



---

# Application Portal Help Manual



Management Center – Application Portal

# Application Portal

## User Help Manual

---

© 2008 - 2010, SGI

*All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of SGI.*

*Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks. Trademarks include: SGI, and the SGI logo are registered trademark of Silicon Graphics International Corp. or its subsidiaries in the United States or other countries, Abaqus and Simulia are registered trademarks of Dassault Systems, and ANSYS and FLUENT, are registered trademarks of ANSYS, Inc.*

*While every precaution has been taken in the preparation of this document, the publisher and the author assume no responsibility for errors or omissions, or for damages resulting from the use of information contained in this document or from the use of programs and source code that may accompany it. In no event shall the publisher and the author be liable for any loss of profit or any other commercial damage caused or alleged to have been caused directly or indirectly by this document.*

*Printed: April 2010*

# Table of Contents

<b>1 Introduction</b>	<b>1</b>
1 Getting Started.....	1
2 Assumptions.....	1
3 User Interface.....	2
4 Conventions and Standard Functionalities.....	2
5 User Access.....	3
6 Logging In.....	3
<b>2 Using Help</b>	<b>4</b>
1 Types of Help.....	4
2 Contents Link.....	5
3 Index Link.....	5
4 Search Link.....	5
<b>3 Working Environment</b>	<b>6</b>
<b>4 How-To Procedures</b>	<b>7</b>
1 Submitting Jobs.....	7
2 Monitor Running Jobs.....	13
<b>5 General Purpose Job</b>	<b>15</b>
<b>6 Panel Descriptions</b>	<b>17</b>
1 Home Panel.....	17
2 Job Creator Panel.....	18
Common Job Creation Steps .....	21
Abaqus Job .....	28
ANSYS Job .....	32
FLUENT Job .....	33
Script Job .....	37
3 Job Status Panel.....	39
4 Links Panel.....	40
<b>7 Glossary</b>	<b>42</b>
<b>INDEX</b>	<b>47</b>

# 1 Introduction

## SGI Management Center - Application Portal Help

Welcome to the SGI Management Center - Application Portal, your SGI cluster companion. With the SMC Application Portal, you can submit jobs to the cluster and check on the status of your jobs — all using an easy User Interface.

Although using the SMC Application Portal is designed to be straightforward, this SMC Application Portal Help system contains additional information you may find useful:

- Click [Getting Started](#) to use the SMC Application Portal Help system to learn more about [Assumptions](#), [User Interface](#), [Conventions and Standard Functionalities](#), [User Access](#), and [Logging In](#).
- Use the Table of [Contents](#) to access more information about [Using Help](#), the [Working Environment](#), [How-To Procedures](#), and [Panel-by-Panel Descriptions](#). Terminology is defined in the [Glossary](#) topic.
- Use the [Index](#), with topics and terms listed in alphabetical order.
- Search for information using the [Search](#) function.

Products that are referred to in this Help system may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks. Trademarks include SGI, a registered trademark of Silicon Graphics International Corp., FLUENT and ANSYS registered trademarks and Multiphysics a trademark of ANSYS, Inc, and Abaqus, a registered trademark of Dassault Systems.

## 1.1 Getting Started

Introductory topics to help you get started are:

- [Assumptions](#)
- [User Interface](#)
- [Conventions and Standard Functionalities](#)
- [User Access](#)
- [Logging In](#)
- [Using Help](#)

## 1.2 Assumptions

### General Assumptions

- Prior experience with internet browsers such as Firefox and Internet Explorer is assumed.
- Users with experience using Microsoft Windows will find the most familiarity with layouts and presentation.

### Programming Assumptions

Familiarity with the following is assumed when using SMC Application Portal:

- Cluster application programming techniques.
- Cluster applications and their associated input and output files.
- Bash shell programming.

SMC Application Portal jobs are bash shell scripts. Many fields entered in the Job Creators are interpreted by bash. The user must be familiar with bash shell conventions. For example, '~' specified as the leading character of a field may be expanded to the user's home directory '/home/user'.

Note that programs, commands, and scripts run by SMC Application Portal jobs run in a subshell of the job scripts.

Fields entered in the Job Creators are normally parameters that are interpreted when a job is run. Exceptions to this are fields specifying load and save paths for files. The SMC Application Portal interprets these fields when the associated **Load** or **Save** button is clicked.

## 1.3 User Interface

### The Browser

The SMC Application Portal program runs within a Internet browser window. The browser's controls behave according to standard behavior; the buttons in the button bar are governed by the browser, not by SMC Application Portal.

### System Information

After a successful login, SMC Application Portal displays system information at the top of the browser window. The user's Login Identity, Logout link, Help Link appear at the top left, and System Status (which may be Active, Idle, Caution, or Disconnected) displays at all times at top right. If the status dots are static gray, the system is idle. If blinking blue, the system is actively processing. A red bar in a circle indicates the system has disconnected or stopped communicating. A yellow triangle indicates caution, an internal error has occurred.

### Expanding and Collapsing Panels

The SMC Application Portal conserves the available screen space by using expanding and collapsing panels of information. Four main panels are displayed after logging in; the Job Creator panel also contains several smaller panels. The panel behavior is the same for each. Each panel header bar has an > or ∨ arrow at the left end, which can be clicked to open or close the panel. A collapsed panel displays only its header bar. An expanded panel displays its information in the amount of vertical space it needs. The panel header bar also contains a Help button which, when clicked, opens the online Help to the topic associated with that panel.

For further information, click the following topic:

- [Panel Descriptions](#)

## 1.4 Conventions and Standard Functionalities

### Conventions

The following text conventions are used throughout the SMC Application Portal Help windows:

- **Bold** text indicates the label of an onscreen button, panel, window, or page.
- ALL CAPS indicates the name of a keyboard key.

### Standard Functionalities

Most conventions associated with internet browsers regarding basic functionalities are also standard in SMC Application Portal.

Some examples include:

- Use the TAB key or your mouse to move the cursor between fields, not the ENTER key.
- To move backward between fields, either press SHIFT + TAB or use your mouse to move the cursor.
- Entering data in fields often requires an additional click to "set" the data you typed and enable another field or button. The state of the first field changes when you move to the next one. You may have to click outside the field to change its state or "set" the data before another field or button is available.
- Validation occurs when you press TAB or ENTER, or click the action button related to the field.

## 1.5 User Access

Users are assigned access permissions by role.

### User

Users who have been assigned the **User** role may create, edit, and submit their own jobs. They may view and receive status information about the jobs they have submitted. They may not see or control jobs submitted by other users without access permissions. They may not delete jobs that are system-wide.

In the Job Status panel, users may cancel, suspend, or resume a job that is running, or cancel a job that is waiting to run. No action may be taken on completed jobs. These jobs are automatically removed after a period of time determined by the administrator.

Each user may create, save, and edit their own job definition templates for re-use. These templates are listed on the Job Selection Display Panel as "My Jobs." Access permissions are required to see other users' templates. Some templates are global (listed as "Global Templates" on the Job Display Panel) and are available to all users. Global templates cannot be altered, but users may edit and Save As (a copy) for themselves, leaving the original global template unaltered.

## 1.6 Logging In

To log in to the SMC Application Portal:

1. On your desktop, open your internet browser.
2. In the Address box at the top of the browser window type the web address of the SMC Application Portal program, and press ENTER (or click the **Go** or **Go to** button at the end of the address line).
3. The **Login** page opens.



Login screen. Click to enlarge. Click again to shrink.

4. Type your Username in the first box.
5. Type your Password in the second box.
6. Click the **login** button.
7. If the information is incorrect, a message page appears, "Invalid login information, please try again."
8. The login page refreshes after one minute if the login has not been completed.

## 2 Using Help

The Help window is accessed by clicking the Help link at the top, just left of middle of the SMC Application Portal's browser window (next to Logout link) or the red Help (?) icon at the top right of a [panel](#), and the Help window contains three panels.

- The browser window contains the menu bar and button bar of your internet browser. The standard functionalities of the browser, such as viewing preferences and printing, are located in this area, and are governed by the browser, not by the SMC Application Portal.
- The top panel contains a logo for the SMC Application Portal.
- The left panel contains the **Contents**, **Index** and **Search** links. **Contents** is the default view.
- The right panel contains the topic you've selected, as well as a "breadcrumbs" trail at the top, where applicable, to indicate your topic position within the Help system.
- The topic title bar also contains clickable icons to navigate the help system (left to right, if applicable): the up arrow links to the parent topic, the left arrow links to the previous topic, and the right arrow links to the next topic. The printer icon links to the printer dialog box to print the topic.

### On a Help window:

- Click the [Contents](#) link to see a Table of Contents of all available help topics.
- Click the [Index](#) link to see an alphabetical Index of all topic titles and other important terms.
- Click the [Search](#) link to build a Full Text Search list of all topics containing a word or phrase.

For further information about Help and SMC Application Portal, click one of the following topics:

- [Introduction](#)
- [Conventions and Standard Functionalities](#)

## 2.1 Types of Help

Many types of Help are available for the SMC Application Portal system.

**The Entire Help System** is available by clicking the Help link in the top, middle of the browser window. A new browser window for the Help system opens to the Introduction page. Navigate through the topics in order using the [Contents](#) link, or use the [Index](#) link or [Search](#) link to quickly find a topic.

**Panel Help** is available by clicking the red Help icon (?) in the upper right of the title bar of a panel. The Help system window opens in a new browser and displays the topic associated with that panel. The topic includes a description of all the fields from the panel, including information about data required to complete each field.

**Context-Sensitive Help** ("Field Help") is available by clicking Help, if available, beside a field or control. A topic window opens in a new browser and advances to the appropriate section of the associated Panel Help topic. The main difference between Panel Help and Context-Sensitive Help, since both use the same topic page, is that the Context-Sensitive Help topic opens directly to the associated section.

**Popup Help** is available in some help topics. When you see the "More Information" link with a dotted underline, click the link to open a small window with more information about the topic. Click outside the popup box to close the popup window. **More Information.**

**How-To Help** ("Task Help" or "Procedural Help"). For topics describing procedures to complete a task, open the Help system from the link in the upper left corner of the browser window, and navigate the Table of Contents to the "How-To" procedure you want. The topic lists each step required. Items in a sequence are numbered. Items with no particular order are bulleted. Click on a link to related topics, if listed.

### Glossary

The Glossary lists glossary terms in alphabetical order. Click an alphabetical heading letter to jump to that section of the Glossary. Click a glossary term to display the definition of the term as expanded text.

## 2.2 Contents Link

On a Help window, click the **Contents** link to see a list of all available help topics, arranged in a Table of Contents by topic in a logical (non-alphabetical) order. The **Contents** link contains two types of icons.



### Book Icon

The book icon indicates that this topic contains related child topics. Click the book icon to open the book , and the related child topics display.



### Page Icon

The page icon indicates that this topic is the lowest level in the help hierarchy. Click the topic name you want to display in the right pane.

## 2.3 Index Link

On a Help window, click the **Index** link to see an alphabetical list of all topic titles and other important terms.

Scroll through the topics and click the topic name you want to display in the right pane. If more than one topic includes the title or term, a small popup box opens with a list of choices. Click the one you want to advance to that topic in the right pane.

## 2.4 Search Link

On a Help window, click the **Search** link to build a Full Text Search list of all topics containing a word or phrase.

1. Type the word or words you want to search for in the top box.
2. Select the maximum number of search results to display from the drop-down list (10, 20, 50, or 100).
3. Choose one of the two option buttons: Match any search words or all search words. The former finds more matches while the latter restricts the number of matches.
4. Click **Submit**.
5. A list of topics containing the word or words you typed appear in the lower box. The search term text is highlighted. Matches are arranged by match score in descending order. Click the topic name you want to display in the right pane. Term matches in the topic are also highlighted.

### 3 Working Environment

SMC Application Portal is an application (program) that runs inside a web browser.  
Recommended browsers:

- Firefox 2.04
- Safari 3.0.4
- Internet Explorer 6.0 or 7.0

These three browsers have all been tested with SMC Application Portal; successful results cannot be guaranteed using other browsers.

## 4 How-To Procedures

How-To Procedures do not describe the SMC Application Portal system panel by panel; rather they describe an activity step-by-step the way a user uses the system. (For panel descriptions, see the [Panel Descriptions](#) topic.)

### Organization of How-To Procedure Topics

- [Submitting Jobs](#)
- [Monitor Running Jobs](#)

### SMC Application Portal Job Templates

- Previous job templates which are stored in SMC Application Portal can be submitted again as written, or they can be edited and run with new parameters.
- Edited job templates can be saved under a new job name to be used again.
- You can also create a new job.

### Job Template Storage Locations

- Jobs are stored by SMC Application Portal and not visible outside of SMC Application Portal.
- Job templates are stored in groups according to the type of template used: FLUENT jobs, Abaqus jobs, General Purpose jobs, and custom scripts.
- See the [Submitting Jobs](#) topic for more information.

## 4.1 Submitting Jobs

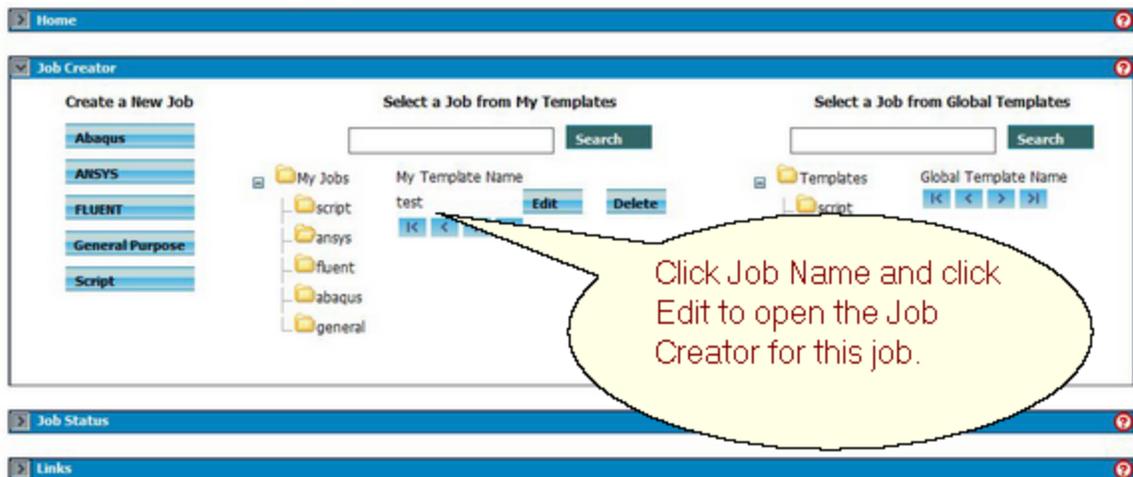
### To Begin the Process

The first steps to submit any job begin in the same manner:

1. Log in to SMC Application Portal with your user name and password. See the [Logging In](#) topic for more information.
2. When the "Dashboard View" appears with panels for **Home**, **Job Creator**, **Job Status**, and **Links**, click the arrow button at the left of the **Job Creator** header bar to expand it, if it is not already open. The Job Selection Display is in view in the panel. See the [Panel Descriptions](#) topic for more information.

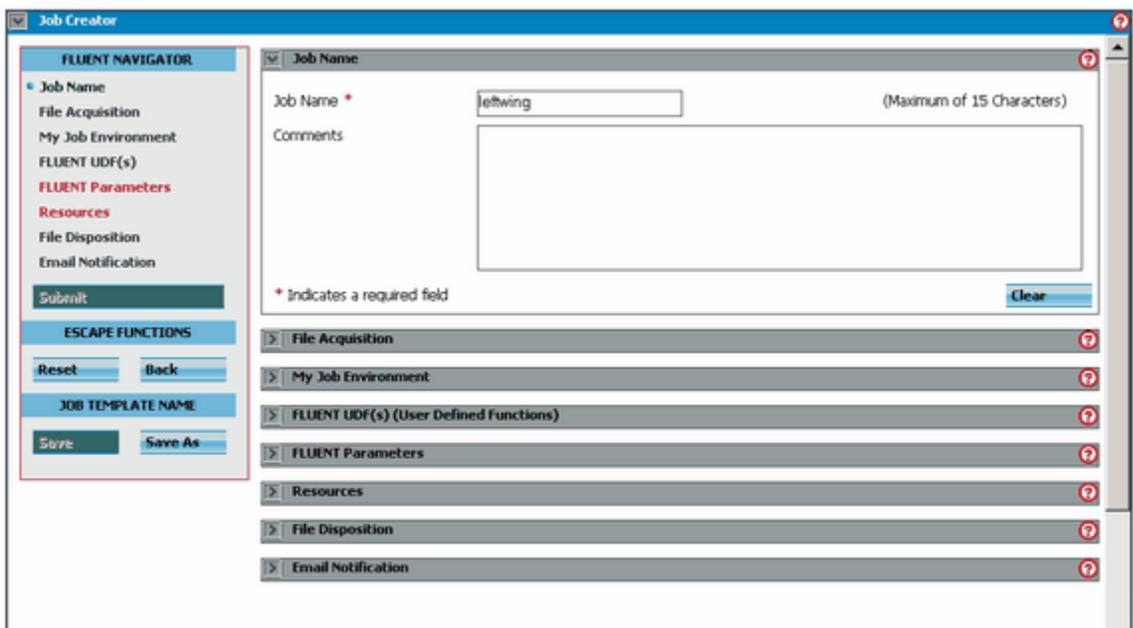
### ☐ Submit An Existing Job

1. Using the folders "tree" sorted by job type (script, FLUENT, Abaqus, or general), click a folder to display the jobs of that type in the My Template Name list or the Global Template Name list. The My Template Name list shows jobs previously saved by the user. The Global Template Name list shows job templates that have been made available to all users by the administrator.
2. If the job list has more than ten job names, use the pagination arrows to navigate. The arrows link to the first page, next page, previous page, and last page. Also, clickable page numbers display between the next and previous buttons.
3. You may search for a job using the search box to type a search term (using the beginning letters or the full name), and click the **Search** button. Matches to your search are listed in the job list.
4. Click the job you want in the list to select it and enable the **Edit** and **Delete** buttons. Then click the **Edit** button to open the [Job Creator Panel](#) for that job.



Job Selection Display Panel. Click to enlarge. Click again to shrink.

5. In the Job Creator Panel, the Step Navigator lists the steps for this job on the left. Clicking a Job Step on the left displays corresponding information in a panel on the right, and positions it at the top of the Job Creator Panel. If the Job Step panel is collapsed, expand it by clicking the arrow on its header bar or by clicking its name in the Step Navigator.



Job Creator Panel. Click to enlarge. Click again to shrink.

6. Save the job (optional step). If you wish to submit the job to run with the same information, click the **Save** button to save the altered job under the existing name as outlined in the [Complete the Process](#) step below. If you wish to submit the job with edits, make changes as necessary in any of the Job Steps and click the **Save As...** button.
7. Submit the job by clicking the **Submit** button.

## ■ Create a New Job

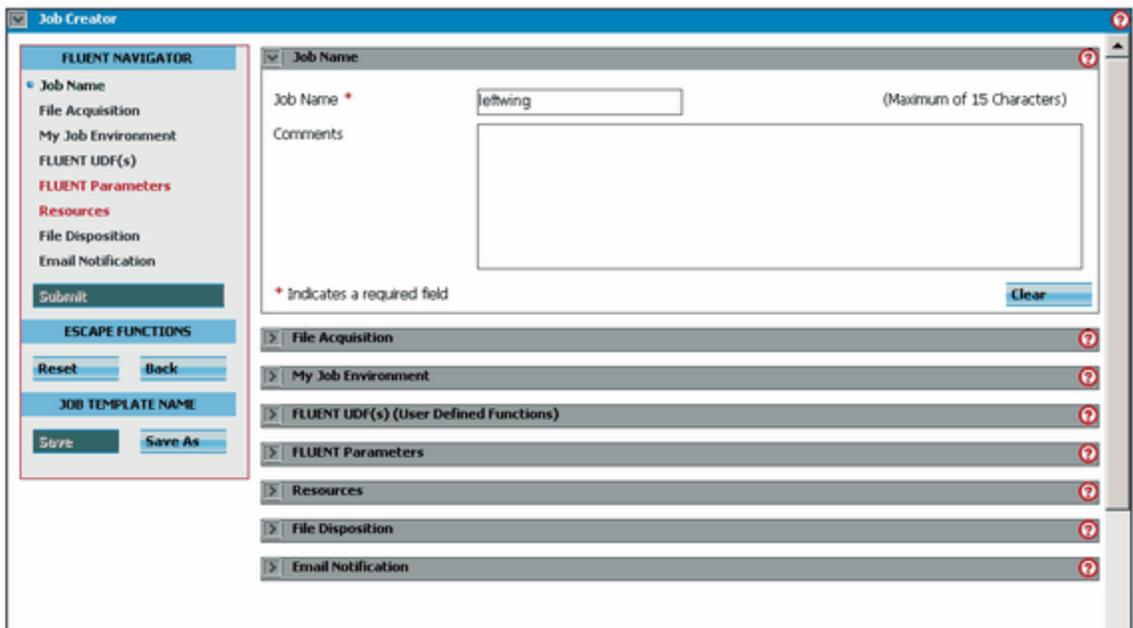
1. In the New Job column of the Job Selection Display, click the button for the job type to display the corresponding Job Creator panel for the FLUENT Job Creator, Abaqus Job Creator, Script Job Creator,

or General Purpose Job Creator. See the [Job Creator Panel](#) topic for more information.



Job Selection Display Panel. Click to enlarge. Click again to shrink.

2. In the Job Creator Panel, the Step Navigator lists the steps for this job on the left. Clicking a Job Step on the left displays corresponding information in a panel on the right, and positions it at the top of the Job Creator Panel. If the Job Step panel is collapsed, expand it by clicking its name in the Step Navigator or clicking the arrow on its header bar.

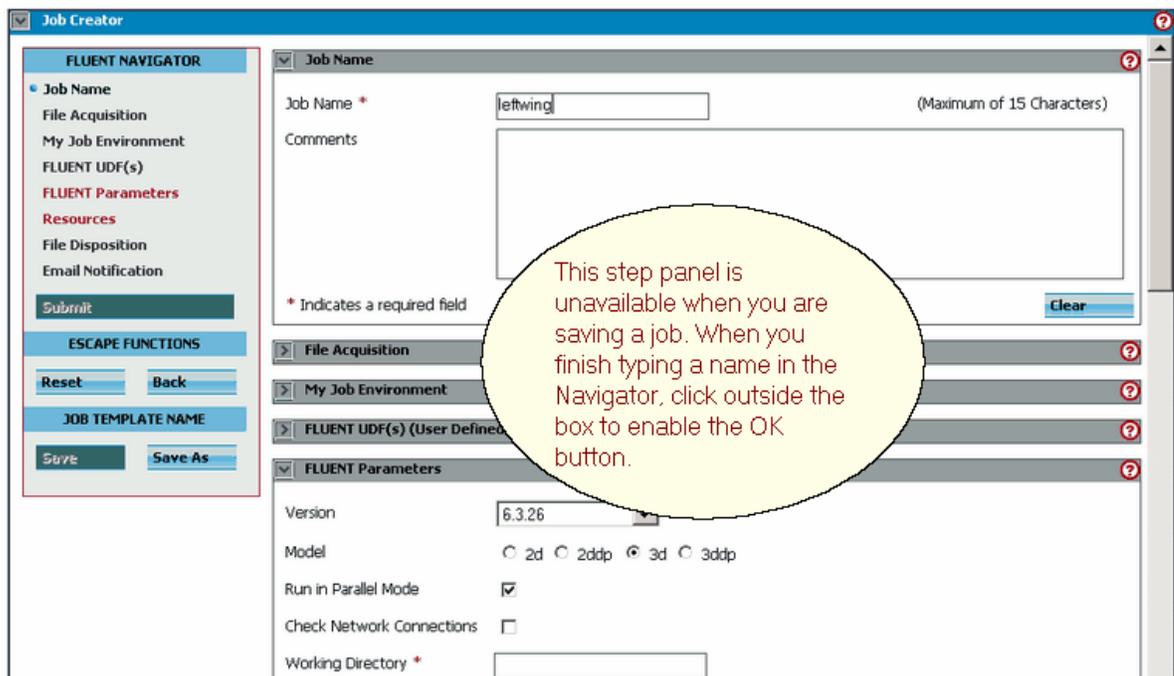


Job Creator Panel. Click to enlarge. Click again to shrink.

3. Enter information in the fields for a step as necessary.
4. Click the **Save As...** button to save the job (optional step). A job may be saved at any time. It does not have to be complete nor error-free to be saved. When subsequently selected for edit, the job will be restored to the state last saved.
5. Submit the job by clicking the **Submit** button.

## To Complete the Process

1. Note that the Step Navigator on the left displays required steps in red.
2. Enter information in the fields for a step as necessary, and repeat to enter information in the fields for other steps as appropriate. You may enter the information in the job steps in any order. Required fields are indicated by a red asterisk. Note that many fields are restricted to the number or type of characters, as explained in the [Panel Descriptions](#) topics. If the information you specify does not meet the validation requirements, an error message displays in red text under the field. **Note:** Not all fields are required in a required step.
3. Saving the job is not required before you submit the job. (If you do not want to save the job definition, skip to step 5 to submit the job.) If you click **Save**, the job is saved under the existing name. When you click **Save As...**, a name field appears to save the job under a new name without altering the job originally chosen, as well as **OK** and **Cancel** buttons. The panels are no longer available while you specify a new name for the job. Click **OK**.

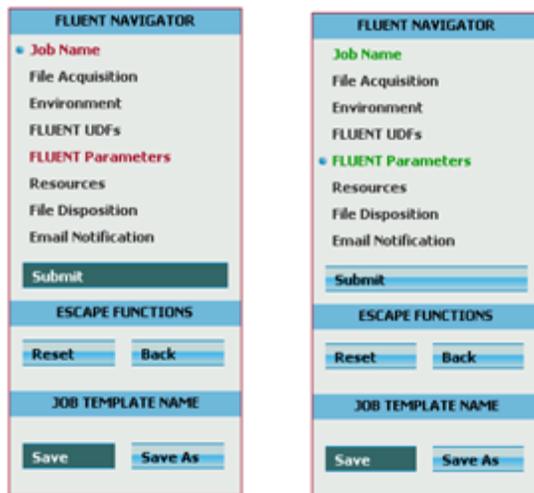


The screenshot shows the 'FLUENT NAVIGATOR' interface. The 'JOB TEMPLATE NAME' section is active, displaying 'left\_wing' in a text field. Below the text field are 'Save' and 'Save As' buttons. The 'ESCAPE FUNCTIONS' section contains 'Reset' and 'Back' buttons. The 'FLUENT NAVIGATOR' section lists various steps: Job Name (green), File Acquisition, Environment, FLUENT UDFs, Fluent Job (red), Resources, File Disposition, and Email Notification. A 'Submit' button is located at the bottom of the 'FLUENT NAVIGATOR' section.

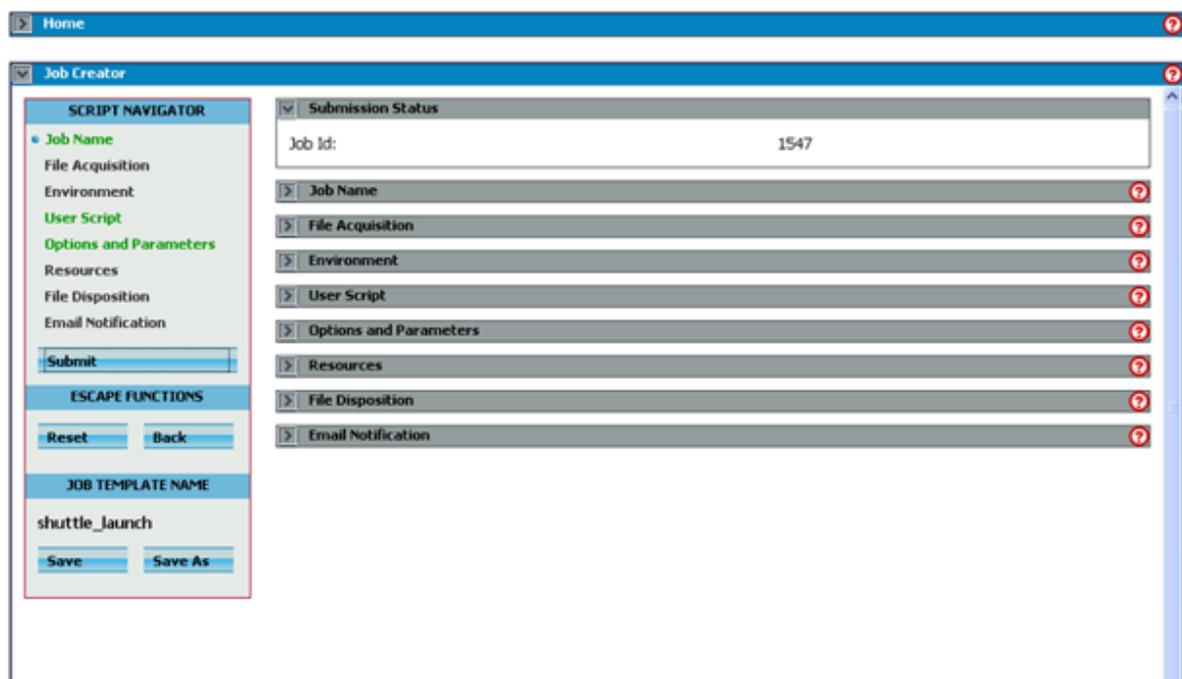
4. If the job has been saved, a date stamp is displayed under the Save and Save as buttons.

The screenshot shows the 'FLUENT NAVIGATOR' interface. The 'JOB TEMPLATE NAME' section is active, displaying 'right\_wing' in a text field. Below the text field are 'Save' and 'Save As' buttons. A date stamp is displayed below the buttons: 'right\_wing created on: Wed Feb 06 17:24:52 CST 2008'. The 'ESCAPE FUNCTIONS' section contains 'Reset' and 'Back' buttons. The 'FLUENT NAVIGATOR' section lists various steps: Job Name (green), File Acquisition, Environment, FLUENT UDFs, Fluent Job (red), Resources, File Disposition, and Email Notification. A 'Submit' button is located at the bottom of the 'FLUENT NAVIGATOR' section.

5. The job may be submitted when all steps in the Step Navigator are either green (indicating that all necessary information has been entered for that step), or dark gray (indicating that the step is optional and has not been completed.) If all steps are green or dark gray, the **Submit** button is enabled.

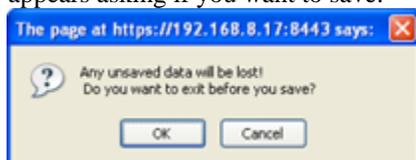


6. Click the **Submit** button on the Job Creator panel. The job is then submitted via a job scheduler to run on the cluster.
7. The Job Creator displays the results of the submission in a new "Submission Status" Step Panel at the upper right — a job ID is displayed if the job was submitted successfully. Otherwise, an error message is displayed.



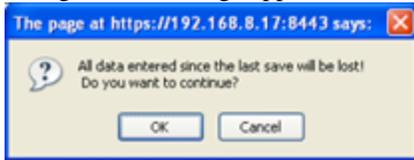
Submission Status Panel. Click to enlarge. Click again to shrink.

8. To return to the Job Selection Display panel, click the **Back** button in the Step Navigator. A message appears asking if you want to save.



Back Button Confirmation.

9. To reset the data in the boxes to the job state before editing began, click the **Reset** button in the Step Navigator. A message appears to confirm your intent.



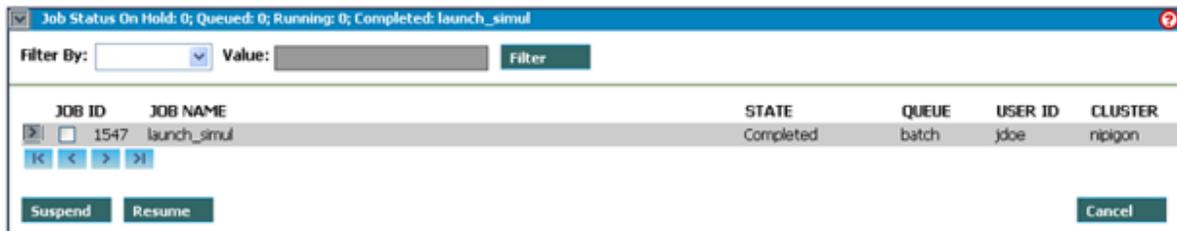
**Reset Button Confirmation.**

10. To clear the fields in the boxes, click the **Clear** button in the bottom right corner of the Job Step Panel.  
 11. You can log on again later to monitor the status of your job in the [Job Status](#) panel.

## 4.2 Monitor Running Jobs

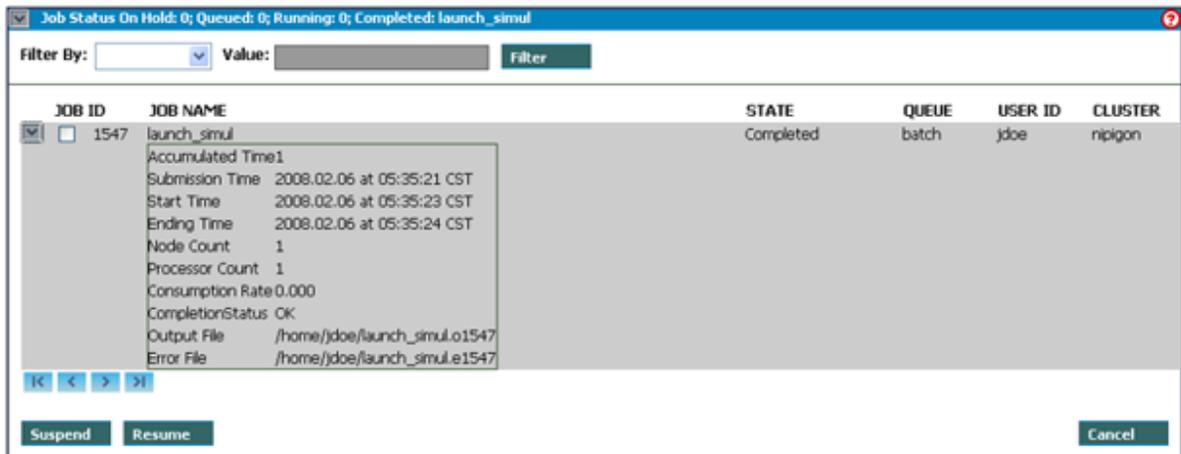
To Monitor Running Jobs:

1. Log in to SMC Application Portal with your user name and password.
2. When the "Dashboard View" appears, note that the header bar for the Job Status panel shows a summary of jobs on hold, queued, running, or completed.
3. Click the arrow icon on the Job Status header bar to expand its corresponding panel.
4. On the [Job Status](#) panel, jobs submitted by the user may be viewed and are identified by Job ID, Job Name, State, Queue, User ID, and Cluster. The jobs may be filtered and sorted. If the job list has more than ten job names, use the pagination arrows to navigate. The arrows link to the first page, next page, previous page, and last page. Also, clickable page numbers display between the next and previous buttons.



**Job Status Panel. Click to enlarge. Click again to shrink.**

Display additional information about a job by clicking on the row's left arrow to expand the row's height. The information displayed depends on the state of the job. Completed jobs show an Output File name and, optionally, an Error File name. Those files accessible to the SMC Application Portal server are highlighted on mouse rollover. Clicking on the file name launches a popup window to display the contents of the file. (see also [File Disposition](#) step).



Job Status Panel expanded. Click to enlarge. Click again to shrink.



Job Status Panel Detail Popup. Click to enlarge. Click again to shrink.

## 5 General Purpose Job

General Purpose Jobs generate scripts which run a system or user command, script, or program. The scripts set up the environment prior to execution and also perform post-execution tasks, based on selection in the Job Steps.

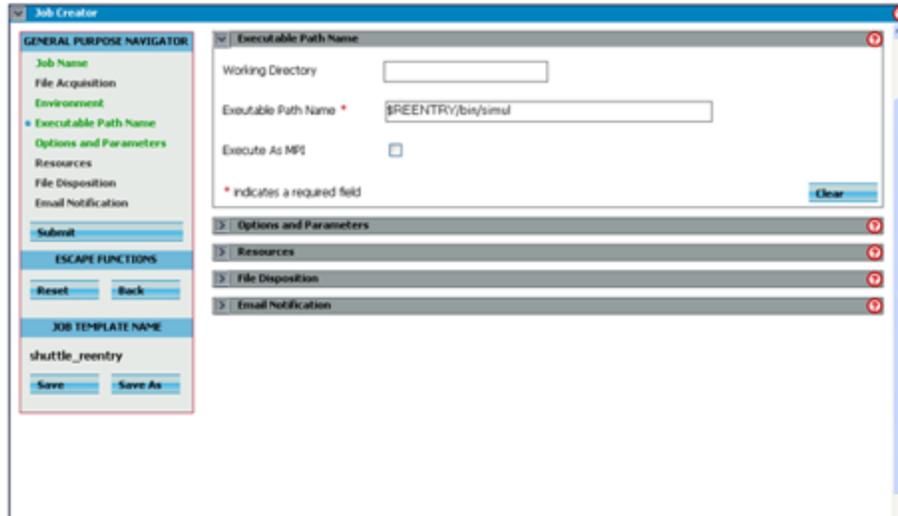
A general purpose job allows you to run a binary without having to know anything about scripting or how a cluster works. A script job requires you to know how to write scripts and how to encapsulate binaries scripts. Script jobs are targeted toward advanced users who want to do complicated things.

General Purpose Scripts follow the Common Job Creation Steps of:

- [Job Name](#)
- [File Acquisition](#)
- [Environment](#)
- [Options and Parameters](#)
- [Resources](#)
- [File Disposition](#)
- [Email Notification](#)

General Purpose Jobs add more information using the following Job Creation step in addition to the Common Job Creation steps:

## Executable Path Name

The image shows a screenshot of the 'Job Creator' application window. The 'Executable Path Name' panel is active, showing a 'Working Directory' text field, an 'Executable Path Name' text field containing '\$REENTRY/bin/simul', and an 'Execute As MPI' checkbox which is unchecked. A 'Clear' button is located at the bottom right of the panel. Below the main panel, there are several collapsed sections: 'Options and Parameters', 'Resources', 'File Disposition', and 'Email Notification'. On the left side, a 'GENERAL PURPOSE NAVIGATOR' sidebar lists various steps: Job Name, File Acquisition, Environment, Executable Path Name (highlighted), Options and Parameters, Resources, File Disposition, and Email Notification. Below the sidebar are 'ESCAPE FUNCTIONS' (Reset, Back) and 'JOB TEMPLATE NAME' (shuttle\_reentry, Save, Save As).

Executable File Name Panel. Click to enlarge. Click again to shrink.

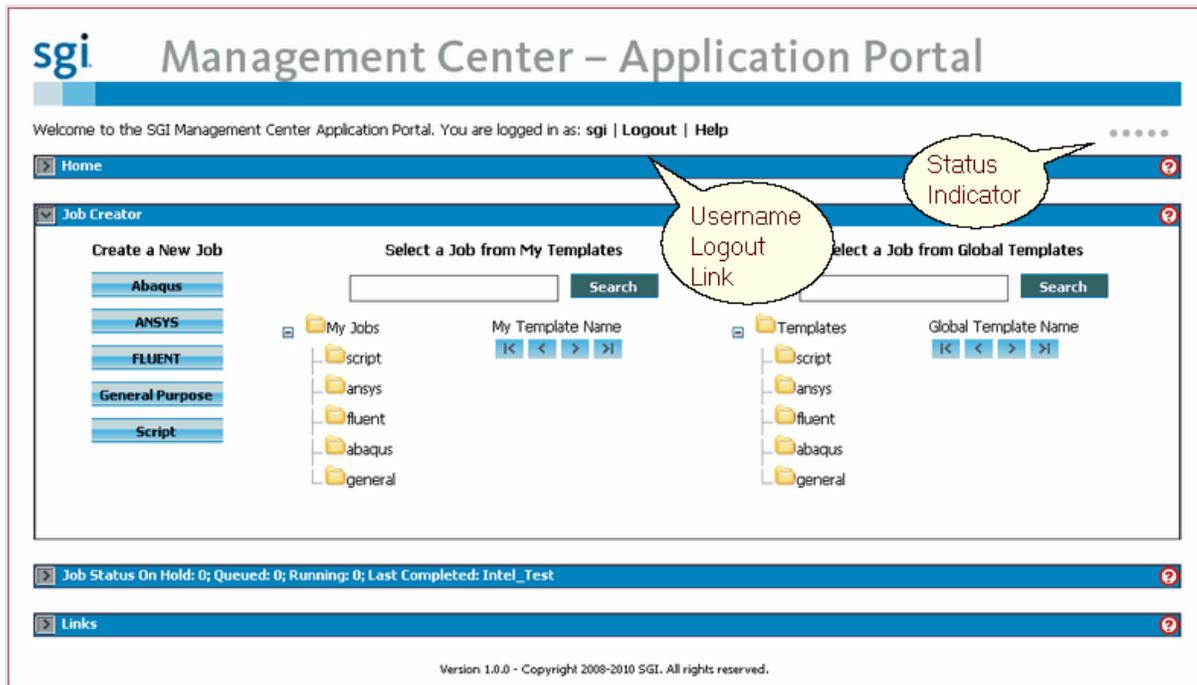
The executable file name step defines a program, command, or script to be run. Type the Executable File Path information:

- Working Directory Name
- Executable File Path (required). Type the name of the path to the executable file. (Text field, limited to 128 characters).
- Check the Execute as MPI check box to run the MPI version. If this is checked, it is assumed that an appropriate MPI environment has already been established.

## 6 Panel Descriptions

The first panel seen after logging in to SMC Application Portal is a "Dashboard view" showing a summary of information contained in the **Home**, **Job Creator**, **Job Status**, and **Links** panels. Each panel is viewed in its expanded position. Click the arrow at the left of each panel's header bar to collapse the panel. Click again to expand again.

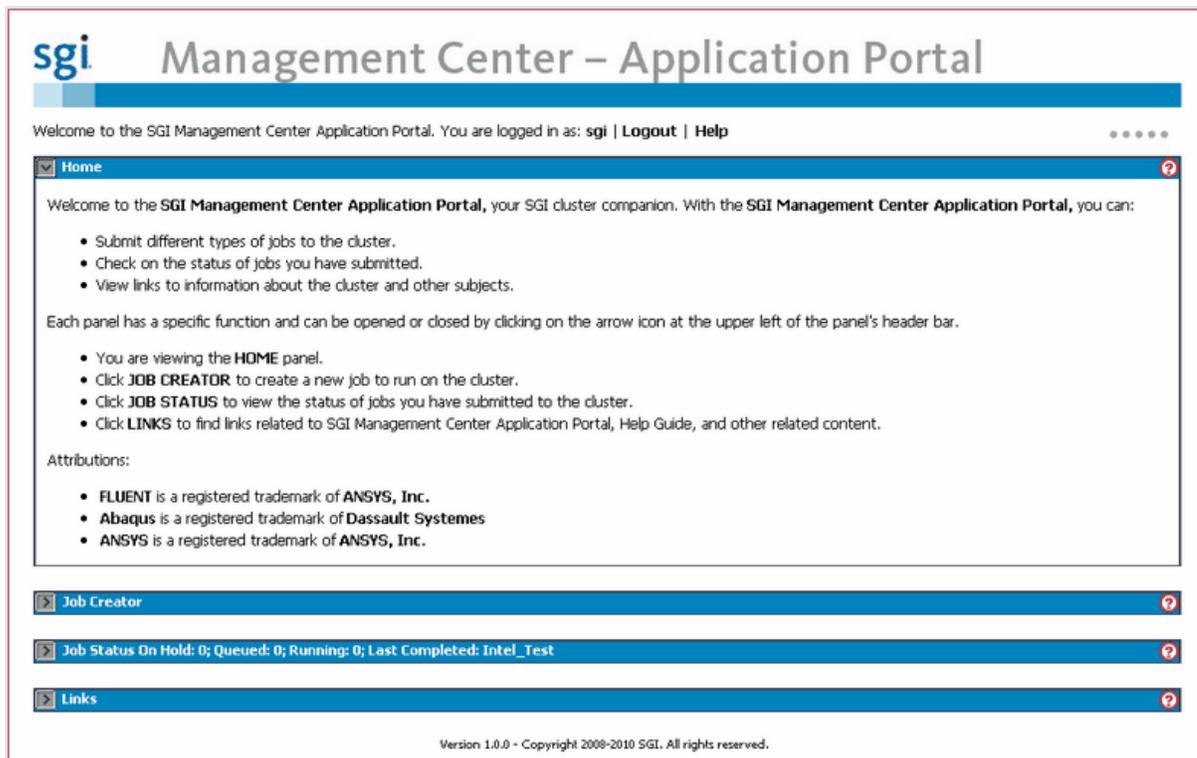
The following illustration shows all the panels in the collapsed position except for the **Job Creator** panel. It is the same view you see just after you log into the SMC Application Portal. Note the Login, Logout, and Help links at the top left, and the System Status dots at the top right, which are activated during system processing. See the [User Interface](#) topic for more information about System Status Information.



SMC Application Portal Panels. Click to enlarge. Click again to shrink.

### 6.1 Home Panel

The topmost of the main panels of the SMC Application Portal program, the Home panel serves as an Introduction and Welcome to SMC Application Portal and its features, explaining the use and functionality of the panels. The panel expands (or collapses) by clicking the arrow at the left of the Home header bar.



Home Panel. Click to enlarge. Click again to shrink.

## 6.2 Job Creator Panel

### Job Creator Overview

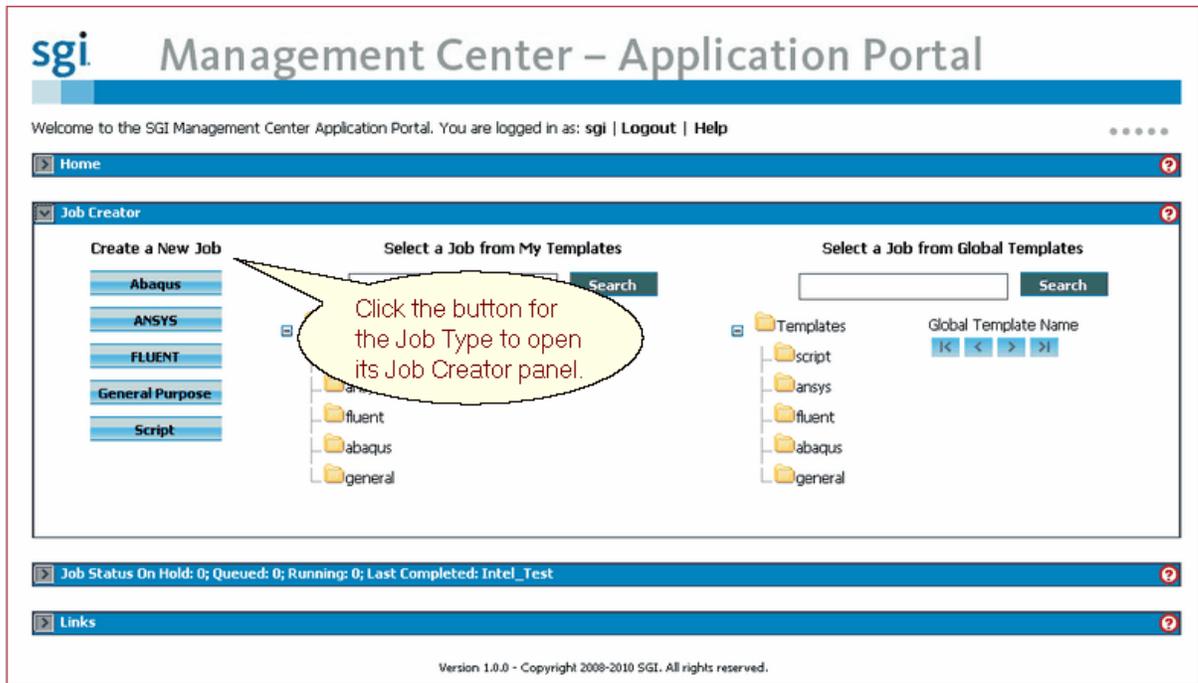
A Job Creator is a sequence of steps used to build a new job or edit an existing job. Each step lets the user enter or display data. The data is used to build a job script which is then submitted via a job scheduler to run on a cluster.

Job Creators are available for:

- [Abaqus](#)
- [ANSYS](#)
- [FLUENT](#)
- [General Purpose](#)
- [Script](#)

### Job Selection Display

The Job Selection Display panel is viewed in the Job Creator Panel when SMC Application Portal is open for a new work session, or when the Job Creator Panel is exited. The Job Creator panel can be expanded or collapsed by clicking the arrow at the left of the Create Jobs header bar.



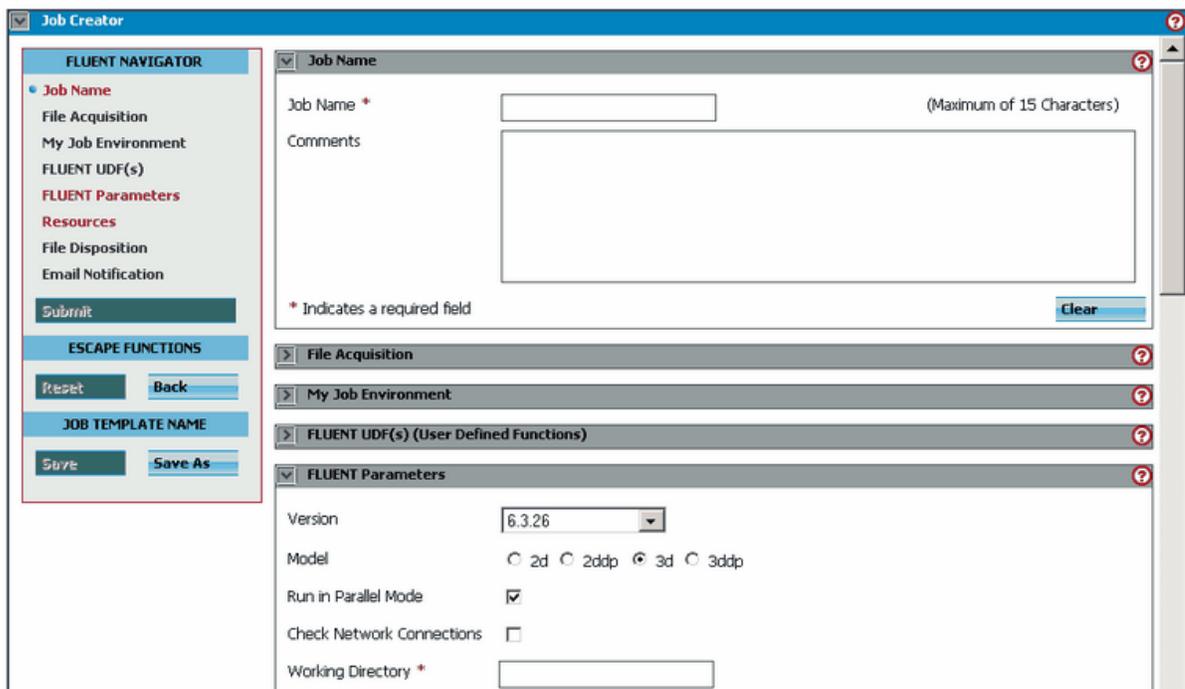
**Job Selection Display Panel. Click to enlarge. Click again to shrink.**

This panel's layout includes three columns of information:

- To choose a new job with default information, click the appropriate button in the left column to open the associated **Job Creator** for FLUENT, Abaqus, Script, or General Purpose.
- To choose an existing user job template saved by this user to edit or delete, click the appropriate My Jobs folder to display the template names of that job type in the Job Name list. Then click the desired template name to select it, and to display the associated **Edit** or **Delete** button. When you click **Edit**, the **Job Creator** for that type of job opens with existing information already set and available to edit. When you click **Delete**, the file is removed.
- To choose an existing global template to edit, click the appropriate Templates folder to display the template names of that job type in the [Job Template](#) list. Then click the desired template name to select it, and to display the associated **Edit** button. When you click **Edit**, the **Job Creator** for that type of job opens with existing information already set. Note that the user cannot delete a global template.

### Job Creator and Step Navigator

Each of the types of Job Creators have a similar look and feel. The **Job Creator Display** for each includes a **Step Navigator** panel on the left with a list of steps to be completed in any order and a set of buttons to click to complete a task or step. Some steps may be optional.



Job Creator and Step Navigator Panel. Click to enlarge. Click again to shrink.

This illustration shows a FLUENT Job. Each step on the left has a corresponding collapsed panel on the right. The selected step is bulleted on the Step Navigator. Its status is indicated by text color.

- Click a step to select it; each step displays its status. The right panel of a **Job Creator Display** shows the content of the selected step in its own panel.
- The step consists of at least one box or option of information, which may or may not be required to complete the step. Error information is displayed in red beneath the field in error. If the box is part of a table, the table row background turns pale red until the error is corrected.
- The area is scrollable as necessary, and includes a **Clear** button to erase all typed text in the step if you make a mistake.
- Individual steps may be expanded showing the entire step or collapsed showing only its header bar. Selecting a step in the Step Navigator expands the step if it is closed, and positions it so it is viewable. Click a topic link below for more detailed information for each job type.

- [FLUENT Job](#)
- [Abaqus Job](#)
- [ANSYS Job](#)
- [Script Job](#)
- [General Purpose Job](#)

## Step Status

The **Step Navigator** displays the steps available and displays the status of the steps using the following color coding:

- Dark Gray — the step is optional.
- Red — the step is required and the required information in the step has not been entered, or the step is optional and partial information entered does not meet minimum requirements to advance to the next step or job submission. If a step is optional and information is cleared, status returns to gray.
- Green — the step is required and the required information in the step has been entered, or the step is optional and partial information entered meets minimum requirements to advance to the next step or job submission.

### Navigator Buttons

Each button in the **Step Navigator** runs a specific task or action.

**Submit** — submits the job. Unavailable if any of the job steps are in a red (incomplete) state.

**Reset** — discards all data from the Job Creator and restores all fields to their previous definitions or values before the last Save or Save As, or before opening the Job Creator. The user remains on the Job Creator panel.

**Back** — discards all data from the Job Creator. A message appears to ask "Do you want to save?" The user returns to the Job Selection Display.

**Save** — saves the job to an existing user job file. Available if editing a user template or if a previous Save As task has been completed.

**Save As...** — displays a box extension to request that you save the job to a user template and assign it a name. The file name is limited to alphanumeric characters and underscore. To enable this button after typing a file name, click outside the text box.

The **Clear** button in the Job Step discards all data in that job step.

## 6.2.1 Common Job Creation Steps

The **Step Navigator** on the left side of the **Job Creator** contains several steps common to FLUENT Jobs, General Purpose Jobs, and Script Jobs. They do not have to be completed in any particular order, nor are they always required information, unless there is a red asterisk beside the field.

The corresponding step panels are described below. When opening a Job Creator, those steps requiring information are automatically expanded.

For illustration purposes, these illustrations come from the FLUENT Job Creator, with all step panels closed except the one being described. Similar steps in the other two Job Creators look the same.

Note: If you opened this page of the Help system by following a link, and the toggled panels below are collapsed, the index term may be inside a collapsed panel. Click the + sign to expand a panel and see more text.

## Job Name

The screenshot shows the 'Job Creator' application window. On the left is a 'FLUENT NAVIGATOR' sidebar with a tree view containing 'Job Name', 'File Acquisition', 'My Job Environment', 'FLUENT UDF(s)', 'FLUENT Parameters', 'Resources', 'File Disposition', and 'Email Notification'. Below this are 'ESCAPE FUNCTIONS' (Reset, Back) and 'JOB TEMPLATE NAME' (Save, Save As). The main 'Job Name' panel has a 'Job Name' text field containing 'leftwing' with a '(Maximum of 15 Characters)' label and a red asterisk. Below it is a 'Comments' text area. A 'Clear' button is at the bottom right of the panel. A legend indicates '\* Indicates a required field'. At the bottom of the main area is a list of expandable sections: File Acquisition, My Job Environment, FLUENT UDF(s) (User Defined Functions), FLUENT Parameters, Resources, File Disposition, and Email Notification, each with a red question mark icon.

Job Name Panel. Click to enlarge. Click again to shrink.

The name of the job and any optional comments are typed in the text boxes provided. The name of the job is required before the job can be submitted.

Fields:

- SMC Application Portal Job Name — the Job Name assigns a name to the job when it is submitted. The name can be reused. This name, along with a Job ID, may be used to monitor the job and display job status. (Job IDs are unique and assigned by the Job Scheduler.) (Text field, must be alphabetic, numerics, and underscores. The first character must be alphabetic. Limited to 15 characters.)
- Comments — optional. (Text field, limited to 5000 characters.)

## File Acquisition

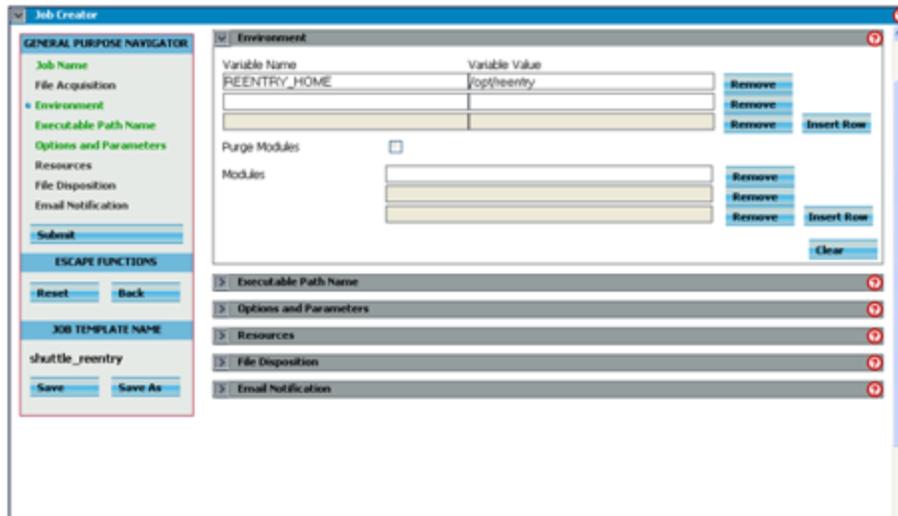
The screenshot shows the 'Job Creator' interface with the 'File Acquisition' panel active. The panel has a table with three columns: 'Source Host', 'Source Path', and 'Destination Path'. There are three rows in the table. To the right of the table are three 'Remove' buttons and one 'Insert Row' button. Below the table are buttons for 'Clear', 'Environment', 'FLUENT UDFs (User Defined Functions)', 'FLUENT Parameters', 'Resources', 'File Disposition', and 'Email Notification'. On the left side of the interface, there is a 'FLUENT NAVIGATOR' sidebar with a tree view containing 'Job Name', 'File Acquisition', 'Environment', 'FLUENT UDFs', 'FLUENT Parameters', 'Resources', 'File Disposition', and 'Email Notification'. Below the sidebar are 'ESCAPE FUNCTIONS' (Reset, Back) and 'JOB TEMPLATE NAME' (Save, Save As) buttons.

File Acquisition Panel. Click to enlarge. Click again to shrink.

Type the File Acquisition information in the text boxes. Files must be acquired before job execution. Files can be copied from any host accessible to the cluster on which the job is run. These files are removed when the job completes. In addition to copying files from the host, you can copy a file to a different tier of storage. You can do this by specifying a source path and a destination path but no source host.

- Source Host name (or IP address) — optional. (Text field, limited to 32 characters.)
- Source Path. (Text field, limited to 128 characters.)
- Destination Path. (Text field, limited to 128 characters.)
- You can specify more than one file. Click Insert Row to insert a row if using more than three files. Click Remove to clear information in a row.

## Environment



Environment Panel. Click to enlarge. Click again to shrink.

The Environment panel is intended for advanced SMC Application Portal users. It allows the user to specify environmental variables and modules to load.

Type or select the Environment information:

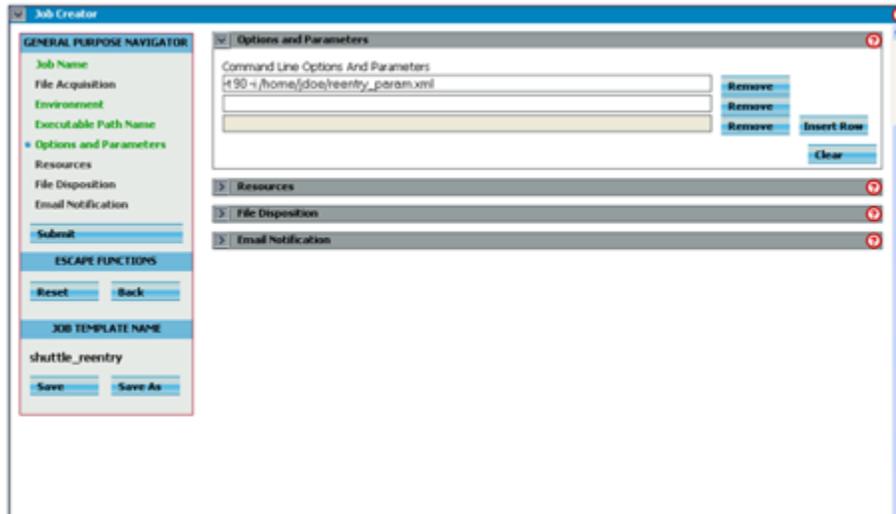
- Type the Variable name and its Value in the boxes. (Text field. Limited to 32 characters. Variable name must consist of alphabetic, numeric, or underscores. The first character may not be numeric. The Variable Value is optional.)
- You can specify more than one variable. Click Insert Row to insert a row if using more than three variables. Click Remove to clear information in a row.
- Modules handling has been incorporated into SMC Application Portal. Click the Purge Modules check box to remove any modules loaded by the shell environment setup. The Modules table is used to specify modules to load before any scripts or programs are executed. More than one module can be specified per entry line separated by a space. SMC Application Portal provides no validation of module existence nor does it check for module dependencies.
- Modules are loaded implicitly based on a FLUENT version or an MPI version selection. The SMC Application Portal administrator configures the modules to load. These modules loaded implicitly override any modules loaded by the shell environment or the Environment step. A user may elect to negate the implicit loading of modules by selecting "Use Environment" on the FLUENT or MPI version.
- SMC Application Portal performs no validation of entries in the Variable Name, Variable Value, and Modules text boxes. The values entered are formatted as written into bash shell commands. For environmental variables, the command is:

```
export Name=Value
```

and for modules the command is:

```
load Module
```

## Options and Parameters



Options and Parameters Panel. Click to enlarge. Click again to shrink.

This step applies to General Purpose Jobs and Script Jobs only. **It does not apply to FLUENT Jobs, which uses a FLUENT parameters panel.**

This step is used to provide command line options and parameters to the command specified in the General Purpose Job or the user script specified in the Script Job.

Type or select the Command Line Options and Parameters information:

- Type the Command Line Options, using the correct syntax and nomenclature. Click the Clear button to clear unwanted text in the box. (Text field, limited to 64 characters).
- You can specify more than one set of parameters. Click Insert Row to insert a row if using more than three sets of parameters. Click Remove to clear information in a row.
- SMC Application Portal does not validate any of the options or parameters. This information is appended to the command line of the command or script; each separate line delimited by a blank.

## Resources

Resources Panel. Click to enlarge. Click again to shrink.

The Job Scheduler uses these parameters to schedule the job and control its execution.

Type the Resource information in the text boxes:

- Number of nodes: (Text field, default is 1, limited to the range displayed.)
- Number of Processors: (Text field, default is 1, limited to the range displayed.)
- Interconnect: Specifies the communication path between nodes to be used if the job uses more than one node. Options are ethernet and (if available) InfiniBand and Myrinet.
- Operating System: If one or more operating systems have been configured for the dynamic provisioning feature included with PBS Professional 10.2, use this drop-down menu to select which operating system the node(s) should be provisioned with before the job runs. For more information on dynamic provisioning, see the [SGI Management Center - Application Portal Install Manual](#).
- Memory Per Job Unit: Memory per job unit usage in Bytes, Kilo-bytes, Mega-bytes, or Giga-bytes
- Start Time: Day is in /MM/DD/YYYY format, followed by (3) 2-character fields to define the hour, minute, and second to begin. Maximum values for these three fields are 23, 59, and 59 respectively.
- Duration Time (maximum): (4) 2-character fields to define days, hours, minutes, and seconds, with maximum values of 99, 23, 59, and 59 respectively. Users may choose to set either or both Start Time and/or Duration time.
- Time and Duration defaults: Date: the date is automatically set to today's date. Time: Setting the hour also sets the minute and second. Default values may be edited. If you submit a job for a past date, it will run immediately.
- Time fields do not accept a time that has already passed; standard behavior is the fields reset to blank upon validation.
- Job Dependency: If the job has a scheduling dependency, specify the "trigger" job by its number and indicate whether the new job should start when the trigger job completes, exits, or fails, by clicking the appropriate option.

## File Disposition

The screenshot shows the 'File Disposition' panel in the Job Creator application. The panel is divided into several sections:

- FLUENT NAVIGATOR:** A sidebar on the left with a tree view containing 'Job Name', 'File Acquisition', 'Environment', 'FLUENT UDFs', 'FLUENT Parameters', 'Resources', 'File Disposition', and 'Email Notification'. The 'File Disposition' item is selected.
- File Disposition:** The main area contains a table with three columns: 'Source Path', 'Destination Host', and 'Destination Path'. There are three rows in the table. To the right of the table are three 'Remove' buttons and one 'Insert Row' button.
- Options:** Below the table, there is a checkbox for 'Merge Output and Error File'. Below that are two text input fields: 'Console Output File' and 'Console Error File'.
- Buttons:** At the bottom right of the panel is a 'Clear' button.
- ESCAPE FUNCTIONS:** A section below the main panel with 'Reset' and 'Back' buttons.
- JOB TEMPLATE NAME:** A section at the bottom with 'Save' and 'Save As' buttons.

File Disposition Panel. Click to enlarge. Click again to shrink.

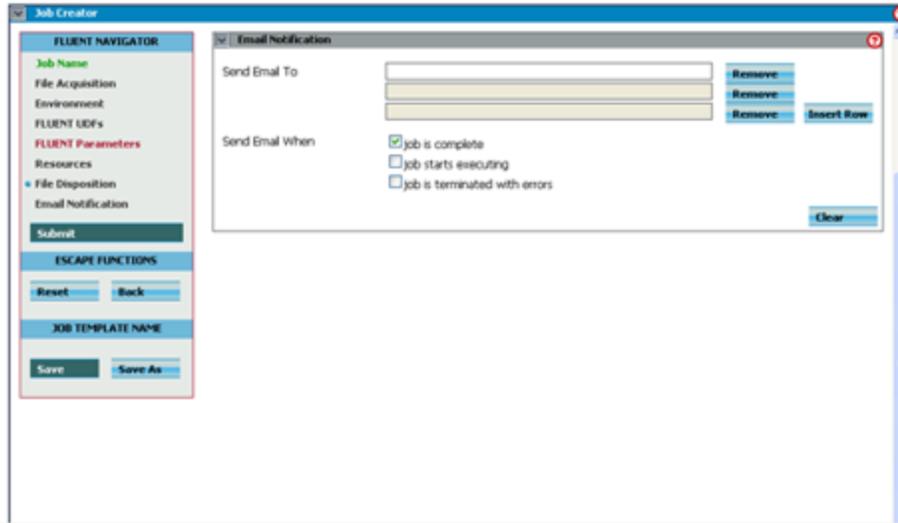
Note: The File Disposition step allows files to be moved from the cluster to other hosts when the job completes. In addition to moving files to the host, you can move a file to a different tier of storage. If you do not specify, output files will remain where they are stored at SMC Application Portal's default output location.

Output files are disposed of after execution.

Type the information in the text boxes:

- Source Path
- Destination Host (or IP address) — optional. (Text field, limited to 32 characters.)
- Destination Path (Text field, limited to 128 characters.)
- You can specify more than one file. Click Insert Row to insert a row if using more than three files. Click Remove to clear information in a row.
- The File Disposition job step has options for handling *stdout* (Console Output File) and *stderr* (Console Error File). The files can be merged and the destination for the files can be specified. Specifying a destination of the format "host:path" will work provided keys are set up to enable an scp transfer of the file.
- If file disposition fails, an email is sent to the user who submitted the job. Complete the Email Notification step to specify and email address.

## ☐ Email Notification



Email Notification Panel. Click to enlarge. Click again to shrink.

Type the Email Notification information:

- Mail To Address. Type the email address of the recipient in the Mail To: box. (Text field, limited to 64 characters, commas not allowed.)
- You can specify more than one recipient. Click Insert Row to insert a row if using more than three e-mail addresses. Click Remove to clear information in a row.
- Send e-mail when: Click to choose to send the e-mail when one of the conditions occurs: (Job is complete [default], Job starts executing, or Job is terminated with errors), or any combination of the three actions.

### 6.2.2 Abaqus Job

Abaqus is a suite of general purpose, nonlinear finite element analysis (FEA) programs for mechanical, structural, civil, biomedical and other related engineering activities.

Abaqus Jobs follow the Common Job Creation Steps of:

- [Job Name](#)
- [File Acquisition](#)
- [Environment](#)
- [Resources](#)
- [File Disposition](#)
- [Email Notification](#)

Abaqus Jobs add more information using the following Job Creation step in addition to the Common Job Creation steps:

## Abaqus Parameters

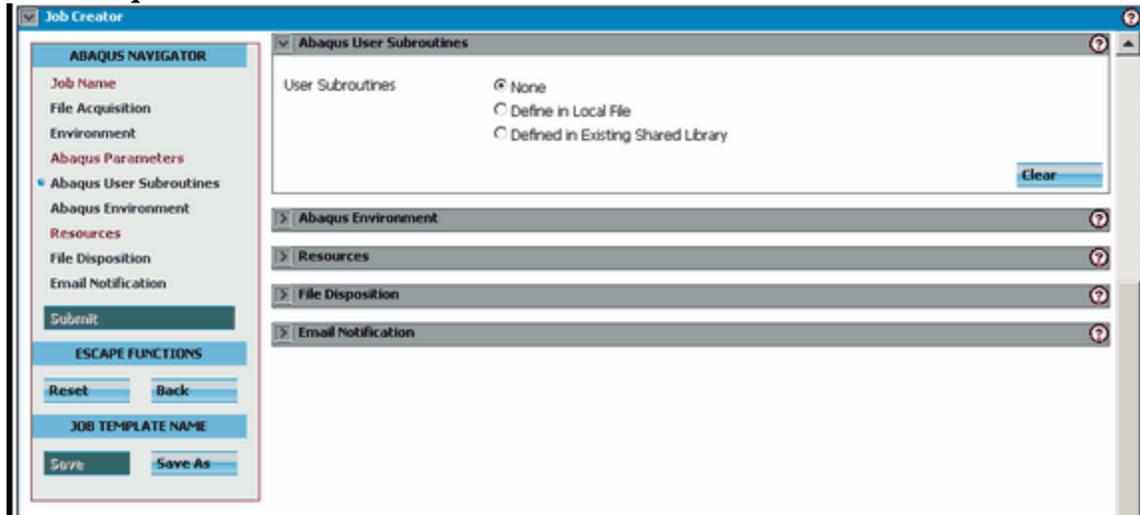
**Abaqus Parameters Panel. Click to enlarge. Click again to shrink.**

The Version number is indicated at the top of the panel.

Enter the Abaqus Parameter information:

- Type the Working Directory (required)
- Chose the Solver (required) (Click to select Standard or Explicit)
- Output Data File (required) (Text field, limited to 128 characters)
- Run in Parallel Mode is on by default (Click to check or uncheck)
- From the Task pull down menu, choose Analysis, Recover, Data Check, Parameter Check, or Syntax Check
- Restart Analysis (Click to check or uncheck; Type Old Job Name)

## ▢ Abaqus User Subroutines

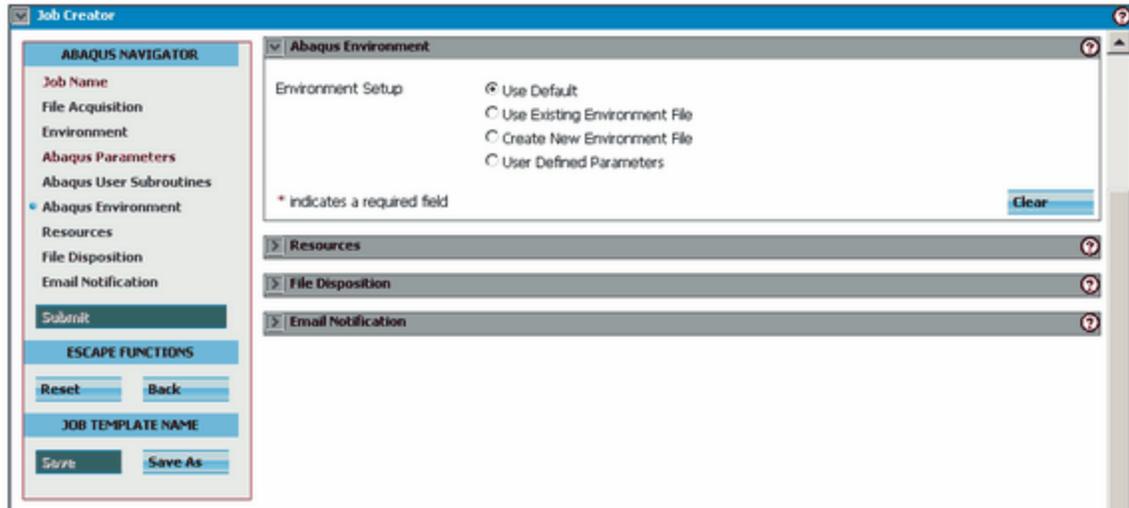


Abaqus User Subroutines Panel. Click to enlarge. Click again to shrink.

For user subroutines, click on any of the following:

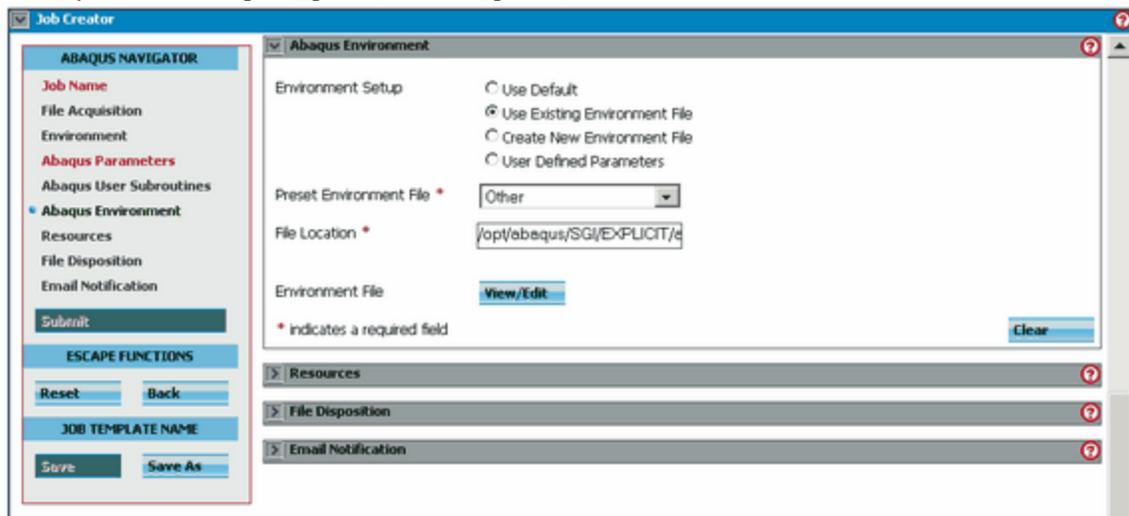
- None
- Define in Local File (Type in the Source File location)
- Defined in Existing Shared Library (Type in the Shared Library Directory location)

## Abaqus Environment



Abaqus Environment Panel. Click to enlarge. Click again to shrink.

The Abaqus Environment setup allows you to use a default setup, use an existing environmental file, create a new environmental file, and define user parameters. The Preset Environment File pull down menu (required) allows you to select `explicit_preset`, `standard_preset`, and `Other`.



Abaqus Preset Environment File Pull-down Menu. Click to enlarge. Click again to shrink.

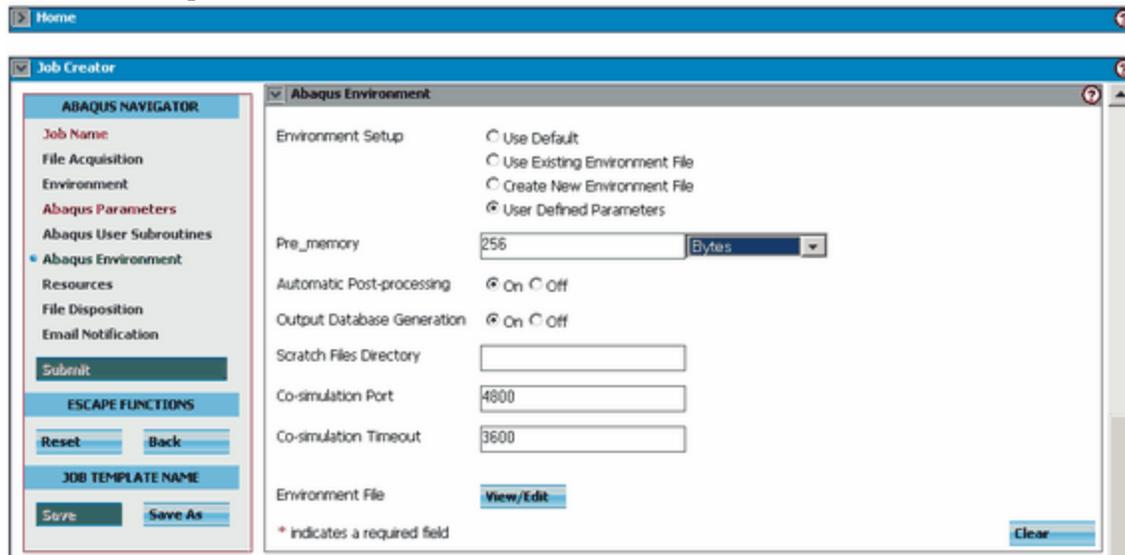
### All Environment file parameters must have a value. The following syntax rules apply:

- All parameters are case sensitive.
- A string value must be enclosed in a pair of double or single quotes.
- Comments are preceded by a number sign (#). All characters following a number sign on a line are ignored. Number signs within a quoted string are part of the string, not the beginning of a comment.
- Blank lines are ignored.
- Embedded single quotes do not require special handling if they are placed within a double-quoted string. For example, "my value's" is translated as my value's. The same holds true for double quotes embedded in a single-quoted string. Quotes of the same type as the enclosing quotes can be embedded if they are prefixed by the backslash (\) character.
- Triple-quoted (" ") strings can span more than one line, and no special treatment of quotes within the string is necessary. Entries take the form: parameter=" " multi-line value " "
- Lists must be enclosed in parentheses (( )) or square brackets ([ ]). Individual items in the list are separated

by commas. If the list is enclosed in parentheses and contains only one value, a comma has to follow the value. String list items must be enclosed in quotes. Entries take the form of: parameter=(value1, value2, value3)

### User Defined Parameters

The user defined parameters in the Abaqus environment panel allow you to create an Abaqus environment file based upon the Input parameters from like pre memory, scratch file directory, co-simulation port, and so on.



Abaqus Environment User Defined Parameters. Click to enlarge. Click again to shrink.

## 6.2.3 ANSYS Job

ANSYS Multiphysics is a suite of programs that allows engineers and designers to simulate the interaction between structural mechanics, heat transfer, fluid flow, acoustics and electromagnetic's.

ANSYS Jobs follow the Common Job Creation Steps of:

- [Job Name](#)
- [File Acquisition](#)
- [Environment](#)
- [Resources](#)
- [File Disposition](#)
- [Email Notification](#)

ANSYS Jobs add more information using the following Job Creation step in addition to the Common Job Creation steps:

## ANSYS Parameters

The screenshot shows the 'ANSYS Parameters' panel within the 'Job Creator' application. On the left, the 'ANSYS NAVIGATOR' sidebar lists various sections: Job Name, File Acquisition, My Job Environment, ANSYS Parameters (highlighted), Resources, File Disposition, and Email Notification. Below this is a 'Submit' button and an 'ESCAPE FUNCTIONS' section with 'Reset' and 'Main Page' buttons. The main panel contains the following fields:

- Version: 11.1 (dropdown)
- Working Directory \*: (text input)
- Run in Parallel Mode:
- Database Memory: (text input) Gigabytes (dropdown)
- Product \*: (ane3fl) Multiphysics (radio button)
- Input File \*: (text input)

\* Indicates a required field

ANSYS Parameters Panel. Click to enlarge. Click again to shrink.

The Version number is indicated at the top of the panel.

Enter the Abaqus Parameter information:

- Type the Working Directory (required)
- Run in Parallel Mode is in on by default (Click to check or uncheck)
- From the Database pull down menu, choose Gigabytes (default), bytes kilobytes, or megabytes
- Product (ane3fl) Multiphysics (required)
- Type the Input File (required)

## 6.2.4 FLUENT Job

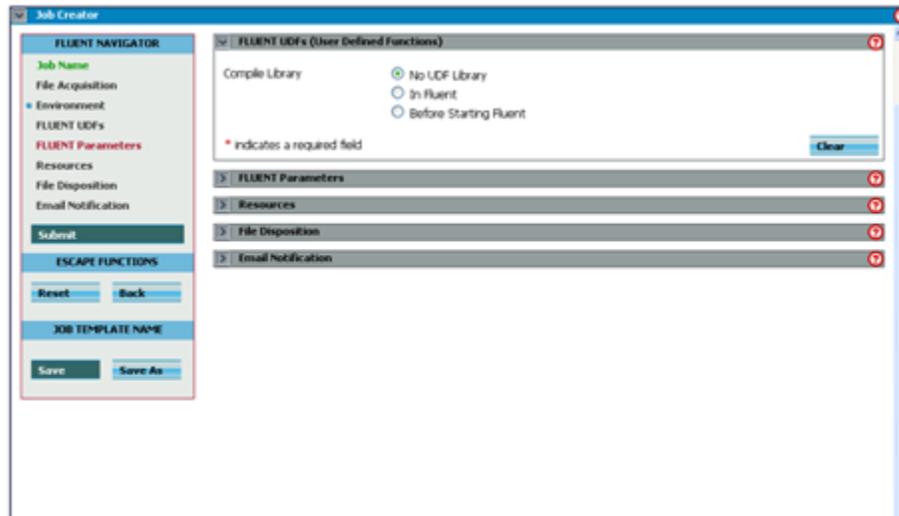
FLUENT is a suite of programs that model systems in computational fluid dynamics (CFD).

FLUENT Jobs follow the Common Job Creation Steps of:

- [Job Name](#)
- [File Acquisition](#)
- [Environment](#)
- [Resources](#)
- [File Disposition](#)
- [Email Notification](#)

FLUENT Jobs add more information using the following Job Creation step in addition to the Common Job Creation steps:

## FLUENT UDFs



FLUENT UDFs Panel. Click to enlarge. Click again to shrink.

User-Defined Functions (UDFs) are C language library functions that can be used to enhance the standard features of FLUENT. Refer to FLUENT documentation for an in-depth discussion of UDFs.

Compile Library allows selection of:

- No UDF Library (default)
- In Fluent. This builds the library from within FLUENT. The input supplied for building the library includes the library name and the C program header files and source files from which the library is built.
- Before Starting Fluent. This will build the library prior to invoking the FLUENT program. A Makefile for generating the library must be provided. It will build the library file specified by Library Name. If the library already exists, the job will not regenerate the library if the check box '**Skip if Library Already Built**' is selected.

## FLUENT Parameters

FLUENT Parameters Panel. Click to enlarge. Click again to shrink.

The Version number is indicated at the top of the panel.

Type the FLUENT Parameter information:

- (Working Directory)
- Case File Path (required) (Text field, limited to 128 characters)
- Output Data File (required) (Text field, limited to 128 characters)
- Iterations (Text field, limited to 16 characters, must be numeric. Set to 100 by default.)
- Model (click either 2d or 3d for 2-D or 3-D modeling. Set to 3d by default).
- Parallel Processing. Click to check or uncheck the Partition check boxes (Auto Partition, In Case File). Neither is required, but both boxes cannot be selected.

### Journal

Journal File Setup

- Build Journal File From Basic Setup
- Use Existing Journal File
- Create New Journal File

Case File \*

Input Data File

Output Data File \*

Iterations

Partition Setup \*

- In Case File
- Auto Partition

Number Of Partitions

Journal File

```
/file/set-batch-options no yes no
/parallel/partition/auto/use-case-file-method no
/parallel/partition/auto/pre-test yes
/file/read-case left_flap.cas.gz
/solve/initialize/initialize-flow
/solve/iterate 100
/file/write-data left_flap_out.dat.gz
exit
yes
```

\* indicates a required field

FLUENT Parameters Journal box. Click to enlarge. Click again to shrink.

Journal File Setup

- Build Journal File From Basic Setup
- Use Existing Journal File
- Create New Journal File

Journal File Path \*

Journal File

\* indicates a required field

Existing Journal Option. Click to enlarge. Click again to shrink.

Journal File Setup

- Build Journal File From Basic Setup
- Use Existing Journal File
- Create New Journal File

Journal File \*

\* indicates a required field

New Journal Option. Click to enlarge. Click again to shrink.

## 6.2.5 Script Job

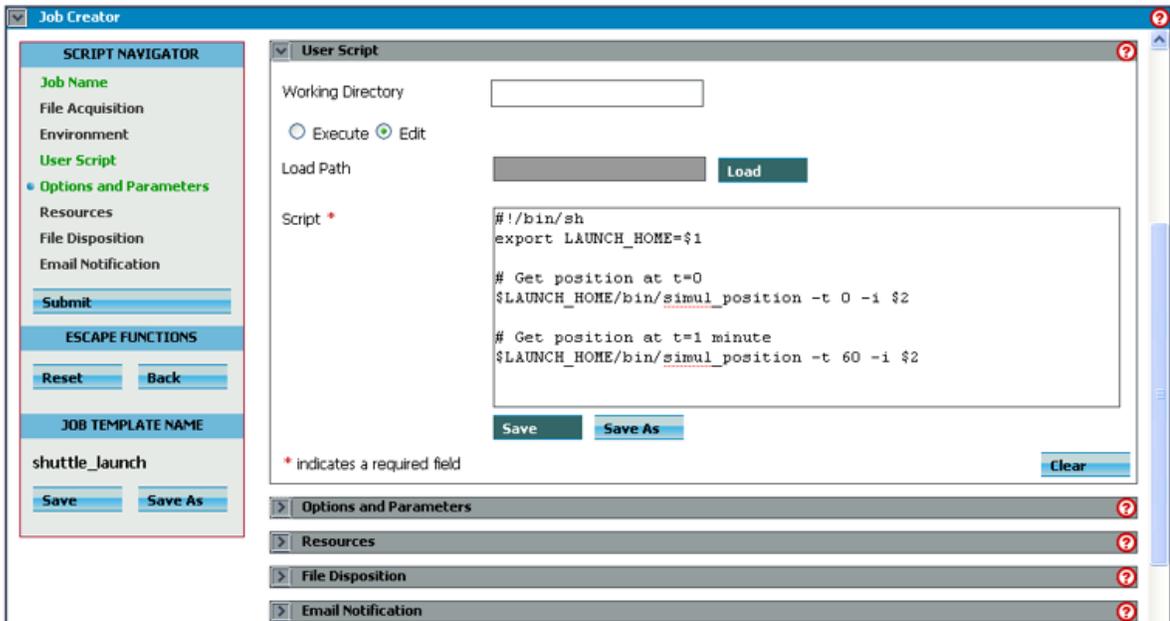
Script Jobs are for advanced users. Script Jobs are similar to General Purpose Jobs except that they are specific to creating and running user-generated scripts.

Script Jobs follow the Common Job Creation Steps of:

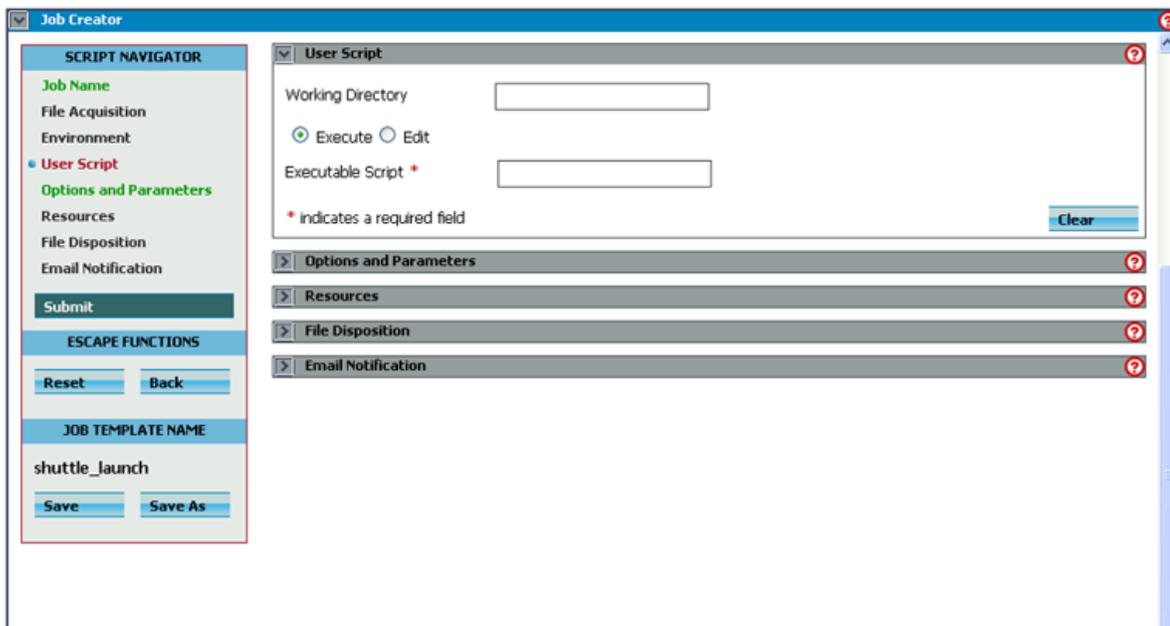
- [Job Name](#)
- [File Acquisition](#)
- [Environment](#)
- [Options and Parameters](#)
- [Resources](#)
- [File Disposition](#)
- [Email Notification](#)

Script Jobs add more information using the following Job Creation step in addition to the Common Job Creation steps.

## User Script



Script Panel Execute Option. Click to enlarge. Click again to shrink.



Script Panel Edit Option. Click to enlarge. Click again to shrink.

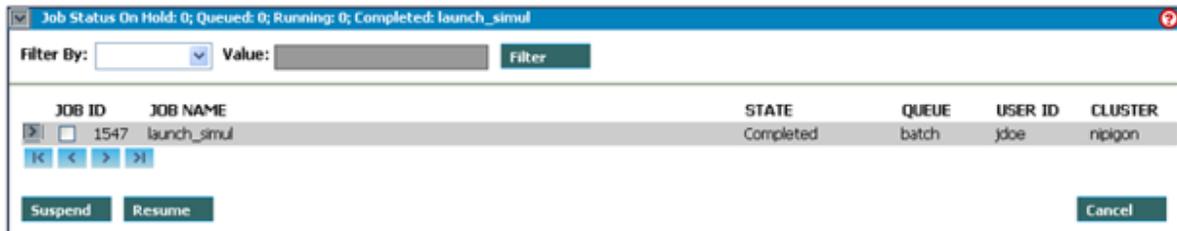
On the User Script Panel job step,

- Type the working directory name.
- Click to choose either the Execute or Edit option. For Execute, the Script Job runs the script specified in the Executable Script box. In either instance, the user script runs in a sub shell of the Script Job. This means that Job Scheduler directives in the user script are ignored.
- To run the script as written, click the Execute option, and then type the full path name of the Executable Script in the text box.
- To create or edit a script, click the Edit option. Verify the load path and type or edit the script displayed in

the large text field. The maximum number of lines allowed are 1000, with each line limited to 256 characters. (**Note:** There is no validation of the script.) Click Save or Save as. A script must be typed in the Script field to enable the Save and Save as buttons. When saved, the script is date stamped. When you click Save as, a field appears prompting for a path name.

## 6.3 Job Status Panel

This panel expands (or collapses) by clicking the arrow at the left of the Job Status header bar. This panel is where a job that has been submitted is listed. The Job Status header bar shows a summary of jobs on hold, queued, running, or completed.



**Job Status Panel. Click to enlarge. Click again to shrink.**

Jobs are listed in the available space of the panel, and can be filtered to reduce the length of the list and display a specific job. If the job list has more than ten job names, use the pagination arrows to navigate. The arrows link to the first page, next page, previous page, and last page. Also, clickable page numbers display between the next and previous buttons.

The job information displayed includes:

- Job ID
- Job Name
- State (see descriptions below)
- Queue
- User ID
- Cluster

State Descriptions:

- Idle Job is in a queue waiting to execute.
- Running Job is executing.
- Completed Job has finished execution or has been canceled.
- Suspended Running job has been suspended by user or administrator.
- Hold Job has an error prior to execution (for example, job requested too many resources) or a hold has been placed on the job by user or administrator.
- Not Queued Job was submitted with a start time in the future.
- Removed Job has been removed by administrator prior to execution.

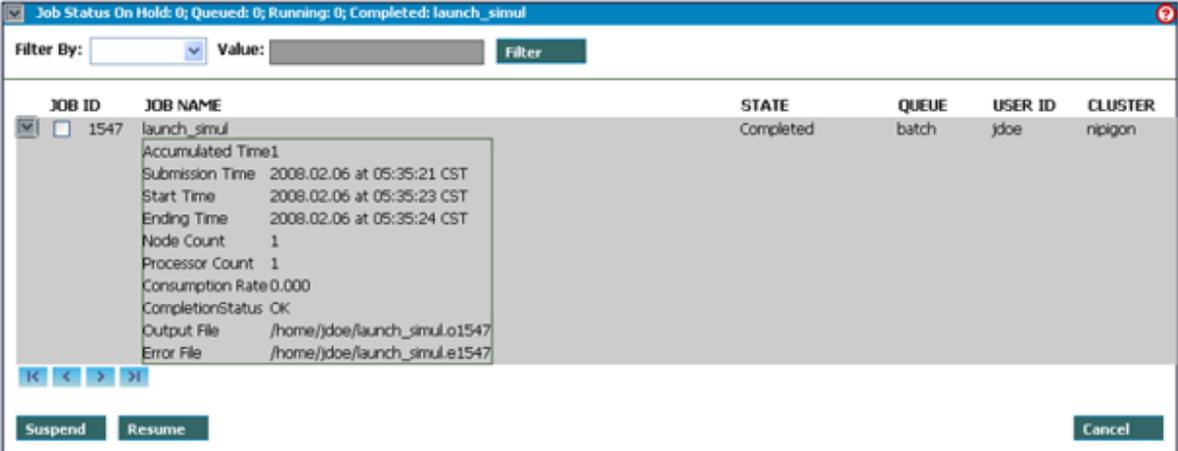
Use the buttons to manage your jobs. You may Suspend, Resume, or Cancel a selected job. Jobs cannot be deleted. Completed jobs remain in the display for a period of time determined by the administrator and then are removed.

Job Cancellation:

- When the job is already running, select it and click **Cancel**. The job is canceled, and the status message says "Completed."
- When the job cannot complete due to operational circumstances, such as insufficient resources, the job is

automatically canceled (removed), and the job status is cleared.

Display additional information about a job by clicking on the row's left arrow to expand the row's height. The information displayed depends on the state of the job. Completed jobs show an Output File name and, optionally, an Error File name. Those files accessible to the SMC Application Portal server are highlighted on mouse rollover. Clicking on the file name launches a popup window to display the contents of the file. (see also [File Disposition](#) step).



Job Status Panel expanded. Click to enlarge. Click again to shrink.



Job Status Panel Detail Popup. Click to enlarge. Click again to shrink.

### 6.4 Links Panel

This panel expands (or collapses) by clicking the arrow at the left of the Links header bar. This panel contains helpful links to other resources, such as SGI, FLUENT, SIMULIA, and ANSYS.



## 7 Glossary

Click a letter to advance to that section of the Glossary listing.  
Click a Glossary term to display the definition of the term as expanded text.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

- A -

- ▼ **Abaqus Job**  
Abaqus is a suite of general purpose, nonlinear finite element analysis (FEA) programs for mechanical, structural, civil, biomedical and other related engineering activities. See the topic for [Abaqus job](#).
- ▼ **Administrator**  
A user who has been granted full access permissions to set up and monitor the system and monitor usage by other users. There is one Administrator role, but many users can be assigned to that role.
- ▼ **Add Button**  
When positioned next to a text field where parameters or variables are being typed, the Add button lets you add the current item to a list or a table of multiple items.
- ▼ **ANSYS Job**  
ANSYS Multiphysics is a suite of programs that allows engineers and designers to simulate the interaction between structural mechanics, heat transfer, fluid flow, acoustics and electromagnetic's. See the topic for [ANSYS job](#).

- B -

- C -

- ▼ **Cluster**  
A cluster is a group of computers and/or servers that share the work as one, making one big computer instead of multiple smaller computers. The "master host" is the computer on which cluster and system management services are run.
- ▼ **Context-Sensitive Help**  
Help which is specific to the adjacent field or control. Click the adjacent Help link to open a topic window in a new browser and advance to the appropriate section of the topic.

Create Jobs Panel (See [Job Creator panel](#))

- D -

- ▼ **Dashboard View**  
After logging in to SMC Application Portal, your browser window shows four panels with header bars. The header bar of each panel controls whether the panel is shown expanded or collapsed. The default view displays three that are collapsed and the Job Creator panel, which is expanded. When all are collapsed, the entire window view may be called a "Dashboard View."

**- E -**

## ▼ Error Messages

If the information you specify in SMC Application Portal's Job Step panels does not meet validation requirements, an error message displays in red text under the field. You must correct the error to exit the step.

## ▼ Executable

A program in machine language that is ready to run in a particular computer environment.

**- F -**

Field Help (See [Context-Sensitive Help](#))

## ▼ FLUENT Job

FLUENT is a suite of programs that model systems in computational fluid dynamics (CFD). This includes flows in two- and three-dimensional geometries, and under a variety of conditions: compressible and incompressible; inviscid, laminar and turbulent; Newtonian and non-Newtonian. The analysis can be steady-state or transient. FLUENT simulates convective, coupled and radiative heat transfer, it can account for the mixing and reaction of chemical species, and for arbitrary sources of heat, mass, turbulence and momentum. Calculations employ stationary or rotating frames of reference, and a variety of meshes. A FLUENT job is a job run using the parameters for FLUENT. See the topic for [FLUENT Job](#).

**- G -**

## ▼ General Purpose Job

A job run using General Purpose parameters. The parameters allow execution of a system or user command, script, or program. See the topic for [General Purpose Job](#).

**- H -**

## ▼ Home Panel

The topmost of the main panels of the SMC Application Portal program, this Welcome panel explains the use and functionality of the panels.

## ▼ How-To Help

Help which lists each step required to complete a task. Open the Help system and navigate to the "How-To" procedure you want. The topic lists each step required. Items in a sequence are numbered. Items with no particular order are bulleted. See the topic for [Types of Help](#).

**- I -****- J -**

## ▼ JBoss

An Open Source application server implemented in pure Java. Because it is Java based, JBoss can be used on any operating system that supports Java.

## ▼ Job Creator Panel

One of the main panels of the SMC Application Portal program, this panel is where jobs are created, edited, and submitted, according to which type of job is being submitted (FLUENT, General Purpose, or Script). The left portion of the panel is a Step Navigator to select the step to which you want to edit or add

information, and the detail of the selected step appears in the right portion.

▼ Job ID

An identifier assigned by the Job Scheduler for the specific instance of a job. It is unique.

▼ Job Scheduler

An automated utility program that stores timing triggers in a job queue for submitted jobs, and runs those jobs in sequence when the timing triggers are met.

▼ Job Selection Display Panel

This panel is viewed in the Job Creator Panel when SMC Application Portal is opened for a new work session, or when the Job Creator Panel is exited. This panel is where the user selects the job type to create or edit. Whichever button is clicked (FLUENT, General Purpose, Script) selects and opens the presentation of available steps for the job in the Job Creator Panel.

▼ Job Status Panel

One of the main panels of the SMC Application Portal program, this panel is where a job that has been submitted is listed. Jobs may be filtered and sorted. They are identified by Job Name, Job ID, state, queue, user ID, and cluster. The Job Status header bar shows a summary of jobs queued, running, or completed.

- K -

- L -

▼ LDAP

LDAP (Lightweight Directory Access Protocol) is a software protocol for enabling anyone to locate organizations, individuals, and other resources such as files and devices in a network, whether on the public Internet or on a corporate intranet. A client starts an LDAP session by connecting to an LDAP server.

▼ Links Panel

One of the main panels of the SMC Application Portal program, this panel contains helpful links to other resources, such as SGI, FLUENT, SIMULIA, and ANSYS. See the topic for [Links Panel](#).

- M -

▼ Master host

The "master host" is the computer on which cluster and system management services are run.

- N -

Navigation Panel (See [Step Navigator](#))

▼ Node

Any computer connected to a computer network. A cluster node is a computer connected to the cluster.

- O -

- P -

▼ Panel Help

Help which describes the purpose or functionality of a panel in the SMC Application Portal, such as the Job Status Panel or Job Name Panel. Click the Help link in the upper right of the title bar of a panel to open the Help system window in a new browser and display the topic associated with that panel. The topic includes a description of all the fields from the panel, including information about data required to complete each field.

Procedural Help (See [How-To Help](#))

- Q -

- R -

▼ Resource Manager

An automated utility program that monitors the processing load on nodes of the cluster. Working in conjunction with the Job Scheduler, the Resource Manager helps assign nodes for processing a job submitted to the Job Scheduler, according to the size of the job and the timing constraints of the Job Scheduler.

- S -

▼ Script Job

A job run according to the parameters set in a coded script. See the topic for [Script Job](#).

▼ SMC Application Portal Job Name

An identifier assigned by a user for a particular set of job characteristics. It can be reused.

▼ Standard Error Messages

Error messages which comes from problems in the program.

▼ Step Navigator

The left panel of the Job Creator panel is the Step Navigator, where steps for a job are listed. When a step is selected in the navigator, the right panel displays corresponding information or parameters. Each step displays its status by color. See the topic for [Job Creator Panel](#).

▼ Submit

The **Submit** button appears on the Step Navigator of the Job Creator Panel. Clicking the button sends the job to the Job Scheduler's job queue. The button is not available if any of the job steps are in a red (incomplete) state.

▼ System Messages

Error message which come from problems with the operating system.

- T -

Task Help (See [How-To Help](#))

▼ Template

Partial or complete job definitions. Some are created by a user for themselves, while others are "global" and are shared among all users of a site.

---

**- U -**

▼ **User**

A User is a person who has been granted certain access permissions to use the system. There is one User role, but many persons can be assigned to that role. Most persons who use the system are assigned the User role.

**- V -**

**- W -**

**- X -**

**- Y -**

**- Z -**

# Index

## - A -

Abaqus Job 28  
 Abaqus Environment 31  
 Abaqus Parameters 29  
 Abaqus User Subroutines 30  
 Access Permissions 3  
 ANSYS Job 32  
 ANSYS Parameters 33  
 Assumptions 1

## - B -

Back Button 7  
 Bash Shell Programming 1  
 Breadcrumbs 4  
 Browser 6

## - C -

Case File Path 33  
 Clear button 7, 18  
 Cluster 13, 39  
 Cluster Application Programming 1  
 Collapsing Panels 2, 17  
 Command Line Options 25  
 Comments 21  
 Common Job Creation Steps 21  
 Completed 39  
 Console Error File 21  
 Console Output File 21  
 Contents Link 4, 5  
 Context-Sensitive Help 4  
 Conventions 2  
 Create a New Job 8

## - D -

Dashboard View 7, 17  
 Database Memory 32  
 Delete button 18  
 Destination Host 21

Destination Path 21  
 Duration 21

## - E -

Edit an Existing Job 7  
 Edit button 18  
 Edit Script 37  
 Email Notification 28  
 Environment 24  
 Error message 7  
 Executable File Path 15  
 Executable Path Name 16  
 Executable Script Name 37  
 Execute as MPI 15  
 Execute Script 37  
 Expanding Panels 2, 17

## - F -

Field Help 4  
 File Acquisition 23  
 File Disposition 27  
 Firefox 1, 6  
 FLUENT Job 18, 21, 33  
 Fluent Parameters 35  
 FLUENT UDFs 34  
 Full Text Search 5

## - G -

General Purpose Job 15, 18, 21  
 Getting Started 1  
 Global templates 3  
 Glossary 4, 42

## - H -

Help, Types of  
   Context-Sensitive 4  
   Field 4  
   How-To 4  
   Panel 4  
   Popup 4  
   Procedural 4  
   Task 4  
 Hold 39

Home Panel 7, 17  
How-To Help 4  
How-To Procedures 7

## - I -

Icons 5  
Idle 39  
Index Link 4, 5  
Input File 32  
Interconnect 21  
Internet Explorer 1, 6  
Introduction 1  
Iterations 33

## - J -

Job Completed 21  
Job Creator 18  
Job Creator and Step Navigator 19  
Job Creator Panel 7, 17, 18  
Job Dependency 21  
Job Executing 21  
Job ID 13, 21, 39  
Job Name 13, 22, 39  
Job Resources 26  
Job Selection Display 18  
Job Status Panel 7, 13, 17, 39  
Job Template storage locations 7  
Job Templates 3  
Job Terminated with Error 21

## - L -

Links Panel 7, 17, 40  
Load Path 37  
Logging in 3

## - M -

Merge Output 21  
Model 33  
Monitor Running Jobs 13

## - N -

Navigator Buttons 21  
Next Topic 4  
Not Queued 39  
Number of Nodes 21  
Number of Processors 21

## - O -

Options and Parameters 21  
Output Data File 28, 33

## - P -

Panel Descriptions 2, 17  
Panel Help 4  
Parallel Processing 28, 33  
Parent Topic 4  
Password 3  
Popup Help 4  
Previous Topic 4  
Print Topic 4  
Procedural Help 4  
Product 32

## - Q -

Queue 13

## - R -

Recipient List 21  
Removed 39  
Required fields 7  
Reset button 7, 18  
Restart Analysis 28  
Run in Parallel Mode 28, 32  
Running 39

## - S -

Safari 6  
Save As button 7, 18  
Save button 7, 18

Script Job 18, 21, 37  
Script Panel 37  
Search 7  
Search Link 4, 5  
Send Email To 21  
Send EMail When 21  
SMC Application Portal Job Templates 7  
SMC Application Portal User Job Name 21  
Solver 28  
Source Host Name 21  
Source Path 21  
Standard Error File 21  
Standard Functionalities 2  
Start Time 21  
State 13, 39  
State Change 2  
Status Indicator 17  
Step Navigator 19, 21  
Step Status 20  
Submit An Existing Job 7  
Submit button 7, 18  
Submitting Jobs 7  
Suspended 39  
System Status 2, 17

## - T -

Task 28  
Task Help 4  
Types of Help 4, 5

## - U -

User Access 3  
User ID 13, 39  
User Interface 2  
User Script 37  
Username 3  
Using Help 4

## - V -

Validation 2, 7, 21, 37  
Variable Name 21  
Variable Value 21  
Variables List 21  
Version 28, 32, 33

## - W -

Working Directory 15, 28, 32, 33, 37  
Working Environment 6



Technical Publications Library  
<http://docs.sgi.com>