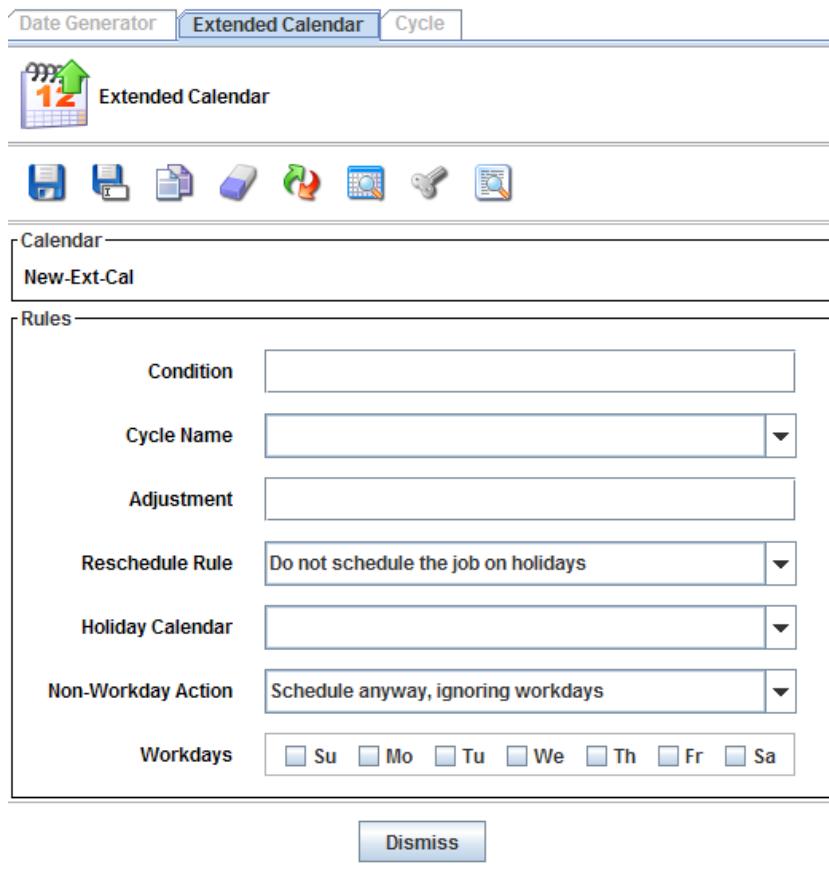
To save the cycle, click the “Save” icon. You can also copy the cycle to another instance by clicking the “Save As” icon. You can copy the cycle to a new name within the same instance by clicking the “Copy” icon.

Once the Cycle has been saved and the date generator dialog has been dismissed, the Calendar Editor shows the days that the cycle covers.



4.7.1.4 Managing Extended Calendars

If you use Unicenter AutoSys JM r11 or higher, you can create extended calendars that one or more jobs can use. To create a new extended calendar, set the appropriate Instance and select the **New►Extended calendar** menu option. Enter the name of the calendar. The date generator dialog shows the parameters to manage an extended calendar.



NOTE: For more information about each attribute, see [CA Workload Automation AE Reference Guide](#).

Once you have the appropriate values for the calendar, you can click the

Preview

icon to see the dates that are set when the calendar is saved. The dates are shown for the next 12 months from the current day.

Once the calendar has been saved, you can click the Generate

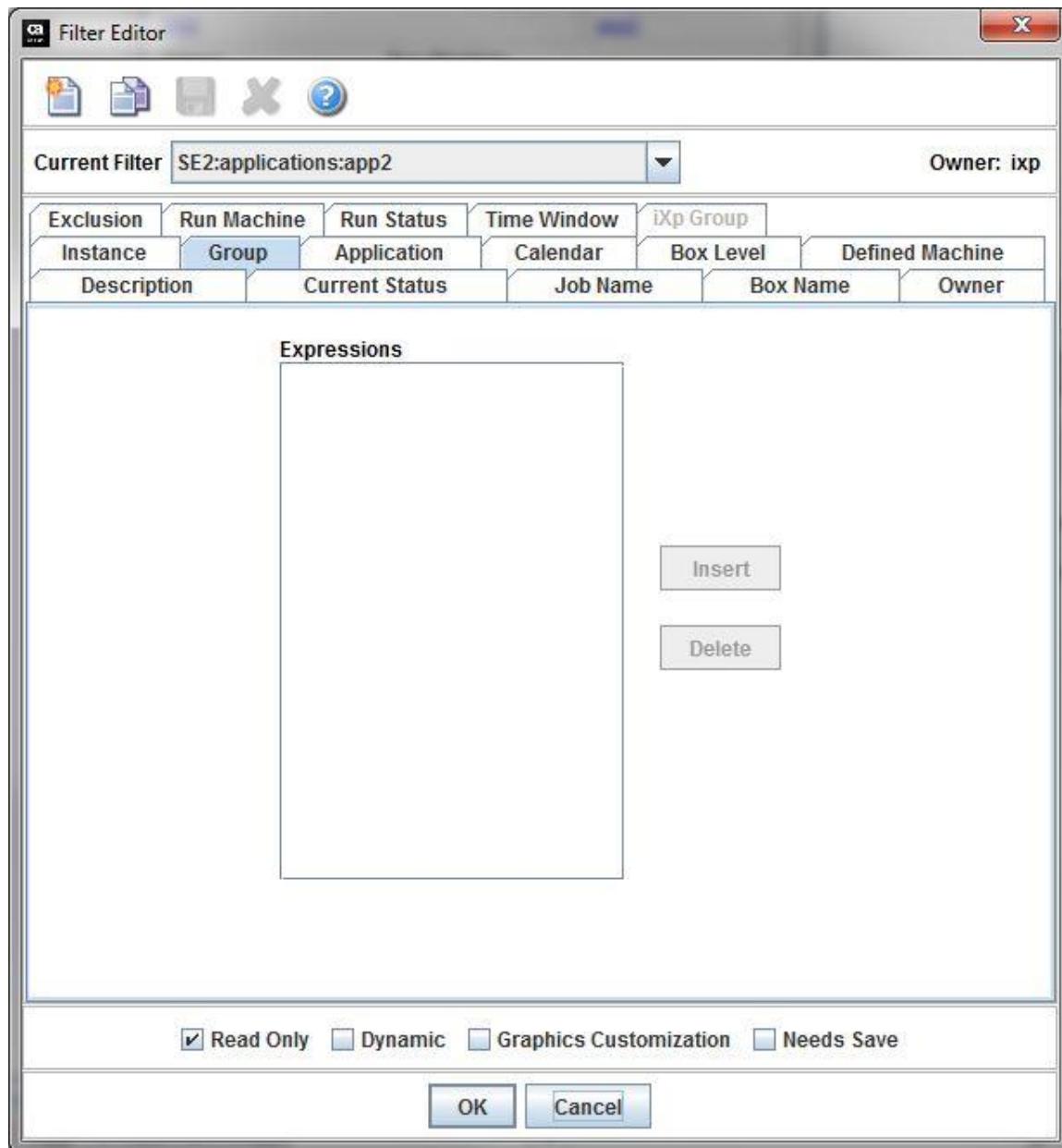
icon to regenerate the dates for the next 12 months from the current day.

To save the extended calendar, click the “Save” icon. You can also copy the calendar to another instance by clicking the “Save As” icon. You can copy the calendar to a new name within the same instance by clicking the “Copy” icon.

Once the calendar has been saved and the date generator dialog has been dismissed, the Calendar Editor shows the days the calendar covers.

4.7.2 Edit Jobs

The Edit Jobs selection provides a form editor for CA Workload Automation AE Jobs.



Definition Menu

The Menu icons provide access to creating, saving, deleting jobs, and so on. The pages of the editor are: Basic, Date/Time, Alarm, Execution, Runtime, Resource, Permission, Box, and File Watcher. These pages are described in detail below.

The area at the bottom of the screen shows the JIL (Job Information Language) that will be used to define the job to CA Workload Automation AE.

4.7.2.1 Menu icons

<u>Menu Icon</u>	<u>Functionality</u>
	Create new job.
	Copy current job to new name (requires save).
	Save current job.
	Save On Alternate Instance—copy this job to a different CA Workload Automation AE instance.
	Delete current job—if the job is a box, jobs in the box are not deleted.
	Delete a box—also deletes all jobs inside the box.
	Create a one-time override for the current job.
	Delete a one-time override for the current job.
	Reload job definition from the CA Workload Automation AE database—all unsaved changes will be lost.
	Clear all fields.
	Find a job by command, description, machine, name, or owner (also show a list of recently selected jobs).
	Display Help.

4.7.2.2 Basic page

Basic information for a job includes the following items:

- Job Name
- The Box the job is in (if any)
- Job Owner (ID to be used when running the job)
- Job Type (cannot be changed)
- Description

- Condition (starting conditions of the job)
- Machine
- Group
- Application

4.7.2.3 Date/Time page

The Date/Time page includes the following details:

- *Date Conditions* check box—must be selected to schedule by date & time
- Date sub-page
 - Run Calendar
 - Run Days
 - Exclude Calendar
- Time sub-page
 - Times of Day
 - Minutes After Each Hour
 - Run Window
 - Time Zone

4.7.2.4 Alarm page

The Alarm page includes: Maximum and Minimum Run Time alarms, and the *Alarm on Failure* check box.

4.7.2.5 Execution page

The Execution page includes the following options:

- Box terminator (for jobs in boxes)
- Job terminator (for jobs in boxes)
- Terminate job minutes
- Delete job hours
- Restart number of times parameter
- Average run time minutes
- AutoHold for jobs in boxes check box

4.7.2.6 Runtime page

On the Runtime page, the standard output file, standard error file, standard input file, and profile to be used when running a job are defined.

4.7.2.7 Resource page

Resources include the Maximum Exit Code parameter, the Heartbeat Interval, the Job Load and Job Priority settings (for use with queuing), and the Disk Space parameters.

Help Menu

4.7.2.8 Permission page

On this page the permissions for access to the job are defined. Edit and Execute permissions for Group, World, and All Hosts are available.

4.7.2.9 Box page

This page contains parameters that are unique to Box jobs: Box Success and Box Failure conditions.

4.7.2.10 File Watcher page

This page provides parameters that are unique to File Watcher jobs. Minimum File Size and Steady State Interval are the parameters supported here.

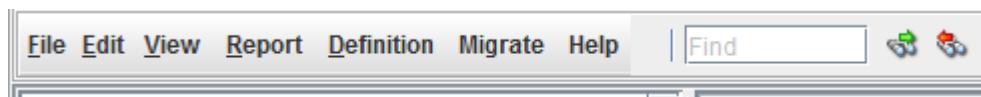
4.8 Help Menu

The **Help Menu** enables users to view information about the version of iXp, see the [CA Workload Automation iXp User Guide](#) and [CA Workload Automation iXp Administration Guide](#), and view description of all the icons being used for job statuses in the Tree and Console View.

4.8.1 Graphics Help

Select the Graphics Help menu item to view a description of the icons and arrows used in the Views.

4.9 Quick Find



The box to the right of “Help” on the iXp Menu Bar allow entry of a search string to find jobs. The “next” and “previous” icons move the selection to the next job that matches the string in the box.

The order in which jobs are found is controlled by the Tree View order, that is: jobs near the top of the Tree will be found first.

Any job name containing the string entered will be matched (wildcards are not supported because all matching strings will be found). If no jobs have a matching string, the icons are grayed out as shown below:



5 iXp TOOL BAR

5.1 Instance Monitor

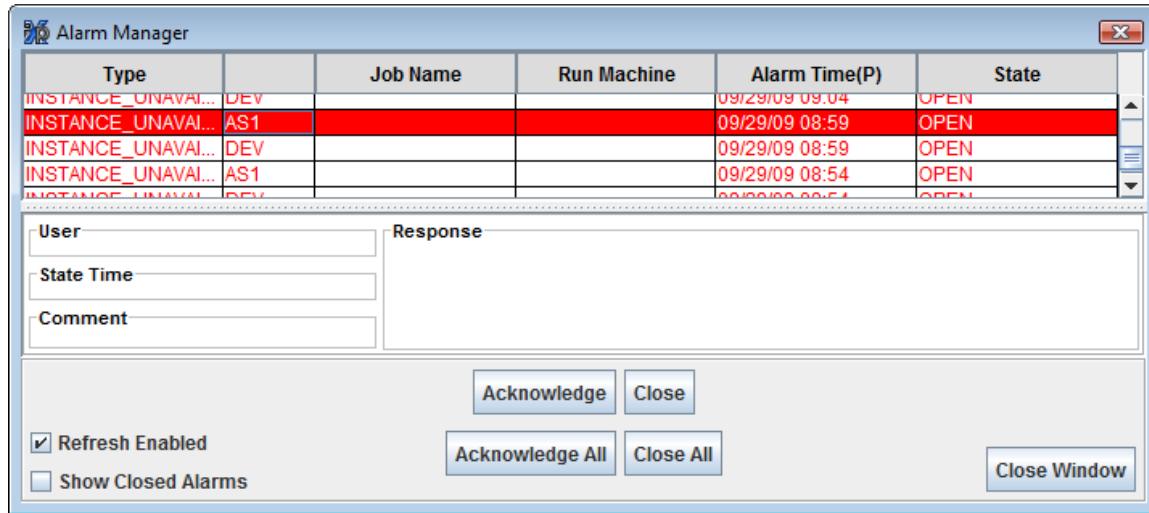
The **Instance Monitor**  button at the bottom-left corner of the iXp window brings up a dialog box that shows the current state of all the CA Workload Automation AE Instances.

If one or more CA Workload Automation AE Instances are experiencing a database issue, then the icon will change to .

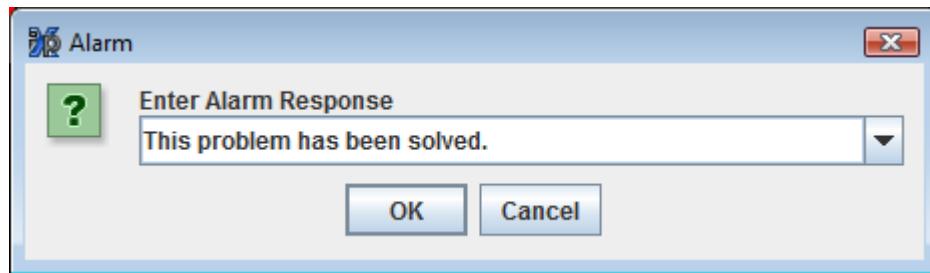
If one or more CA Workload Automation AE Instances have been disabled in iXp, then the icon will change to .

5.2 Alarm Manager

The **Open Alarms** button on the bottom of the iXp window brings up the **Alarm Manager** dialog. This button is visible only if the user has been assigned the privilege to view CA Workload Automation AE Alarms.



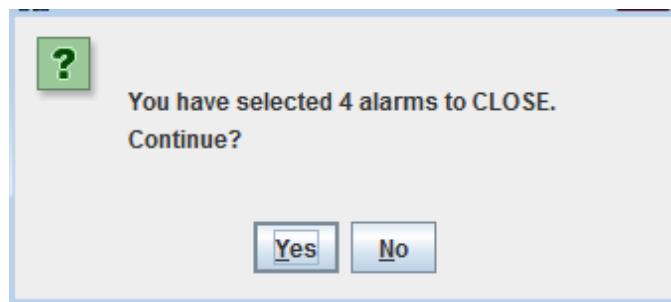
CA Workload Automation AE alarms are in one of three states: Open, Acknowledged and Closed. From the Alarm Manager, Open alarms may be Acknowledged or Closed. All Open Alarms have a red font and a red highlight when selected. Acknowledged alarms may be Closed or Acknowledged again. Closed Alarms may be Closed again, if needed. The Alarm Manager Buttons on the bottom of the Alarm Manager change the state of selected alarms, and prompt for a Response.



The iXp administrator can restrict the total length of each response (including the date/time and user name information in the response header). If you enter a response that exceeds this value, an error dialog shows the maximum allowed characters and the total length of the current response.

When closing multiple alarms at the same time, a confirmation dialog—shown below—will be shown before the alarms are closed.

Alarm Manager



Details for the fields and options in the Alarm Manager are shown below.

BUTTON	DESCRIPTION
Acknowledge	Acknowledge the selected Open alarms. If multiple alarms are selected, the Acknowledge button will acknowledge those alarms that are in the Open state. The Enter Alarm Response input box will appear. Enter the appropriate response text for the alarms, and select OK .
Acknowledge All	Acknowledge all the Open alarms. The Enter Alarm Response input box will appear. Enter the appropriate response text for the alarms, and select OK .
Close	Close the selected Open or Acknowledged alarms. If multiple alarms are selected, the Close button will Close those alarms that are in the Open or Acknowledged state. The Enter Alarm Response input box will appear. Enter the appropriate response text for the alarms, and select OK .
Close All	Close all the Open and Acknowledged alarms. The Enter Alarm Response input box will appear. Enter the appropriate response text for the alarms, and select OK .
Refresh Enabled	By default, the Alarm Manager refreshes the alarm data with every client refresh. To prevent the Alarm Manager from automatically refreshing while you are working with it, clear this check box.
Show Closed Alarms	Includes Closed alarms on the Alarm Manager list.
Hide Closed Alarms	Removes Closed alarms from the Alarm

BUTTON	DESCRIPTION
	Manager list.
Close Window	Closes the Alarm Manager dialog.

The information boxes in the Alarm Manager window display the following alarm management information:

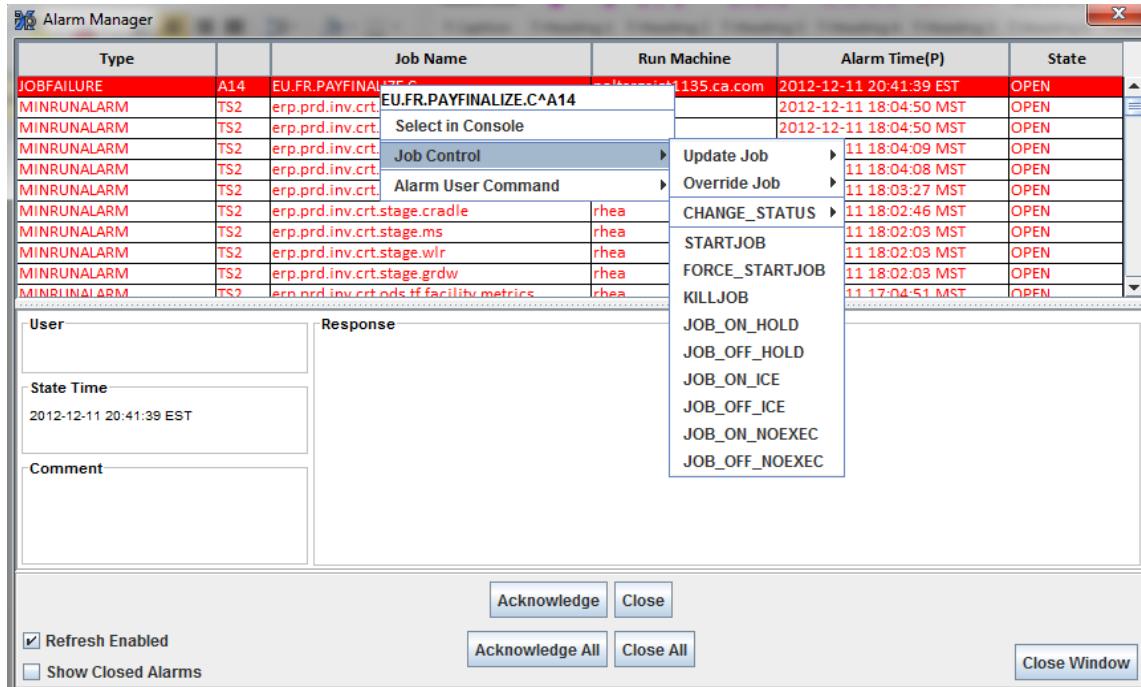
INFORMATION BOX	DESCRIPTION
User	The user who Acknowledged or Closed the alarm.
Comment	An attribute of alarm, provided by the CA Workload Automation AE scheduler.
State Time	The time of the most recent state transition of the alarm (to state Open, Acknowledged or Closed).
Response	The response input when the alarm was transitioned from Open to Acknowledged, or to Closed. If the alarm has been Acknowledged or Closed multiple times, all the responses entered will be shown.

5.2.1 Job Control Pop-up menu in Alarm Manager

Select an alarm, and right-click the alarm to bring up the Job Control pop-up menu for the job that generated the alarm.

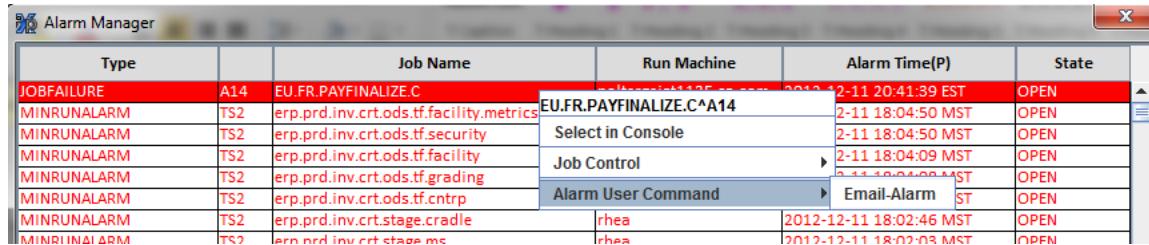
The Job Control menu functionality is described in the Section 7.2 *Job Control* of this document.

Alarm Manager



Choose “Select in Console” to highlight the job in all the iXp views. If the selected Alarm Manager job is not in the current iXp job set, a refresh will be executed to bring in the job.

If the Alarm selected is not related to a job, a more limited pop-up menu is displayed:



5.2.2 Sort Order in Alarm Manager

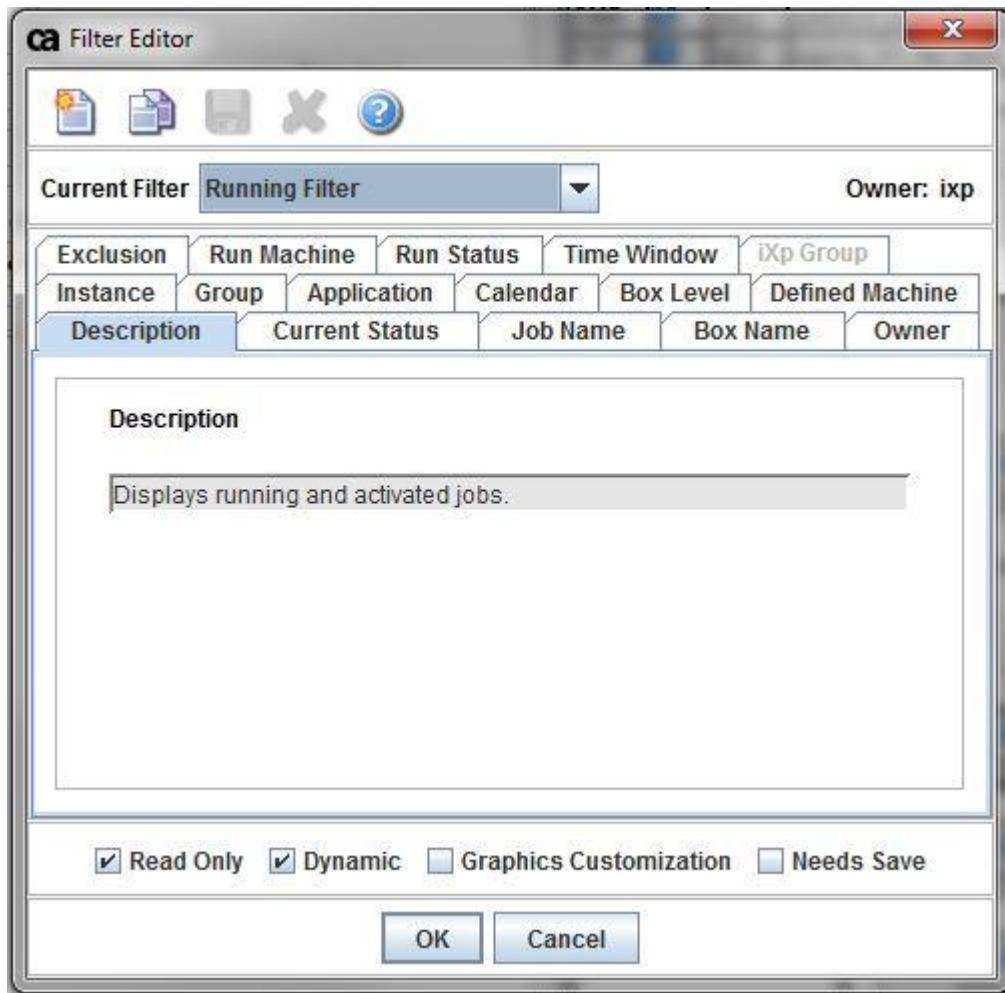
Rearrange the listing order in the Alarm Manager by selecting on a column heading with the right mouse button. The sort order selection (box) pop-up, similar to the one in the Console View, will appear. The columns in this dialog may be moved and resized by clicking and dragging the column headers. The column positioning, sizing and the sort order can be saved by selecting the Save Session Settings option under the File menu item on the main screen.

5.3 Current Filter

The **Current Filter** button at the bottom of the iXp window may be used to change the current filter for the iXp views.

Current Filter Instance Filter ▾

Select a filter from the pull down list to apply the filter to your current iXp session. iXp will refresh the job views on the client, from the iXp Daemon, using the selected filter.



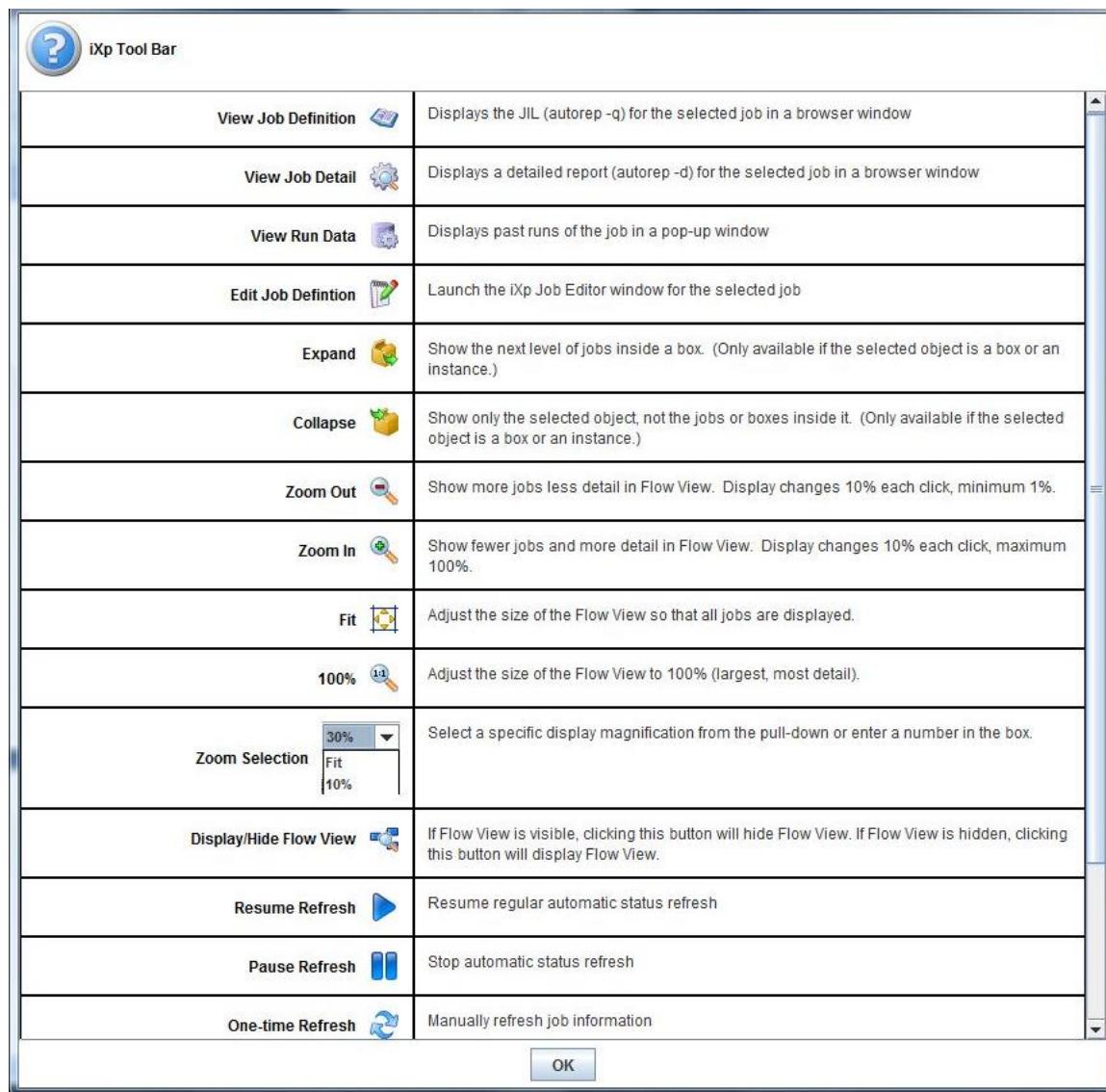
In the Current Filter drop-down list, the list of filters is ASCII sorted (alphabetically with capitals first). Also, iXp creates temporary filters when a user action related to the view is performed (e.g. Critical Path analysis). These temporary filters are named `username_number`, where `username` is the name of the logged-on user and `number` is an incremental number, starting with 0. To save any of these temporary filters, just select the filter and click the Save icon.

Flow View Buttons

Remember to save such filters or else they will not be available to the user after logging out or closing the browser. These temporary filters are very useful as users can save the results of any Impact Analysis actions, job selections, and so on.

5.4 Flow View Buttons

The bottom-right part of the Tool Bar provides buttons for the Job Flow View. These buttons provide the same functionality as the **View▶Flow View** menu option.



6 JOB FILTERS

6.1 Filters Defined

There are two kinds of filters in iXp. **Attribute Filters** limit the job data that is sent back, according to specified job attributes. **Job Dependency Filters** limit the iXp views according to specified job dependencies.

Users have access to two types of filters, from the *Current Filter* Selection list.

- 1) “Out of the box” filters provided by iXp. These include several Job *Attribute Filters*.
- 2) “User-defined” filters are owned by the user who defined them, and are configurable by him/her. These include temporary filters created when jobs are added to the view.

The Current Filter appears on the Current Filter button at the bottom of the iXp window, and on the *Filter Editor*.

All filters are applied after the user security filters have been applied. Thus, applying the “No Filter” as current filter will show all jobs that the user is allowed to see.

6.1.1 Attribute Filters

Job Attribute Filter configurations may be edited, or created, with the *Filter Editor*. Attribute Filters can use CA Workload Automation AE job attributes to further define or limit the views in iXp.

The following table shows the “Out of the box” Attribute Filters:

iXp Job Attribute Filter Name	Description
Level Zero Filter	Includes all instances in the site and jobs that are not in boxes and box jobs at level zero i.e. jobs within a box are not shown.
Running Filter	Includes jobs that have a current status of STARTING, RUNNING or ACTIVATED.
Exception Filter	Includes jobs that have a current status of FAILURE

iXp Job Attribute Filter Name	Description
	or TERMINATED.
Instance Filter	Only the Site and Instance icon are shown. No jobs are shown.
Site Filter	Only the Site icon is shown. No instance icons or jobs are shown.
No Filter	Shows all instances and all jobs within all instances.

6.1.2 Job Dependency Filters

Job Dependency Filters are selected from the [Job Tools Pop-up](#) menu. Job Dependency filters can be applied in two ways, **Update Filter** and **New Filter**. Update Filter will apply the selected filter to the existing view. This may result in an addition of new jobs to match the filter but will not result in a removal of any jobs from the existing view. New Filter will clear the existing view, create a temporary filter based on the username and show the jobs that match the selected filter. See Section 7.3.1 [Job Dependency Filters Definitions](#).

6.2 How Filters Work

When the iXp Daemon receives a request for a read operation, such as refresh, job filters are applied to the iXp Data before returning jobs data to the Client, as follows.

- 1) The iXp Daemon first applies the appropriate security read filter to the site data, returning a security-filtered site. (The request from the iXp Client always comes identified with the specific user, for individualized response from the iXp Daemon.)
- 2) Then the user-specified filter is applied to the security-filtered site data, and the data are sent to the client.

6.2.1 Filter Logic Sequence

The filter saved to the iXp Daemon, for the specific iXp Client, is applied to the security-filtered site, according to the following filter logic:

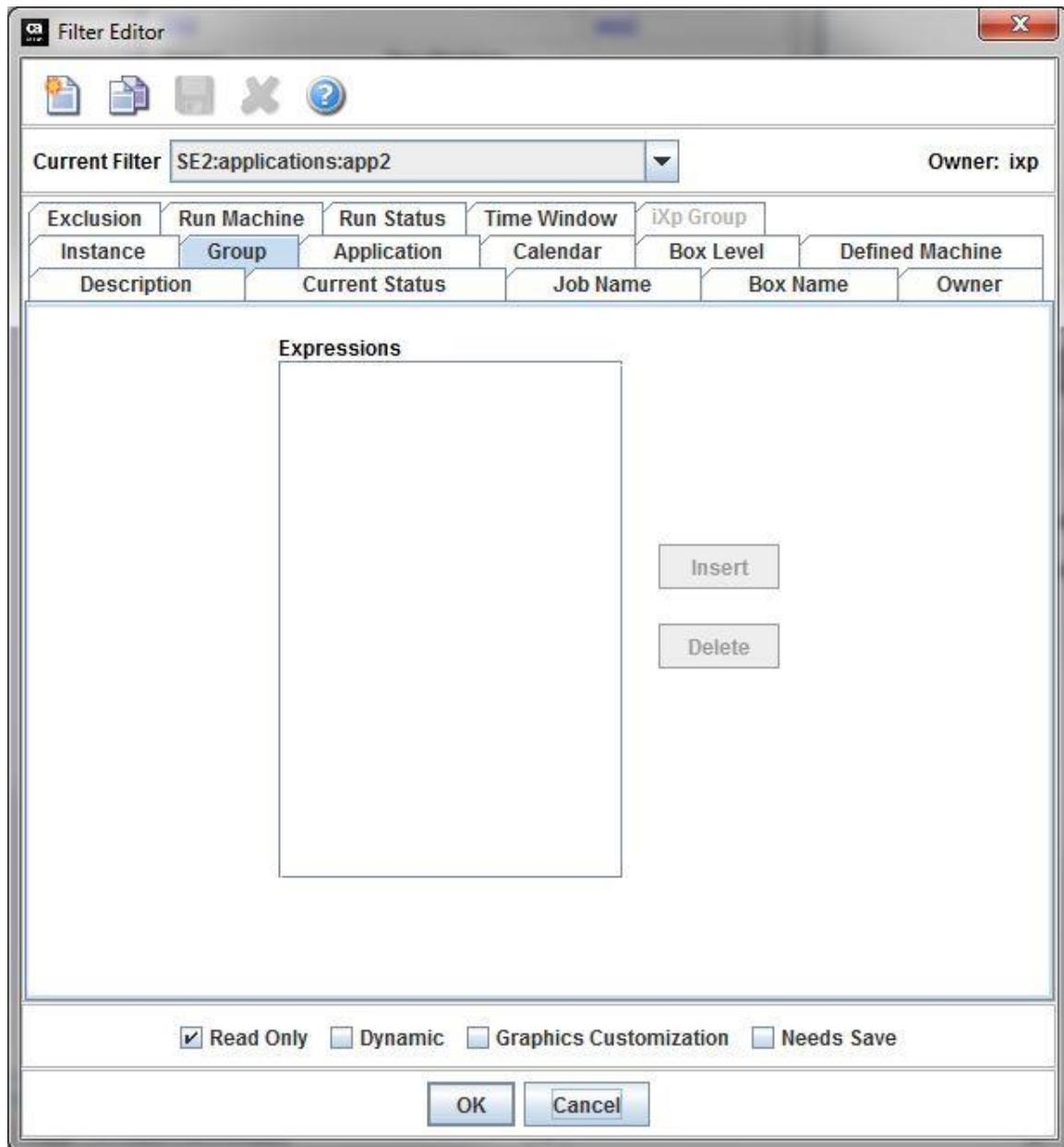
- 1) The Job *Attribute Filter* or *Job Dependency Filter* reduces the view according to the specified attributes. Then any Exclusion Post-Process attributes result in special eliminations.
- 2) User-modifications to the views are applied, including Expand, Collapse, Expand All, Hide, Update Filter, Find Job by Name, Predecessor and Successor (as chosen from the Job Detail View).
- 3) Inclusion of the complete Box Ancestry for all jobs returning to the iXp Client is always the final filtration step on the iXp Daemon.
- 4) New jobs, arriving to the Client after graphics customization, are positioned logically by iXp, post-process.

6.2.2 Example Filtration Sequence

- 1) Suppose one applies the Level Zero Filter: only the first level Box Jobs appear in the view.
- 2) Then, through the *Update Filter* function on the job tools pop-up menu, apply a Critical Path Filter on one of those jobs. This will create a new filter that belongs to you, and will return all the dependency-related jobs for that selected job, also leaving the other first level box jobs.
- 3) Then use the *Find Job By Name* function on another, third level Box Job. This returns that job and its parent, in addition to the other jobs.]
- 4) The iXp Client will expand the box graphics in the Job Flow View and insert the newly returned jobs.

6.3 Filter Editor

The **Filter Editor** can be brought up by the **Edit▶Edit Filter** menu option, or by clicking Filter Value in the Preference Editor. Use the Filter Editor to adjust the configurations of the Job Attribute Filters. The iXp Daemon sends to the iXp client only jobs that pass the *Current Filter*.



To edit a Job Attribute Filter:

- 1) Select the filter from the **Current Filter** menu.

- 2) Select the filter attribute that you want to edit from among the twelve tabs: Description, Current Status, Job Name, Box Name, Owner, Instance, Box Level, Defined Machine, Exclusion, Run Machine, Run Status, and Time Window.
- 3) Edit the properties of that tab on the dialog. For Instance, Run Machine, Defined Machine, Exclusion, Job Name, Box Name and Owner, use the **Insert** and **Delete** buttons to edit the **Expressions**. In Box Level and Time Window, slide the level pointer. In Current Status and Run Status, check or uncheck Statuses to filter. In Description, type your description directly in.

NOTE. You can use the asterix figure “*” as a wild card for your search terms. For example entering Pay*, pay* or PAY* returns all jobs having Job Name that starts with Pay or pay.

NOTE: For JOB NAMES, ^ is a special character that defines a CA Workload Automation AE Instance, as inJob_A*^ACE...

- 4) Select **OK** to save your edits and close the Filter Editor window.
- 5) Click the Save icon on the Filter Editor, or on the Preference Editor, to save your filter edits.

Filter Editor Tabs:

Filter Attribute	Description
Instance	CA Workload Automation AE Instance names, such as “ACE”, or wildcard expressions, such as “A*”. The absence of any entries means no jobs will be excluded based on instance.
Box Level	Box Level is the maximum number of box levels that will satisfy the filter. All jobs of a higher box level will be excluded.
Run Machine	Run Machine entries pass only jobs having one or more run records in the specified list of statuses. Entries may be a string, such as “pluto”, or a wildcard expression, such as “pl*”. The absence of any entries means no jobs will be excluded based on run machine. Only jobs having one or more historical run records on a run machine (or virtual machine) will pass the filter. If a job satisfies a filter, its box ancestry will also be included.
Run Status	See screen below. The filter includes all ancestors of

Filter Editor

Filter Attribute	Description
	jobs satisfying this filter, regardless of the ancestors' Run Statuses. The absence of any Run Status selections means no jobs will satisfy the filter. If no Run Status filtration is needed, select all statuses.
Time Window	“Future Hours” and “Past Hours” set bounds on the Run Status and Run Machine filter tabs. Choosing “Ignore” for Past Hours means no recent run history is required to pass the filter. Choosing “Ignore” for Future Hours means no future execution is required to pass the filter.
Defined Machine	Each list entry can be a string, such as “pluto”, or a wildcard expression, such as “jup*”. The absence of any entries implies that no jobs will be excluded based on the JIL “machine:” specification. A job satisfies the filter if it has at least one machine in its JIL “machine:” definition that matches any of the filter’s wildcard expressions. Note that if a job satisfies a filter, its box ancestry will also be included.
Exclusion	Exclusion expressions are performed after all other filter expressions. If a job_name satisfies an exclusion expression that job, and if a box all of its descendants, will be discarded. Expressions may be a string, such as “job_ABC”, or a wildcard expression, such as “job_A*”. The absence of any entries means that no jobs will be filtered based on Exclusion expressions.
Description	Use the Description field to document the filter.
Current Status	Only jobs with Statuses that are selected by a check mark will satisfy the filter. If no statuses are selected, no jobs will pass the filter. If all Statuses are selected, no jobs will be excluded based on status.
Job Name	Each list entry can be a job_name, such as “Job_A” or a wildcard expression, such as “Job_A*”. The absence of any entries implies that no jobs will be excluded based on job_name. Note that “^” is a special character for delimiting instances. “Job_A” is equivalent to “Job_A^*”.
Box Name	Each list entry can be the name of a Box Job. The name supports wildcard expressions. The filter will return all

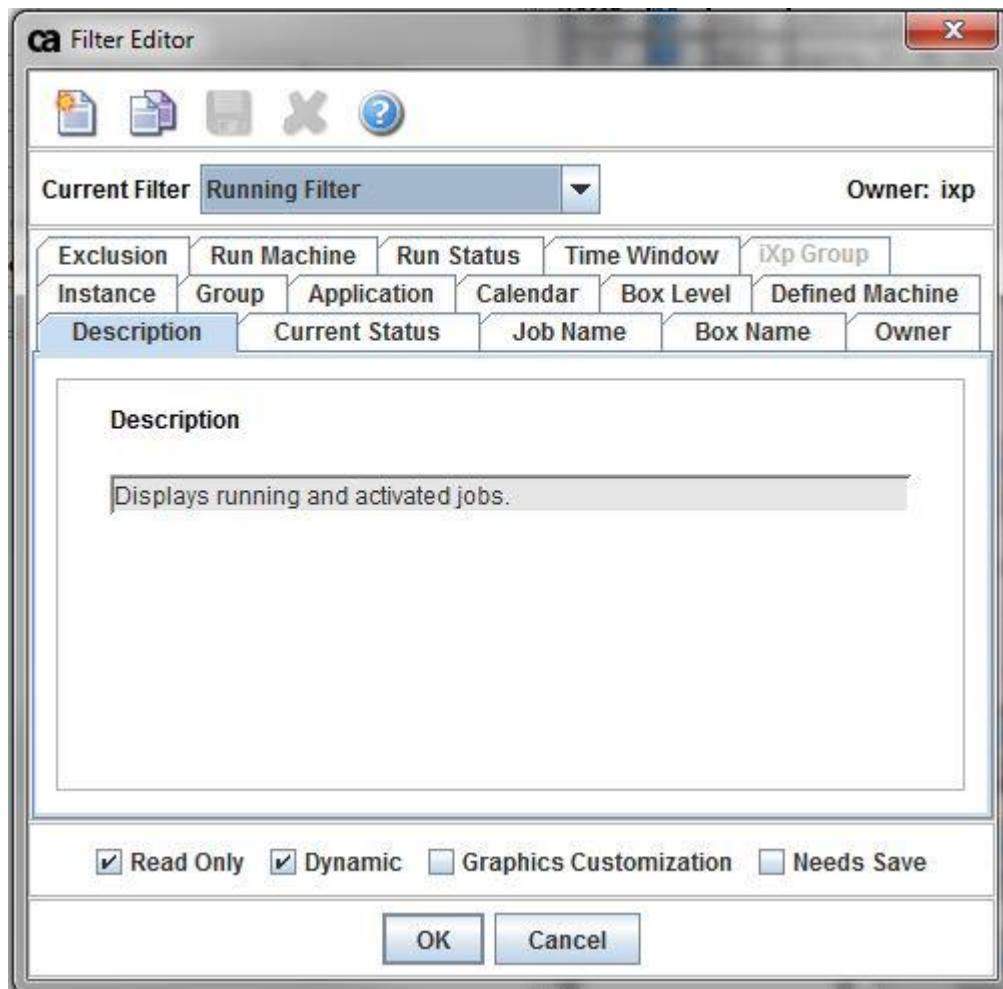
Filter Attribute	Description
	Box Jobs that match the name expressions and all the jobs within them.
Owner	Only jobs with an owner that match these expressions passes the filter. Entries can be a string, such as “root@pluto”, or a wildcard expression, such as “root@*”. The absence of any entries means that no jobs are excluded based on the owner.
iXp Group	The filter is shared with members of the iXp groups specified in this filter attribute.
Calendar	Filters jobs by calendar.
Group	Filters jobs by group.
Application	Filters jobs by application.

Filter Editor Check Boxes:

Check Box	Description
Read Only	Indicates this filter is not owned by the current user and cannot be modified.
Dynamic	Indicates this filter is modified by job run data.
Graphics Configuration	Indicates additional drill-down or drag-n-drop actions are associated with this filter. This is a deprecated setting that may be enabled again in a future release.
Needs Save	Indicates that filter configuration changes have not yet been saved to the iXp Daemon.

Filter Editor

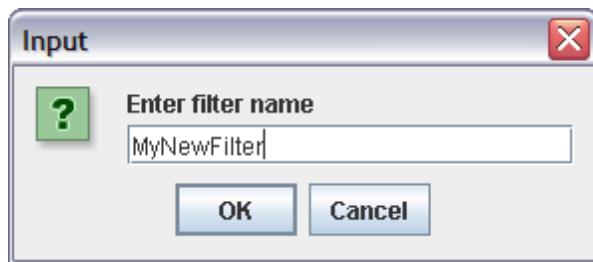
Filter Editor, showing Run Status selection:



6.3.1 Filter Editor File Menu



Click the New Filter icon to create a new filter.



Click the Copy Filter icon to bring up an input box to save the specified filter configurations under a new filter name.



The Save icon saves your filter.



The Delete Filter icon saves a copy of the selected filter to the iXp Server, and then deletes it. If you want, you can restore your deleted filter by asking the administrator to rename your saved filter file.

7 JOB TOOLS POP-UP

A pop-up menu for job tools can be activated by right-clicking a job in any of the views. The same menu can also be activated by right-clicking an Instance icon on the Tree or Job Flow View. This menu offers tools for navigating the job streams, issuing events on jobs, updating job definitions, generating job dependency filters, running user commands and viewing job information.



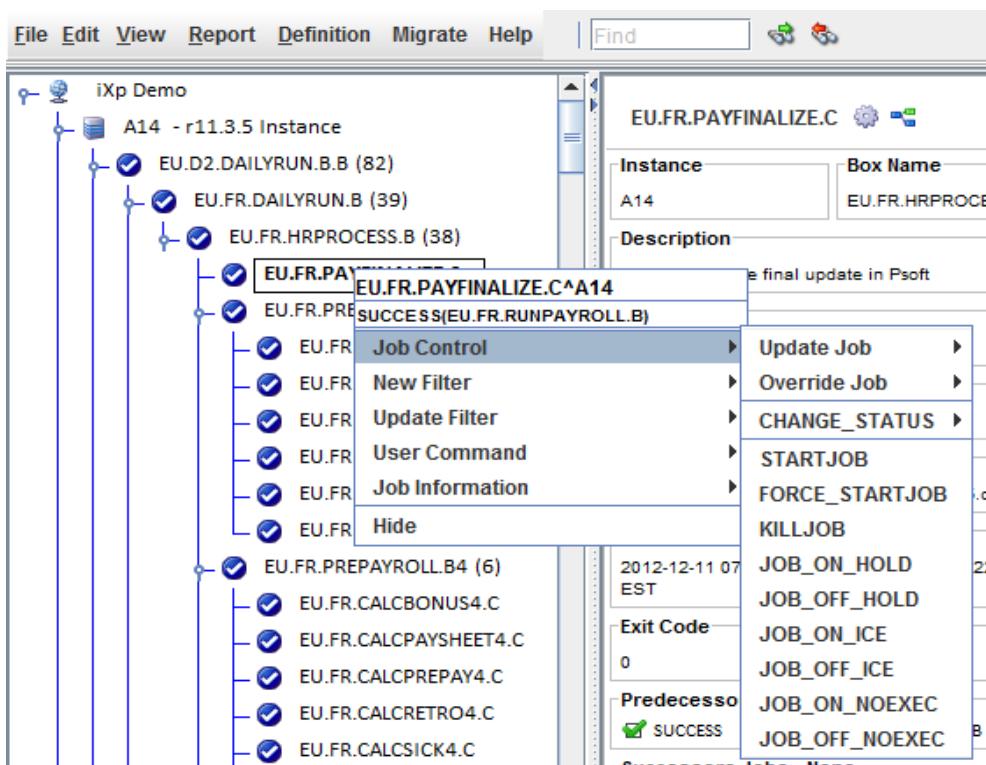
7.1 Expand, Collapse, and Hide

The **Expand**, **Expand All** and **Collapse** menu items are shown when either a Box job or an Instance is selected. These three options provide an easy way to traverse the job streams. Box jobs or Instances would either be expanded by just one additional level (**Expand**) or expanded to show all the jobs within them (**Expand All**). A Box Job or an Instance could also be collapsed to show just that Box job or Instance but not any of the jobs within them (**Collapse**). The **Hide** menu option could be applied to any job or Instance. Activating this item removes the selected job/Instance and also all of the jobs within them, from all of the Views.

Pop-up Menu Pick (to Include/Remove jobs)	Description
Expand	Includes the children of the Box Job in the views.
Expand All	Includes all progeny of the Box Job (its children, their children, and so forth) in the views.
Collapse	Removes all progeny of the Box Job (its children, their children, and so forth) from the views.
Hide	Removes the selected job, and all its progeny, from the view. NOTE: You cannot Hide a Site.

7.2 Job Control

The **Job Control** sub-menu items provide the capability to send events, create job definition overrides, and update job definitions. The job definition updates and overrides can be submitted through a dialog that accepts job definition attributes in JIL format. That dialog also shows the current job definition in JIL format, for reference. The dialog also performs a syntax check on the JIL submitted, and warns on erroneous, invalid and incomplete data. This menu option will only show those choices for which you are authorized.

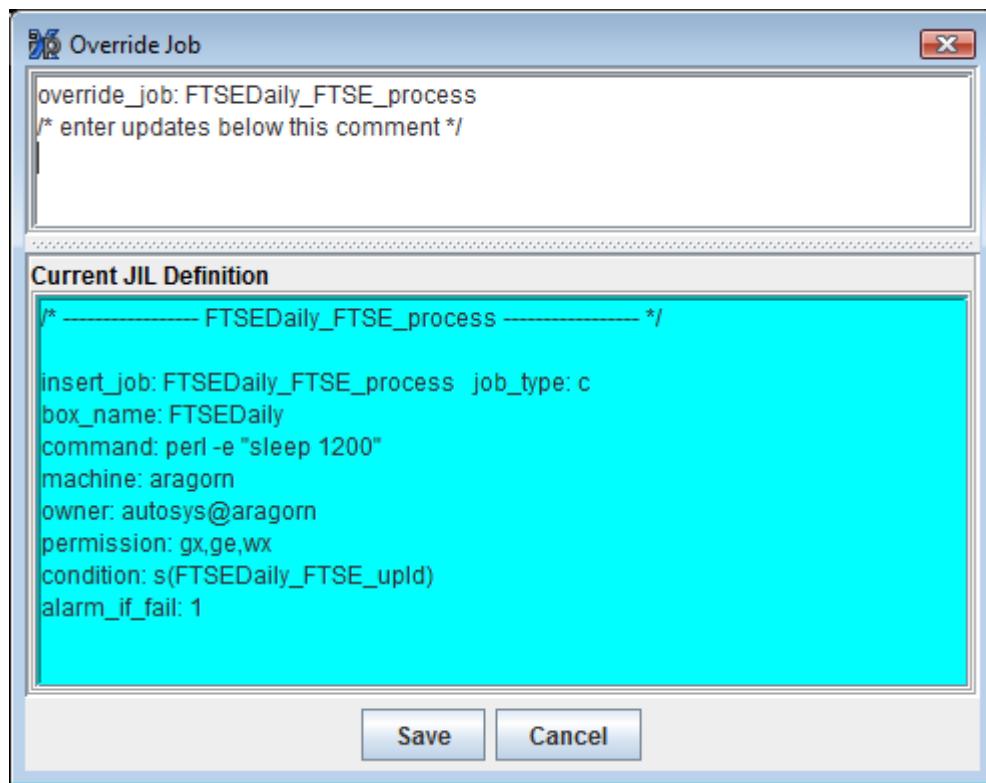


7.2.1 Update Job

The **Update Job** menu item opens a dialog from which a user can update the job definition. The dialog allows users to update any attribute of the job, except the **owner** field.

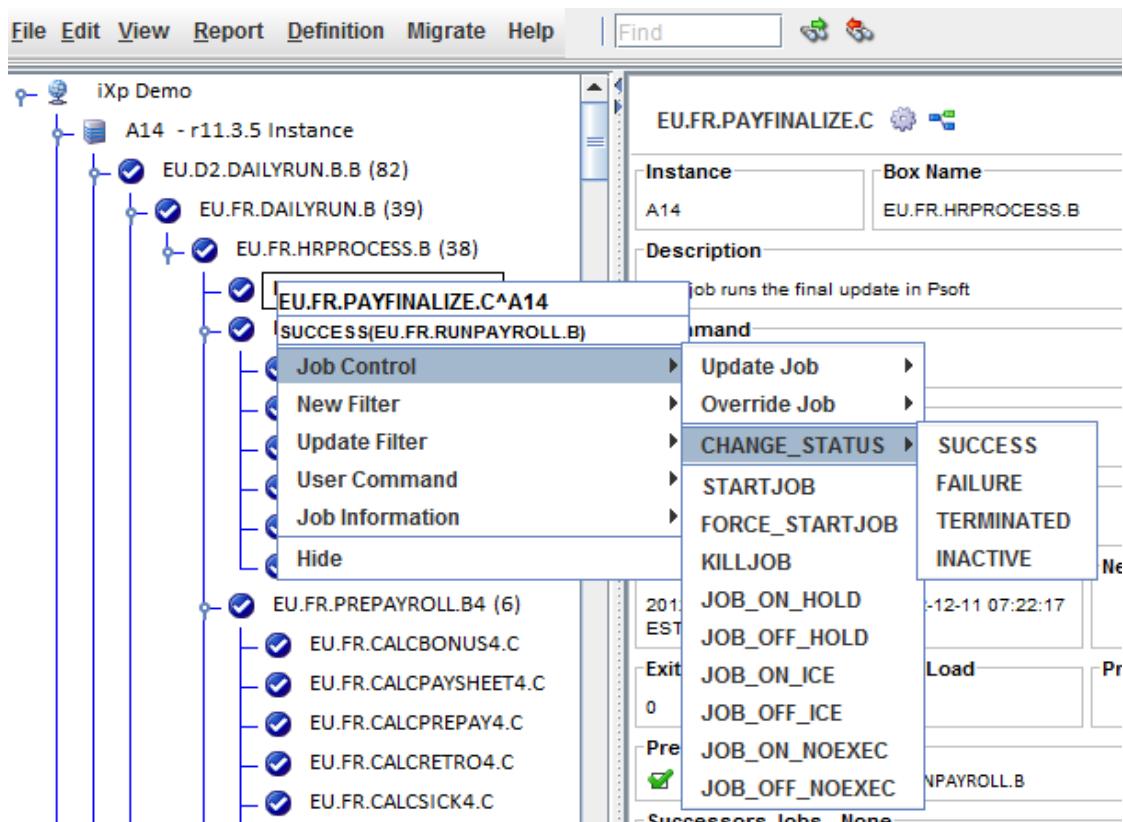
7.2.2 Override Job

The **Override Job** menu item provides a dialog from which a user can submit a one-time job override to CA Workload Automation AE. For one-time overrides, CA Workload Automation AE only allows a selected job attributes to be modified. Hence, the iXp dialog may generate error messages if the one-time override is issued for invalid job attributes.



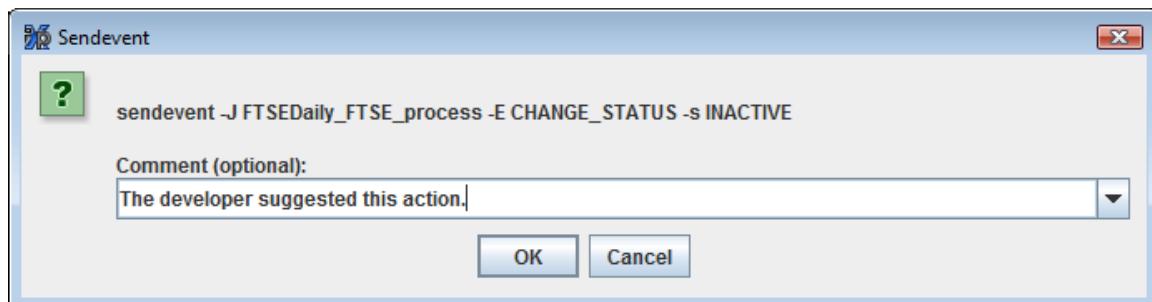
7.2.3 Change Status

The rest of the Job Control menu options allow users to send events to CA Workload Automation AE for the selected jobs. The **CHANGE_STATUS** option has a sub-menu that provides a selection of job statuses.



When an event is selected, users can also provide a comment that could be used for audit purposes. The comment is not mandatory and hence the text area for the comment could be left blank. Every time iXp issues an event to the CA Workload Automation AE database, the iXp username is inserted as a part of the comment, even if the comment is left blank. This provides an audit trail of all events performed via iXp.

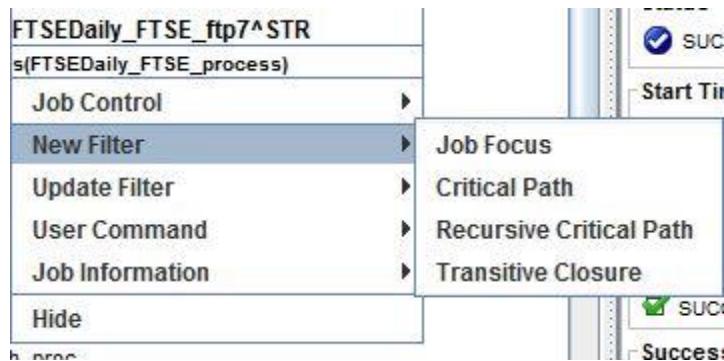
When a particular sendevent is selected, the confirmation dialog also allows users to type in the comment to be associated with that job and event.



7.3 New Filter and Update Filter

The **New Filter** and **Update Filter** options allow the creation of Job Dependency Filters. New Filter always creates a new temporary filter with the selected Job Dependency criteria. Update Filter always updates the existing filter with the selected Job Dependency criteria. Once the filter is set the preferred way, it can be saved with a new name from the [Filter Editor](#).

Select **New Filter** to create a new filter that will appear on the Set Filter list.



Choosing a New Filter will apply a [Job Dependency Filter](#) to the selected job (named Payroll_CalcBonusPay1 in this example).

Select **Update Filter** to return the **union set** of jobs for a [Job Dependency Filter](#) on the selected job, together with the existing filter. The Update Filter item has the same choices as the New Filter option.

For example, choosing an Update Filter of **Job Focus** will add the child and parent dependency relations of the selected job to the view and will not remove the other jobs.

7.3.1 Job Dependency Filters Definitions

Job Dependency filters can be applied via Update Filter and New Filter. Update Filter will apply the selected filter to the existing view and may result in an addition of new jobs to match the filter but will not result in a removal of any jobs from the existing view. New Filter will clear the existing view, create a temporary filter based on the username and show the jobs that match the selected filter.

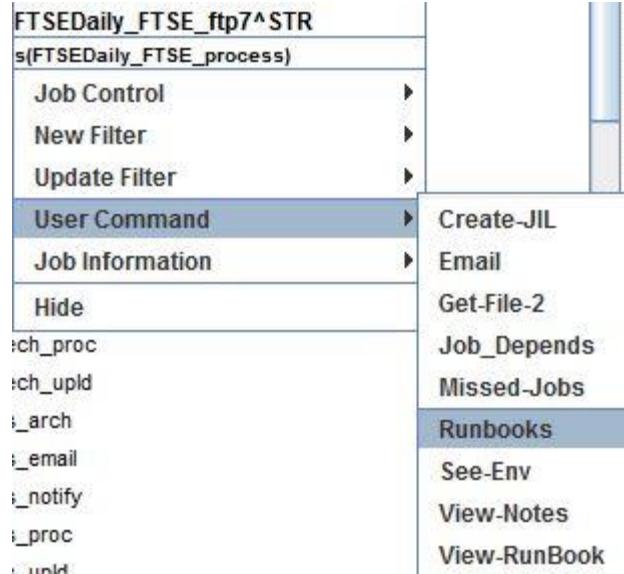
Dependency Filter Name	Description
Job Focus Filter	Filters the iXp views to show a job and its immediate predecessors and successors.

Dependency Filter Name	Description
Critical Path	Focuses on a job and then follows predecessor and successor relationships (dependency relationships) from that job, as far as the dependency relationships can be traced in the job stream.
Recursive Critical Path	Performs a critical path filter on the job, and on all its ancestors and all its progeny. This yields all the extended ancestor and progeny relationships (Box relationships) to the selected job, and all the extended predecessor and successor relationships (dependency relationships) to each of those jobs.
Transitive Closure	Follows all Box and dependency relationships in both directions, throughout the CA Workload Automation AE Job structure. First a Recursive Critical Path filter is applied to the selected job, then a Recursive Critical Path filter is applied to the resulting jobs, and so forth through the job stream. Transitive Closure on any job in the set of jobs returned by the Transitive Closure filter has the useful property that the filter applied to any one selected job returns the same set of jobs as for any other job in the set. The Transitive Closure filter can be useful for understanding where the partitions are in your job stream, hence for designing more modular job streams, for rapid failure recovery.

7.4 User Command

The **User Command** menu option provides quick access to all user commands of type job. When expanded, this menu item shows all the job user commands that are available for execution. The list of commands would be same as that found under the **File▶UserCommand▶Job** menu option.

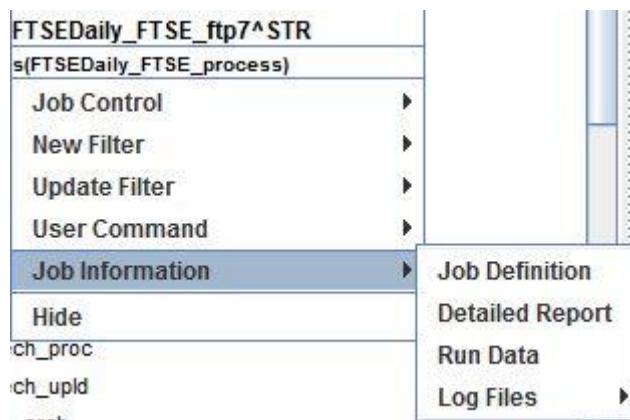
Job Information



7.5 Job Information

The **Job Information** menu option has five submenu options that let you perform the following actions:

- Retrieve the job definition
- Report on the last job run
- View all the historical and forecasted runs of the selected job
- Retrieve the log files the job and CA Workload Automation AE created when the job ran on the Remote Agent machine (if the iXp Agent is installed on that machine)
- View the calendars associated with the job



Select **Job Definition**, **Detailed Report**, **View Run Data** to view the Job Information for the selected job. Select the **Log Files** sub-menu item to see a list of files that you can retrieve for the last job run. Select the **Calendars** sub-menu to see the Run or Exclude Calendar for a job.

7.5.1 Job Definition

Select **Job Definition** to return the JIL definition of the job. This is by means of a call to the CA Workload Automation AE command:

```
autorep -J jobname -L 0 -q
```

To view job definitions, you require a CA Workload Automation AE Client that is configured for all instances monitored through iXp.

7.5.2 Detailed Report

Select **Detailed Report** to return the event history of the most recent run of the job. This is by means of a call to the CA Workload Automation AE command:

```
autorep -J jobname -r 0 -d
```

To run a Detailed Report, you require a CA Workload Automation AE Client that is configured for all instances that are monitored through iXp.

These reports are returned in a Web browser.

7.5.3 Run Data

The Run Data option provides a listing of all the historical and forecasted runs for the selected job. The runs are listed in descending order with the most recent run at the top. The most recent run (or the current run if the job is running) has the run-number 0. Hence, the oldest run has the highest run-number. All forecasted runs are marked with “FUTURE”, rather than numbers. This provides a clear indication about which runs are forecasted and which are actual.

Selecting **Run Data** returns a report as shown in the following screen:

Job Run Data Payroll_CalcPrePay1^STR:Runs=12						
	Status	Start Time	End Time	Duration	Exit Code	Run Machine
0	SUCCESS	2009-04-14 18:09:09 MDT	2009-04-14 18:10:50 MDT	01m41s	0	rover
1	SUCCESS	2009-04-10 03:05:19 MDT	2009-04-10 03:07:00 MDT	01m41s	0	rover
2	SUCCESS	2009-04-09 12:03:20 MDT	2009-04-09 12:05:01 MDT	01m41s	0	rover
3	SUCCESS	2009-04-09 11:34:47 MDT	2009-04-09 11:36:28 MDT	01m41s	0	rover
4	SUCCESS	2009-04-08 12:03:19 MDT	2009-04-08 12:05:00 MDT	01m41s	0	rover
5	SUCCESS	2009-04-08 11:11:51 MDT	2009-04-08 11:13:32 MDT	01m41s	0	rover
6	SUCCESS	2009-04-03 12:03:19 MDT	2009-04-03 12:05:01 MDT	01m42s	0	rover
7	SUCCESS	2009-04-03 11:22:22 MDT	2009-04-03 11:24:03 MDT	01m41s	0	rover
8	SUCCESS	2009-04-02 12:03:20 MDT	2009-04-02 12:05:03 MDT	01m43s	0	rover
9	SUCCESS	2009-04-02 10:21:29 MDT	2009-04-02 10:23:10 MDT	01m41s	0	rover
10	SUCCESS	2009-04-01 11:34:07 MDT	2009-04-01 11:35:48 MDT	01m41s	0	rover
11	SUCCESS	2009-03-24 12:12:39 MDT	2009-03-24 12:14:19 MDT	01m40s	0	rover

Job Information

RUN DATA COLUMN	DESCRIPTION
First column	Job run identifier number, as used in the CA Workload Automation AE command autorep -j <i>job_name</i> -r <i>run_number</i> .
Status	Status of the job for the specific run of the job.
Start Time	Time the run of the job started.
End Time	Time the run ended.
Duration	End Time – Start Time.
Exit Code	Exit Code returned for the execution of the job run.

7.5.3.1 View Detail

If you want to see the detailed report (autorep -d) on any run, select that run on this dialog and click this button.

7.5.3.2 Create Report

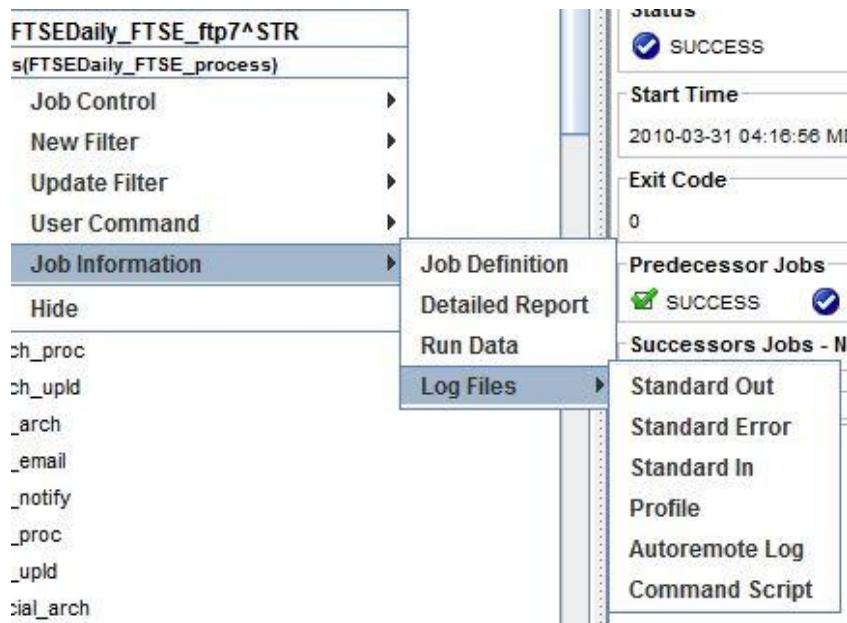
Once the appropriate runs have been imported in the Run Data dialog, an HTML report that lists those runs can be created by selecting this option. The report will be shown in a web browser. This feature enables users to print, email and save the run report for any job.

Invent_ProcBarrels1^VS2

Report Generated At	01/24/03 14:55					
Start Time	01/17/03 03:49					
End Time	01/17/03 21:10					
Total No. Of Job Runs	35					
Total No. Of Jobs In Failure	0					
Total No. Of Jobs In Terminated	0					
Total No. Of Rows Returned	35/35					
Job Name	Start Time	End Time	Total Duration	Status	Exit Code	Machine Name
Invent_ProcBarrels1^VS2	01/17/03 21:09	01/17/03 21:10	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 20:39	01/17/03 20:40	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 20:10	01/17/03 20:10	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 19:40	01/17/03 19:40	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 19:09	01/17/03 19:10	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 18:39	01/17/03 18:40	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 18:09	01/17/03 18:10	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 17:39	01/17/03 17:40	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 16:40	01/17/03 16:40	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 16:10	01/17/03 16:10	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 15:39	01/17/03 15:40	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 15:10	01/17/03 15:10	00m31s	SUCCESS	0	venus
Invent_ProcBarrels1^VS2	01/17/03 14:39	01/17/03 14:40	00m31s	SUCCESS	0	venus

7.5.4 Log Files

The **Log Files** sub-menu displays a list of files that you can retrieve for the last job run of the selected job. This menu option is visible only if the privilege to view Job Log files or Job Script files has been assigned to you.



You can retrieve the STDOUT, STDERR, STDIN, Job Profile, and Remote Agent log for the last job run. If any of these files are not present on the Remote Agent machine, the iXp Client will notify you. Since all of these files reside on the Remote Agent machine, the iXp Agent has to be up and running on that machine in order for the iXp Client to show the files for jobs running in Unicenter AutoSys JM r11 or older versions.

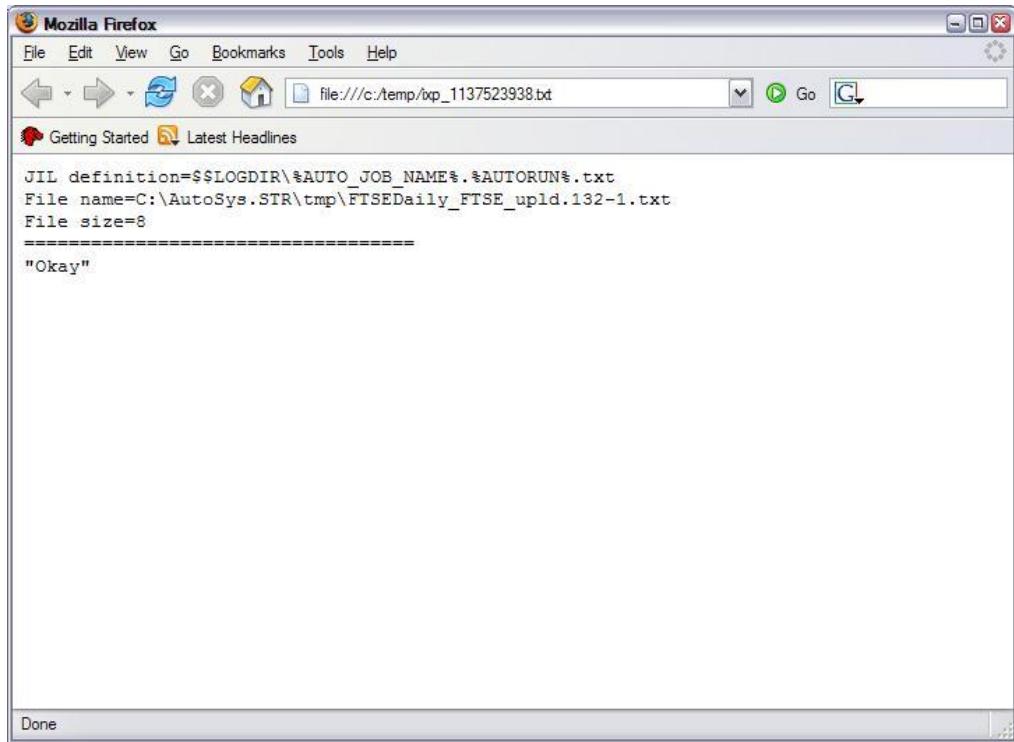
The iXp Client will display the contents of the requested files in a web browser window. This way you can search for text, email, or print the contents of the file.

Tip: If the iXp Agent is not running, then the iXp Client will display an error indicating this condition. If the iXp Client displays a Process Timeout error, you can try to retrieve the log again.

7.5.4.1 STDOUT, STDERR, STDIN

Select the **Standard Out**, **Standard Error**, or **Standard In** option to view these files. The iXp Daemon will extract the file name as defined to the job and resolve any Substitution, Global, or Environment variables in the file name before retrieving the file. If the file name is based on variables that can have dynamic values (e.g. the RUN_NUM, NTRY of a job, the date when the job ran, and so

on), then the iXp Daemon will use information from the last run of the job to determine the value of such variables.



A screenshot of a Mozilla Firefox browser window. The title bar says "Mozilla Firefox". The address bar shows "file:///c:/temp/ixp_1137523938.txt". The main content area displays the following text:

```
JIL definition=$$LOGDIR\%AUTO_JOB_NAME%\%AUTORUN%.txt
File name=C:\AutoSys.STR\tmp\FTSEDaily_FTSE_upld.132-1.txt
File size=8
=====
"Okay"
```

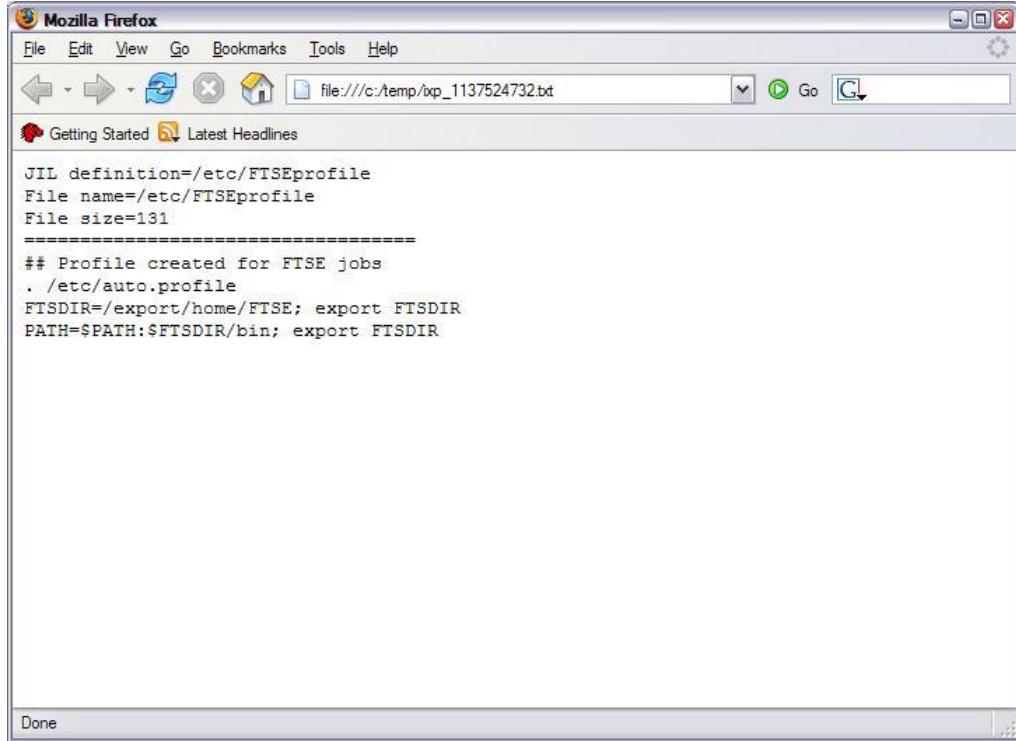
The output of the STDOUT file above shows that the job is defined to create the STDOUT file based on a Global Variable called “LOGDIR” and the standard CA Workload Automation AE Environment variables called “AUTO_JOB_NAME” and “AUTORUN”. The output from iXp Client shows the resolved name of the file after the appropriate values were plugged in for the variables used.

7.5.4.2 Job Profile

Select the **Profile** menu option to view the file that has been assigned to the job profile field in the job definition.

NOTE: This functionality is available for UNIX jobs only.

Job Information



```
JIL definition=/etc/FTSEprofile
File name=/etc/FTSEprofile
File size=131
=====
## Profile created for FTSE jobs
. /etc/auto.profile
FTSDIR=/export/home/FTSE; export FTSDIR
PATH=$PATH:$FTSDIR/bin; export FTSDIR
```

7.5.4.3 Remote Agent Log

Select the **Autoremove Log** option to view the Remote Agent Log file. In most cases, CA Workload Automation AE is set up to purge the Remote Agent Log when the job ends in a SUCCESS. Hence, this functionality may work only with jobs in a FAILURE or TERMINATED status.

For Unicenter AutoSys JM r11 or older, if the iXp Agent is unable to find a file, the web browser window will show that message. The window will also show the fully qualified name of the file that the iXp Agent attempted to retrieve.

```

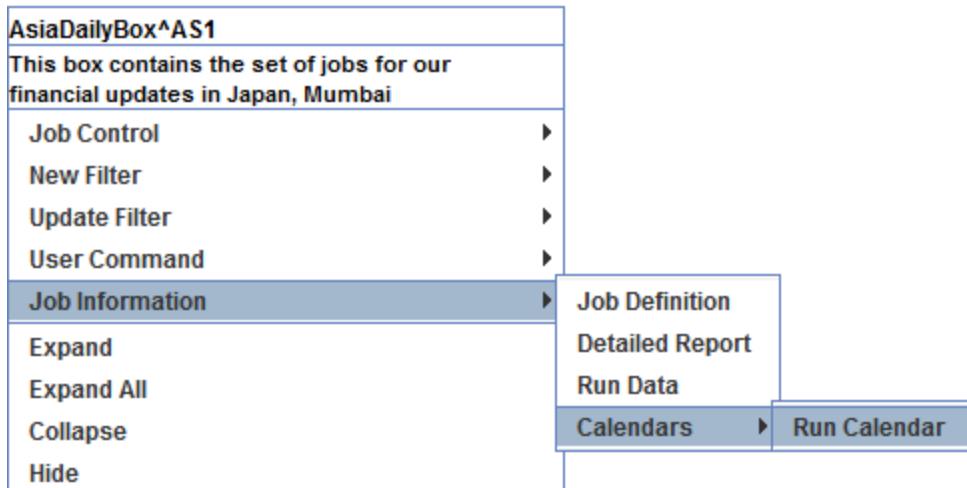
Mozilla Firefox
File Edit View Go Bookmarks Tools Help
Back Forward Stop Home file:///c:/temp/xp_1137525084.txt Go C
Getting Started Latest Headlines
Tue Jan 17 12:05:39 2006: Changing working directory to /users/parag
Tue Jan 17 12:05:39 2006: setuid( 1006 ) succeeded!
Tue Jan 17 12:05:39 2006: COMMAND = 99
Tue Jan 17 12:05:41 2006: START_SHADOW = 83
Tue Jan 17 12:05:41 2006: child fork suceeded 7891
Tue Jan 17 12:05:41 2006: Executing cmd->AUTO_JOB_PID=7891; export AUTO_JOB_PID; AUTOSYS=/Au...
Tue Jan 17 12:05:41 2006: About to exec...
Tue Jan 17 12:05:41 2006: parent wait for user task 7891
Tue Jan 17 12:05:41 2006: Sending RUNNING Event...
Tue Jan 17 12:05:41 2006: about to send_event
Tue Jan 17 12:05:41 2006: Sending Event: 101 Status: 1 ...
Tue Jan 17 12:05:41 2006: Attempting to Connect to: STRDORA
Tue Jan 17 12:05:42 2006: SENT Successfully !!!
Tue Jan 17 12:05:42 2006: AUTOSV not set
Tue Jan 17 12:05:42 2006: parent returned from wait, exit code 256 (0 1)
Tue Jan 17 12:05:42 2006: User task exit code = 1
Tue Jan 17 12:05:42 2006: Sending the Completion Event...
Tue Jan 17 12:05:42 2006: about to send_event
Tue Jan 17 12:05:42 2006: Sending Event: 101 Status: 5 ...
Tue Jan 17 12:05:42 2006: Attempting to Connect to: STRDORA
Tue Jan 17 12:05:42 2006: SENT Successfully !!!
Tue Jan 17 12:05:42 2006: send_event() ret=0
Tue Jan 17 12:05:42 2006: auto_remote work complete, exiting

```

Done

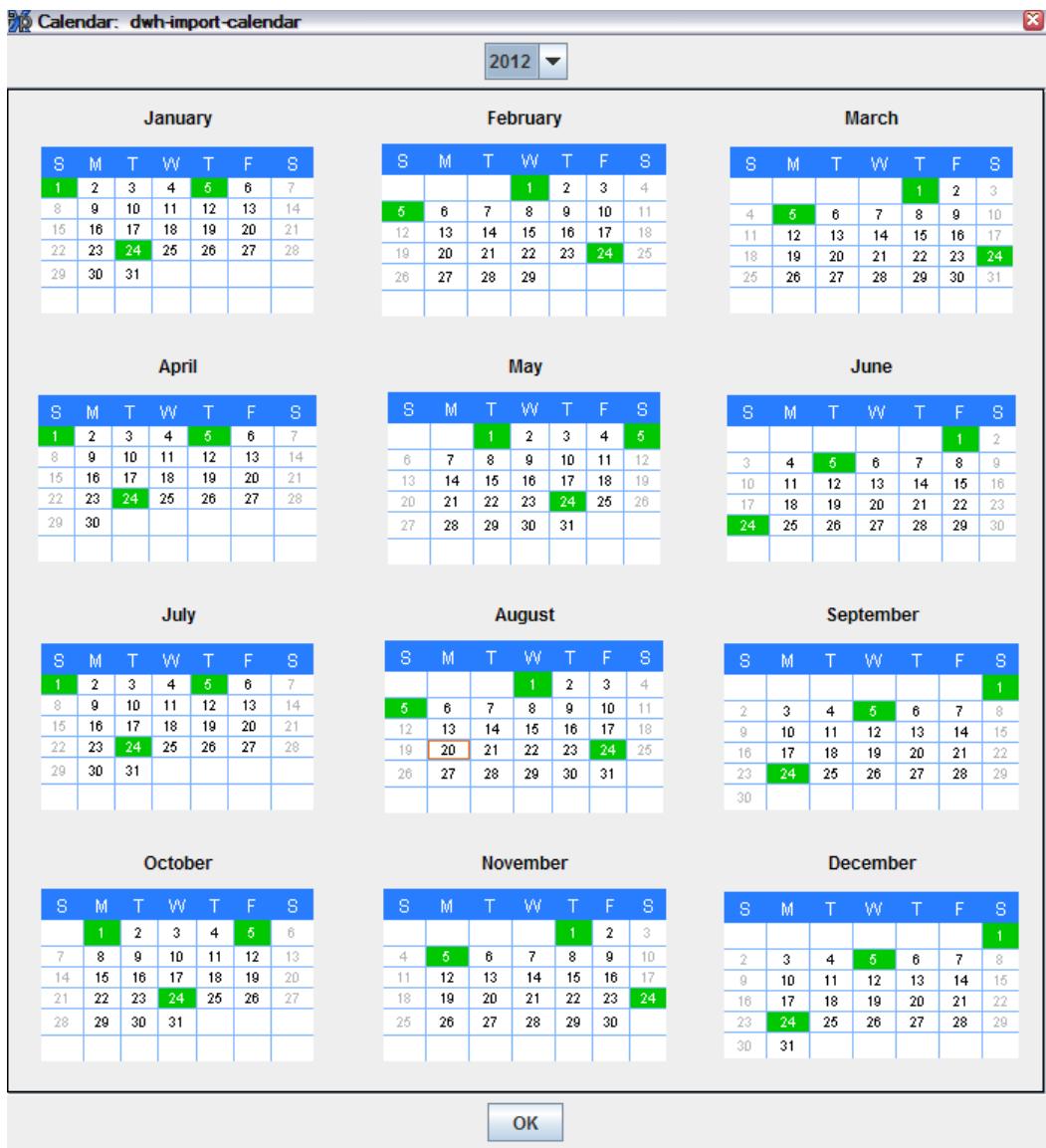
7.5.5 Calendars

This menu item is shown only for those jobs that use a “run_calendar” or “exclude_calendar”. You can view the name and the dates assigned to that each calendar by selecting the menu item. The calendar shown is “Read only” and no changes are permitted.



You can view one calendar year at a time by selecting the year from the drop-down list. For each year, the dates set inside the calendar definition are shown in “green” color. The name of the calendar is shown in the title bar of the window.

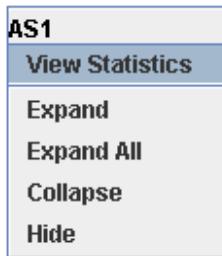
View Statistics



7.6 View Statistics

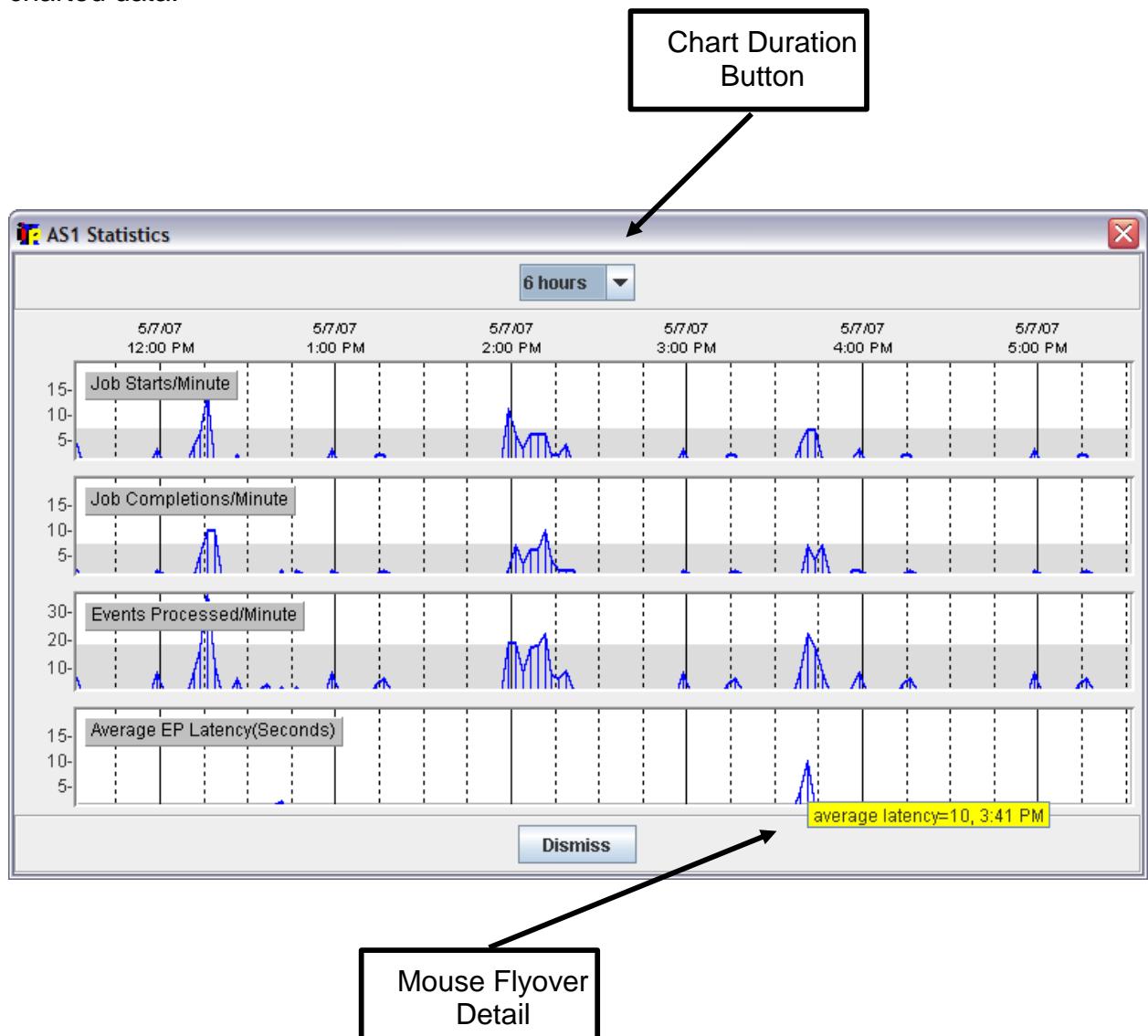
Server statistics provide a comprehensive report on the capacity, usage and performance of a CA Workload Automation AE instance. Non-admin users can see this option only if the privilege has been granted by the administrator.

Select a CA Workload Automation AE Instance icon on the Tree View, and right mouse click to see the Instance Options menu.



Select View Statistics to bring up the Server Statistics charts.

From top to bottom, the charts show the number of jobs started per minute, the number of jobs completed per minute, the events processed per minute, and the average scheduling latency time in seconds, each plotted as a function of time. The gray area of each chart is set to contain eighty percent or more of the charted data.



[View Statistics](#)

Use the chart duration button to select the time duration shown. Move the mouse over a chart to view the exact data value, and time, in the mouse flyover banner.

Using Server Statistics: These statistics provide guidance to the CA Workload Automation AE administrator for capacity planning and fulfilling service level agreements. Ideally, the scheduling latency should not be more than a few seconds and the number of jobs submitted should be as high as possible without affecting the latency. The gray area is set to show the average figures for every chart.

8 iXp CLIENT CLI

iXp provides a set of command line tools that enable users to execute the CA Workload Automation AE commands sendevent, autorep, and jil from their client machine without installing the CA Workload Automation AE software. These commands interface with the iXp Server and the actual execution of CA Workload Automation AE commands occurs on the iXp Server. The results of execution are passed back to the client. All the parameters supported by the actual CA Workload Automation AE commands can be passed to the iXp commands, including input files.

8.1 Installation

The iXp Client CLI is a self-contained set of files that has to be copied to each machine from where the commands will be executed. The total disk space required for these files is less than 3Mb.

Once the files have been copied, you have to set two environment variables and create a configuration file.

Environment Variables

IXP_HOME=<Directory where software resides>
AUTOSERV=<CA Workload Automation AE Instance name>

where

IXP_HOME = The Base directory where the iXp Client CLI has been installed.
AUTOSERV = The 3-letter name of the CA Workload Automation AE instance for which the command is being executed. This variable can be set before each execution, if the commands are being used for multiple instances.

For example,

IXP_HOME=C:\ixphome
AUTOSERV=ACE

Optional variables

IXP_SERVER_URL=<http://IXP_SERVER:PORT>
IXP_SERVER_URL_2=<http://IXP_SERVER:PORT>

Installation

If these variables are defined, the Configuration File (see below) is ignored.

Configuration File

You must create a configuration file under the IXP_HOME/etc directory if the IXP_SERVER_URL variable is not defined in the environment. This file called *ixp.conf* contains a single line that provides the URL of the iXp Server to the Client CLI.

The following command will create this file:

```
echo "IXP_SERVER_URL=http://IXP_SERVER:PORT" >  
$IXP_HOME/etc/ixp.conf
```

(UNIX/Linux)

```
echo IXP_SERVER_URL=http://IXP_SERVER:PORT >  
%IXP_HOME%\etc\ixp.conf
```

(Windows)

where

IXP_SERVER = The machine/IP address of the iXp Server
PORT = The HTTP port number of the iXp Server.

For example,

```
echo IXP_SERVER_URL=http://venus:8080 > C:\ixphome\etc\ixp.conf
```

If the *IXP_SERVER_URL* variable is defined in the environment, the configuration file is ignored. Once the configuration file has been created or the variable defined, you can run the client CLI.

If there is an alternate iXp server running for high availability, then an additional line can be added in the file to provide its connection information to the CLI.

```
echo "IXP_SERVER_URL_2=http://IXP_SERVER_2:PORT" >>  
$IXP_HOME/etc/ixp.conf
```

where

IXP_SERVER_2 = Machine/IP address of the alternate iXp Server
PORT = The HTTP port of the alternate iXp Web Server

Similarly, the above can be set as an environment variable.

8.2 Commands

The iXp Client CLI provides six commands in the \$IXP_HOME/bin directory. All except one are counterparts to CA Workload Automation AE commands. Each command has the same syntax as its CA Workload Automation AE counterpart, and accepts the same input and parameters.

When you execute any command, the parameters and input file, along with your authentication information, are passed to the iXp Server defined in your configuration file. If you have been assigned the authorization to execute the command for all the parameters and input provided, the iXp Server will run the original CA Workload Automation AE counterpart, capture the results, and send them back to you.

8.2.1 ixautorep

The **ixautorep** command is the iXp counterpart of the CA Workload Automation AE “**autorep**” command. It accepts the same list of parameters that you can pass to the “autorep” command.

The following shows the syntax for the ixautorep command. Notice how it is actually the syntax of the CA Workload Automation AE “autorep” command.

```
C:\ixphome\bin>ixaautorep

Usage: [-J Jobname] <-d | -s | -q | -t | -o [Override #] | -w>
       [-R run_num] [-L Print Level] [-N Retry] [-x]
       [-G GlobalName] [-M MachineName] [-D TNS_alias_name]
       IF OverRide# = 0, it will display OverRide Currently in
Effect.

Error in command line for autorep.
JobName OR GlobalName OR MachineName is required.
```

When you run the ixautorep command with the “-J” option, it will provide the Summary, Detail, or Definition output, depending on the parameters. Only those jobs for which you are authorized will be displayed.

Commands

Job Name	Last Start	Last End	ST	Run	Pri/Exit
Invent_ProcPrePay1	05/08/2007 10:06:30	05/08/2007 10:08:30	SU	1649/1	
Invent_ProcBonusPay1	05/08/2007 10:10:42	05/08/2007 10:12:41	SU	1649/1	
Invent_ProcPrePay2	05/08/2007 10:06:30	05/08/2007 10:08:30	SU	1649/1	
Invent_ProcBonusPay2	05/08/2007 10:10:41	05/08/2007 10:12:40	SU	1649/1	
Invent_ProcPrePay3	05/08/2007 10:06:32	05/08/2007 10:08:32	SU	1649/1	
Invent_ProcBonusPay3	05/08/2007 10:10:52	05/08/2007 10:12:51	SU	1649/1	
Invent_ProcPrePay4	05/08/2007 10:06:33	05/08/2007 10:08:35	SU	1649/1	
Invent_ProcBonusPay4	05/08/2007 10:10:53	05/08/2007 10:12:53	SU	1649/1	
Invent_ProcPrePay5	05/08/2007 10:06:33	05/08/2007 10:08:34	SU	1649/1	
Invent_ProcBonusPay5	05/08/2007 10:10:52	05/08/2007 10:12:53	SU	1649/1	
Invent_ProcPrePay6	05/08/2007 10:06:34	05/08/2007 10:08:36	SU	1649/1	
Invent_ProcBonusPay6	05/08/2007 10:10:53	05/08/2007 10:12:54	SU	1649/1	
Invent_ProcPrePay7	05/08/2007 10:06:34	05/08/2007 10:08:37	SU	1649/1	
Invent_ProcBonusPay7	05/08/2007 10:10:53	05/08/2007 10:12:56	SU	1649/1	
Invent_ProcPrePay8	05/08/2007 10:06:34	05/08/2007 10:08:38	SU	1649/1	
Invent_ProcBonusPay8	05/08/2007 10:10:54	05/08/2007 10:12:57	SU	1649/1	
Invent_ProcPrePay9	05/08/2007 10:06:34	05/08/2007 10:08:39	SU	1649/1	
Invent_ProcBonusPay9	05/08/2007 10:10:57	05/08/2007 10:13:01	SU	1649/1	
Invent_ProcPrePay10	05/08/2007 10:06:35	05/08/2007 10:08:40	SU	1649/1	
Invent_ProcBonusPay10	05/08/2007 10:10:57	05/08/2007 10:13:01	SU	1649/1	
Payroll_PRE_box1	05/08/2007 10:00:06	05/08/2007 10:10:36	SU	1647/1	
Payroll_CalcPaysheet1	05/08/2007 10:00:11	05/08/2007 10:01:51	SU	1647/1	
Payroll_CalcVacations1	05/08/2007 10:01:54	05/08/2007 10:03:35	SU	1647/1	
Payroll_CalcRetro1	05/08/2007 10:03:38	05/08/2007 10:05:19	SU	1647/1	
Payroll_CalcPrePay1	05/08/2007 10:05:23	05/08/2007 10:07:04	SU	1647/1	
Payroll_CalcSickTime1	05/08/2007 10:07:08	05/08/2007 10:08:49	SU	1647/1	
Payroll_CalcBonusPay1	05/08/2007 10:08:53	05/08/2007 10:10:34	SU	1647/1	
Payroll_PRE_box2	05/08/2007 10:00:06	05/08/2007 10:10:38	SU	1647/1	
Payroll_CalcPaysheet2	05/08/2007 10:00:11	05/08/2007 10:01:52	SU	1647/1	
Payroll_CalcVacations2	05/08/2007 10:01:55	05/08/2007 10:03:37	SU	1647/1	
Payroll_CalcRetro2	05/08/2007 10:03:40	05/08/2007 10:05:21	SU	1647/1	
Payroll_CalcPrePay2	05/08/2007 10:05:25	05/08/2007 10:07:06	SU	1647/1	
Payroll_CalcSickTime2	05/08/2007 10:07:10	05/08/2007 10:08:51	SU	1647/1	
Payroll_CalcBonusPay2	05/08/2007 10:08:55	05/08/2007 10:10:36	SU	1647/1	
Payroll_PRE_box3	05/08/2007 10:00:06	05/08/2007 10:10:37	SU	1647/1	
Payroll_CalcPaysheet3	05/08/2007 10:00:11	05/08/2007 10:01:52	SU	1647/1	
Payroll_CalcVacations3	05/08/2007 10:01:55	05/08/2007 10:03:36	SU	1647/1	
Payroll_CalcRetro3	05/08/2007 10:03:40	05/08/2007 10:05:21	SU	1647/1	
Payroll_CalcPrePay3	05/08/2007 10:05:24	05/08/2007 10:07:05	SU	1647/1	
Payroll_CalcSickTime3	05/08/2007 10:07:08	05/08/2007 10:08:49	SU	1647/1	
Payroll_CalcBonusPay3	05/08/2007 10:08:53	05/08/2007 10:10:35	SU	1647/1	
Payroll_PRE_box4	05/08/2007 10:00:06	05/08/2007 10:10:38	SU	1647/1	
Payroll_CalcPaysheet4	05/08/2007 10:00:13	05/08/2007 10:01:53	SU	1647/1	
Payroll_CalcVacations4	05/08/2007 10:01:57	05/08/2007 10:03:38	SU	1647/1	
Payroll_CalcRetro4	05/08/2007 10:03:41	05/08/2007 10:05:22	SU	1647/1	
Payroll_CalcPrePay4	05/08/2007 10:05:25	05/08/2007 10:07:06	SU	1647/1	
Payroll_CalcSickTime4	05/08/2007 10:07:10	05/08/2007 10:08:51	SU	1647/1	
Payroll_CalcBonusPay4	05/08/2007 10:08:55	05/08/2007 10:10:36	SU	1647/1	
Payroll_CalcPay_box	05/08/2007 10:10:37	05/08/2007 10:14:13	SU	1647/1	
Payroll_CalcPay1	05/08/2007 10:10:47	05/08/2007 10:12:24	SU	1647/1	
Payroll_CalcPay2	05/08/2007 10:10:49	05/08/2007 10:12:25	SU	1647/1	
Payroll_CalcPay3	05/08/2007 10:10:50	05/08/2007 10:12:25	SU	1647/1	
Payroll_CalcPay4	05/08/2007 10:10:51	05/08/2007 10:12:27	SU	1647/1	
Payroll_PrintPaySlip1	05/08/2007 10:12:28	05/08/2007 10:14:09	SU	1647/1	
Payroll_PrintPaySlip2	05/08/2007 10:12:29	05/08/2007 10:14:10	SU	1647/1	
Payroll_PrintPaySlip3	05/08/2007 10:12:29	05/08/2007 10:14:10	SU	1647/1	
Payroll_PrintPaySlip4	05/08/2007 10:12:30	05/08/2007 10:14:11	SU	1647/1	

When you run the ixautorep command with the “-M” or “-G” parameters, to view information about Virtual Machines or Global Variables respectively, all the machines and global variables will be displayed.

8.2.2 ixsendevent

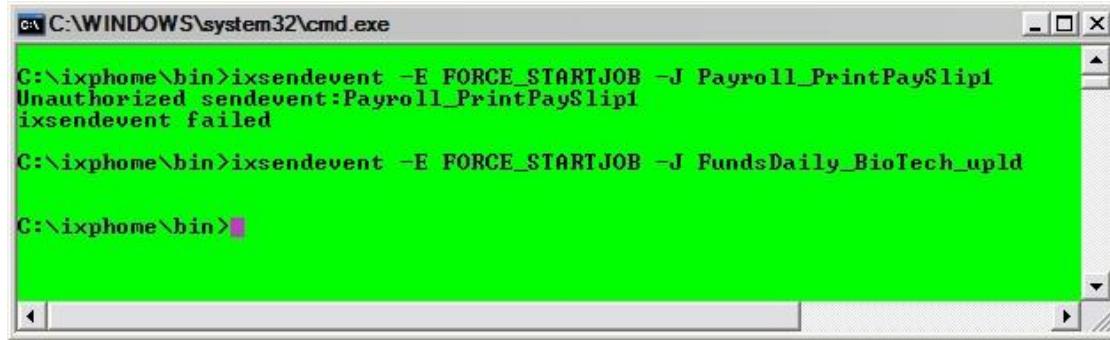
The **ixsendevent** command is the iXp counterpart of the CA Workload Automation AE “**sendevent**” command.

The syntax of the ixsendevent command is as follows:

```
C:\ixphome\bin>ixsendevent
```

```
Usage: sendevent -E EVENT [-S AUTOSERV] [-A Alarm] [-J JobName]
           [-s Status] [-P Event Priority] [-M Max Send
Trys ]
           [-q Job Que Priority] [-G Global=Value] [-C
Comment]
           [-U (Un-SENDEVENT)] [-T Time of Event] [-K
Signal(s)]
```

Error in command line for sendevent.
Event [-E] is required.



The screenshot shows a Windows command prompt window titled 'cmd C:\WINDOWS\system32\cmd.exe'. It contains two lines of text output from the 'ixsendevent' command:

```
C:\ixphome\bin>ixsendevent -E FORCE_STARTJOB -J Payroll_PrintPaySlip1
Unauthorized sendevent:Payroll_PrintPaySlip1
ixsendevent failed

C:\ixphome\bin>ixsendevent -E FORCE_STARTJOB -J FundsDaily_BioTech_upld
```

When you run the `ixsendevent` command with the “-J” option, it will issue the `sendevent` to the job only if you are authorized to do so. Otherwise, the iXp Server will return a security exception.

You can pass any valid parameter supported by the CA Workload Automation AE “**`sendevent`**” command.

NOTE: `ixsendevent` does not allow “*-E STOP_DEMON*” events. These events have to be issued from your normal commands or interfaces.

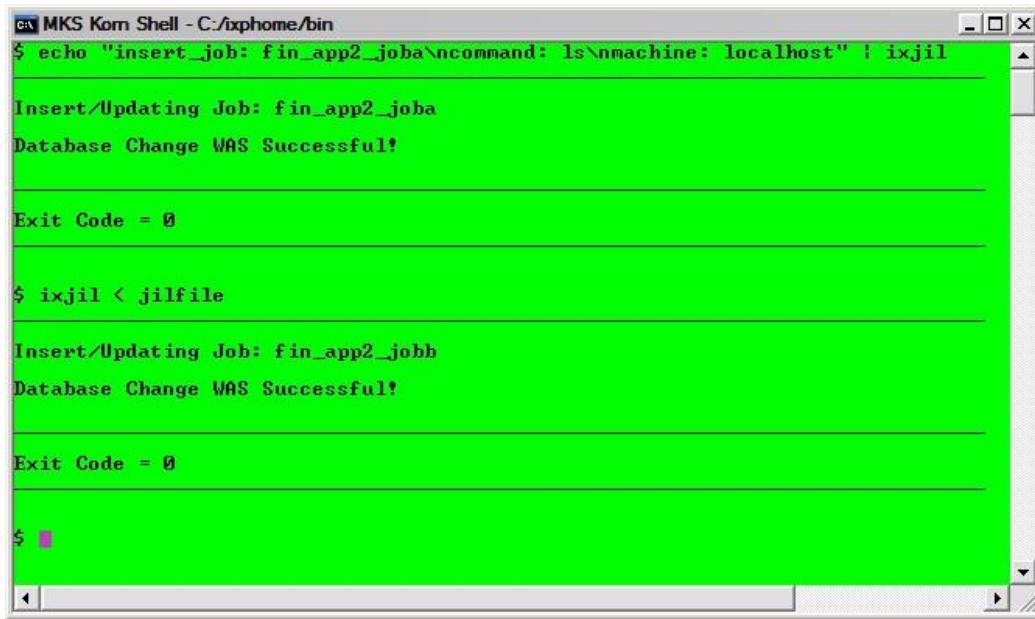
8.2.3 ixjl

The `ixjl` command is the iXp counterpart for the CA Workload Automation AE “*jil*” command. This command enables you to create, update, or delete CA Workload Automation AE job and machine definitions using valid JIL statements.

You can run the `ixjl` command only in the batch mode. You have to either pass a filename or valid JIL statements as standard input.

In the screen below, you can see how the `ixjl` command is executed with JIL statements and filename as standard input.

Commands



```
ca MKS Korn Shell - C:/ixphome/bin
$ echo "insert_job: fin_app2_joba\ncommand: ls\nmachine: localhost" | ixjil
Insert/Updating Job: fin_app2_joba
Database Change WAS Successful!

Exit Code = 0

$ ixjil < jilfile
Insert/Updating Job: fin_app2_jobb
Database Change WAS Successful!

Exit Code = 0

$
```

When you create, update, or delete job definitions, the name of the job has to match your authorizations. If the authorizations have been implemented with naming standards in place, the job name has to meet your naming standards also.

In the example below, the user is authorized to create jobs with job names matching any of the following expressions:

```
fin_*_*
pay_*_*
```



```
ca MKS Korn Shell - C:/ixphome/bin
$ echo "insert_job: fin_app2_jobc\ncommand: ls\nmachine: localhost" | ixjil
Insert/Updating Job: fin_app2_jobc
Database Change WAS Successful!

Exit Code = 0

$ echo "insert_job: pay_app1_joba\ncommand: ls\nmachine: localhost" | ixjil
Insert/Updating Job: pay_app1_joba
Database Change WAS Successful!

Exit Code = 0

$ echo "insert_job: pay2_app1_joba\ncommand: ls\nmachine: localhost" | ixjil
Unauthorized JIL request:job name=pay2_app1_joba
ixjil failed
$
```

As shown above, the JIL insert statement for job `pay2_app1_joba` failed as it did not meet the authorization.

NOTE: If the standard input to ixjil is a filename, the entire file should contain JIL statements that meet your authorizations. If it contains even one JIL statement that does not meet your authorization, the entire file will be rejected.

8.2.4 ixautostatus

The **ixautostatus** command is the iXp counterpart for the CA Workload Automation AE “**autostatus**” command. This command enables you to view the current status or value of a single CA Workload Automation AE job or global variable respectively.

The syntax of the ixautostatus command is as follows:

```
C:\ixphome\bin>ixautostatus  
Usage: <-J JobName> OR <-G GlobalName> [-S AUTOSERV]  
  
Error in command line for autostatus.
```

For example,

```
C:\ixphome\bin>ixautostatus -J EuropeDailyBox  
SUCCESS
```

8.2.5 ixjob_depends

The **ixjob_depends** command is the iXp counterpart for the CA Workload Automation AE “**job_depends**” command. This command enables you to view the list of job dependencies, the current status of predecessor and successor jobs of a single job, or a forecast report of all jobs scheduled to run within a specific time frame and their successors.

The syntax of the ixjob_depends command is as follows:

```
C:\ixphome\bin>ixjob_depends  
  
JobName is required.  
  
Must specify Mode:  
c Current Condition Status  
d Dependencies Only (from Job Definition)  
t Time Dependencies (Forecasts)
```

```
Usage: job_depends< -c | -d | -t | -t -s | -t -e | -t -e -s  
><-J JobName> | -w
```

Commands

```
[ -F From Date/Time (MM/DD/YYYY HH:MM) ]  
[ -T To Date/Time]  
[ -L Print Level]      [ -D TNS_alias_name]
```

*** Error in command line for job_depends.***

The sample output of ixjob_depends command is as follows:

```
C:\temp>ixjob_depends -j EuropeDailyBox -c  
  
Job Name           Status     Date Cond?    Start Cond?  Dependent Jobs?  
EuropeDailyBox     SUCCESS   03/30/2010 10:30    Yes       Yes  
Condition: s<AsiaDailyBox> and v<OKTORUN> = YES  
Atomic Condition  
SUCCESS<AsiaDailyBox>  
VALUE<OKTORUN>  
Dependent Job Name  
FranceDailyBox  
Testbox_a  
  
Current Status T/F  
SUCCESS      T  
YES          T  
Condition  
SUCCESS<EuropeDailyBox>  
SUCCESS<EuropeDailyBox>  
  
C:\temp>
```

8.2.6 ixautocal_asc

The **ixautocal_asc** command enables you to view, create, modify, and delete standard CA Workload Automation AE calendars. The functionality is similar to the CA Workload Automation AE autocal_asc command.

You can use all command line arguments of standard autocal_asc with benefit of ixp security and audit.

The following example shows the command being executed with a filename that contains lines to add dates to a calendar:

```
#>cat infile  
TESTCAL  
A  
08/05/2011  
09/05/2011  
10/05/2011  
  
#>ixautocal_asc<infile  
Utility to Add/Delete or Print entries in Calendar.
```

Calendar Name: Add (A) or Delete (D) or Print (P) ?

```
Date (MM/DD/YYYY [HH:MM]): ...Successful.  
Date (MM/DD/YYYY [HH:MM]): ...Successful.
```

```
Date (MM/DD/YYYY [HH:MM]):      ...Successful.  
Date (MM/DD/YYYY [HH:MM]):
```

The following example shows the command being executed with standard input that prints out the dates in a calendar:

```
#>echo "TESTCAL\nP" |ixaautocal_asc  
Utility to Add/Delete or Print entries in Calendar.  
  
Calendar Name: Add (A) or Delete (D) or Print (P) ?  
  
Days in the Calendar: TESTCAL  
-----  
08/05/2011 00:00  
09/05/2011 00:00  
10/05/2011 00:00
```

8.2.7 ixflags

The **ixflags** command is a command to view the current version of iXp Client.

```
$ ixflags  
  
iXp-11.3.5.X
```

NOTE: This command is **not** a counterpart to the CA Workload Automation AE “**autoflags**” command. The “X” character in the preceding response shows the build number.

8.2.8 ixuserjobcmd

The **ixuserjobcmd** command allows you run a user command previously defined in AdminTool.

Specify the command and job names that this command will operate upon. The command return results in a standard output.

NOTE you must have rights to run user job commands.

```
usage: ixuserjobcmd v11.3.5.5097
```

```
-c,--command <arg>      REQUIRED. User job-command name.  
  
-j,--job <arg>          REQUIRED. Job name or comma  
                         separated list of job names  
                         that are passed to a user job-  
                         command. If fullname is not
```

Commands

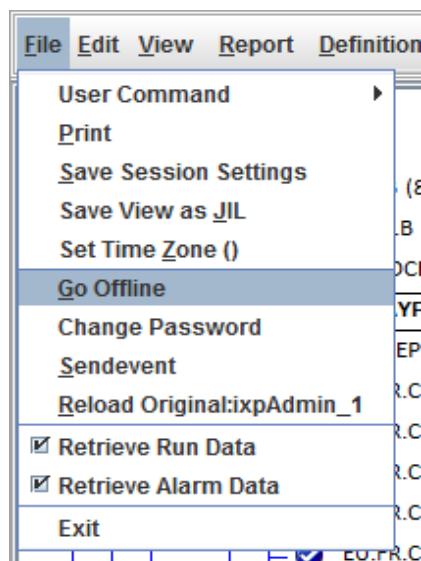
	used, current instance is added to job name. Job name will be set to env. variable <code>IXP_USERCOMMAND_JOB_NAME</code> and <code>IXP_USERCOMMAND_JOB_FULL_NAME</code> .
<code>-i,--input <arg></code>	Custom user input. Input will be set into env. variable <code>IXP_USERCOMMAND_INPUT</code>
<code>-s,--autoserv <arg></code>	CA WAAE (Autosys) instance to be used. If not specified the one from env. variable <code>AUTOSERV</code> is used.
<code>-x,--version</code>	Shows client version.
<code>-h,--help</code>	Shows this help.

9 INTERACTIVE FORECASTING

A key function of iXp is the ability to perform interactive forecasting and simulations. Forecast reports can be generated and simulations played back. All job run simulations are done by iXp and not actually run on CA Workload Automation AE. Simulation is based on historical averages and resolution of job dependencies as defined within CA Workload Automation AE. The results of a simulation can be viewed as steps-through-time and also can be saved in a report. Simulation also provides the ability to perform “what-if” scenarios that could help during decision-making.

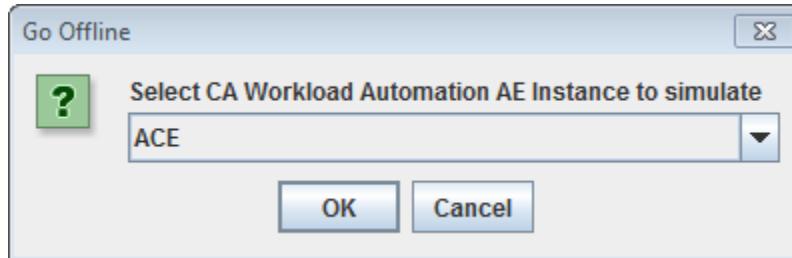
9.1 Go Offline

iXp has two modes, Online and Offline. Interactive forecasting can be performed only during Offline mode. When Offline mode is started all job dependencies and relevant attributes are loaded on the client, and during Offline mode job runs and current statuses are not loaded or shown. As a result, in Offline mode all jobs are initially marked as INACTIVE. Although the job data is highly compressed during Offline mode, it could impact the client machine performance because all that data is stored in memory on the client machine when a user decides to enter Offline mode. Therefore, iXp allows users to enter Offline mode with data for a single CA Workload Automation AE instance only. If iXp is monitoring more than one CA Workload Automation AE instance, the user is presented with a selection of CA Workload Automation AE instances when entering Offline mode.



Forecast Configuration

Select the **File ▶ Go Offline** menu option to enter iXp Offline mode and enable Interactive Forecasting. First, a dialog box prompts the user to select the instance on which the forecasting is to be performed.



The offline mode will copy all the data of the selected instance to the local machine. All forecasting and simulation activities will be performed on that local snapshot.

Once in Offline mode, iXp presents jobs that match the current filter and also four new buttons that control interactive forecasting.



9.1.1 Rewind, Play, Pause

Clicking the **Play** button starts the forecast simulation sequences.

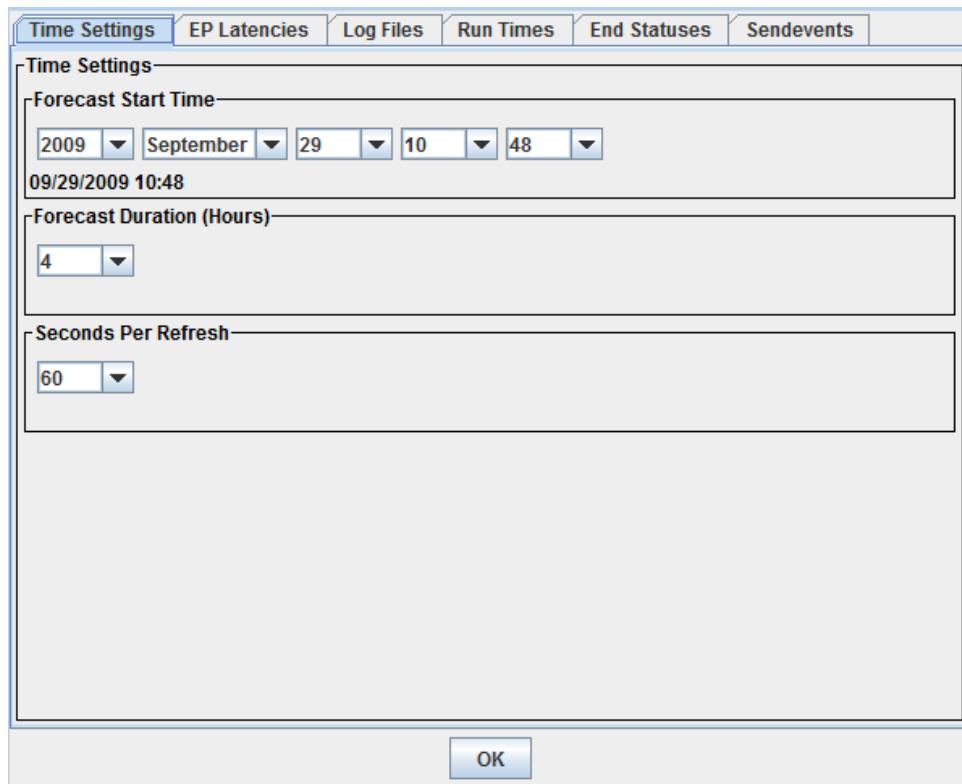
Simulations can be paused by clicking the **Pause** button and filters can be changed to view different jobs.

The **Rewind** button restarts a simulation with the same parameters.

9.2 Forecast Configuration

The **Customize** button opens the dialog for setting all the parameters for the simulation or forecasting. Once all the parameters have been defined, the user can also create or select the appropriate iXp filter. During the simulation, only jobs that match the filter will be shown in the views. For example, if you want a simulation to view all jobs that would run on a particular set of machines during a specific date and time, a filter would have to be created or selected that would have the "Run Machine" attribute defined with the appropriate set of machines. Then, once the date and time values are set in the "Customize" panel, only the

jobs that would run on those machines would be shown during the simulation. However, iXp would still perform a complete and comprehensive simulation of the selected CA Workload Automation AE instance, but only show jobs that match the selected filter.



There are six tabs that bring up different customizing options: Time Settings, EP Latencies, Log Files, Run Times, End Statuses and Sendevents. Use the options under each tab to customize the forecast as follows:

9.2.1 Time Settings

The Time Settings tab enables you to customize the forecast time window by selecting new values for the following attributes:

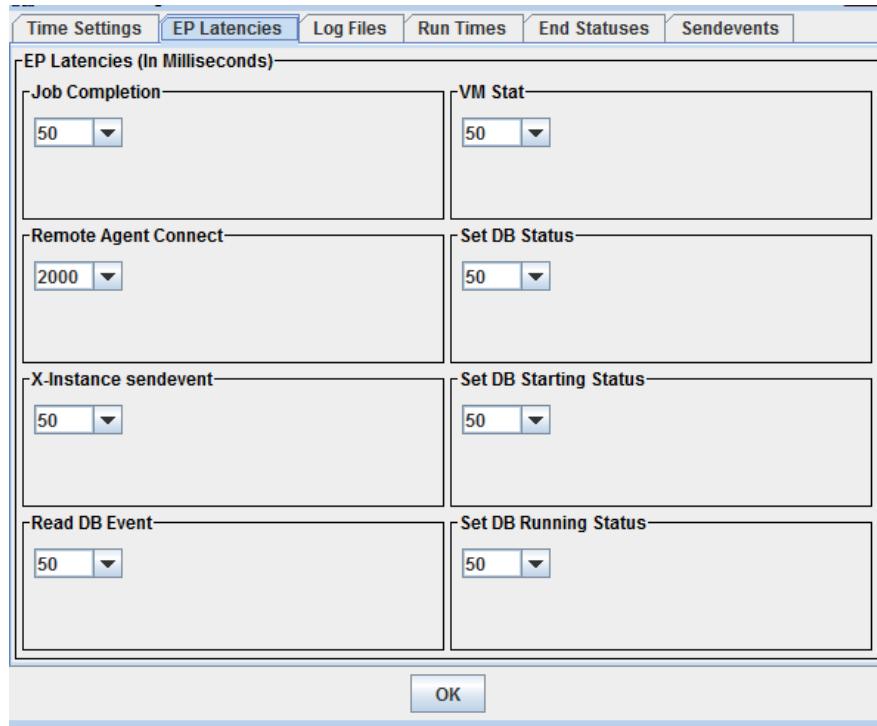
Time Settings Field	Description
Forecast Start Time	The year, month, day, hours and second for the forecast start time. Default value: current date and time.
Forecast Duration	The number of hours of forecast time. Default value: 4hrs.
Seconds Per Refresh	The number of simulated seconds per forecast

Forecast Configuration

Time Settings Field	Description
	window refresh (the “speed” of the forecast). Default value: 60 seconds.

Select **OK** to apply the changes and close the Forecast Configuration window.

9.2.2 EP Latencies



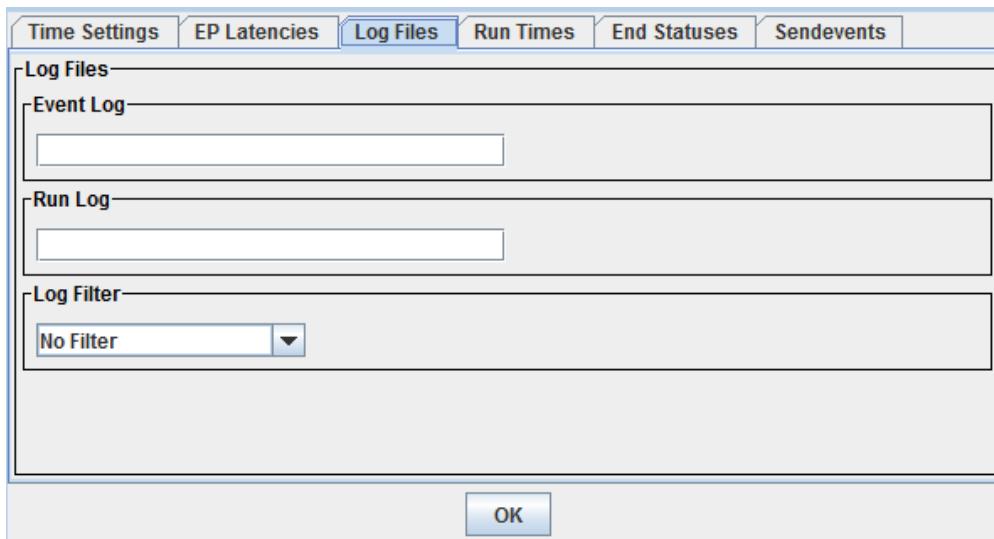
This dialog lets you set the forecast scheduling latencies, in milliseconds. These **EP Latencies** variables are described in the Section 5.8 *Forecast of the CA Workload Automation iXp Administration Guide*, corresponding as follows:

EP Latencies Field	Forecast Property Variable
Job Completion	setDoneStatusTimeMillis
VM Stat	vmstatTimeMillis
Remote Agent Connect	StartJobTimeMillis
Set DB Status	setStatusTimeMillis
X-Instance sendevent	xinstanceSendeventTimeMillis

EP Latencies Field	Forecast Property Variable
Set DB Starting Status	setStartingTimeMillis
Read DB Event	readEventTimeMillis
Set DB Running Status	setRunningTimeMillis

9.2.3 Log Files

Interactive Forecasting can create **log files** for textual reports of the jobs forecast. These files are stored on the local machine where the simulation was performed.



Log Files Field	Description
Event Log	Where to place the event log file (path and file name).
Run Log	Where to place the run log file (path and file name).
Log Filter	Filter for data content of the log files. The Log Filter selections are described in the Chapter 6: JOB FILTERS of this document.

9.2.4 Run Times

Forecast Configuration

The screenshot shows the 'Run Times' tab of the Forecast Configuration dialog box. At the top, there are tabs for Time Settings, EP Latencies, Log Files, Run Times, End Statuses, and Sendevents. The Run Times tab is selected.

Job Name: CACDaily_CAC_ftp2^DEV

Current Average Run Time: 00h05m00s

Assigned Run Time: 00h08m00s (with dropdown menus for hours, minutes, and seconds)

Run Time: Add CACDaily_CAC_ftp2^DEV 00h08m00s

Simulated Run Times: Delete CACDaily_CAC_ftp2^DEV 00h08m00s

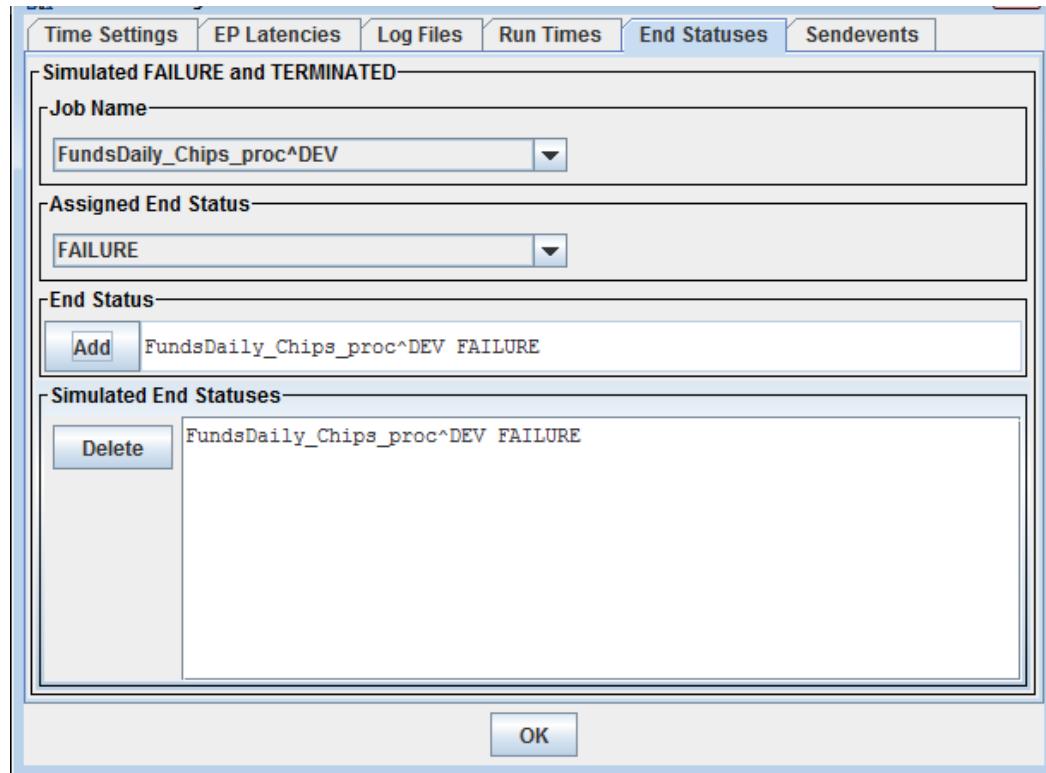
At the bottom right is an **OK** button.

Customize run times for specific jobs. Assigning new run times for a job overrides the average run time values for the next forecasted run of the job.

Run Times Field	Description
Job Name	Name of job to which new run time is to be assigned.
Current Average Run Time	The average run time currently used by the forecaster.
Assigned Run Time	The hours, minutes and seconds for a new run time may be built with the h, m, spicklists. The resulting run time is combined with the Job Name in the Run Time field.
Run Time	This field combines the Assigned Run Time with the Job Name fields. This may also be edited directly. Select Add to add the newly assigned time to the update list.
Simulated Run Times	This is a running list of all the run times one is preparing to add to the simulation. Run times on the list may be deleted by highlighting them and selecting Delete . (The same <i>Selecting</i>

Run Times Field	Description
	<i>multiple jobs</i> method may be used as in other windows.) Once you select OK , the job names and times listed here will be assigned.

9.2.5 End Statuses



Customize **End Status** for specific jobs. Assigning a new End Status for a job overrides the current End Status, in the job forecast processing logic, for the next forecasted runs of the job. If a job runs multiple times within your forecast window, each run will end in the status specified.

End Statuses Field	Description
Job Name	Job name to which a new End Status is to be assigned in the simulation.
Assigned End Status	Pick list for End Status currently to be assigned by the forecaster.
End Status	This field combines the Job Name and Assigned End Status fields, select Add to add the newly

Forecast Configuration

End Statuses Field	Description
	assigned value to the list.
Simulated End Statuses	This is a running list of all the End Statuses one is preparing to add to the simulation. End Statuses on the list may be deleted by highlighting them and selecting Delete . (The same <i>selecting multiple jobs</i> method may be used as in other windows.) Once you select OK , the job names and End Statuses listed here will be assigned.

9.2.6 Sendevents

The screenshot shows the 'Sendevents' configuration dialog. At the top, there are tabs for Time Settings, EP Latencies, Log Files, Run Times, End Statuses, and Sendevents. The Sendevents tab is active. Below the tabs, there are several input fields and buttons:

- Time (-T):** A date and time selector showing "Now 09/29/2009 10:48".
- Job Name:** A dropdown menu containing "profile_chk^DEV".
- Events:** A dropdown menu containing "KILLJOB".
- Future Sendeevent:** A section with an "Add" button and a text field containing "sendevent -J profile_chk^DEV -E KILLJOB -T \"09/29/2009 10:48\"".
- Future Sendevents:** A section with a "Delete" button and a text field containing "sendevent -J profile_chk^DEV -E KILLJOB -T \"09/29/2009 10:48\"".
- OK:** A button located at the bottom right of the dialog.

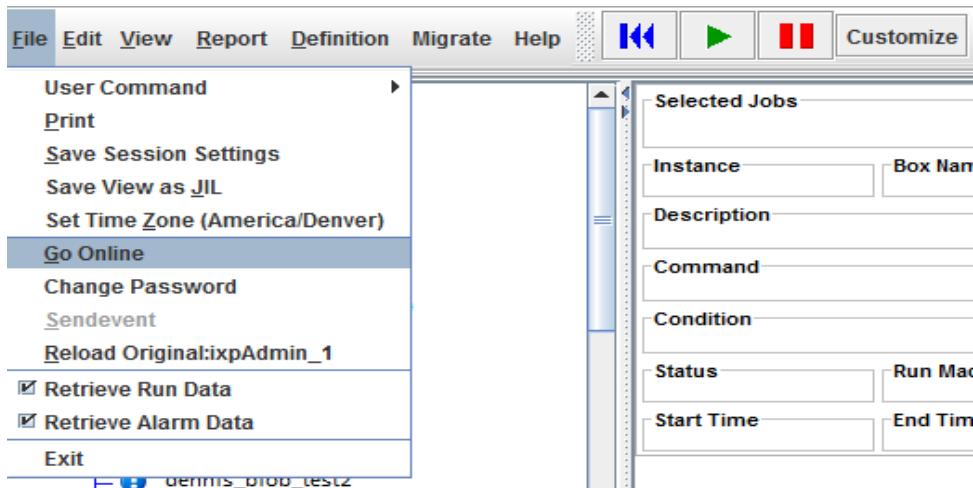
Add new **Future Sendevents** for the next iXp forecast run.

Sendevents Field	Description
Time	The time field sets the execution time of a simulated sendevent. To simulate a future Sendevent, set the time fields to appropriate future execution date and time.
Job Name	Job Name to which a new Sendevent is to be assigned.

Sendevents Field	Description
Events	Event portion of the Sendevent JIL.
Future Sendeevent	This field combines the Time, Job Name, and Events fields to define a Future Sendeevent. Select Add to add this one to the Future Sendevents list. The JIL populated here is essentially the same as used in CA Workload Automation AE (except for the use of ^InstanceName in the iXp syntax).
Future Sendevents	This is a running list of all the Future Sendevents one is preparing to add to the simulation. Future Sendevents on the list may be deleted by highlighting them and selecting Delete . (The same jobs method may be used as in other windows.) Once you select OK , the job names and End Statuses listed here will be assigned.

9.2.7 Return iXp to Online Mode

Select the **File▶Go Online** menu option to return iXp to online mode as shown below:



When you return to online mode, Interactive Forecasting in iXp is disabled, and job runs and current statuses from the CA Workload Automation AE instances are again loaded and shown in iXp. The next time you select the **File▶Go Offline** menu option, the Interactive Forecasting properties will be reset to the current job properties and defaults, all job dependencies and relevant attributes will be loaded on the client, and job runs and current statuses will not be loaded or shown.

View Forecast Run Data

Thus if one does not want to lose the information gained from a simulation in Offline Mode, the *log files* should be kept in saved file names.

9.3 View Forecast Run Data

Forecast jobs (jobs generated by the iXp Daemon rather than by CA Workload Automation AE) appear in the *Run Data* table (on the Job Tools Pop-up, Job Information menu) with job index number listed as **SIMULATED**, for example:

testjob^AS2:Runs=11						
	Status	Start Time	End Time	Duration	Exit Code	Run Machine
SIMULATED	SUCCESS	2011-07-27 11:15:02 MDT	2011-07-27 11:16:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 11:00:02 MDT	2011-07-27 11:01:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 10:45:02 MDT	2011-07-27 10:46:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 10:30:02 MDT	2011-07-27 10:31:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 10:15:02 MDT	2011-07-27 10:16:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 10:00:04 MDT	2011-07-27 10:02:01 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 09:45:02 MDT	2011-07-27 09:46:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 09:30:02 MDT	2011-07-27 09:31:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 09:15:02 MDT	2011-07-27 09:16:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 09:00:02 MDT	2011-07-27 09:01:59 MDT	01m57s	0	aragorn
SIMULATED	SUCCESS	2011-07-27 08:45:02 MDT	2011-07-27 08:46:59 MDT	01m57s	0	aragorn

[Refresh](#) [View Detail](#) [Create Report](#) [Close](#)

9.4 Errors and Warnings

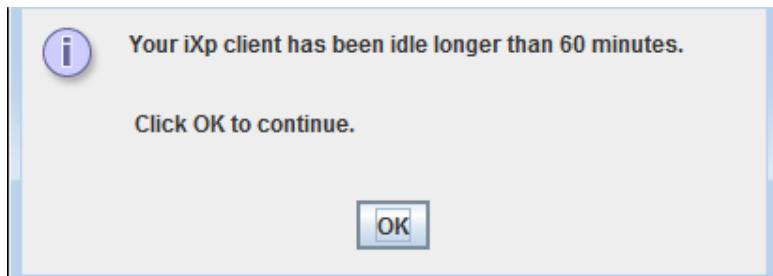
The iXp client provides various indications to the user about problems that iXp may be experiencing. These indications are provided via the means of messages, warnings or certain behavior.

9.4.1 Warning for old data

The iXp Daemon continuously reads data from the CA Workload Automation AE databases. The daemon also incorporates the acquired data in the iXp cache that is read by the iXp clients. If the iXp Daemon is unable to read data from a CA Workload Automation AE instance, then it will not update the cache. To alert the user of such a condition, the iXp client will update the Instance monitor to indicate that the Instance is not refreshing. The Instance monitor is shown in the lower left corner of the client. Also, if the cache has not been updated in five minutes, the iXp client will get an error dialog message indicating the condition.

9.4.2 No Activity Warning

The iXp administrator has the ability to set a time out for inactive GUIs. If there is no activity in the GUI for the given number of minutes, a notification dialog will appear:



Clicking the OK button will return the iXp Client to normal refresh behavior.

9.4.3 iXp Client is “Out Of Memory”

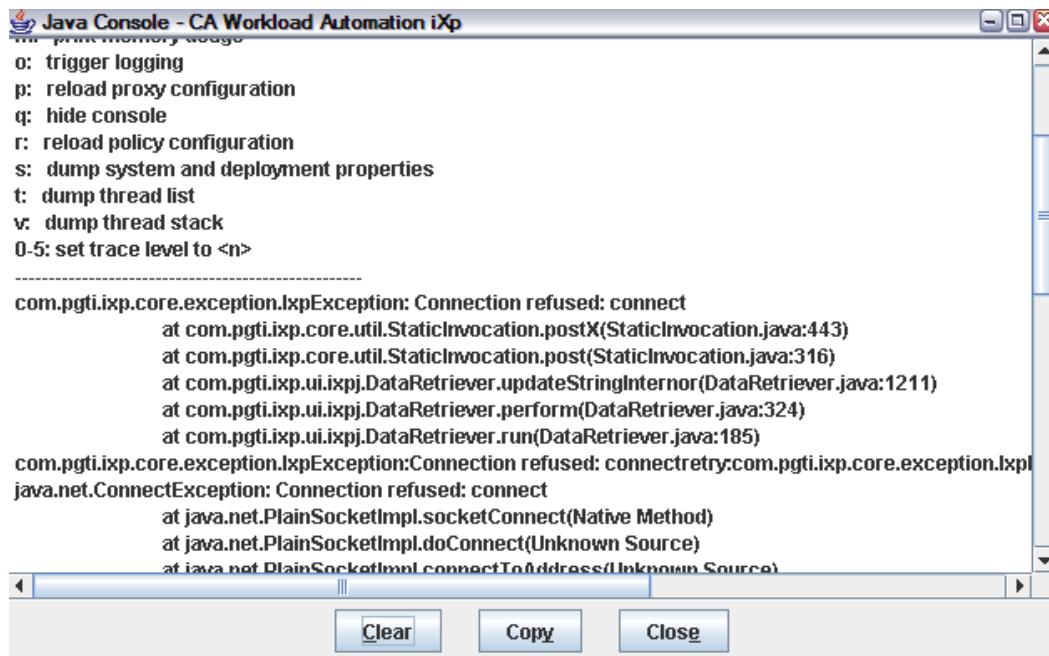
The Java environment for the iXp client is configured with Java Runtime Parameters. These parameters define how much memory can be used by the Java Environment on the client. If the iXp client’s Java environment requires slightly more memory than that defined by the parameters, the Java environment will issue an “Out Of Memory” message and exit. This message is shown in the Java Console or the Java application viewer command console if the iXp client was started from a web browser or the application viewer respectively. If the iXp client was started through Java Web Start, the message will be shown in the Java console. There may be no visual indication on the iXp client indicating that it is “Out Of Memory”. Users may notice the iXp client going through data refreshes without updating the view or the data timestamp on the lower-left corner or may notice that the iXp client is not responding. To recover from this condition, the iXp client would have to be re-opened and the memory settings for the Java environment may have to be changed.

```
J9-20 16.49.31:width=1200
J9-20 16.49.31:height=700
J9-20 16.49.31:http://titan:8082/ixp/
J9-20 16.49.31:iXp-7.2.0.4
J9-20 16.49.31:java.specification.version:1.5
J9-20 16.49.31:java.version:1.5.0_11
J9-20 16.49.31:Temp Directory:C:\DOCUME~1\parag\LOCALS~1\Temp
J9-20 16.49.31:MainApplet.start():0ms
J9-20 16.49.31:init(1):31ms
#### Java Web Start Error:
#### java.lang.OutOfMemoryError: Java heap space
```

9.4.4 iXp Client gets “EOF” Exceptions

Users may notice “EOF” exception errors when performing certain operations that require the iXp client to contact the iXp server. Actions such as processing iXp reports, getting job definitions, issuing sendevents, responding to CA Workload Automation AE Alarms, and so on. may result in this exception. Typically, this occurs due to a timeout parameter setting between the iXp client and the server. The default value for this parameter is 60 (sixty) seconds. If the iXp client has not received the results of its request within this time, it will throw this exception message to the user. The iXp client will not stop functioning due to this exception. Also, this exception does not indicate the result of the action requested. For example, the user clicks a few alarms and tries to Acknowledge them. After the timeout interval, the iXp client throws the exception and continues with its refresh cycle. Meanwhile, the iXp Requestor finally updates the alarms in the CA Workload Automation AE database, but it cannot tell the user that requested the update about the completion of its work. However, the iXp client would receive the new data as a part of its refresh.

If the iXp Daemon has crashed, the iXp client will timeout for every refresh and throw the EOF exception message in the Java Console or the application viewer command window. For users that open iXp from a web browser, the Java Console is an extremely important window, as the majority of error messages would go in there. We recommend that you configure the Java environment, so that this console is opened every time.



```
Java Console - CA Workload Automation iXp
o: trigger logging
p: reload proxy configuration
q: hide console
r: reload policy configuration
s: dump system and deployment properties
t: dump thread list
v: dump thread stack
0-5: set trace level to <n>

com.pgti.ixp.core.exception.IxpException: Connection refused: connect
    at com.pgti.ixp.core.util.StaticInvocation.postX(StaticInvocation.java:443)
    at com.pgti.ixp.core.util.StaticInvocation.post(StaticInvocation.java:316)
    at com.pgti.ixp.ui.ixpj.DataRetriever.updateStringInternor(DataRetriever.java:1211)
    at com.pgti.ixp.ui.ixpj.DataRetriever.perform(DataRetriever.java:324)
    at com.pgti.ixp.ui.ixpj.DataRetriever.run(DataRetriever.java:185)
com.pgti.ixp.core.exception.IxpException:Connection refused: connectretry:com.pgti.ixp.core.exception.IxpException
java.net.ConnectException: Connection refused: connect
    at java.net.PlainSocketImpl.socketConnect(Native Method)
    at java.net.PlainSocketImpl.doConnect(Unknown Source)
    at java.net.DualStackPlainSocketImpl.connectToAddress(Unknown Source)
    at java.net.PlainSocketImpl.connectToAddress(Unknown Source)
    at java.net.PlainSocketImpl.connect(Unknown Source)

Clear Copy Close
```

10 MIGRATING WORKLOAD OBJECTS

10.1 Scenario: How to Migrate Workload Objects in CA Workload Automation iXp

As a CA Workload Automation AE scheduler, you want to migrate workload objects from an older Unicenter AutoSys JM release instance to a newer release instance. For example, you set up an instance of CA Workload Automation AE r11.3 or higher and you want to move your workload objects from the existing Unicenter AutoSys JM 4.5.1 instance over to it. While traditional Unicenter AutoSys JM 4.5.1 migration utilities such as datamover let you migrate workload objects, the migration assistant offers you the following capabilities that other utilities do not:

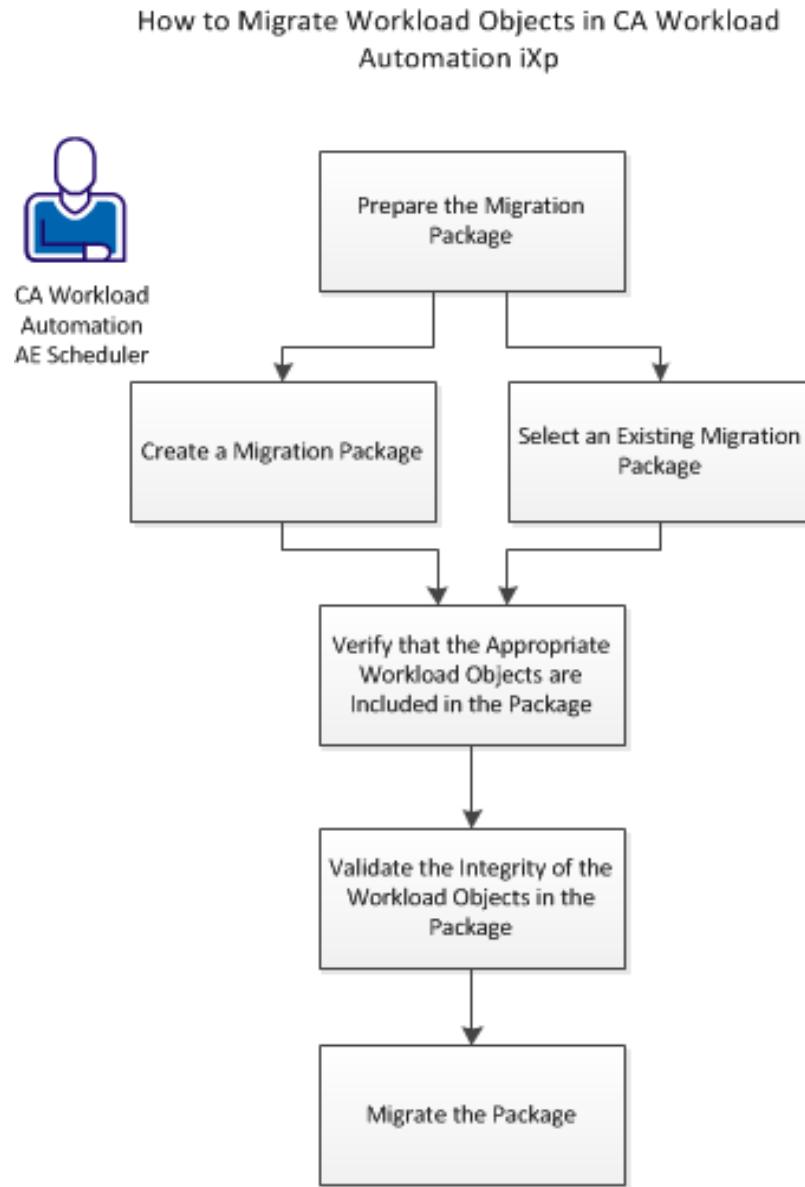
- If authorized, you can migrate the workload objects yourself instead of relying on an administrator to do it for you.
- You can define, visualize, and migrate subsets of workload objects easily to ensure that you migrate only the data you want.
- You can create a migration package for future migration.

NOTE: To migrate workload objects from an older Unicenter AutoSys JM release instance to a newer release instance, you can also use [CA Workload Automation AutoSys Upgrade Assistant \(AUA\)](#).

This scenario shows the full process of workload object migration by stepping you through creating and migrating a package. Skip any steps of the process that do not apply to you.

The following diagram illustrates how to migrate workload objects from a Unicenter AutoSys JM 4.5.1 instance to a CA Workload Automation AE r11.3 or higher instance:

Scenario: How to Migrate Workload Objects in CA Workload Automation iXp



To migrate workload objects from a Unicenter AutoSys JM 4.5.1 instance to a CA Workload Automation AE r11.3 or higher instance, follow these steps:

- 1) Prepare the migration package (see page 144) using one of the following methods:
 - [Create a migration package](#) (see page 145).
 - [Select an existing migration package](#) (see page 147).
- 2) Verify that the appropriate workload objects are included in the package (see page 148).
- 3) Validate the integrity of the workload objects in the package (see page 149).
- 4) Migrate the package (see page 151).

10.1.1 Prerequisites

Verify that the following prerequisites are met before you migrate a set of workload objects in CA Workload Automation iXp:

- You are authorized to access the iXp user interface client and logged in.
- You have the security privileges to create migration packages, migrate the package, or both.

NOTE: The Migrate tab is displayed on the iXp menu bar only when you have security privileges to create or migrate packages.

- You are familiar with transitive closures, exclusions, and conversion scripts.

NOTE: For more information about transitive closure, see Section 7.3.1 *Job Dependency Filters Definitions*.

- You are familiar with iXp filters, and you know how to create a filter to view the desired set of jobs.

10.1.2 Preparing the Migration Package

A migration package contains the set of workload objects that include jobs and their related global variables and calendars.

If you are authorized, you can prepare a package for migration using either of the following methods:

- [Create a migration package](#) (see page 145).
- [Select an existing migration package](#) (see page 147).

Both methods are described in subsequent procedures. After this step, if authorized, you can migrate the package to move workload objects from Unicenter AutoSys 4.5.1 to CA Workload Automation AE r11.3 or higher.

10.1.2.1 Create a Migration Package

To migrate a package with a set of workload objects, create a migration package based on filters. The filter can only include jobs from a single Unicenter AutoSys JM 4.5.1 instance.

Note: You must be authorized to view the details of the jobs that are shown in the filter and any dependent jobs included by transitive closure. You must have authorization to read the calendars and global variables that are associated with the jobs included in the migration package.

Follow these steps:

- 1) Log in to the iXp user interface client.
- 2) Select an existing filter from the Filter drop-down list.

Notes:

- You can also select an existing filter by clicking View, Personal filter, or Group filter. The Personal filter option shows only the filters that you have created. The Group filter option shows only the filters that are created and shared only by your group.
- If the existing filters do not include the jobs that you want to migrate, create a new filter to show only the jobs that you want.

A list of filtered jobs is displayed.

- 3) Click Migrate, Edit Migrations.
- 4) Click Create.

The Create Job Stream Migration dialog opens with the selected job filter in the Job Stream Name field.

NOTE: The job stream name, or package name, must not match any previously created package names. If you select an existing name, an error message is displayed.

- 5) Select the CA Workload Automation AE instance to which you plan to migrate the package from the Target AUTOSERV drop-down list.
- 6) (Optional) Enter a description for the package.
- 7) (Optional) Clear one or more of the following check boxes if you do not want to apply them to this migration package:

Apply Transitive Closure

Applies the transitive closure to the package. The transitive closure lets the migration assistant build a closed set of jobs that run together without breaking job flows.

Note: The transitive closure lets migration assistant amend your jobs in the package and include the dependent jobs that are not included in the active filter. Thus, a closed set of jobs is built.

Apply Exclusions

Applies the exclusion rule set to the package. The exclusion rule set excludes jobs from the migration package based on job status, machines, and other attributes that your administrator has specified.

Note: By default, the migration assistant automatically applies the rule set every time a package is created or opened.

Apply Conversion Scripts

Applies predefined conversion scripts to the package. The conversion scripts parse and modify the workload object files to meet the syntax requirements of the target instance and the internal corporate standards.

Note: For more information about exclusions and conversion scripts, see *Chapter 7: MANAGING WORKLOAD MIGRATION* in the [**CA Workload Automation iXp Administration Guide**](#).

- 8) Click OK to retrieve and include the filtered set of workload objects in the package.
- 9) Click Next.

The Migrate Job Stream dialog displays the list of jobs that are included in the package. Jobs that meet the exclusion rule set are marked as excluded.

The package is loaded with workload objects and the internal list of workload objects is built. Next, you should verify that all of the workload objects you want to migrate are included in the package.

10.1.2.2 Select an Existing Package

An existing package can be migrated if you want to do either of the following:

- Migrate workload objects you packaged previously.
- Rebuild an existing package with JIL definitions that have been modified since you created the package.

You can edit the package before migration.

Follow these steps:

- 1) Log in to the iXp user interface client.
- 2) Click Migrate, Edit Migrations.

The Migrate Job Stream dialog is displayed.

- 3) Click Edit.

The Select Migration dialog displays with a list of migration packages.

NOTE: A checkmark in the list indicates that the migration package has been loaded into the target instance.

- 4) Select the migration package, and click OK.

The migration assistant automatically checks the added, deleted, or modified jobs or job dependencies that affect the closed set of jobs. The package is loaded with workload objects and the internal list of workload objects is built.

The Migrate Job Stream dialog displays the set of workload objects included in the package.

NOTE: If the list of jobs or their dependencies have changed, the migration assistant suggests that you rebuild the package by clicking Rebuild. When you rebuild the package, the migration assistant deletes and creates a set of files. This process rebuilds the references to related global variables, calendars, machines, and owners and updates the dependent object files with current definitions.

The package is loaded with workload objects and the internal list of workload objects is built. Next, you should verify that all of the workload objects you want to migrate are included in the package.

10.1.3 Verify that the Appropriate Workload Objects are Included in the Package

The migration assistant applies the default exclusion rule to exclude particular jobs from the package that you have created or selected. The migration assistant also applies transitive closure, if enabled, to find all the dependent jobs.

You can manually include or exclude jobs from the list of jobs that are shown in the Migrate Job Stream dialog. Before the migration starts, verify that all the workload objects you want to migrate have been included in the package.

NOTE: If you have selected a predefined package to migrate, you cannot change the list of excluded jobs. If you add new jobs to the predefined package, you can manually exclude only those additional jobs.

Follow these steps:

- 1) Click the Search icon on the Migrate Job Stream dialog.

The Hide Selected Jobs dialog is displayed with the default exclusion rule set. You can view the rules to exclude jobs based on status, machine, and so on, by clicking the Status, Machines, Owner, and Miscellaneous tabs respectively.

- 2) (Optional) Do *one* of the following actions after you close the Hide Selected Jobs dialog:

- Clear the Included check box against the Level-Zero job that you want to exclude from the package.
- Select the Included checkbox against the Level-Zero job that you want to include in the package.

- 3) Click Next.

The migration assistant processes the included jobs, and prepares the list of workload objects to be included in the package.

NOTE: The transitive closure, if enabled, lets migration assistant amend your jobs in the package and include the dependent jobs that are not included in the active filter. Thus, a closed set of jobs is built.

- 4) Verify the list of workload objects by performing the following actions in the Migrate Job Stream dialog:

- a) Click the Jobs tab to verify the set of jobs to be loaded in the package.
- b) Click the Calendars tab to verify the set of calendars to be loaded in the package.
- c) Click the Globals tab to verify the global variables to be loaded in the package.
- d) (Optional) Click the relevant Edit File icon next to the object count in the Pre-conversion Summary section to view the JIL file, the calendar definition file, and the global variable script.

NOTE: The JIL file, calendar definition file, and the global variable script are used to create jobs, calendars, and global variables. The migration assistant parses the JIL file and builds a list of calendars and global variables that are referenced by the job attributes in that file.

- e) Click the Machines tab to verify the list of machines that are referenced by jobs defined in the JIL file.
- f) Click the Owners tab to see the list of job owners for the jobs included in the migration package.
- g) Click the Profiles tab to see the list of profile names that are referenced by any Windows-based jobs included in the migration package.

NOTES:

- If the jobs use credentials that are stored in the Unicenter AutoSys JM 4.5.1 database, they are displayed in the Owners tab.
- The machine, owner, and profile lists are only for a reference. The migration assistant does not create them in the target instance.

You are now ready to run the conversion scripts against the object files to validate their syntax and finalize them for the migration.

10.1.4 Validate the Integrity of the Workload Objects in the Package

You can automatically run the predefined conversion scripts and syntax checker on the workload objects after you verify the contents of the package to migrate. This validation ensures that the workload objects are migrated more easily and with fewer errors.

The conversion scripts can be set up to change the definitions of the workload objects before migration. The syntax checker verifies that the object files meet the syntax requirements of the target instance. You can view the list of objects after the conversion scripts have processed their respective definition files.

Follow these steps:

- 1) Click Next from the workload object verification page of the Migrate Job Stream dialog after you verify that the package contents are correct.

The migration assistant loads the workload objects in the package, runs the conversion scripts against the object files, and prepares them for the migration. The Migrate Job Stream dialog displays the converted files.

- 2) Re-verify the converted files of workload objects that are loaded in the package after the scripts ran, as changes to these objects may have taken place. To do so, use the following available methods:
 - The Pre-conversion Summary section displays the number of jobs, calendars, global variables, machines, owners, and profiles by parsing the definition files. The definition files are created after the conversion scripts ran.
 - The Jobs, Calendars, and Global variables tabs show the objects that exist on the target instance and the objects that are ready for migration.
 - The Machines and Owners tabs list the required objects and the objects that have not yet been defined on the target instance.

IMPORTANT! If any machines have not been defined on the target instance, you cannot proceed with migration. Contact the CA Workload Automation AE administrator to resolve these errors.

- 3) Click Next.

The migration assistant performs a syntax check on the JIL file and displays the job stream migration panel.

- 4) (Optional) Perform the following actions as appropriate if your syntax check fails:
 - a) Click View Details to view the errors.
 - b) Click Previous to go back to the previous panel and click the Edit File icon next to the job count.

- c) Verify the JIL files again and modify them, if required.

NOTES:

- You can run the syntax checker multiple times to make the required modifications until you have no syntax errors remaining.
- You can close the migration assistant at any time. Before you close the migration assistant, ensure that you have saved all the modifications.

- d) Click Next to go to the panel to migrate the package.

NOTE: Alternatively, click the Edit File icon next to the job count in the conversion summary section to run the syntax check manually, as follows:

- a) Click the Check Syntax toolbar icon to run the syntax checker. The JIL file includes the results of the syntax check and the messages that are generated by the syntax checker as comments.
- b) Click View Results of syntax check to view the entire output in a separate dialog.
- c) Type a string in the Find option to find the syntax errors and warnings. You can type the search strings CAUAJM_W for warnings and CAUAJM_E for errors.

You are now ready to migrate the package.

10.1.5 Migrate the Package

You can migrate a package after the migration assistant validates that the workload object files meet the syntax requirements of the target instance.

To complete the package migration, click Migrate Now.

If the migration is successful, the migration assistant prompts you to bring the migrated jobs into the tree view in the main iXp client window.

NOTES:

- If you decide to migrate the package at a future time, click Exit and your package is saved.

- If the migration panel displays only Exit, you do not have authorization to migrate the package. Click Exit, and your package is saved. Contact your CA Workload Automation AE administrator to migrate the package for you.

If an error is encountered during the migration, the migration assistant deletes the workload objects that were created prior to the step where the error is encountered. The migration is then stopped and rolled back automatically to let you resolve errors and missing objects before proceeding.

IMPORTANT! If an error is encountered during the migration and the migration is not automatically rolled back due to network and system issues, the migration assistant indicates that the rollback is not working. Contact your CA Workload Automation AE administrator to perform the rollback manually by using the relevant files in the following directory on the iXp server:

`$IXP_HOME/dat/migrate/<package_name>/rollback`

You have successfully migrated the workload objects that you want from the source Unicenter AutoSys JM instance to the target CA Workload Automation AE instance.

11 GLOSSARY

11.1 CA Workload Automation iXp Related Terms

Console View: Tabular listing of jobs and their vital data in the upper right portion of the iXp window.

Critical Path Filter: Focuses on a job and then follows predecessor and successor relationships (dependency relationships) from that job.

Exception Filter: A Job Attribute Filter that Displays only jobs that have failed or been terminated.

HTTPD: Hypertext Transfer Protocol Daemon.

Instance Filter: A Job Attribute Filter that displays only the Site and its Instances.

Job Attribute Filters: Filters that use each CA Workload Automation AE job attribute to further define or limit the views in iXp.

Job Dependency Filters: Filters that limit the iXp views according to specified job dependencies.

Job Detail View: View in the upper center of the iXp window that shows details of the selected job.

Job Flow View: View in the lower right portion of the iXp window that shows the predecessor and successor job relationships for each job.

Level Zero Filter: A Job Attribute Filter that displays the Site, the Instances, and Level 0 boxes.

Recursive Critical Path Filter: Applies an ancestor-progeny filter that passes all the parents and children of the selected job, all their parents and children, and so forth through the job stream. Then a Critical Path filter is applied to each of those jobs.

Running Filter: A Job Attribute Filter that displays only running jobs.

Server Invocation: A call from a client (web browser) to the server, which in turn makes a call to refresh or request data from a CA Workload Automation AE Instance.

SHTTP: Secure Hypertext Transfer Protocol

Site: A group of one or more CA Workload Automation AE instances.

Site Filter: A Job Attribute Filter that displays only the Site icon.

Transitive Closure Filter: Follows all Box and dependency relationships in both directions, throughout the CA Workload Automation AE Job structure. First a Recursive Critical Path filter is applied to the selected job, and then a Recursive Critical Path filter is applied to the resulting jobs, and so forth through the job stream.

Tree View: View on the left of the iXp window that depicts the hierarchical box structure of the jobs.

11.2 CA Workload Automation AE Terms

See also *CA Workload Automation AE User Guide*.

Alarm: Alarms are special events that notify operations personnel of situations requiring attention.

BoxJob: A CA Workload Automation AE job that spawns other jobs that are “contained” in the Box Job.

Global Variable: Set by the sendeventSET_GLOBAL commands, Global Variables are used to create dependency relationships.

JIL: Job Information Language. Refer to the *CA Workload Automation AE User Guide*.

Job: A job is the basic building block on which an operations cycle is built. A CA Workload Automation AE job is any single command or executable, UNIX shell script, or Windows batch file. Each CA Workload Automation AE job definition contains qualifying attributes, including conditions for when and where a job should be run. Command Jobs execute commands, BoxJobs are containers, which hold other jobs, and File Watcher Jobs watch for the arrival of a specified file.

Job Name: The job name is used to identify the job to CA Workload Automation AE, and must be unique within CA Workload Automation AE. It can be from 1- to 30 alphanumeric characters long, and is terminated with white space. Embedded blanks and tabs are illegal.

Symbols in this Guide

JOID: Job ID (see *CA Workload Automation AE Reference Guide*).

sendevent: A CA Workload Automation AE command to activate the scheduler.

11.3 Symbols in this Guide

Symbol or type style	Represents	Example
Bold	A new term.	The console is the upper right window in iXp.
Alternate color	Hyperlinks to other sections, or to the internet.	See http://www.ca.com for further information.
<i>Italic</i>	Words that are emphasized. Blue italic for hyperlinks. <u>Underlined Italic</u> for titles of other documents.	Dismiss the window <i>after</i> finalizing your changes.
Monospace	Syntax variables. Directories, file names, command names, computer code.	<code>COPY filename &HIGHLVL. SRCLIB</code>
	Computer screen text, system responses, command line commands.	<code>Copy file? Y/N</code>
Monospace bold	What a user types.	...enter RUN APP. EXE in the Application field.
◇	The name of a key on the Keyboard.	Press <Enter>.
►	Choosing a command from a menu.	Edit► Preferences.

11.4 Related Documents

[CA Workload Automation AE Windows Implementation Guide](#)

[CA Workload Automation AE UNIX Implementation Guide](#)

[CA Workload Automation AE Reference Guide](#)

[CA Workload Automation AE User Guide](#)

[CA Workload Automation iXp Release Notes](#)

[CA Workload Automation iXp Administration Guide](#)