



# Scheduling Jobs in Groups

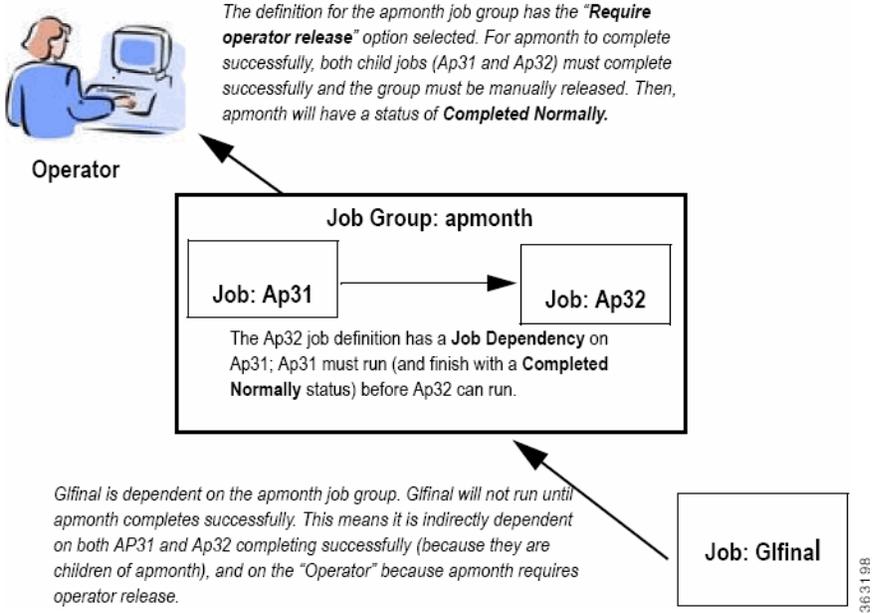
## Overview

Enterprise Scheduler lets you organize your jobs into job groups to make it easier to manage and control jobs, and to make it more efficient to set job attributes. Jobs can inherit characteristics such as dependencies and calendars from their associated job group, eliminating the need to specify common job details for each job.

When a job group is added to the schedule manually, all of its member jobs (called child jobs) are added as well, saving you additional work and reducing the potential for mistakes. A job group can be configured the way a single job can be to depend on another job or job group.

In this exercise, we will create a job group called apmonth. apmonth will consist of two jobs, Ap31 and Ap32. We will make the Ap32 job dependent on the Ap31 job completing successfully. Once the apmonth job group has completed normally, Glfinal will run.

**Figure 6-1 Interdependency of Glfinal, apmonth, Ap31 and Ap32**



This chapter describes how to:

- Define a job group

- Create jobs that belong to the group
- Schedule the job group
- Create a job that depends on a group
- Release the job group

**Note**

To complete the exercises in this tutorial, you need to:

- Install Enterprise Scheduler in the default directory **Scheduler** (or the examples in this tutorial will not work properly)
- Select the **Super User** option in your User definition
- Configure a default agent
- Create and have available the work day calendar

## Job Group Hierarchy

A job group is represented with a colored background. All of a group's child jobs are indented underneath the group name. Each job group can include jobs and other job groups, which in turn can include other jobs and job groups. The window helps you visualize and navigate through the hierarchy of job groups. When you click the symbol to the left of a job group name, the display expands to show all of the jobs and job groups within the selected job group.

## Job Group Scheduling

In this chapter we will develop a set of jobs under a job group, then schedule the jobs by submitting the job group only. We will do this by initially setting up the job group and its jobs as unscheduled (without an assigned calendar). This will prevent the jobs from entering the schedule before all the definitions are complete. We will then give the job group a calendar. We will set the child jobs to inherit the calendar so that all the jobs in the job group will be scheduled in one step.

## Adding a Job Group

To add a job group:

1. From the Navigator pane, select Definitions>Jobs to display the Jobs pane.
2. Right-click in the Jobs pane of the console and select Add Job Group from the context menu.

The Job Group Definition dialog displays.

Figure 6-2 Job Group Definition Dialog

The Job Group Definition dialog is similar, but not the same, as the Job Definition dialog. The Job Group Definition dialog does not have a field for specifying the command to execute, because a job group is a container for jobs.

3. In the **Job Group Name** field, enter **apmonth**.
4. Click the **Options** tab, and select the **Require operator release** option. This causes the group to wait for a manual release before it will launch.
5. Click **OK**.  
A **Confirm** dialog displays.
6. Click **Yes**. The **apmonth** job group is added to the **Jobs** pane.

## Creating Jobs that Belong to a Job Group

Now, you will add child jobs within the job group that you just created. Because you are adding jobs within the job group, inheritable properties will be set for the jobs from the job group, such as the agent that the jobs will run on.

### Creating the Ap31 Child Job

To create the Ap31 child job belonging to the apmonth job group:

1. From the Navigator pane, select Definitions>Jobs to display the **Jobs** pane.
2. Select the apmonth job group.
3. Click the Add Job button on the Enterprise Scheduler toolbar or right-click the **Jobs** pane and select Add Job from the context menu to display the **Job Definition** dialog.
4. Enter Ap31 in the Job Name field.

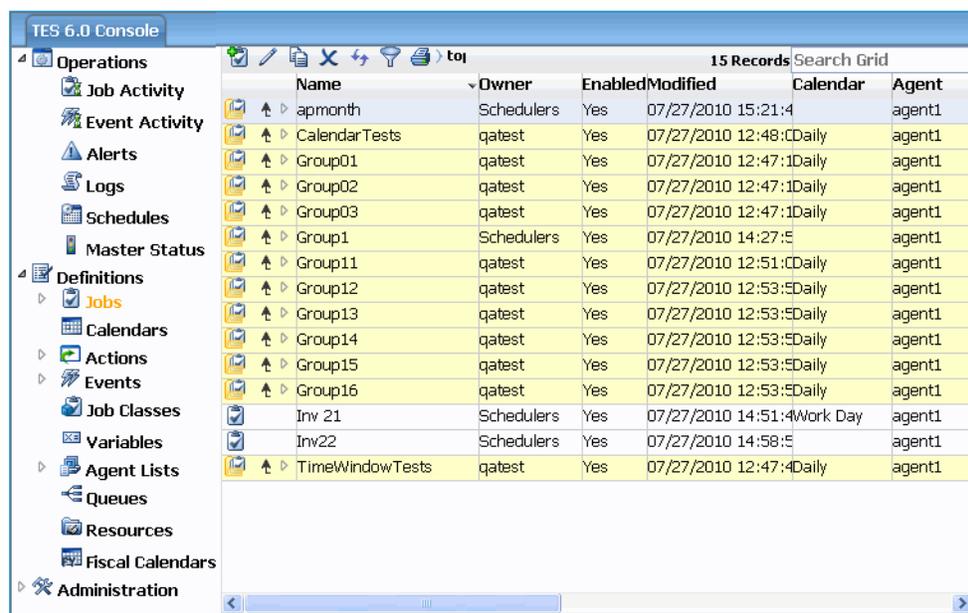
Notice that the apmonth job group is displayed in the Parent Group field. You can also specify apmonth as the job group by selecting \apmonth from the Parent Group list.

5. In the Command field enter the full path to Ap31.bat.
6. Click OK.
7. A Confirm dialog displays.
8. Click Yes.
9. Now, when the apmonth job group is displayed in the jobs window, it will have a  icon to the left of it. This icon indicates there are jobs and/or more job groups underneath it that are not currently visible. Clicking the  icon expands the selected job group, showing the child jobs and/or job groups belong to it. Clicking the  icon again collapses the job group. Jobs do not have the  icon next to them because a job is singular and cannot have child jobs

**Note**

Ap31 is identified as a Level 2 job, meaning it is nested on the next level below apmonth. The indentation of the job name also serves as a visual cue of the hierarchy. Apmonth is at Level 1 (or root) level.

**Figure 6-3** apmonth Job Group—Collapsed View



Name	Owner	Enabled	Modified	Calendar	Agent
apmonth	Schedulers	Yes	07/27/2010 15:21:4		agent1
CalendarTests	qatest	Yes	07/27/2010 12:48:0	Daily	agent1
Group01	qatest	Yes	07/27/2010 12:47:1	Daily	agent1
Group02	qatest	Yes	07/27/2010 12:47:1	Daily	agent1
Group03	qatest	Yes	07/27/2010 12:47:1	Daily	agent1
Group1	Schedulers	Yes	07/27/2010 14:27:5		agent1
Group11	qatest	Yes	07/27/2010 12:51:0	Daily	agent1
Group12	qatest	Yes	07/27/2010 12:53:5	Daily	agent1
Group13	qatest	Yes	07/27/2010 12:53:5	Daily	agent1
Group14	qatest	Yes	07/27/2010 12:53:5	Daily	agent1
Group15	qatest	Yes	07/27/2010 12:53:5	Daily	agent1
Group16	qatest	Yes	07/27/2010 12:53:5	Daily	agent1
Inv 21	Schedulers	Yes	07/27/2010 14:51:4	Work Day	agent1
Inv22	Schedulers	Yes	07/27/2010 14:58:5		agent1
TimeWindowTests	qatest	Yes	07/27/2010 12:47:4	Daily	agent1

All of the jobs and job groups within **apmonth** will be listed beneath it. If they are not, expand the **apmonth** listing by clicking the icon next to it.

## Creating the Ap32 Child Job with a Dependency

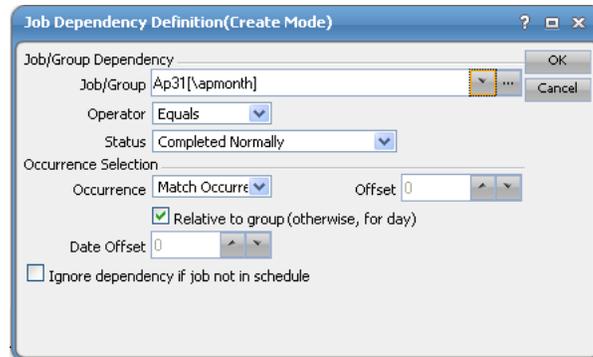
Now, we will create the **Ap32** child job that depends on the **Ap31** job. This job also belongs to the **apmonth** job group.

To create the Ap32 child job with a dependency:

1. From the Navigator pane, select Definitions>Jobs to display the Jobs pane.
2. Select the apmonth job group.
3. Click the Add Job button on the Enterprise Scheduler toolbar or right-click the **Jobs** pane and select Add Job from the context menu to display the Job Definition dialog.

4. In the Job Name field, enter the job name Ap32. The apmonth job group should be displayed in the Parent Group field. If it does not appear, select \apmonth from the Parent Group list.
5. In the Command field, enter the full path to Ap32.bat.
6. Click the Dependencies tab.
7. Click Add and select Add Job Dependency to display the Job Dependency Definition dialog.
8. Click the down-arrow button in the Job/Group list and select the Ap31 job.

**Figure 6-4** Making Ap31 a job dependency of Ap32



9. Click OK.  
Ap31 is now displayed on the Dependencies tab of the Job Definition dialog. Notice that the Type of dependency is identified as JOB.
10. Click OK.  
The Confirm dialog displays, reminding you that a calendar has not been specified.
11. Click Yes to accept the job definition without assigning it a calendar.  
The Ap32 job appears along with Ap31 in the hierarchy under the apmonth job group.

## Scheduling the Job Group

We have created two child jobs under the job group called **apmonth**, but no jobs have been scheduled. We will now assign a calendar to the job group, and when closed, the job group and all its child jobs will enter the schedule to run based on the calendar.

To schedule the job group:

1. Double-click the **apmonth** job group to open its definition.
2. In the **Calendar Name** list, select the **Daily** calendar.  
Since child jobs default to inheriting the parent group's attributes, by setting this option for the group, you are effectively assigning a **Daily** calendar to each child job.
3. Click **OK**. The **Effective Date** dialog appears.
4. Accept the defaults and click **OK**.  
The job group and jobs are submitted and displayed in the **Job Activity** pane.

## Scheduling a Job that Depends on a Group

One of the benefits of using job groups is that you can work with multiple jobs as though they were one big job. You can schedule jobs that depend on the status of the job group. You do not have to determine the order in which the jobs will complete, or set a dependency on each individual job.

The status of the job group is determined by its child jobs. For example, a job group cannot reach completed status until every job in the job group has completed.

To schedule a job that depends on a group:

1. From the Navigator pane, select **Definitions>Jobs** to display the Jobs pane.
2. Verify that no job group (such as **apmonth**) is highlighted, click the **Add** button on the Enterprise Scheduler toolbar or right-click in the **Jobs** pane and select **Add Job** from the context menu.  
The Job Definition dialog displays.
3. In the Job Name field, enter **Glfinal**.
4. In the Command field, enter the full path to **Glfinal.bat**.
5. Click the Schedule tab.
6. Select the Daily calendar from the Calendar Name list.

## Adding a Job Group Dependency

Now, you can add the dependency that causes job **Glfinal** to wait until the **apmonth** job group completes normally.

To add a job group dependency:

1. Click the **Dependencies** tab in the **Job Definition** dialog.
2. Click **Add**, and select **Add Job Dependency** to display the **Job Dependency** dialog.
3. Go to the **Job/Group** field, and click the down-arrow button.
4. Select the **apmonth** job group.

The dependency will be met when the **apmonth** job group reaches Completed Normally status. Each job in the group must complete normally for **apmonth** to complete normally.

5. Click **OK** to return to the Job Definition dialog. Notice that, to the right of **apmonth**, the Type of dependency is identified as **JOB**.
6. Click **OK**, then click **OK** again in the **Effective Date** dialog to accept the current production schedule.

The **Glfinal** job now displays in the hierarchy.

## Releasing a Job Group

To release a job group:

1. From the **Navigator** pane, select **Operations>Job Activity** to display the **Job Activity** pane.

The **apmonth** job group and the **Glfinal** job are now in the production schedule. **apmonth** is **Waiting on Operator**, and the **Glfinal** job is waiting for the normal completion of all the jobs in the **apmonth** group.

2. Highlight and then right-click the **apmonth** job group to display the context menu.
3. Select the **Job Control** option, then select the **Release/Resume** option to release the job group. The **Confirm** dialog displays.
4. Click **Yes**.  
The **Information** dialog displays.
5. Click **OK** in the **Information** dialog.

**Apmonth** will enter **Active** status. Then, the **Ap31** job runs, and **Ap32** follows after **Ap31** completes normally. When **Ap32** completes, the **apmonth** job group shows a **Completed Normally** status. Then the **Glfinal** job runs. The total process should take a few minutes.

