Using Scheduler Calendars

Overview

In the previous exercise, you created an unscheduled job. In this chapter you will create a scheduled job by creating a calendar, and adding it to the job. Scheduled jobs run on a regular basis according to the dates in their calendar. Some schedules are simple with jobs running every day from Monday through Friday, or on the first day of every month. Others are more involved, with jobs running on irregular accounting periods, holidays or fiscal period offsets.

Enteprise Scheduler uses calendars to define the set of dates on which jobs run. Enteprise Scheduler contains five different methods for creating calendars, depending on the period in which you need your job to repeat. For example, you may need your job to run as needed on a, daily, weekly or monthly basis. Each method addresses a particular period.

This chapter describes how to build four calendars:

- **first wkdy** – A list calendar (as needed) representing the first workday of each week.
- **work day** – A daily calendar representing Monday through Friday.
- **Fiscal Week End** – A calendar to use when your work week ends on a Thursday.
- **Fiscal Quarter End** – A calendar for scheduling on the last business day of a quarter.

You will then schedule a job using the **work day** calendar, and confirm that it is scheduled properly.

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

Building the First Workday Calendar

In this exercise, you will build a list calendar called **first wkdy** which refers to the first workday in every week. In the **List Calendar** dialog, you choose each day that the job is to be scheduled.

To build a List calendar:

Step 1   From the **Navigator** pane, select **Definitions>Calendars** to display the **Calendars** pane.

Step 2   Click the **Add** button on the Scheduler toolbar or right-click a calendar and select **Add Calendar>List** from the context menu to display the **List Calendar Definition** dialog.

Step 3   In the **Calendar Name** field, type **first wkdy**.

Step 4   In the calendar view, double-click the dates that represent Monday of each week for the current month.

All selected dates appear under the **Selected Dates** section to the right of the calendar.

> **Note**   To add scheduling dates to other months, use the inner right arrow buttons. To add scheduling dates to other years, use the outer right arrow buttons.

Step 5   Click **OK** after you have completed your selections.

Figure 13-1   Calendars View Showing First Wkdy

Name	Type	Owner	Public	Modified
Every other Friday	Weekly	Schedulers	Yes	
Every other Friday except Holidays	Group	Schedulers	Yes	
Every Wednesday and Friday	Weekly	Schedulers	Yes	
First Wkdy	List	Schedulers	Yes	06/05/2012
Friday	Daily	Schedulers	Yes	
Good Friday	Group	Schedulers	Yes	
Holidays DE	Group	Schedulers	Yes	
Holidays FR	Group	Schedulers	Yes	
Holidays UK	Group	Schedulers	Yes	
Holidays US	Group	Schedulers	Yes	
Independence Day US	Monthly (Days)	Schedulers	Yes	
Labor Day (Fête du premier mai)	Monthly (Days)	Schedulers	Yes	

Congratulations, you just created your first list calendar!
You can create a calendar for any dates you specify. This calendar can be associated with a job from within the **Job Definition** dialog, but will not be used in any future tutorial exercises.

Building the Work Day Calendar

Now you will create the **work day** daily calendar to use for scheduling a job. The **work day** daily calendar schedules your job to run on each weekday.

To build a Work Day calendar:

Step 1   From the **Navigator** pane, select **Definitions>Calendars** to display the **Calendars** pane.

Step 2   Click the **Add** button on the Enterprise Scheduler toolbar or right-click a calendar and select **Add Calendar>Daily** from the context menu to display the **List Calendar Definition** dialog.

Step 3   In the **Calendar Name** field, type **Work Day**.

Notice the **Public** option in the lower left corner of the dialog. Selecting this option makes the calendar available to all Enterprise Scheduler users.

We will be accepting the defaults in the **Details** tab. The defaults automatically set the calendar to generate dates for Monday through Friday of each week.

Step 4   Click the **Forecast** tab to generate the calendar.

This tab displays all the dates calculated from the **Details** tab. The **Forecast** tab is viewed the same way as in the **List Calendar** dialog, when the calendar **first wkday** was entered. You can add individual dates from this tab by double-clicking in the calendar view on the dates you want to change. You can delete dates by selecting the date in **Selected Dates** and either right-clicking the date to select **Delete** or clicking the **Delete** button. The forecast displays a four-year time window, but the calendar extends indefinitely.

Note   This step can take from a few seconds to a minute, depending on your system's configuration.

Step 5   Click **OK**.

The Calendars view displays the two calendars you created. By default, the rows of the display are sorted alphabetically according to calendar name (the **Name** column). You can also sort by other columns by clicking the column name. For example, if you click the **Owner** name at the top of the **Owner** column, calendars are grouped by their creator. If you click the **Modified** label at the top of the **Modified** column, your newest calendars are grouped together.

Building the Fiscal Week End Calendar

We will create the **Fiscal Week End** calendar to use for scheduling a job to run when your fiscal week ends on Thursday evening. If Thursday is a holiday, the job will execute on Wednesday evening, through the use of a condition definition.

To build a Fiscal Week End calendar:

Step 1   From the **Activities** menu, select the **System Configuration** option.

*Figure 13-2   System Configuration Dialog, Master Tab*
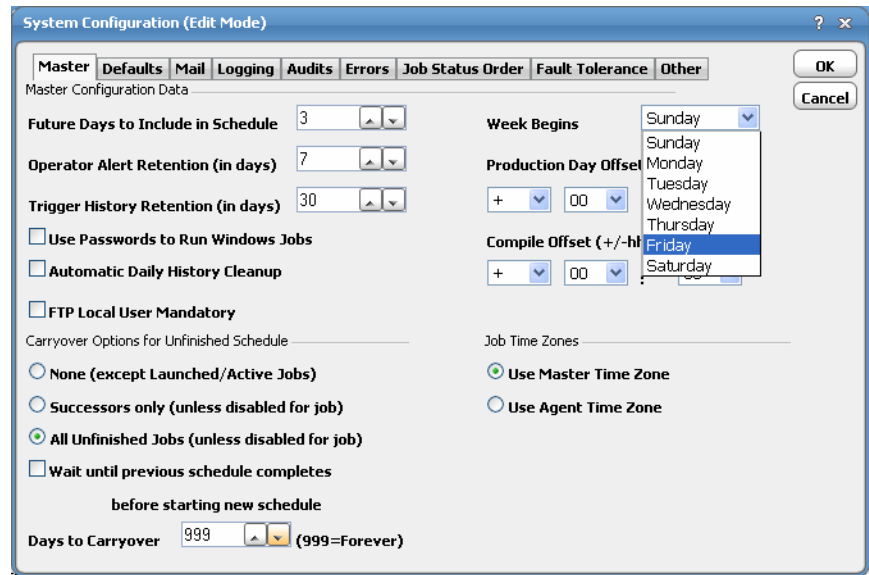
Step 2   In the **Week Begins** list, select **Friday**. This sets your fiscal week to start on Friday and end on Thursday.

Step 3   Click **OK**.

Step 4   Click **OK** when the **Warning** dialog displays. This warning displays whenever you change the calendar week starting day.

Step 5   From the **Navigator** pane, select **Definitions>Calendars** to display the **Calendars** pane.

Step 6   Click the **Add** button on the Enterprise Scheduler toolbar or right-click a calendar and select **Add Calendar>Subset** from the context menu to display the **Calendar Subset Definition** dialog.

Step 7   In the **Calendar Name** field, enter **Fiscal Week End**.

Step 8   In the **Occurrence** list, select **Every**.

Step 9   In the **Calendar** list, select **Friday**.

Step 10   In the **Time Frame** list, select **Week**.

Step 11   (Optional) Multiple fiscal calendars can be defined for Enteprise Scheduler. You can choose to base a calendar definition on a fiscal year, rather than a standard January- through-December calendar year.

Making no selection in the **Based on Fiscal** list results in the use of a standard calendar. For this exercise, leave the field empty.

Step 12   Now, we need to set a condition to let Enteprise Scheduler know what to do if a holiday occurs on Thursday. Click the **Conditions** tab.

Step 13   Click **Add** to display the **Condition** dialog.

Figure 13-3   Condition Dialog
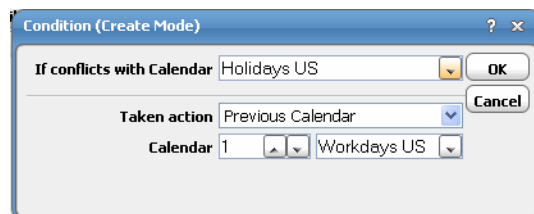
Step 14   From the **If conflicts with calendar** list, select the **Holidays** calendar.

Step 15   From the **Take action** list, select **Previous Calendar**.

Step 16   The **Calendar** field defines which calendar to use and how many days in the past to go. The default is **0** days. Select a value of **1**, and in the adjacent list, select **Workdays**.

Step 17   Click **OK.**

The condition now displays in the **Conditions** view.

Figure 13-4   Calendar Subset Definition Dialog, Conditions Tab
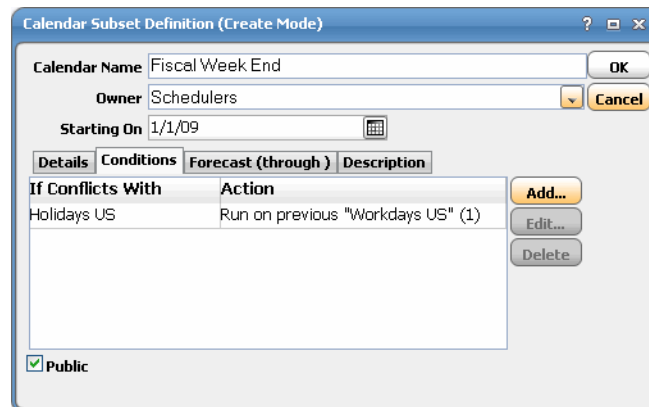
Now if a holiday falls on Friday of the **Fiscal Week End**, Enteprise Scheduler will schedule the **Fiscal Week End** calendar for Wednesday.

Step 18   Click the **Forecast** tab (Figure 13-1) to verify the dates Enteprise Scheduler has set.

Step 19   Click **OK**. The **Fiscal Week End** calendar now appears in the **Calendars** view.

Alternate Method of Creating a Calendar

In most cases, there is more than one way to define a calendar such as our **Fiscal Week End**. The following is an example of another way to create the **Fiscal Week End** calendar. We will call this calendar **Fiscal Week Ending**, so that the results of both exercises will be visible.

To create a calendar:

Step 1   From the **Navigator** pane, select **Definitions>Calendars** to display the **Calendars** pane.

Step 2   Click the **Add** button on the Enterprise Scheduler toolbar or right-click a calendar and select **Add Calendar>Weekly** from the context menu to display the **Weekly Calendar Definition** dialog.

Step 3   In the **Calendar Name** field, enter **Fiscal Week Ending**.

Step 4   Click the **Details** tab. In the **Include the following days** section, de-select **Monday**, **Tuesday**, **Wednesday** and **Thursday** options.

Figure 13-5   Weekly Calendar Definition Dialog
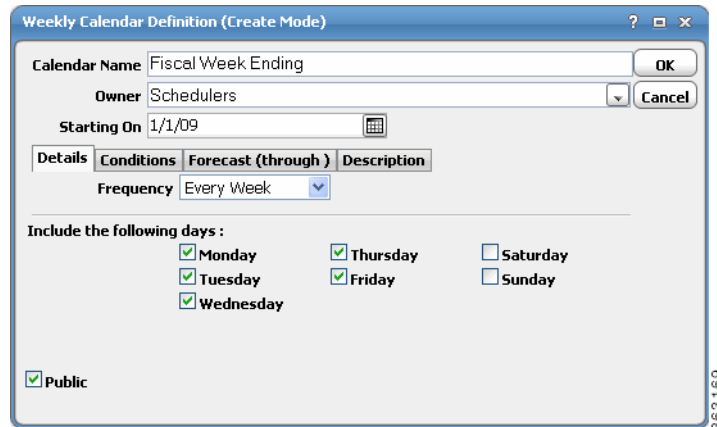
Step 5   Click the **Conditions** tab, and then click **Add**.

Step 6   In the **If conflicts with calendar** list, select the **Holidays US** calendar.

Step 7   In the **Take action** list, select **Previous Calendar**.

Step 8   The **Calendar** field defines which calendar to use and how many days in the past to go. The default is **0** days. Select a value of **1**, and in the adjacent list, select **Workdays**.

Step 9   Click **OK.**

Step 10 Click **Forecast** to verify the dates that Enteprise Scheduler has chosen.

Step 11 Click **OK** in the **Weekly Calendar Definition** dialog.

Step 12 Now, both the **Fiscal Week End** and the **Fiscal Week Ending** calendars are visible in the **Calendars** view.

Building the Quarter End Calendars

We will create the **Fiscal Quarter End** and **Calendar Quarter End** calendars to use for scheduling jobs to run when your fiscal quarter ends on the last work day of the quarter. If the quarter ends on a holiday, the calendar should execute on the previous work day. For this exercise, we will consider the fiscal year to run from November to October.


Fiscal Quarter End

We first have to define a fiscal calendar period, to be used in documenting the **Fiscal Quarter End** calendar. Many companies run production from more than one fiscal calendar period.

To define a Fiscal calendar period:

Step 1   From the **Navigator** pane, select **Definitions>Fiscal Calendars** to display the **Fiscal Calendars** pane.

Step 2   Click the **Add** button on the Enterprise Scheduler toolbar or right-click a calendar and select **Add Fiscal Calendar** from the context menu to display the **Fiscal Calendar Definition** dialog.

Figure 13-6   Fiscal Calendar Definition Dialog
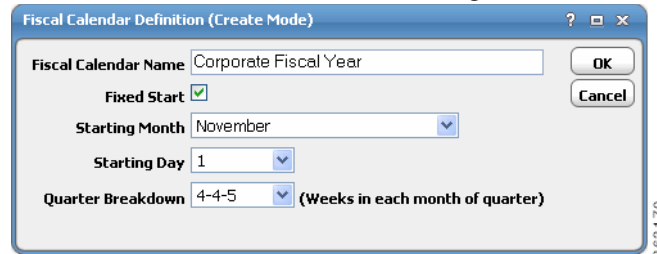
Step 3   In the **Fiscal Calendar Name** field, enter **Corporate Fiscal Year**.

Step 4   In the **Starting Month** list, select **November**. Keep the default values for the remaining text fields.

Step 5   Click **OK**.

Step 6   From the **Navigator** pane, select **Definitions>Calendars** to display the **Calendars** pane.

Step 7   Click the **Add** button on the Enterprise Scheduler toolbar or right-click a calendar and select **Add Calendar>Subset** from the context menu to display the **Calendar Subset Definition** dialog.

Step 8   In the **Calendar Name** field, enter **Fiscal Quarter End**.

Step 9   If not already selected, click the **Details** tab.

Step 10   From the **Occurrence** list, select **Last**.

Step 11   From the **Calendar** list, select **Workdays US**.

Step 12   From the **Time Frame** list, select **Quarter**.

Step 13   In the **Based on Fiscal** list, select **Corporate Fiscal Year**. Leave the **Adjust by ... days** field at **0**.

Step 14   We have completed the definition for the **Fiscal Quarter End** calendar. Click the **Forecast** tab to verify the dates that will be selected for production execution and then click **OK**.

The calendar definitions are ready to be used in production.

Calendar Quarter End

To create a quarter end calendar that will work on the last business day of the calendar quarter, where the fiscal year starts in January, just repeat Steps 6 through 12 above with the following exceptions:

- In **Step 8**, change the Calendar Name to **Calendar Quarter End**.
- In **Step 12**, leave the **Based on Fiscal** field blank.

You have created two quarterly calendars, one based on a fiscal year calendar and one based on a standard calendar year starting in January.

Scheduling the Unix Test 1 Job with a Calendar

Now, return to the **Unix Test 1** job and schedule it using the **work day** calendar.

To schedule the Report job using the word day calendar:

Step 1   From the **Navigator** pane, select **Definitions>Jobs** to display the **Jobs** pane.

Step 2   Right-click the **Unix Test 1** job and select **Edit Job/Group** from the context menu to display the **Job Definition** dialog.

Step 3   Click the **Schedule** tab on the **Job Definition** dialog.

Step 4   In the **Calendar Name** list, select **work day**.

Step 5   To view the dates in the calendar, click the **Forecast** button and then click **OK**.

Step 6   Click **OK** again on the **Job Definition** dialog to display the **Effective Date** dialog.

The **Effective Date** dialog displays asking you when the job should enter the production schedule. The dates represent the current span of the production schedule.

Step 7   Click **OK** to accept the default (today).

Another occurrence of the **Unix Test 1** job enters the production schedule.

Step 8   From the **Navigator** pane, select **Operations>Job Activity** to display the **Job Activity** pane.

The job runs according to the **work day** calendar. It will run today (unless you are running this tutorial on a weekend). Your window may appear slightly different.

You will also see the previous occurrence of the **Unix Test 1** job that was added to the schedule manually in the previous chapter. The job occurrence has been renamed **Unix Test 1(2)** to reflect the first occurrence of the same job (**Unix Test 1(1)**) ran earlier.