cadence®

Cadence Job Monitor Reference

Product Version ICADVM20.1
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Contents

Preface

The Cadence® Job Monitor lets you launch and monitor jobs running on a local or a remote host.

This user guide is aimed at developers and designers of integrated circuits and assumes that you are familiar with:

- The Virtuoso design environment and application infrastructure mechanisms designed to support consistent operations between all Cadence® tools.
- The applications used to design and develop integrated circuits in the Virtuoso design environment, notably, the Virtuoso Layout Suite, and Virtuoso Schematic Editor.
- The Virtuoso design environment technology file.

This preface contains the following topics:

Scope

Unless otherwise noted, the functionality described in this guide can be used in both mature node (for example, IC6.1.8) and advanced node and methodologies (for example, ICADVM20.1) releases.

Label	Meaning

(ICADVM20.1 Only)	Features supported only in ICADVM20.1 advanced nodes and advanced methodologies releases.
(IC6.1.8 Only)	Features supported only in mature node releases.

Licensing Requirements

For information about licensing in the Virtuoso design environment, see *Virtuoso Software Licensing and Configuration Guide*.

Related Documentation

What's New and KPNS

- *Cadence Job Monitor What's New*
- *Cadence Job Monitor Known Problems and Solutions*

Additional Learning Resources

Video Library

The Video Library on the Cadence Online Support website provides a comprehensive list of videos on various Cadence products.

To view a list of videos related to a specific product, you can use the *Filter Results* feature available in the pane on the left. For example, click the *Virtuoso Layout Suite* product link to view a list of videos available for the product.

You can also save your product preferences in the Product Selection form, which opens when you click the *Edit* icon located next to *My Products*.

Virtuoso Videos Book

You can access certain videos directly from Cadence Help. To learn more about this feature and to access the list of available videos, see Virtuoso Videos.

Rapid Adoption Kits

Cadence provides a number of Rapid Adoption Kits that demonstrate how to use Virtuoso applications in your design flows. These kits contain design databases and instructions on how to run the design flow.

To explore the full range of training courses provided by Cadence in your region, visit Cadence Training or write to training_enroll@cadence.com.

Note: The links in this section open in a separate web browser window when clicked in Cadence Help.

Help and Support Facilities

Virtuoso offers several built-in features to let you access help and support directly from the software.

- The Virtuoso *Help* menu provides consistent help system access across Virtuoso tools and applications. The standard Virtuoso *Help* menu lets you access the most useful help and support resources from the Cadence support and corporate websites directly from the CIW or any Virtuoso application.
- The Virtuoso Welcome Page is a self-help launch pad offering access to a host of useful knowledge resources, including quick links to content available within the Virtuoso installation as well as to other popular online content.

  The Welcome Page is displayed by default when you open Cadence Help in standalone mode from a Virtuoso installation. You can also access it at any time by selecting *Help – Virtuoso Documentation Library* from any application window, or by clicking the *Home* button on the Cadence Help toolbar (provided you have not set a custom home page).

For more information, see Getting Help in *Virtuoso Design Environment User Guide.*

Customer Support

For assistance with Cadence products:

- Contact Cadence Customer Support

  Cadence is committed to keeping your design teams productive by providing answers to technical questions and to any queries about the latest software updates and training needs. For more information, visit https://www.cadence.com/support.

- Log on to Cadence Online Support

  Customers with a maintenance contract with Cadence can obtain the latest information about various tools at https://support.cadence.com.

Feedback about Documentation

You can contact Cadence Customer Support to open a service request if you:

- Find erroneous information in a product manual
- Cannot find in a product manual the information you are looking for
- Face an issue while accessing documentation by using Cadence Help

You can also submit feedback by using the following methods:

- In the Cadence Help window, click the *Feedback* button and follow instructions.
- On the Cadence Online Support Product Manuals page, select the required product and submit your feedback by using the *Provide Feedback* box.

Typographic and Syntax Conventions

The following typographic and syntax conventions are used in this manual.

text	Indicates names of manuals, menu commands, buttons, and fields.
`text`	Indicates text that you must type exactly as presented. Typically used to denote command, function, routine, or argument names that must be typed literally.
`z_argument`	Indicates text that you must replace with an appropriate argument value. The prefix (in this example, *`z_`*) indicates the data type the argument can accept and must not be typed.
|	Separates a choice of options.
`{ }`	Encloses a list of choices, separated by vertical bars, from which you **must** choose one.
`[ ]`	Encloses an optional argument or a list of choices separated by vertical bars, from which you **may** choose one.
`[ ?argName` *`t_arg`* `]`	Denotes a *key argument*. The question mark and argument name must be typed as they appear in the syntax and must be followed by the required value for that argument.
`...`	Indicates that you can repeat the previous argument. Used with brackets to indicate that you can specify zero or more arguments. Used without brackets to indicate that you must specify at least one argument.
`,...`	Indicates that multiple arguments must be separated by commas.
`=>`	Indicates the values returned by a Cadence® SKILL® language function.
`/`	Separates the values that can be returned by a Cadence SKILL language function.

If a command-line or SKILL expression is too long to fit within the paragraph margins of this document, the remainder of the expression is moved to the next line and indented. In code excerpts, a backslash (\ ) indicates that the current line continues on to the next line.

1

Overview

The Cadence Job Monitor lets you run and query the status of Cadence software jobs. Additionally, you can use Job Monitor to view the jobs in a queue; run jobs, now or at a later time; display output and error log files; suspend, resume, and terminate jobs; customize the appearance of the *Jobs* table view; and search for jobs that match specific criteria.

The Job Monitor uses Load Balancing System (LBS), which is a Cadence proprietary load-sharing system, to distribute jobs across a network of workstations. LBS refers to the API that applications use to launch jobs and the back-end load-sharing system. This API works with the Cadence proprietary LBS called *cdsqmgr* and third-party systems such as Load Sharing Facility (LSF), Sun Grid Engine (SGE), and OpenLava (OLV).

cdsqmgr is the default load balancing system. To specify a different system, set the LBS_BASE_SYSTEM shell environment variable to one of the following:

- `LBS_LSF` (for LSF)
- `LBS_SGE` (for SGE)
- `LBS_OLV` (for OLV)

To use LSF, SGE, or OLV, you must have it installed at your site. For more information, contact the respective vendor.

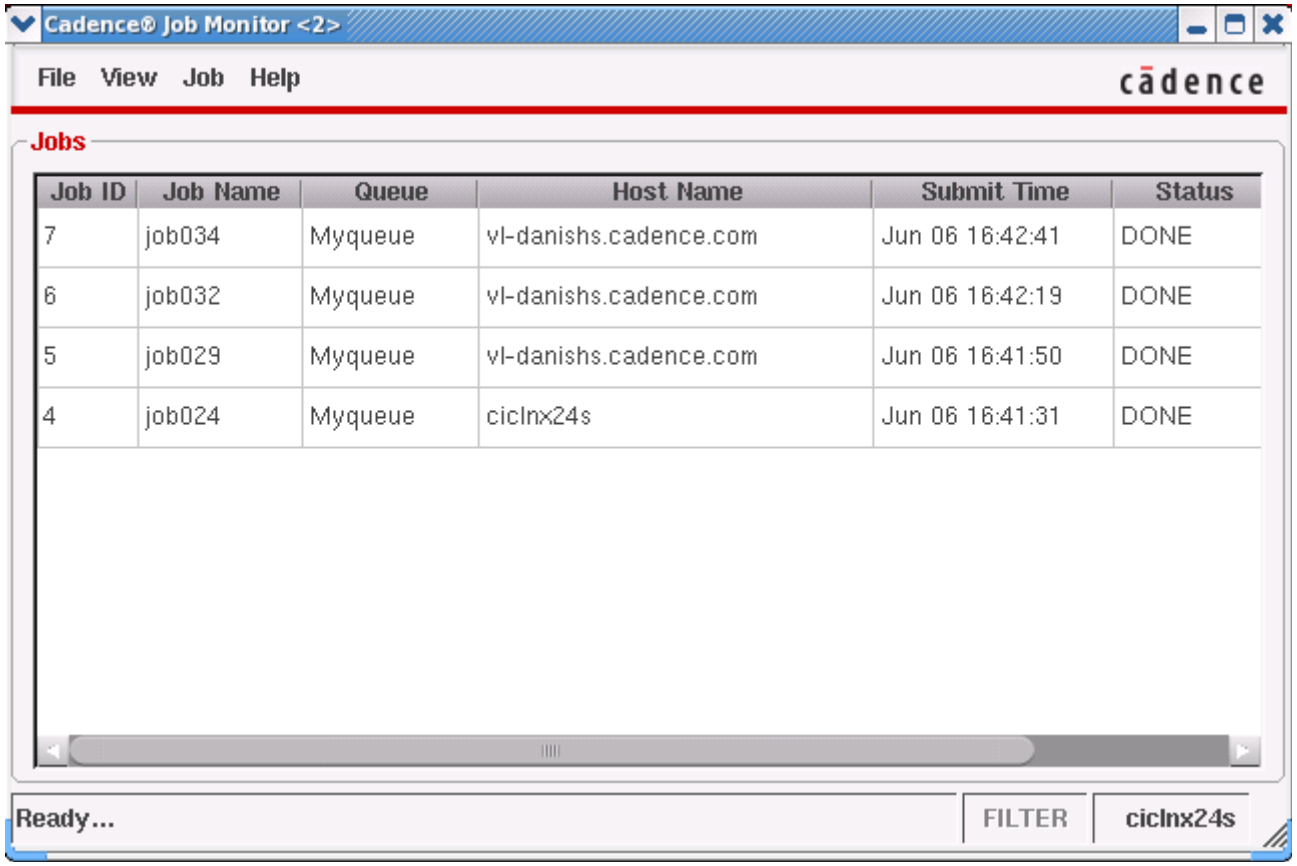
Starting the Job Monitor

To start the Job Monitor:

➡ In a terminal window, type

```
cdsJobMonitor \
   [{-32 | -64 | -32only | -64only | -3264 | -6432}] [-quiet3264] \
   [-debug3264] [-plat <platform>] [-v3264] [-help3264] \
   <application-specific-options>...
```

The Job Monitor window appears.



Note: The *Jobs* table view displays the jobs that have been submitted to the Job Monitor.

The Job Monitor menu bar is discussed next.

The Menu Bar

File Menu

- *Save Defaults* saves the current settings of Job Monitor as the default settings. For more information about the Job Monitor window settings, see Job Monitor Window Settings.
- *Exit* closes the Job Monitor.

Job Monitor Window Settings

Before you start the Job Monitor, set the `CDS_JOB_MONITOR_DEFAULTS` environment variable to use the predefined settings.

```
setenv CDS_JOB_MONITOR_DEFAULTS "parameter_1=value_1 parameter_2=value_2..."
```

Note: The parameter-value pairs in the `CDS_JOB_MONITOR_DEFAULTS` environment variable should not contain any blank spaces or quotes.

The table below describes the parameters, data types, default values, and descriptions that are supported by the `CDS_JOB_MONITOR_DEFAULTS` environment variable.

Parameter	Type	Default Value	Description
`frame_width`	integer	600	Width of the Job Monitor window
`frame_height`	integer	400	Height of the window
`frame_x`	integer	0	Horizontal position of the top-left corner of the window
`frame_y`	integer	0	Vertical position of the top-left corner of the window
`show_toolbar`	Boolean	false	Shows the toolbar
`columns_order`	string	JobID, JobName, Queue, HostName, SubmitTime, Status	Order of columns in the Job Monitor window. The allowed column names are JobID, JobName, Queue, HostName, SubmitTime, Status, StartTime, EndTime, Command, and Owner

`filter_by_status`	Boolean	false	State of the *Status* check box on the Filters form
`filter_by_hostname`	Boolean	false	State of the *Host Name* check box on the Filters form
`filter_by_owner`	Boolean	false	State of the *Owner* check box on the Filters form
`filter_by_jobname`	Boolean	false	State of the *Job Name* check box on the Filters form
`status_filter`	string	RUNNING	Status of the job on the Filters form. The allowed states are RUNNING, PENDING, SUSPENDED, and ENDED
`hostname_filter`	string		Text controlled by the *Host Name* check box on the Filters form
`owner_filter`	string		Text controlled by the *Owner* check box on the Filters form
`jobname_filter`	string		Text controlled by the *Job Name* check box on the Filters form
`confirm_kill`	Boolean	true	State of the *Show confirmations before terminating jobs* check box on the Options form
`send_abort_mail`	Boolean	true	State of the *Send default mail on job abort* check box on the Options form
`refresh_rate`	integer	2	Position of the *Rate* slider on the Options form
`auto_refresh`	Boolean	true	State of the *Auto* radio button on the Options form
`show_jobname`	Boolean	true	State of the *Job Name* check box on the Options form
`show_owner`	Boolean	false	State of the *Owner* check box on the Options form
`show_hostname`	Boolean	true	State of the *Host Name* check box on the Options form
`show_status`	Boolean	true	State of the *Status* check box on the Options form

`show_submittime`	Boolean	true	State of the *Submit Time* check box on the Options form
`show_starttime`	Boolean	false	State of the *Start Time* check box on the Options form
`show_endtime`	Boolean	false	State of the *End Time* check box on the Options form
`show_command`	Boolean	false	State of the *Command* check box on the Options form
`show_queue`	Boolean	false	State of the *Queue* check box on the Options form

Note: The values for the parameters *filter_by_status*, *filter_by_hostname*, *filter_by_owner*, and *filter_by_jobname* are set automatically if the corresponding filter string has been assigned a value. For example, setting the *status_filter* parameter to `true` will automatically set the *filter_by_status* parameter to `true`.

View Menu

- *Refresh* reloads the *Jobs* table view
- *Toolbar* displays or hides the toolbar
- *Log Files* displays output and error log files
- *Options* lets you select the job attributes—choose column headings, set the refresh rate, show or hide the *Confirm Terminate Job* dialog box, and choose to send e-mail notifications when a job aborts
- *Filters* lets you find jobs by their status, owner, host name, job name, or queue

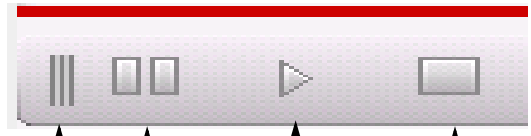
Job Menu

- *Run* lets you launch new jobs and schedule jobs to run later
- *Suspend* lets you defer a job to run later
- *Resume* lets you run a suspended job
- *Terminate* lets you stop a job that is running
- *Properties* displays information about a job

Help Menu

- *Help Topics* links to the online documentation library
- *About Job Monitor* displays information about the version of Job Monitor you are running

The Toolbar



The toolbar is hidden by default.

To display the toolbar:

➡ From the Job Monitor window, choose *View – Toolbar*.

Note: You can use the same command to hide the toolbar.

You can place the toolbar anywhere on your desktop or inside the Job Monitor window.

To move the toolbar:

➡ Drag the drag-and-drop icon to the location you want.

To return the toolbar to its original position:

➡ Drag the drag-and-drop icon between the menu bar and the *Jobs* table view on the Job Monitor window.

Note: If the close button is not visible, move the toolbar inside the Job Monitor window.

The Pop-Up Menu

The pop-up menu gives you fast access to the common commands.

To use the pop-up menu:

1. In the *Jobs* table view, select the jobs you want to suspend, resume, terminate, or for which you want to display the properties.
2. Right-click.

   The pop-up menu appears.
3. Click the task you want to perform.

   The *Jobs* table view displays the new status of the job.

   Note: The commands in the pop-up menu are enabled or disabled depending on the status of the selected jobs. For example, if more than one job is selected, the *Properties* command is disabled.

Selecting Jobs

To select a single job:

➡ In the *Jobs* table view, click the job.

To select multiple contiguous jobs, do one of the following:

- ❑ Press and hold the `Shift` key, then click the start and end row of the set you want.
- ❑ Click and drag over the jobs you want to select.

To select multiple non-contiguous jobs:

➡ Press and hold the `Ctrl` key, then click the jobs you want to select.

Deselecting Jobs

To deselect a single job:

➡ In the *Jobs* table view, press and hold the `Ctrl` key and click the job you want to deselect.

To deselect the selected jobs:

➡ In the *Jobs* table view, select a new job.

Closing the Job Monitor

To close the Job Monitor:

➡ Choose *File – Exit*.

2

Using the Job Monitor

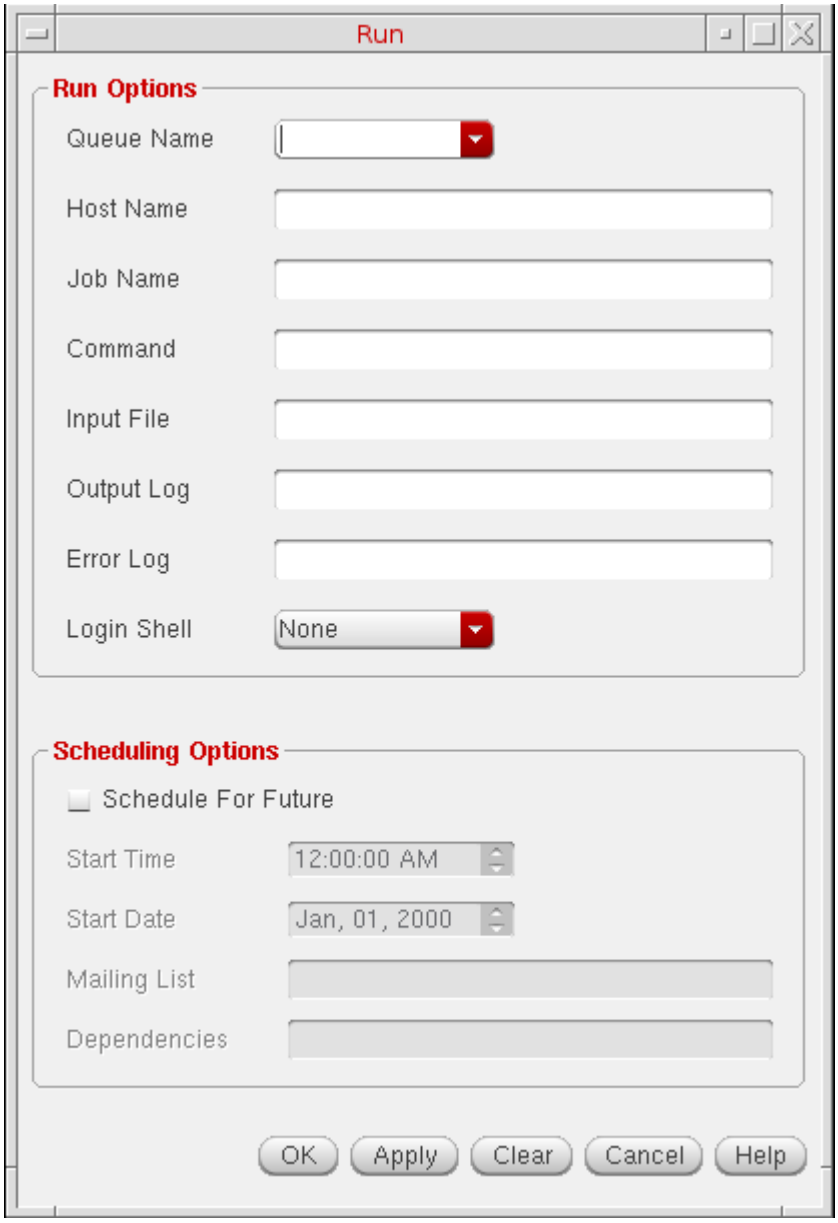
This chapter discusses the following topics:

Running Jobs

To run a job or schedule it for later, do the following:

1. Choose *Job – Run*.

   The Run form appears.



2. From the *Queue Name* drop-down list box, choose the queue in which you want to run the job or leave it unchanged for the job to run in the DEFAULT queue.

3. (Optional) In the *Host Name* field, type the name of the host on which you want to run the job.

   If you specify both *Queue Name* and *Host Name*, the job runs when the host becomes available on the queue.

   If you specify only *Queue Name*, the job runs on the host that has the least load as identified by the underlying distributed resource management systems. The job is dispatched when a host becomes available.

   If you specify only *Host Name*, or if you specify neither *Queue Name* nor *Host Name*, the job is run on the *DEFAULT* queue. The *DEFAULT* queue is served by all hosts in the network.

4. (Optional) In the *Job Name* field, type the name of the job.
5. In the *Command* field, type the name of the command.
6. In the *Input File* field, type the name of the input file.
7. (Optional) In the *Output Log* field, type the filename to store the errors that might prevent the job from running.
8. (Optional) In the *Error Log* field, type the filename to store the error log.
9. Run the job now or later as required.

   - ❑ To run the job now, click *OK* to launch the job and close the form.

     Alternatively, click *Apply* to launch the job. The Run form remains open to let you launch additional jobs.

   - ❑ To run the job later, do the following:

     a. In the *Scheduling Options* section, select the *Schedule For Future* check box. The *Start Time* and the *Start Date* fields are set to the current time and date.

     b. In the *Start Time* field, you can specify a new time or use the spin box to select a new time.

     c. In the *Start Date* field, you can specify a new date or use the spin box to select a new date.

     d. (Optional) In the *Mailing List* field, enter the e-mail address of the users you want to notify about the job status.

     e. In the *Dependencies* field, type the ID of the job that must end before this job starts.

     f. Click *OK*.

Displaying Output and Error Log Files

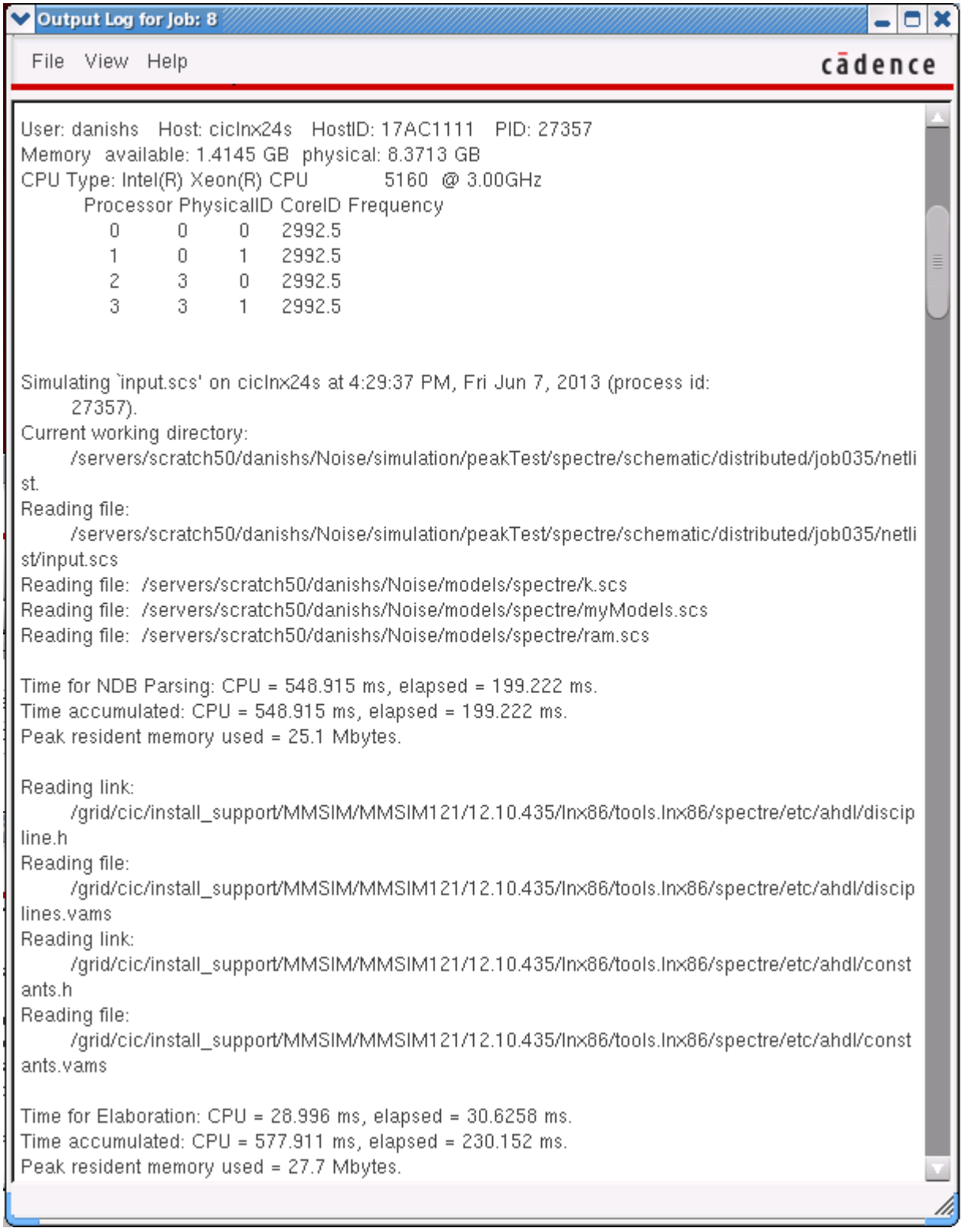
You can display the output and error status of jobs using the Output/Error Log form. This form gets updated dynamically when the file changes.

To display the output or error log of a job:

1. In the *Jobs* table view, select the job whose files you want to view.
2. Choose *View – Log Files – Output* or *View – Log Files – Error*.

   Note: The *Log Files* option is enabled only if a single job is selected and it has an associated output and error log file. The *Output* and *Error* options are enabled or disabled depending on whether the selected job has an output or an error log file.

The log form for the selected job appears.



The status bar displays the line count for the text you select in the window.

Managing the Status of a Job

You can change the status of a job in one of the following ways:

- suspend a running or scheduled job
- terminate a running or scheduled job
- resume a suspended job

Job States in Job Monitor

A job can have the following states.

State	Description
UNKNOWN	Out of the recognized range
PENDING	Waiting for resource availability
PEND_SUSPENDED	Suspended while waiting for resource availability
ABORTED	Suspended in the queue due to resource unavailability
RUNNING	Submitted and under execution
USR_SUSPENDED	Suspended by the user during execution
SYS_SUSPENDED	Suspended by LBS
TERMINATED	Terminated sending a notification to the Unix terminal
EXITED	Exited before submission giving a non-zero value
DONE	Completed successfully with a zero value

Suspending a Job

To suspend a job:

1. In the *Jobs* table view, select the jobs you want to suspend.
2. Choose *Job – Suspend*.

   The *Status* column in the *Jobs* table view shows the selected jobs as suspended.

Note: If the job cannot be suspended, an error dialog box appears. You can skip the job, process the next selected job, or cancel the operation.

Terminating a Job

To terminate a job:

1. In the *Jobs* table view, select the jobs you want to terminate.
2. Choose *Job – Terminate*.

   A confirmation dialog box prompts you to confirm the termination process.

   Note: If you deselect the *Show confirmations before terminating jobs* check box in the Options form, the confirmation dialog box does not appear.

   The *Status* column in the *Jobs* table view shows the selected jobs as terminated.

Note: If the job cannot be terminated, an error dialog box appears. You can skip the job, process the next job in the selected set, or cancel the operation.

Resuming a Job

To resume a suspended job:

1. In the *Jobs* table view, click the suspended jobs you want to resume.
2. Choose *Job – Resume*.

   The *Status* column in the *Jobs* table view shows the selected jobs as running.

Note: If the job cannot be resumed, an error dialog box appears. You can skip the job, process the next job in the selected set, or cancel the operation.

Customizing the Jobs Table View

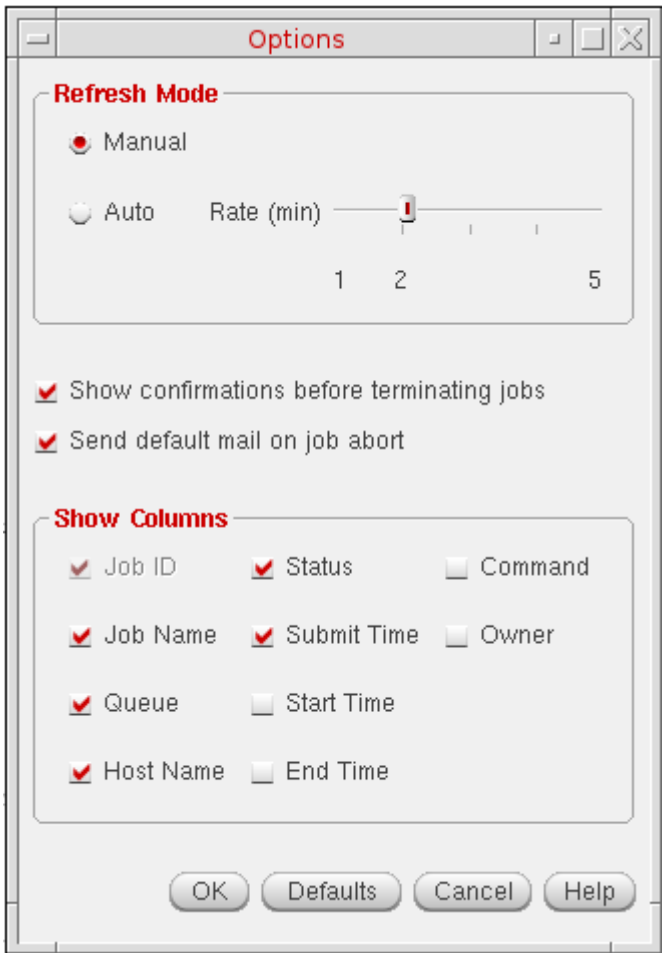
You can customize the *Jobs* table view by displaying or hiding column headings, changing the width of the columns, and changing the sort order of items in the columns.

Displaying or Hiding Column Headings

To display or hide column headings in the *Jobs* table view:

1. Choose *View – Options*.

The Options form appears.



2. In the *Show Columns* section, select or deselect the headings you want in the *Jobs* table view.
3. Click *OK*.

Resizing Column Headings

To resize a column heading:

➡ In the *Jobs* table view, drag the column delimiters as required.

Sorting Jobs

By default, the jobs are sorted in descending order of the job ID. You can also sort the jobs according to other attributes. The other attributes sort the jobs alphanumerically except the submit time, start time, and the end time attributes that are sorted by date.

To sort the jobs according to a different job attribute:

➡ In the *Jobs* table view, click the required column heading.

The jobs are re-sorted.

Updating Job Information

You can see the latest information in the *Jobs* table view by refreshing the display. The Job Monitor has two refresh modes, *Manual* and *Auto*. *Auto* refresh mode lets you set specific time intervals for the information to be reloaded. *Manual* refresh mode lets you reload the information on demand.

To set the refresh mode:

1. Choose *View – Options*.

   The Options form appears.

2. In the *Refresh Mode* section, do one of the following:

   - Click *Manual*.

     Choose *View – Refresh* each time you want to refresh the display.

   - Click *Auto*.

     Move the *Rate (min)* slider to the required refresh rate.

     By default, the Job Monitor refreshes the display every 2 minutes.

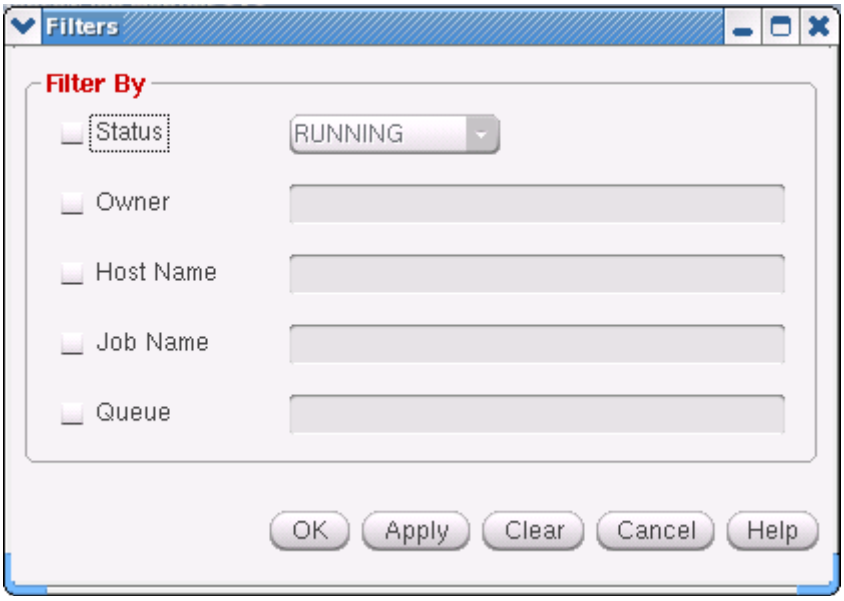
3. Click *OK*.

Searching for Specific Jobs

To search for specific jobs:

1. Choose *View – Filters*.

The Filters form appears.



2. Select the required filters.
3. Specify the values for each filter.
4. Click *OK.*

   The *Jobs* table view displays the jobs matching the specified values.

Displaying Information about a Job

To display information about a job:

1. Select a job from the *Jobs* table view.
2. Choose *Job – Properties.*

   The Job Properties form appears.

A

Understanding Clusters and Queues

A cluster is a set of hosts working together to balance the job load. Each cluster is controlled by a daemon process called *cdsqmgr*. Jobs from different applications are submitted to the *cdsqmgr*, which sends the jobs to the hosts in the cluster.

Following are the best practices for farm software:

- All involved machines should use the common path to access file systems. For example, the Cadence software should be available on all machines using the same file path.
- All involved machines should share common user-account information. For a given account name, `userId`, `groupId`, and home directory should not vary between machines.
- All machines should be able to access the user's home directory using the same file path.
- It is recommended that the farm machines use common file servers for data, rather than being dependent upon each other. In terms of reliability, this becomes important with the increasing number of farm machines.

Note: The information in this chapter is applicable only to Default-LBS. When you run jobs using LSF-LBS, cdsqmgr is not used. For more information about the daemon process involved in LSF, see LSF documentation available at www.platform.com.

To start *cdsqmgr*:

➡ In a terminal window, type

```
cdsqmgr configPath
```

where `configPath` is the path to a configuration file that lists the queues and the hosts (available for each queue) on which you want to run the jobs. Typically, you can start *cdsqmgr* on a machine and all the applications can use this *cdsqmgr*.

How Applications Connect to cdsqmgr

You can set the `LBS_CLUSTER_MASTER` environment variable to control the *cdsqmgr* to which your application connects. This variable should be set to the name of the host on which the *cdsqmgr* resides. This host is also known as the cluster master. The default cluster master is the local host.

The following logic determines how applications connect to the *cdsqmgr*.

Note: Applications do not have to code this logic; linking to the LBS client-side libraries or using the LBS JAVA class files is sufficient.

1. The application can connect to *cdsqmgr* residing on the cluster master using *`login_name`*. *`login_name`* is the login name of the person who attempts to launch the application.
2. If there is no instance of *cdsqmgr* running as *`login_name`*, the application attempts to connect to *cdsqmgr* running as root on the cluster master.
3. If there is no instance of *cdsqmgr* running as root, an instance of *cdsqmgr* is automatically started up on the cluster master, and the application connects to it. Because *cdsqmgr* was started using the login name of the person who attempts to launch the application, it continues to run as *`login_name`*.

   Because *cdsqmgr* is started automatically, a configuration file cannot be specified. In this case, only the *DEFAULT* queue is considered to have been configured in the cluster.

To balance loads across all the users in a cluster, the person who is logged in as root should start up *cdsqmgr* on a known cluster master. The users should set the `LBS_CLUSTER_MASTER` environment variable to this cluster master. They will, then, connect to the same *cdsqmgr*, which will balance the load across all users' jobs.

If each user were to connect to a separate *cdsqmgr*, the load would be balanced only across each user's jobs.

B

The Configuration File

The configuration file is a setup file that defines the number of jobs that can be submitted to the specified queues and the hosts that are available for each queue. Each host has a job limit that identifies the maximum number of active jobs it can run at a time for a specific queue.

To create a configuration file:

1. Open a text editor.
2. Type a list of queues and hosts in the form

   ```
   queueName numberOfHosts
   hostname numberOfJobs
   ```

   As an example, see the sample configuration file.
3. Save the file.

Specifying a Different Configuration File

If *cdsqmgr* is running and you want to specify a different configuration file

➡ In a terminal window, type

```
cdsreconfig filename
```

A prompt asking you to confirm the new configuration appears.

Important

If *cdsqmgr* is running as root, your system needs to run as a root. You must notify all the LBS clients connected to this *cdsqmgr* to avoid disrupting their work.

If *cdsqmgr* is not running and you want to specify a configuration file other than the default,

➡ In a terminal window, type

```
cdsqmgr configPath
```

where `configPath` is the absolute path to the configuration file.

Note: If you did not specify a configuration file, the *DEFAULT* queue is available only if you are using Default-LBS. If you are using a different load-balancing system, such as LSF, the default queue of that system is used. *ALL* lets you view all the jobs running in all the known queues.

The mechanism used by *cdsqmgr* to start programs on remote hosts is configurable. For more information, see cdsRemote in the *Cadence Interprocess Communication SKILL Reference* guide.

Sample Configuration File

The sample configuration file below contains a list of the different queues in the cluster and the different hosts available for each queue.

```
queue1 3
hostA 2
hostB 1
hostD 5
queue2 2
hostA 3
hostC 4
queue3 4
hostA 1
hostB 4
hostC 6
hostD 5
```

This file contains the following information:

- Three hosts—*hostA*, *hostB*, and *hostD* are available for *queue1*. A maximum of two jobs (submitted to queue1) can run on *hostA*, one on *hostB*, and five on *hostD*. When all these hosts have reached their maximum job limit, the jobs that are submitted must wait in the queue until one of the hosts becomes available.
- Two hosts—*hostA* and *hostC* are available for *queue2*, with a maximum limit of three and four jobs, respectively.
- Four hosts—*hostA*, *hostB*, *hostC*, and *hostD* are available for *queue3*, with a maximum limit of one, four, six, and five jobs, respectively.

Note: *DEFAULT* and *ALL* queue modes are reserved and cannot be used for queue names. Queue names and host names are case sensitive.

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Form Descriptions

Filters Form

Important

Regular expressions are not supported and values must be specified fully.

Status activates the cyclic field to let you select a status for filtering the jobs.

Owner lets you type the name of the owner.

Host Name lets you type the name of the host on which the job was launched.

Job Name lets you specify a name to the job.

Queue lets you type the name of the queue in which the job is running.

OK submits the selected filter attributes and closes the form.

Apply submits the selected filter attributes and leaves the form open so you can submit additional filter searches.

Clear removes all the information from the form.

Cancel closes the form without applying the selected filters.

Help describes the form.

For more information, see Searching for Specific Jobs.

Options Form

Refresh Mode

Manual sets the refresh mode to update the display only on request.

Auto lets you set the refresh mode to update the display automatically at the specified rate. Move the slider to adjust the rate. The default refresh rate is 2 minutes.

Show confirmations before terminating jobs lets you specify whether you want the Job Monitor to display a dialog box to alert you before terminating a job.

Send default mail on job abort lets you specify whether you want the Job Monitor to send you an e-mail notification when a job aborts.

Show Columns lets you select the following job attributes to display:

Job Id displays the identification number assigned to a job.

The job ID is always displayed and cannot be disabled.

Job Name displays the name of the job.

Owner displays the user ID of the owner of the job.

Host Name displays the name of the host on which the job was launched.

Status displays the state of a job.

Submit Time displays the time when a job was submitted.

Start Time displays the time when a job started running or is scheduled to run.

End Time displays the time when a job was terminated.

Command lets you specify a set of instructions to run a job.

Queue displays the name of the queue in which the job is launched.

OK sets the specified options and closes the form.

Defaults resets the form values to their default values.

Cancel closes the form without applying your selections.

Help describes the form.

For more information, see Customizing the Jobs Table View.

Output Log Form

File – Close closes the form.

View – Refresh reloads the data being displayed. Refresh is done automatically every 5 seconds if you do not perform a manual refresh.

View – File Info provides the filename, location, size, and permissions of the output or error log file being viewed.

Help describes the form.

For more information, see Displaying Output and Error Log Files.

Run Form

Run Options

Queue Name lets you specify the name of the queue in which you want to run a job.

Host Name lets you specify the name of the host on which you want to run a job. If you select the *DEFAULT* queue, you can specify any host name. If you do not specify a host name, the Job Monitor runs the jobs on your local host.

If you select a specific queue, you can type the name of a host that is available for the specified queue or click the arrow to select one of the hosts. If *Host Name* is left blank, the system assigns a host depending on the availability and the load of each machine assigned to the queue.

Job Name lets you specify a name to a job or a group of jobs. This field is optional and defaults to the command name.

Command lets you specify a set of instructions to run a job.

Input File lets you specify the path to the file that connects to the `stdin` of the job. If the job attempts to read its `stdin`, it reads the contents of this file. This path can be specified as absolute or relative to the working directory of the job. The default is `/dev/null`.

Output Log lets you specify the path to the file to which the output of the job will be sent. If the job attempts to write to its `stdout`, the contents are written to this file. This path can be specified as absolute or relative to the working directory of the job. The default is `/dev/null`.

Error Log lets you specify the path to the file to which the `stderr` output of the job is sent. If the job attempts to write to its `stderr`, the contents are written to this file. This path can be specified as absolute or relative to the working directory of the job. The default is `/dev/null`.

Login Shell lets you select a shell specific to your environment prior to running a job.

Scheduling Options

Schedule For Future lets you specify a start date in the future.

Start Time lets you set the time at which you want to start the job. You can enter or use the spin box to specify the time.

The clock is reset when this form is closed.

Start Date lets you select the date on which you want to start the job. You can enter or use the spin box to specify the date.

Mailing List lets you type the list of users you want to notify when a job terminates or stops running. You can specify multiple entries using a comma or a space as a delimiter.

Dependencies lets you type the job ID of jobs that must end before this job can start. Separate multiple entries by a comma or a space.

OK launches the job and closes the form.

Apply launches the job and leaves the form open.

Clear removes all the information from the form.

Cancel closes the form without launching the job.

Help describes the form.

For more information, see Running Jobs.