Cisco Tidal Enterprise Scheduler BusinessObjects Adapter Guide

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Preface

This guide describes the installation, configuration, and usage of the BusinessObjects Adapter with Cisco Tidal Enterprise Scheduler (TES).

Audience

This guide is for administrators who install and configure the BusinessObjects Adapter for use with TES, and who troubleshoot TES installation and requirements issues.

Related Documentation

See the *Cisco Tidal Enterprise Scheduler Documentation Overview* for your release on cisco.com at:

http://www.cisco.com/c/en/us/support/cloud-systems-management/tidal-enterprise-scheduler/products-documentation-roadmaps-list.html

...for a list of all TES guides.

Note We sometimes update the documentation after original publication. Therefore, you should also review the documentation on Cisco.com for any updates.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see What's New in Cisco Product Documentation at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

Subscribe to What's New in Cisco Product Documentation, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.

Document Change History

The table below provides the revision history for the *Cisco Tidal Enterprise Scheduler BusinessObjects Adapter Guide*.

Version Number	Issue Date	Reason for Change
6.1.0	October 2012	• New Cisco version.
6.2.1	June 2014	• Available in online Help only.
6.2.1 SP2	June 2015	• Configuration provided in the *TES Installation Guide*; usage provided in online Help only.
6.2.1 SP3	May 2016	• Consolidated all BusinessObjects Adapter documentation into one document.

CHAPTER 1

Introducing the BusinessObjects Adapter

This chapter provides an overview of the BusinessObjects Adapter and its requirements:

- Overview
- Prerequisites

Overview

The Tidal Enterprise Scheduler Adapter for BusinessObjects is an SAP certified solution that uses the BusinessObjects Enterprise SDK to provide a seamless integration that embeds BusinessObjects functionality in the standard Enterprise Scheduler screens. This allows schedulers to connect to BusinessObjects servers and define BusinessObjects tasks as part of Enterprise Scheduler job definitions. The adapter queries the BusinessObjects InfoStore to discover folders and objects such as reports, Desktop Intelligence and Web Intelligence that can be scheduled with full parameter support. As a platform independent solution, the adapter can run on any platform where the Enterprise Scheduler master runs.

The BusinessObjects Adapter enforces BusinessObjects security by authenticating through associations between Enterprise Scheduler runtime users and BusinessObjects users. Creating a BusinessObjects job from Enterprise Scheduler is highly secure, but as simple as creating any other job.

A job definition refers to a Crystal Report, Web Intelligence or Desktop Intelligence object as defined to BusinessObjects. You can also refer to a Data Services (Data Integrator) job. BusinessObjects Data Services is a complex platform for the data integration process and has the ability to schedule Extract, Transform and Load (ETL) jobs, along with other data warehousing jobs. Based on defined scheduling criteria, the adapter submits a BusinessObjects task to run through the BusinessObjects Job Scheduling Service.

Once a job has been submitted, the adapter monitors it through completion. The Adapter returns the final completion status (used to control downstream jobs) as well as details associated with the run to the console. In addition, the Adapter lets users cancel, hold/resume, abort and rerun tasks from Tidal Enterprise Scheduler, a feature that provides significantly more control over the environment than afforded by scripting or other non-integrated scheduling solutions.

The BusinessObjects Adapter also provides event triggers that allow users to be notified via email (or other alerting mechanism) when new content (report or Web Intelligence data) is available. Output can be attached, or for greater security, can include a hyperlink to the BusinessObjects document on the server requiring that users log on before opening the document. The Adapter also supports triggering Enterprise Scheduling tasks from BusinessObjects custom event monitoring.

The BusinessObjects Adapter is event-based. It launches processes based on defined calendars and schedules and uses asynchronous callbacks for monitoring-enabling users to see status changes in real time and to control those processes as they execute. This capability reduces production processing time windows, because the Adapter does not need to wait for a polling interval to pass before reacting to the completion of a BusinessObjects task.

Prerequisites

BusinessObjects

For BusinessObjects , you need to configure your firewall to grant the adapter access to ports 6400 to 6405, 8080, 1948, and 4205. If you override any of these default ports, be sure to open the ports required to communicate with BusinessObjects .

Data Services

If you will be using the adapter to schedule BusinessObjects Data Services (formerly Data Integrator) jobs and the associated Web Services host is configured to use SSL for external communication (HTTPS), you must complete the following steps as described in detail in Configuring the HTTPS Protocol.

- Obtain security certificates for all target servers.
- Export security certificates for all target servers to a local directory.
- Import security certificates for all target servers into a Java keystore.

Also verify that:

- Web Services are configured.
- A Job Server is configured for each repository containing jobs you want to schedule.
- The adapter is configured to use a connection/runtime user that has Administrative privileges.
- Jobs are Web Service enabled.

For information on these configuration items, please refer to the appropriate BusinessObjects Data Services or Data Integrator documentation.

Software Requirements

The minimum requirement for the Enterprise Scheduler master and client is 5.3.1.179.

Enterprise Scheduler supports the following releases with the corresponding adapter package listed:

- BusinessObjects 3.0 (12.0), 3.1 (12.1), 3.2 (12.2), 4.0 (14.0), and 4.1 (14.1)

Note 12.1.1.3 minimum fix pack level recommended.

- boservice.pkg

CHAPTER **2**

Configuring the BusinessObjects Adapter

Overview

The BusinessObjects Adapter software is installed as part of a standard installation of Enterprise Scheduler. However, you must perform the following steps to license and configure the adapter before you can schedule and run BusinessObjects jobs:

- Licensing an Adapter – Apply the license to the BusinessObjects Adapter. You cannot define a BusinessObjects connection until you have applied the BusinessObjects license from Tidal Software.

- Securing the BusinessObjects Adapter – Define BusinessObjects users that the adapter can use to establish authenticated sessions with the BusinessObjects server and permit requests to be made on behalf of the authenticated account.

- Using WinAD or LDAP Authentication – Configure authentication as necessary for your environment.

- Configuring the HTTPS Protocol – Configure the HTTPS protocol if used in your environment.

- Defining a BusinessObjects Adapter Connection – Define a BusinessObjects connection so the master can communicate with the BusinessObjects server.

See Configuring service.props for details about configuring service.props to control such things as polling, output, and log gathering.

Licensing an Adapter

Each TES Adapter must be separately licensed. You cannot use an Adapter until you apply the license file. If you purchase the Adapter after the original installation of TES, you will receive a new license file authorizing the use of the Adapter.

You might have a Demo license which is good for 30 days, or you might have a Permanent license. The procedures to install these license files are described below.

To license an Adapter:

Step 1 Stop the master:

<u>Windows:</u>

a. Click **Start** and select **Programs>TIDAL Software>Scheduler>Master>Service Control Manager**.

     b. Verify that the master is displayed in the **Service** list and click on the **Stop** button to stop the master.

     UNIX:

     Enter `tesm stop`

Step 2 Create the license file:

- For a Permanent license, rename your Permanent license file to *master.lic*.
- For a Demo license, create a file called *demo.lic*, then type the demo code into the *demo.lic* file.

Step 3 Place the file in the `C:\Program File\TIDAL\Scheduler\Master\config` directory.

Step 4 Restart the master:

     Windows:

     Click **Start** in the Service Control Manager.

     UNIX:

     Enter `tesm start`

     The master will read and apply the license when it starts.

Step 5 To validate that the license was applied, select **Registered License** from **Activities** main menu.

     The master will read and apply the license when it starts.

Securing the BusinessObjects Adapter

There are two types of users associated with the BusinessObjects Adapter, **Runtime Users** and **Schedulers**. You maintain definitions for both types of users from the **Users** pane.

- Runtime Users

  Runtime users in the context of BusinessObjects jobs represent those users and passwords required for authentication. BusinessObjects operations require authentication against a valid BusinessObjects user as defined by a BusinessObjects administrator. You can also use runtime users to override data source logons used by your reports. See Defining Runtime Users.

- Schedulers

  Schedulers are those users who will define and/or manage BusinessObjects jobs. There are three aspects of a user profile that grant and/or limit access to scheduling jobs that affect BusinessObjects:

  – Security policy that grants or denies add, edit, delete and view capabilities for BusinessObjects jobs.

  – Authorized runtime user list that grants or denies access to specific authentication accounts for use with BusinessObjects jobs.

  – Authorized agent list that grants or denies access to specific BusinessObjects Adapter connections for use when defining BusinessObjects jobs.

  See Authorizing Schedulers to Work with BusinessObjects Jobs.

For information about securing the BusinessObjects Adapter using HTTPS, see Configuring the HTTPS Protocol.

Note If you are using WinAd or LDAP authentication, see Using WinAD or LDAP Authentication.

Defining Runtime Users

The credentials specified for the runtime user are used to store the information about the simple user security context consisting of a user name and password pair and to pass this information to the adapters. This runtime user can be used for database targets when needing database authentication.

The Runtime User for BusinessObjects must have the following user access rights:

- View and Edit Objects rights for Info Objects
- View Objects right for server CentralManagementServer

To define a runtime user:

Step 1   From the **Navigator** pane, expand the **Administration** node and select **Runtime Users** to display the defined users.

Step 2   Right-click **Runtime Users** and select **Add Runtime User** from the context menu (*Insert* mode).

-or-

You can also right-click a user in the **Runtime Users** pane and select **Edit Runtime User** from the shortcut menu (*Edit* mode).

The **User Definition** dialog displays.

Step 3   If this is a new user definition, enter the new user name in the **User/Group Name** field.

Step 4   For documentation, enter the **Full Name** or description associated with this user.

Step 5   In the **Domain** field, enter a valid BusinessObjects authentication method (for example, Enterprise or WinAD).

Step 6   To define this user as a runtime user for BusinessObjects jobs, click **Add** on the **Passwords** tab.

The **Change Password** dialog displays.
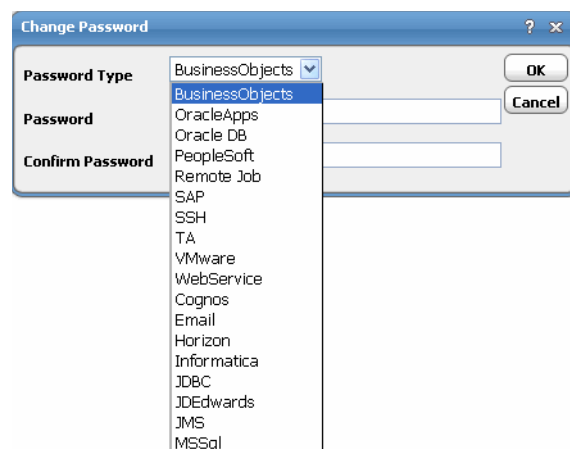
Step 7   Select **BusinessObjects** from the **Password Type** list.

Step 8   Enter a password (along with confirmation) in the **Password/Confirm Password** fields.

Only those users with a password specified for BusinessObjects will be available for use with BusinessObjects jobs. The password might be the same as the one specified for Windows/FTP jobs.

The password cannot be blank.

Step 9   Click **OK** to return to the **User Definition** dialog.

The new password record displays on the **Passwords** tab.

Step 10   Click **OK** to add or save the user record in the Enterprise Scheduler database.

Authorizing Schedulers to Work with BusinessObjects Jobs

There are three procedures you need to perform to authorize schedulers to work with BusinessObjects Jobs:

- Authorizing Schedulers
- Granting Access Privileges
- Defining Scheduler Users

Authorizing Schedulers

To authorize Schedulers:

Step 1   From the **Navigator** pane, select **Administration>Security Policies** to display the **Security Policies** pane.

Step 2   Right-click **Security Policies** and select **Add Security Policy** from the context menu. You can also right-click to select an existing security policy in the **Security Policies** pane and select **Edit Security Policy**.

The **Security Policy Definition** dialog displays.
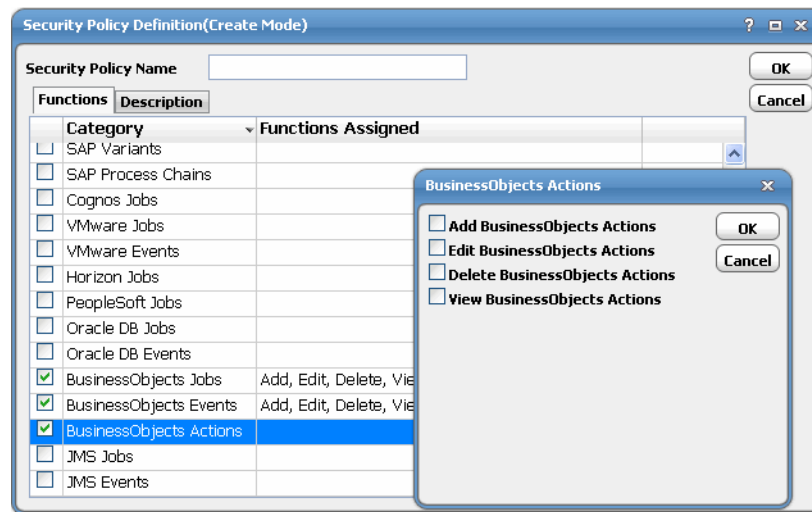
The following three categories associated with BusinessObjects:

- **BusinessObjects Jobs**

    - **Add BusinessObjects Jobs** – The ability to create new BusinessObjects jobs.

    - **Edit BusinessObjects Jobs** – The ability to modify existing BusinessObjects jobs.

    - **Delete BusinessObjects Jobs** – The ability to delete existing BusinessObjects jobs.

    - **View BusinessObjects Jobs** – The ability to view existing BusinessObjects jobs.

- **BusinessObjects Events**

    - **Add BusinessObjects Events** – The ability to add new BusinessObjects events.

    - **Edit BusinessObjects Events** – The ability to edit existing BusinessObjects events.

    - **Delete BusinessObjects Events** – The ability to delete BusinessObjects events.

    - **View BusinessObjects Events** – The ability to view BusinessObjects events.

    - **Suspend Monitoring** – The ability to suspend the operation of the BusinessObjects monitor.

    - **Resume Monitoring** – The ability to resume the operation of the BusinessObjects monitor.

- **BusinessObjects Actions**

    - **Add BusinessObjects Actions** – The ability to create new BusinessObjects actions.

    - **Edit BusinessObjects Actions** – The ability to edit existing BusinessObjects actions.

    - **Delete BusinessObjects Actions** – The ability to delete BusinessObjects actions.

    - **View BusinessObjects Actions** – The ability to view BusinessObjects actions.

Note   Refer to the *Tidal Enterprise Scheduler User Guide* for a general discussion on setting up security policies that you associate with Scheduler Users.

Granting Access Privileges

To grant access privileges:

Step 1   In the **Navigator** pane, select **Security Policies** to display the **Security Policies** pane.

Step 2   Select a security policy for the BusinessObjects job, event or action privileges and double-click on it to display its **Security Policy Definition** dialog.

Step 3   Scroll down the list of function categories and double-click on the **BusinessObjects** category to display the available functions.

Step 4   Select the desired job privileges, then click **OK**.

A check mark appears next to the **BusinessObjects** function category indicating that one or more functions are selected within the category.

If needed, different security policies with varying authorized functions can be created to provide different levels of access for a variety of users.

For more information about the Security Policy Definition dialog, refer to the chapter on User Administration in your TES *User Guide*.

Defining Scheduler Users

To define a Scheduler user to work with BusinessObjects jobs:

Step 1   From the **Navigator** pane, select **Administration>Interactive Users** folder to display the **Users** pane.

Step 2   Either click the **Add** button 🗓 in the toolbar, or right-click in the **Users** pane and select **Add Interactive User** from the context menu to display the **User Definition** dialog.
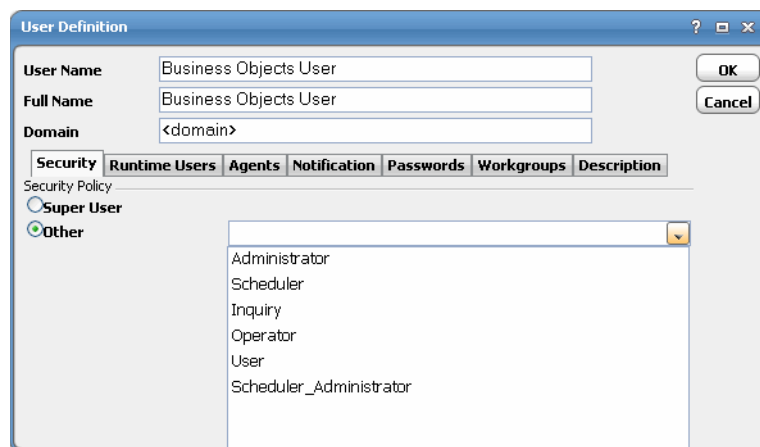
Step 3   If this is a new user definition, enter the new user name in the **User/Group Name** field.

Step 4   For documentation, enter the **Full Name** or description associated with this user.

Step 5   In the **Domain** field, select a Windows domain associated with the user account required for authentication, if necessary.

Step 6   On the **Security** page, select the **Other** option and then select the security policy that includes authorization for Business Object jobs.

Step 7   Click the **Runtime Users** tab.
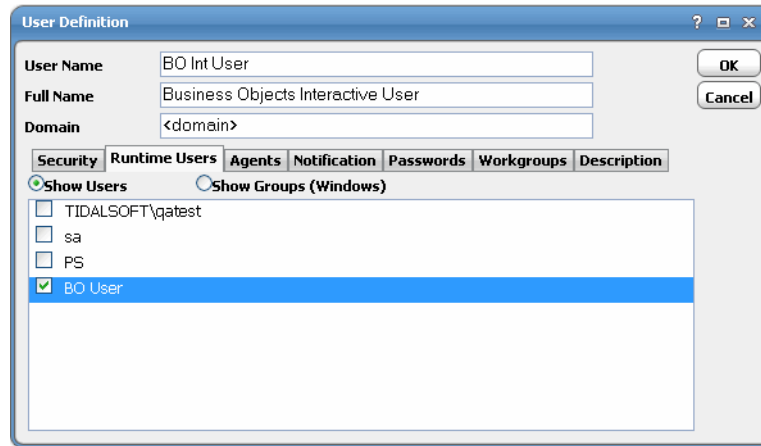
Step 8   Select the BusinessObjects users that this scheduling user can use for BusinessObjects authentication from BusinessObjects jobs.

Step 9   Click the **Agents** tab.

Step 10   Select the check boxes for the BusinessObjects connections that this scheduling user can access when scheduling jobs.

Step 11   Click **OK** to save the user definition.

Using WinAD or LDAP Authentication

If you are using WinAD or LDAP authentication, you need to configure the location of the login configuration.

To use WinAD or LDAP authentication:

Step 1   Go to the **master/services/{88EBA24D-7B9A-4EAC-855B-F29D99CE37E9}** folder.

Step 2   Create a subfolder called **config,** if it does not already exist.

Step 3   Create a text file named *service.props* if it does not already exist.

Step 4   Open the *service.props* text file and add the following line:

```
LoginConfig=c:\\windows\\bscLogin.conf
```

...or wherever the login configuration is located. Note the use of **** if this is a Windows location.

Step 5   Restart the master after creating/updating this file.

See Configuring service.props for other parameters that can be set in service.props related to polling, output, and log gathering.

Configuring the HTTPS Protocol

It is recommended that BusinessObjects Web servers be configured to use SSL via the HTTPS protocol for Data Services/Data Integrator. If your environment is configured to use HTTP, you can skip this section.

For complete instructions on configuring BusinessObjects servers to use the HTTP or HTTPS protocol, refer to the BusinessObjects documentation that ships with the product.

Obtain Security Certificates

From a Windows desktop, you can obtain a security certificates for each target BusinessObjects server using the Microsoft Internet Explorer Certificate Cache.

Note Although other procedures are available for obtaining the required certificates, the procedure below can be performed from your Windows desktop.

Note You need to carry out the following instructions only if your server certificate is generated in-house (that is, self-signed) or if your server certificate is signed by a Certification Authority that is not trusted by the version of Java you are using. Alternatively, if your adapter connection fails by reporting the error "unable to find valid certification path to requested target" you need to carry out the following instructions.

To obtain target BusinessObjects server security certificates

Step 1   Open the Internet Explorer browser and navigate to the following dispatch URL (replacing servername and port as it applies to your environment).
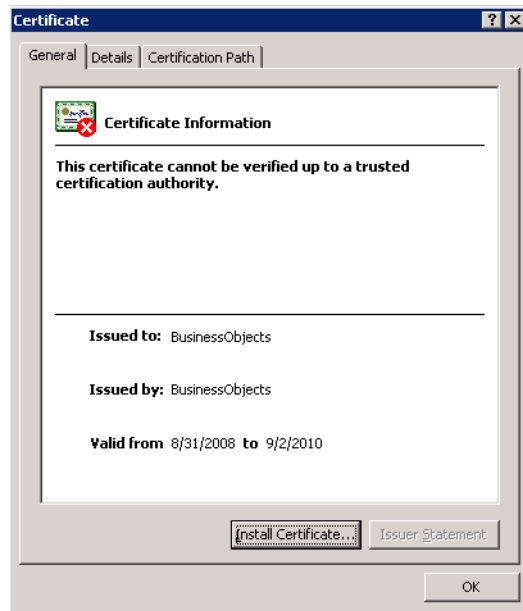
```
https://<adminHost:adminPort>/admin/servlet/webservices
```

where `adminHost` is where the Data Integrator Administrator is installed and `adminPort` is the port the Data Integrator Administrator is listening on.

A **Security Alert** message displays.

Step 2   Click **View Certificate** to open the **Certificate** dialog.

Step 3   Click **Install Certificate**.

Step 4   On the **Certificate Import Wizard Welcome** panel, click **Next**.

Step 5   On the **Certificate Store** panel, use the default option **Automatically select the certificate store based on the type of certificate** and click **Next**.

Step 6   On the **Completing Certificate Import Wizard** panel, click **Finish**.

Step 7   If a **Security Warning** message displays informing you that you are about to install a certificate from a certification authority, click **Yes** to continue with the certificate installation.

A message stating *The import was successful* displays.

Step 8   Click **OK** to close the message and return to the **Certificate** dialog.

Step 9   Click **OK** on the **Certificate** dialog. You can close your browser now.

Step 10   Repeat the process for each BusinessObjects server that you want to connect to with the BusinessObjects adapter.

Export Security Certificates

After you have obtained the security certificates for the target servers, you must export them from the Internet Explorer cache to a local directory.

To export the cached certificates to a local directory

Step 1   On the local computer, create the following directory for the certificates:

```
C:\BO-Certs
```

Step 2   In Internet Explorer, select **Tools > Internet Options**.

Step 3   On the **Internet Options** dialog, select the **Content** tab.

Step 4   In the Certificates area, click **Certificates**.

Step 5   On the **Certificates** dialog, select the **Trusted Root Certification Authorities** tab to display the list of trusted certificates. This list should contain the certificates for the target servers that were obtained in the previous procedure (see "Obtain Security Certificates").

Step 6   Scroll through the list of certificates to find the certificates.

Step 7   Perform the following procedure for each target server certificate:

    a. Select the certificate and click **Export** to launch the Certificate Export Wizard.

    b. On the **Welcome** panel, click **Next**.

    c. On the **Export File Format** panel, use the default option DER encoded binary X.509 (.CER) and click **Next**.

    d. On the **File To Export** panel, enter the complete path to the *BO-Certs* directory and a unique name for the certificate:

```
C:\BO-Certs\servername.cer
```

    e. Click **Next**.

    f. On the **Completing the Certificate Export Wizard** panel, click **Finish** to complete the export.

       A message stating The export was successful displays.

    g. Click **OK** to close the message box.

Step 8   After all target server certificates have been exported, click **Close** to exit the **Certificates** dialog.

Step 9   Click **OK** to close the **Internet Options** dialog.

Import Target Server Certificates into a Java Keystore

You must now import the target server certificates into a local Java keystore.

Note   These instructions assume that a JRE or JDK is in your system PATH.

To import certificates into a Java keystore

Step 1   Open a Windows **Command Prompt** window.

Step 2   Change to the directory where the certificates are stored by entering the following commands:

```
c:
cd \BO-Certs
```

Step 3   Use the Java keytool utility to import a certificate. The following syntax is used:

```
keytool -import -file <certificate-filename> -alias <servername>-keystore
<your_trusted_keystore.keystore-filename>
```

For example:

```
C:\BO-Certs>keytool -import -file sdkpubs01.crt -alias sdkpubs01 -keystore
BOXI.keystore
```

Step 4   When prompted to create a password for the keystore, enter a password at the prompt. The keystore utility displays the certificate information.

Step 5   At the **Trust this certificate? [no]** prompt, type **yes** and press **Enter**. The certificate is imported into the **<your_trusted_keystore>.keystore** keystore and the following message displays:

```
                    Certificate was added to keystore
```

Step 6   Repeat this procedure for each target server.

Step 7   Navigate to the following folder where the Enterprise Scheduler BusinessObjects adapter is installed and create a new directory named **config**:

```
<install dir>\master\services\{88EBA24D-7B9A-4EAC-855B-F29D99CE37E9}\config
```

Step 8   Create a text file named *service.props* if it does not already exist.

Step 9   Open the *service.props* text file and add the following line:

```
Keystore=c:\\BO-Certs\\<your_trusted_keystore>.keystore
```

Note the use of escaped backslashes for windows directories.

See Configuring service.props for parameters that can be set in service.props related to polling, output, and log gathering.

Defining a BusinessObjects Adapter Connection

You must create one or more BusinessObjects connections before Enterprise Scheduler can run your BusinessObjects jobs. These connections also must be licensed before Enterprise Scheduler can use them. A connection is created using the **Connection Definition** dialog.

To add a BusinessObjects connection:

Step 1   From the **Navigator** pane, navigate to **Administration>Connections** to display the **Connections** pane.

Step 2   Right-click **Connections** and select **Add Connection>BusinessObjects Adapter** from the context menu.

The **BusinessObjects Adapter Connection Definition** dialog displays.
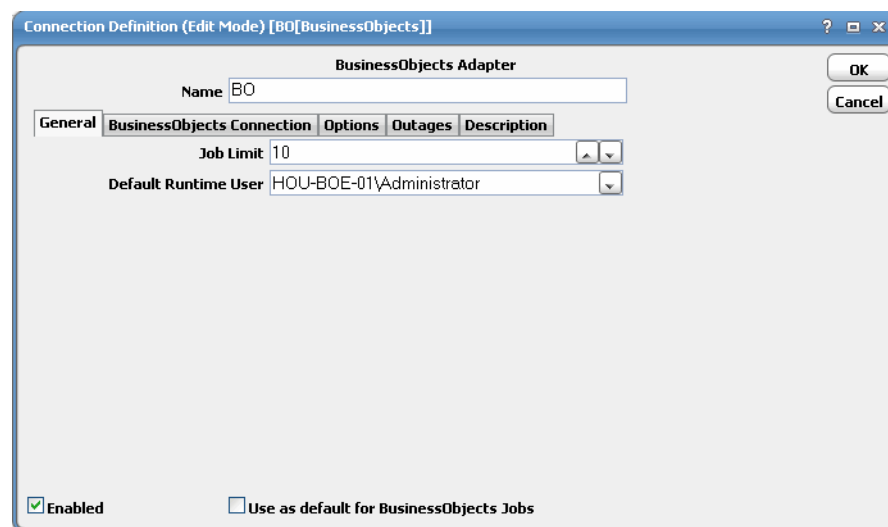
Step 3   On the **General** page, enter a name for the new connection in the **Name** field.

Step 4   In the **Job Limit** field, select the maximum number of concurrent active processes that Enterprise Scheduler should submit to the BusinessObjects server at one time.

Step 5   From the **Default Runtime User** drop-down list, you have the option to select the name of a default user for BusinessObjects jobs. The runtime user is used for authentication with BusinessObjects to authorize scheduled operations.

Only authorized users that have been defined with BusinessObjects passwords display in this list. The selected user is automatically supplied as the default runtime user in a new Enterprise Scheduler BusinessObjects job definition.

Step 6   Click the **BusinessObjects Connection** tab.

Step 7   In the **Central Management Server** field, enter the name of your BusinessObjects server.

If you are connecting using a port that is not the default port, you may need to include a port, preceded by colon (for example, **hou-bo-01:6400**).

Step 8   From the **User** list, select the associated Runtime User for BusinessObjects to be used for connecting to BusinessObjects .

This is a persistent user connection to BusinessObjects that is only used for administration and monitoring and for jobs with a matching runtime user. Jobs with a different runtime user specified will create additional temporary connections.

Step 9   In the **Authentication** field, select the appropriate method of authentication for the user supplied.

It will default to the domain associated with the **User** field if the domain matches a valid authentication method for BusinessObjects (for example, Enterprise, WinAD or LDAP). See also, "Using WinAD or LDAP Authentication".

Step 10   For BusinessObjects, select a supported version from the **Version** drop-down list.

Step 11   Select the **Restrict jobs to objects owned by runtime user** option if you want to limit which reports or Web Intelligence objects can be selected when defining jobs.

Step 12   In the **Data Services Connection** section, select whether or not you want to connect to Data Services.

You can choose one of the following options:

- Connect to Data Services in addition to BusinessObjects Enterprise

- Only connect to Data Services (no connection to BusinessObjects Enterprise)

- Not to connect to Data Services (default)

Step 13   In the **Port** field, enter the appropriate port number for the Data Services Web Service.

The default port is **8080**. If the Data Services Web Service has been configured for SSL, select the **Use HTTPS** check box and set the port (for example, **8443**).

Step 14   For Data Integrator/Data Services, select a supported version from the **Version** drop-down list.

Step 15   Click the **Test** button to test the connection.

Step 16   Click the **Options** tab to configure parameters for this connection.
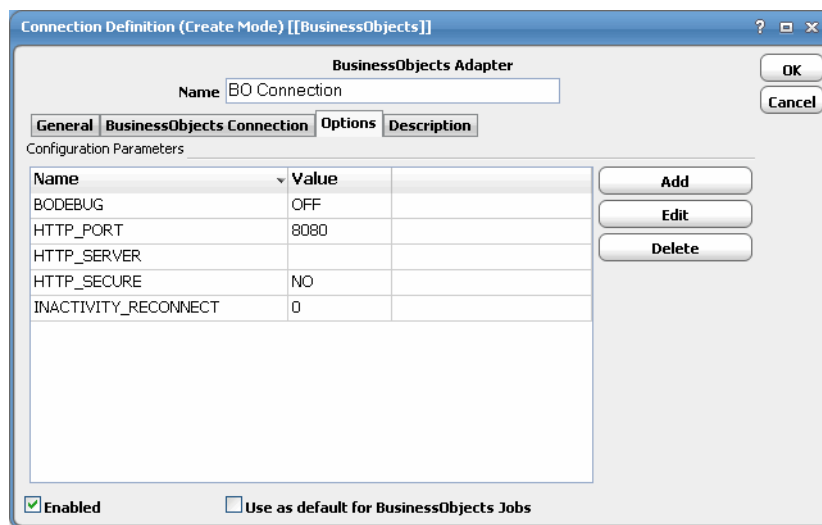
Step 17   In the **Configuration Parameters** section, click **Add** or select a parameter, then click **Edit** to display the **Variable Definition** dialog.
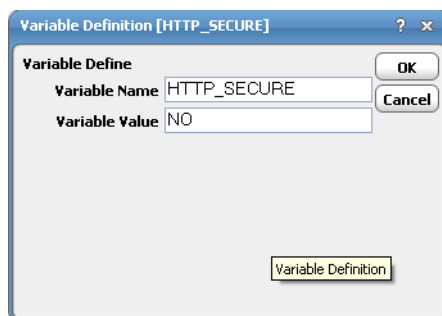
Step 18   Enter a name for the variable or edit the existing name.

Step 19   Enter a new value into the **Value** field or edit the existing value, then click **OK**.

The following parameters are available:

- **BODEBUG** – Turns the debugging function on/off. When set to **ON**, diagnostic data is added to the adapter log and job output. You may be asked to turn this option on when working with technical support to investigate an issue.

- **HTTP_PORT** – If Tomcat on the BusinessObjects server uses a port other than the default of 8080, use **HTTP_PORT** to specify an override value for the port. This is only used for constructing URLs that link to BusinessObjects documents.

- **HTTP_SECURE** – If Tomcat on the BusinessObjects server uses SSL (HTTPS), set **HTTP_SECURE** to **YES** and **HTTP_PORT** to **8443** (or other configured port). This only applies when the adapter constructs a URL that links to a BusinessObjects document

- **HTTP_SERVER** – If the server used for InfoView (OpenDocument interface) differs from the Central Management Server, specify that server here so that the correct URL can be constructed to bring up BusinessObjects documents.

- **INACTIVITY_RECONNECT** – Automatically reconnects to the BusinessObjects environment if the configured number of minutes has passed between job launches. This addresses problems with inactivity timeouts on the BusinessObjects side that cannot be detected by the adapter.

Step 20   Click **OK** to save the new BusinessObjects connection.

The configured connection displays in the **Connections** pane.
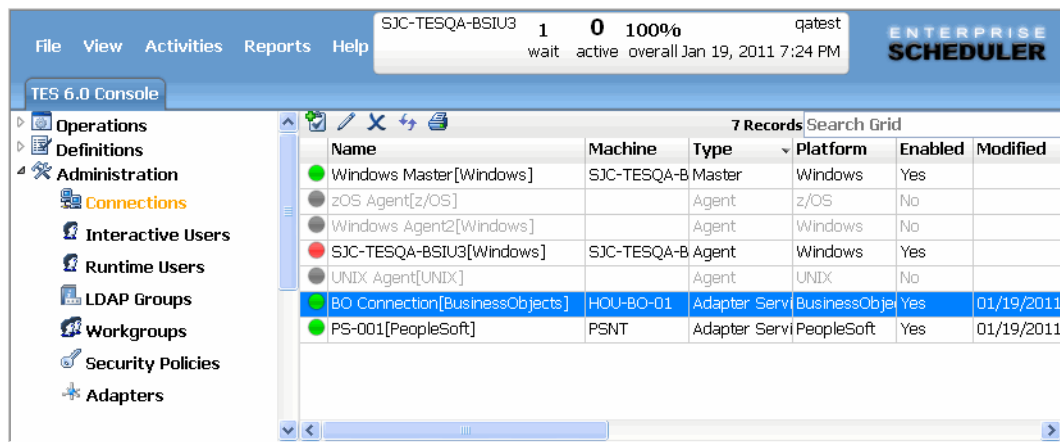
The status light next to the connection indicates whether the Enterprise Scheduler Master is connected to the BusinessObjects server. If the light is green, the BusinessObjects server is connected.

A red light indicates that the master cannot connect to the BusinessObjects server. BusinessObjects jobs will not be submitted without a connection to the BusinessObjects server. You can only define jobs from the Client if the connection light is green.

If the light is red, you can test the connection to determine the problem. Right-click the connection and select **Test** from the shortcut menu. A message displays on the **Test BusinessObjects Connection** dialog describing the problem. Or go to **Operator|Logs** to look for error messages associated with this connection.

CHAPTER 3

Using the BusinessObjects Adapter

Overview

This chapter describes how to use the BusinessObjects Adapter in these topics:

- Defining BusinessObjects Jobs
- Defining BusinessObjects Events
- Defining a BusinessObjects Action
- Monitoring BusinessObjects Job Activity
- Controlling Adapter and Agent Jobs

Defining BusinessObjects Jobs

This section provides instructions for defining a BusinessObjects job in Enterprise Scheduler and descriptions of the various types of tasks and options that can be included in the jobs.

BusinessObjects Job Definition

You define jobs to run BusinessObjects reports, Web Intelligence, Desktop Intelligence and Data Services jobs. This section describes the basic steps for defining a BusinessObjects job.

To define a BusinessObjects job:

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

Step 2   Right-click **Jobs** and select **Add>BusinessObjects Job** from the context menu.
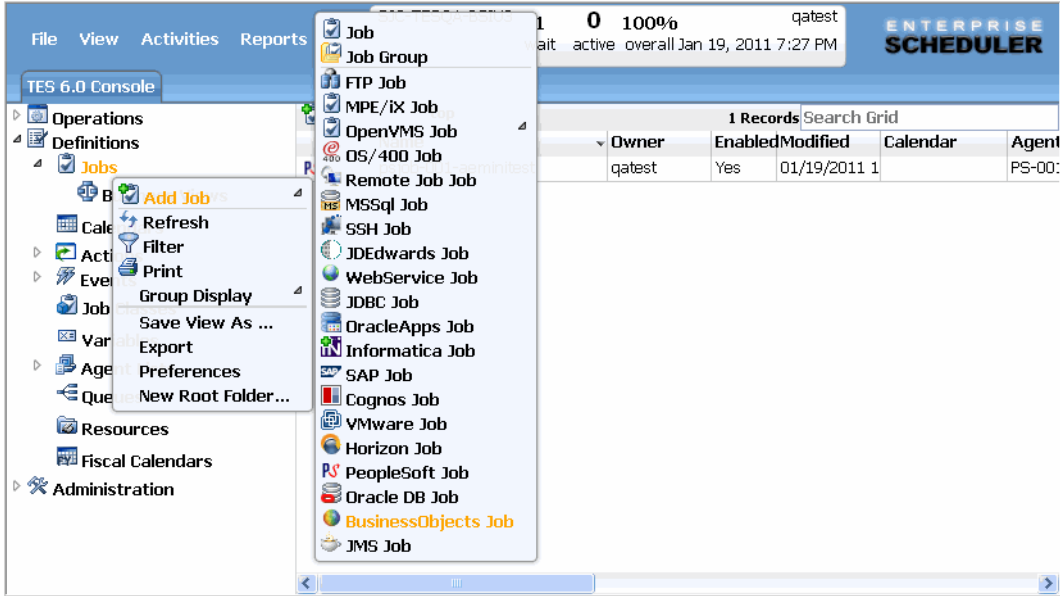
The **BusinessObjects Job Definition** dialog displays.
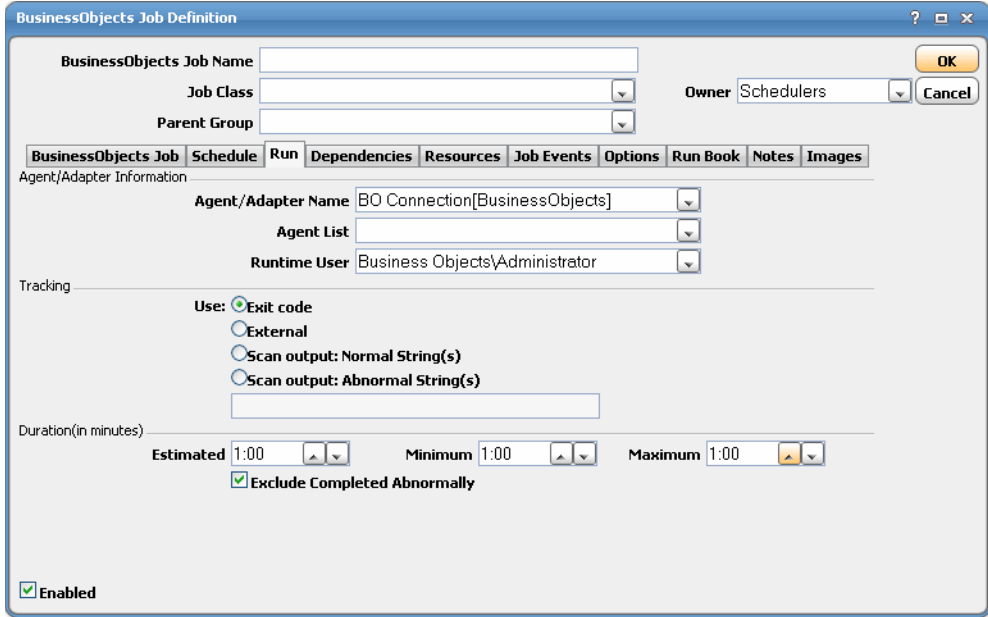
The **Run** tab is selected by default. You must first specify a name for the job, the BusinessObjects adapter connection that will be used for the job and a valid runtime user who has the appropriate BusinessObjects authority for the report being scheduled.

Step 3   In the upper portion of the dialog, specify the following information to describe the job:

- **Job Name** – Enter a name that describes the job.

- **Job Class** – If you want to assign a defined job class to this job, select it from the drop-down list. This field is optional.

- **Owner** – Select the BusinessObjects owner of the selected report/Web Intelligence. The user must have the appropriate BusinessObjects authority for the operation.

- **Parent Group** – If this job exists under a parent group, select the name of the parent group from the drop-down list. All properties in the Agent Information section are inherited from its parent job group.

Step 4   Specify the following connection information in the **Agent/Adapter Information** section:

- **Agent/Adapter Name** – Select the BusinessObjects adapter connection to be used for this job from the drop-down list.

- **Agent List Name**– Select a list for broadcasting the job to multiple servers.

- **Runtime User** – Select a valid runtime user with the appropriate BusinessObjects authority for the job from the drop-down list.

Step 5   Specify the appropriate **Tracking** and **Duration** information for the job. Refer to the *Tidal Enterprise Scheduler User Guide* for information on these options.

Step 6   Click the **BusinessObjects** tab.

You can create and schedule jobs in Enterprise Scheduler to perform various types of BusinessObjects tasks, such as Crystal Report, Web Intelligence, Desktop Intelligence, Data Services (Data Integrator) and Publishing.

Step 7   Select one of the following task types from the **Task Type** drop-down list:

- **Crystal Report**

  – **Folder** – Select the folder that contains the BusinessObjects report you want to schedule.

  – **Crystal Report Name** – Select the report from the list (or locate and select it from the **Browser** tab.)

  – **Description** – A description of the selected report displays in this field. This field is read-only.

– **Add Job Class Prefix** – Select this option if you want to automatically use the Job Class name as the prefix for the title of the report.

To use this option:

a. Select a report template (named report without a prefix).

b. Select **Add Job Class Prefix** to load the object named by this prefix followed by the report template name. The "Name" label is replaced with the current job class.

This option allows you to create multiple jobs from the same template by simply copying the job and changing the job class without editing the job details. When jobs of this type are included in a group, you can create templates that differ only in terms of the group's job class and local variables, simplifying the creation of multiple instances from the same template.

- Web Intelligence

– **Folder** – Select the folder that contains the BusinessObjects Web Intelligence you want to schedule.

– **Web Intelligence Name** – Select the Web Intelligence name from the list (or locate and select it from the **Browser** tab.)

– **Description** – A description of the selected Web Intelligence displays in this field. This field is read-only.

– **Refresh List of Values** – Select this option to automatically refresh the List of Values associated with the selected Web Intelligence before running it.

– **Add Job Class Prefix** – Select this option if you want to automatically use the Job Class name as the prefix for the title of the report.

To use this option:

a. Select a report template (named report without a prefix).

    b. Select **Add Job Class Prefix** to load the object named by this prefix followed by the report template name. The "Title" label is replaced with the current job class.

This option allows you to create multiple jobs from the same template by simply copying the job and changing the job class without editing the job details. When jobs of this type are included in a group, you can create templates that differ only in terms of the group's job class and local variables, simplifying the creation of multiple instances from the same template.

- Desktop Intelligence

   – **Folder** – Select the folder that contains the BusinessObjects Desktop Intelligence you want to schedule.

   – **Title** – Select the name of the Desktop Intelligence object you want to schedule.

   – **Description** – A description of the selected Desktop Intelligence displays in this field. This field is read-only.

   – **Refresh List of Values** – Select this option to automatically refresh the List of Values associated with the selected Desktop Intelligence before running it.

   – **Add Job Class Prefix** – Select this option if you want to automatically use the Job Class name as the prefix for the title of the report.

To use this option:

    a. Select a report template (named report without a prefix).

    b. Select **Add Job Class Prefix** to load the object named by this prefix followed by the report template name. The "Name" label is replaced with the current job class.

This option allows you to create multiple jobs from the same template by simply copying the job and changing the job class without editing the job details. When jobs of this type are included in a group, you can create templates that differ only in terms of the group's job class and local variables, simplifying the creation of multiple instances from the same template.
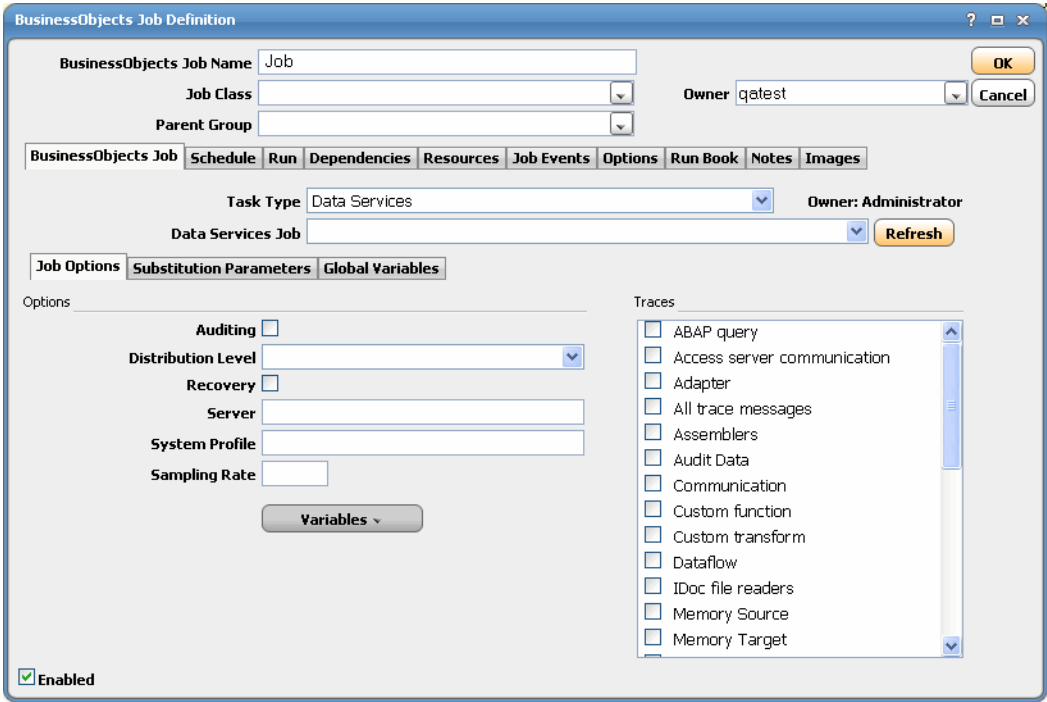
- Data Services (Data Integrator)

   – **Data Services Job** – Select the name of the Data Services job that you want to schedule.
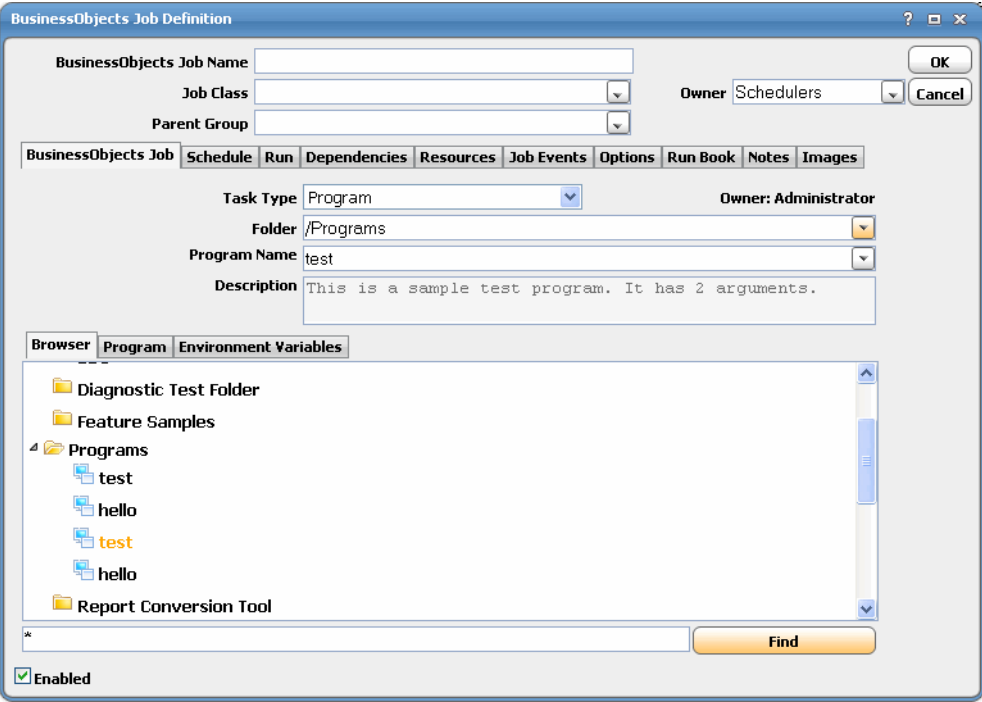
- Program

- **Folder** – Select the folder that contains the BusinessObjects program you want to schedule
- **Program Name** – Select the name of the Program you want to schedule.

  – **Description** – A description of the selected Program displays in this field. This field is read-only.

- **Publishing**

  – **Folder** – Select the folder that contains the publication you want to schedule.

  – **Publishing Name** – Select the name of the publication you want to schedule.

  – **Description** – A description of the selected publication displays in this field. This field is read-only.

  – **Add Job Class Prefix** – Select this option if you want to automatically use the Job Class name as the prefix for the title of the report.

To use this option:

 a. Select a report template (named report without a prefix).

 b. Select **Add Job Class Prefix** to load the object named by this prefix followed by the report template name. The "Name" label is replaced with the current job class.

   This option allows you to create multiple jobs from the same template by simply copying the job and changing the job class without editing the job details. When jobs of this type are included in a group, you can create templates that differ only in terms of the group's job class and local variables, simplifying the creation of multiple instances from the same template.

Step 8   You can search for a folder or item by entering part of the folder or item name in the **Find** field (located below the **Browser** tab), then click **Find**. Click **Find** again to find the next occurrence. After the last occurrence, **Find** will begin its search from the beginning again.

Note   When using Find, all content will be expanded, so you will see an hourglass while the entire Info Store is loaded.

The **Owner** field displays the BusinessObjects owner of the selected report/Web Intelligence. This is read only.

Step 9 For all jobs, except for Data Services, Program and Publishing, click the **Options** tab.

This tab contains the following elements:

- **Format** – Select the desired format from the list (e.g. PDF, HTML, CSV, etc.).

- **Instance Title** – Enter an Instance Title for the run of the report. Variables can be used in this field to uniquely identify each run of a report.

- Printer – Enter the name of a printer as defined to BusinessObjects.

- Copies – Select the number of copies to be printed.

- **Save As** – If you want job output to be downloaded to the master, enter the full local path, including file name. The output is saved locally on the master machine (or use UNC or network mount to save it elsewhere). You can use variables in this field. Some variables may have to be customized in order for them to work properly. For example, Date variables cannot contain separators like / or \. Be sure to include an appropriate file extension based on the format of the report (.pdf, .csv, etc.)

- **Custom Tag** – This field allows you to associate an identifier that you can refer to in a BusinessObjects event.

For example, if your event sends an email about a new report, you can insert the custom tag as a variable in the email's subject line or body text. You can use a variable in this field such as a local group variable that identifies the customer to which this run applies.

Step 10 Click the **Category** tab.

You can select an existing Personal or Corporate category from the category tree. To dynamically determine the category at runtime, select a parent category from the tree and enter a value with variable(s) selected from the **Variables** button in the **Category** text field.
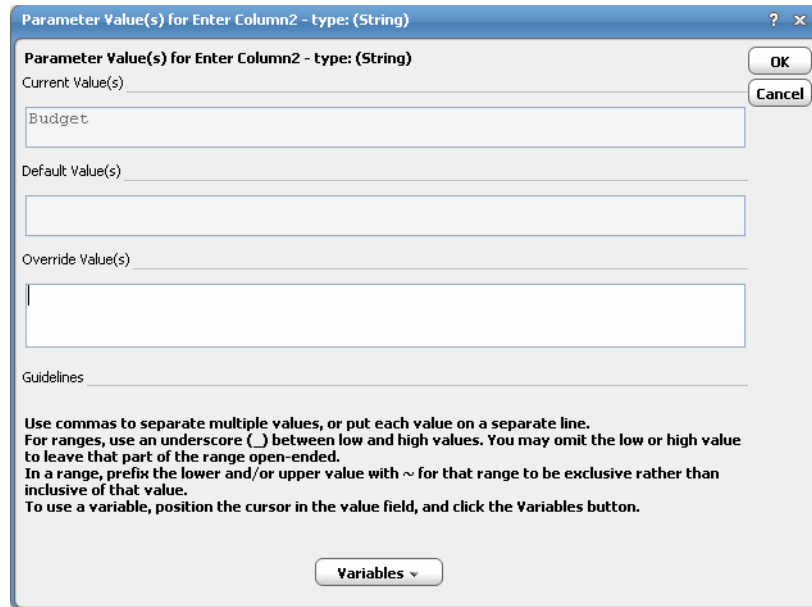
Step 11   If you are scheduling a report, click the **Parameters** tab.

Parameter	Current Value	Override Value
Enter Column1 - type:	Actuals	
Select the month/year for column	032004	
Enter Column2 - type:	Budget	
Select the month/year for column	032004	

Tabs shown: Browser | Options | Category | **Parameters** | Logons

You can enter an override value for any parameter, including Scheduler variables selected with the **Variables** button. For parameters with a specific set of predefined default set of values, you can select the value from the drop-down.

For longer parameter values, click the ellipsis button at the end of the parameter row to open a dialog with more space to view and override the existing report parameter values.

The **Parameter Value Override** dialog displays.

Dialog: **Parameter Value(s) for Enter Column2 - type: (String)**

Parameter Value(s) for Enter Column2 - type: (String)

Current Value(s)

    Budget

Default Value(s)

Override Value(s)

Guidelines

Use commas to separate multiple values, or put each value on a separate line.
For ranges, use an underscore (_) between low and high values. You may omit the low or high value to leave that part of the range open-ended.
In a range, prefix the lower and/or upper value with ~ for that range to be exclusive rather than inclusive of that value.
To use a variable, position the cursor in the value field, and click the Variables button.

Buttons: OK | Cancel | Variables ▾

Step 12   Enter the new parameter value in the field provided corresponding to the parameter shown at the top of the screen.

Note   You can also use the Variable button to insert a variable anywhere into this field.

Parameter Guidelines:

- Use commas to separate multiple values, or put each value on a separate line.
- For ranges, use an underscore (_) between low and high values. You can omit the low or high value to leave that part of the range open-ended.
- In a range, prefix the lower and/or upper value with ~ for that range to be exclusive rather than inclusive of that value.
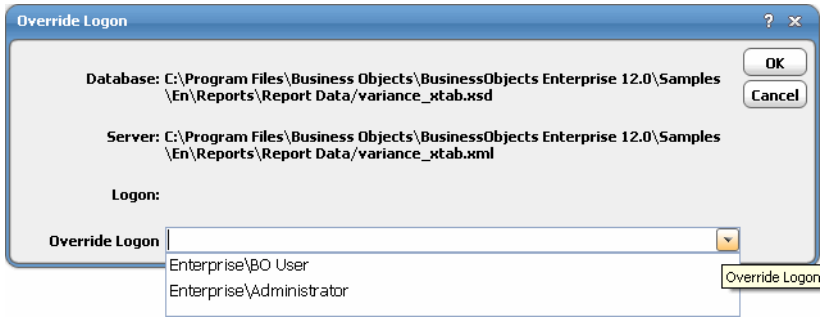
- To use a variable, position the cursor in the value field, and click the **Variables** button.

Step 13   Click **OK** to save the override parameters.

Step 14   Click the **Logons** tab if you need to specify logon overrides for any of the data sources used by the report or Web Intelligence.

Browser	Options	Category	Parameters	Logons		
Database			**Server**		**Logon**	**Override**
C:\Program Files\Business Objects\Busi			C:\Program Files\Business Objec			

To use this feature, you need to set up runtime users for the logon overrides you need. See "Defining Runtime Users".

Override Logon   ? ✕

	OK
	Cancel

    Database: C:\Program Files\Business Objects\BusinessObjects Enterprise 12.0\Samples
    \En\Reports\Report Data/variance_xtab.xsd

    Server: C:\Program Files\Business Objects\BusinessObjects Enterprise 12.0\Samples
    \En\Reports\Report Data/variance_xtab.xml

    Logon:

    Override Logon   ▼

    Enterprise\BO User
    Enterprise\Administrator   Override Logon

Step 15   Select the runtime user you want to use as a logon override for the data source logon.

Step 16   Click **OK**.

Step 17   If you are creating a **Web Intelligence** or **Desktop Intelligence** job, click the **Prompts** tab.

Browser	Options	Category	Prompts		
Prompt			**Current Value**	**Override Value**	▼
Compare 2005 data with the following Year:			2006	2004	
Enter Month:				3	
				Override...	

You can override the current value for the associated prompt in the **Override Value** column. You can also insert Scheduler variables as needed by clicking the **Variables** button and selecting the variable from the list.

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Note   If a prompt is bold, then a value is required.

Step 18   If you are creating a Data Services job:

   a.   Click the **Job Options** tab to select the options necessary for running your job.

You can also choose trace categories in the **Traces** box. Right-click in this box to select/deselect all trace categories. The trace options determine how much detail is included in the trace log for the job. After a Data Services job is complete, you can view the trace log on the **Output** and **Run Info** tabs. The trace is also available from the Data Services Management Console as a link from the job.

Note   If using BusinessObjects Data Integrator XIR2 or earlier, the Distribution Level option does not display.

b. Click the **Substitution Parameters** tab to override values for substitution parameters.

Enter the substitution parameter names (always starting with **$$**) along with the substitution parameter value override into the **Value** field. You can insert Scheduler variables as needed by clicking the **Variables** button and selecting the variable from the list.

Note   If using BusinessObjects Data Integrator XIR2 or earlier, the Substitution Parameters tab does not display.

c. Click the **Global Variables** tab to override global variable values for the job.

Do not include the **$** prefix commonly seen with global variables. You can insert Scheduler variables as needed by clicking the **Variables** button and selecting the variable from the list.

Step 19   Click **OK** to save the job.

Defining BusinessObjects Events

Using the BusinessObjects Adapter, you can define events that can be used for alerting and invoking an automated response through email and/or inserting additional jobs into the schedule. The **Event Definition** dialog is displayed when you add or edit a BusinessObjects event. Tidal Scheduler can monitor events and then take one or more actions when the event trigger occurs. You must configure a calendar for the event from the **Schedule** tab to schedule when the event is enabled (that is, when monitoring will occur). If needed, you can configure the monitor to operate only during certain time periods or leave the monitor in operation at all times.
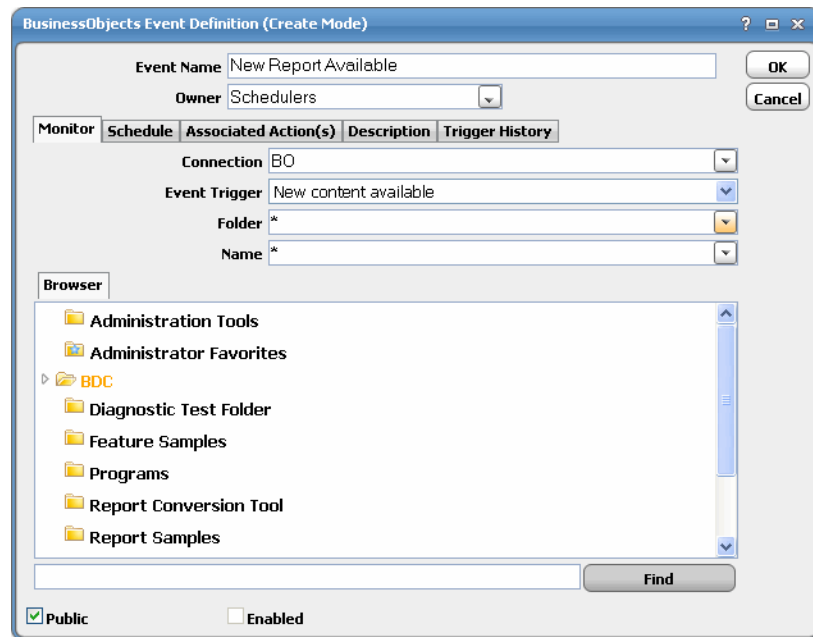
BusinessObjects Event Definition

To define a BusinessObjects event:

Step 1   In the **Navigator** pane, select **Definitions>Events>BusinessObjects Events** to display the **BusinessObjects Events** pane.

Step 2   Right-click **BusinessObjects Events** and select **Add>BusinessObjects Event** from the context menus.
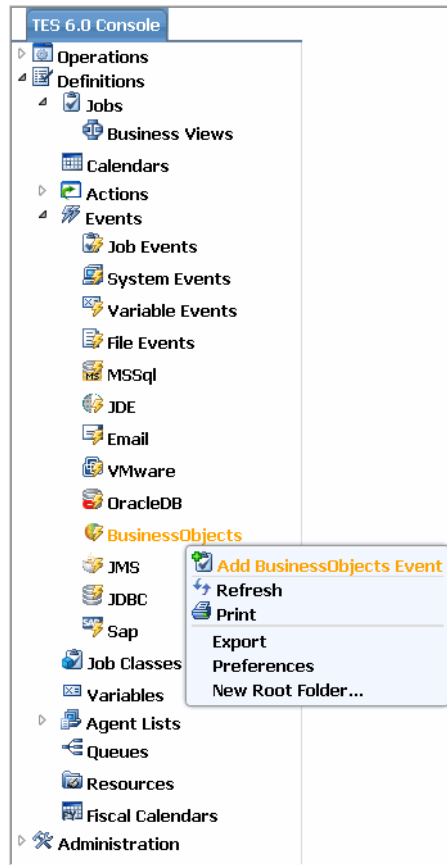
The **BusinessObjects Event Definition** dialog displays.

Step 3   Enter a name for the event in the **Event Name** field and select an **Owner** from the drop-down list.

Step 4   On the **Monitor** tab, specify the following information:

- **Connection** – Select the BusinessObjects connection from the drop-down list. This is the connection that will be monitored for the specified event.

- **Event Trigger** – Select the condition that causes Scheduler to trigger the associated actions. Currently, the only event trigger is when new report or Web Intelligence output is available from a job run from the adapter.

- **Folder** – Select the folder containing the report or Web Intelligence. You can use wildcards in this field (including asterisks and question marks).

- **Name** – Select the name or instance title of the Crystal Report, Destkop Intelligence or Web Intelligence you want to trigger the alert. You can use wildcards in this field (including asterisks and question marks).

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>
> **Note**   The other tabs on the BusinessObjects Event Definition dialog are general event configuration options and are not specific to the BusinessObjects Adapter. Any action that is available in Enterprise Scheduler, such as sending email, generating alerts, sending SNMP traps, setting variables, and adding jobs is available as a response to a BusinessObjects event.

Step 5   You can search for a report by entering part of the folder or report name in the **Find** field (located below the **Browser** tab), then click **Find**. Click **Find** again to find the next occurrence. After the last occurrence, **Find** will begin its search from the beginning again.

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>
> **Note**   When using Find, all content will be expanded, so you will see an hourglass while the entire Info Store is loaded.
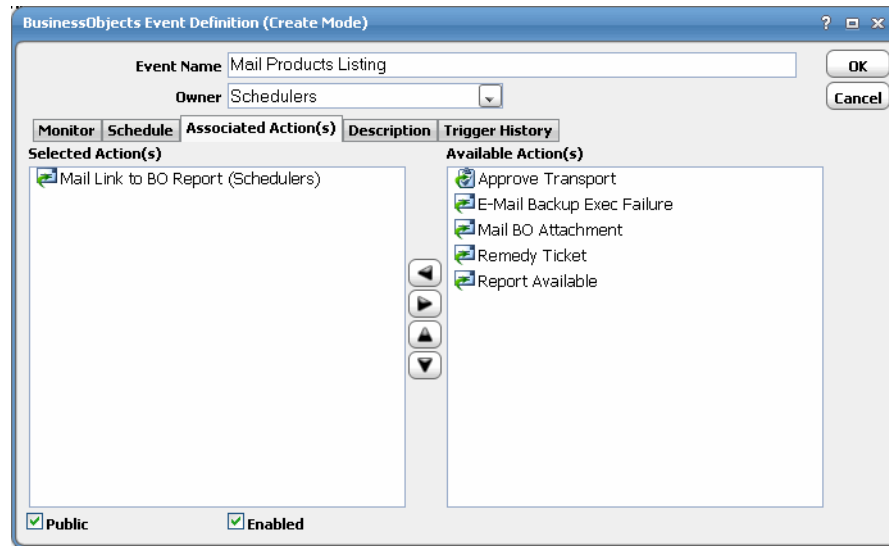
Step 6   Click **OK** to save the event definition.

Define an Action for an Event

You can add any action for a BusinessObjects event that is available in Enterprise Scheduler.

For example, to define an email action for a BusinessObjects event:

Step 1   From the **Event Definition** dialog, click on the **Associated Actions** tab.

Step 2   In the **Available Actions** section, right-click and select **Add Email Action**.

The **Action Definition: E-Mail** dialog displays.
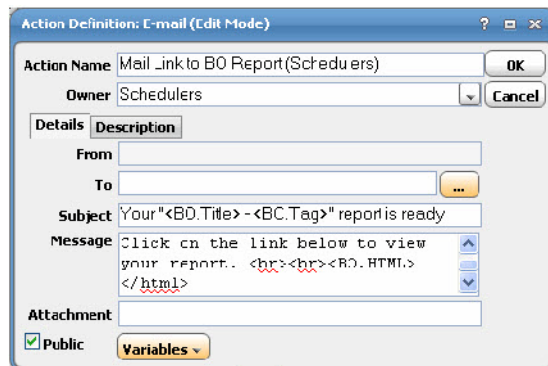
The BusinesObjects event variables that are available with the BusinessObjects Adapter are shown below, and only apply when the action is associated with a BusinessObjects event.

- **Folder** – Folder containing the report or Web Intelligence object.

- **Title** – Title of the new report or Web Intelligence document that is available.

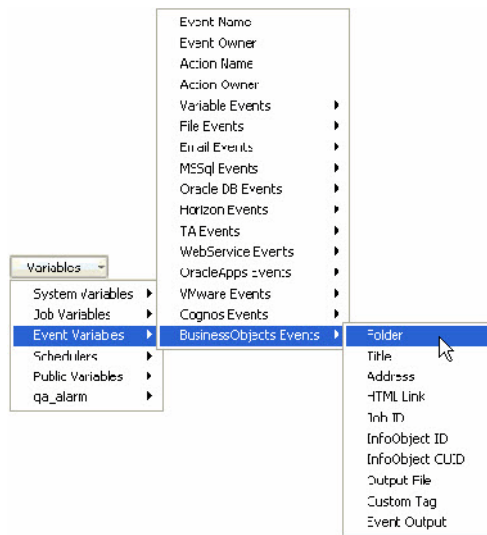- **Address** – The URL that links to the output on the BusinessObjects server using the OpenDocument plugin. See Page 23 for information on overriding HTTP defaults.

- **HTML Link** – Refers to an HTML fragment that you can embed as a hyperlink inside of a an HTML document, such as the body of an email.

  For example:

  ```
  <html><body>
  Please follow the link below to view your new <BO.Title> report:<br><br>
  <BO.HTML>
  </body></html>
  ```

- **InfoObject ID** – ID of the report or Web Intelligence object.

- **InfoObject CUID** – Cluster Unique ID that uniquely identifies the new report or Web Intelligence content.

- **Output File** – Full path to the first output file created on the BusinessObjects server.

- **Custom Tag** – The custom tag defined for the job that generated the alert. See Step 9 on page 3-28 for how this custom tag is defined.

- **Event Output** – Description of the event that took place.

Step 3 Complete the required fields on the **Action Definition** dialog and click **OK**.

Defining a BusinessObjects Action

The BusinessObjects adapter allows you to trigger BusinessObjects events as an Enterprise Scheduler Action type. This action can then be associated with any Enterprise Scheduler event, including job events such as "Job Completed Normally" or file, email, variable events, etc (refer to Enterprise Scheduler documentation on how to associate actions with scheduling events). When the action triggers a custom event in BusinessObjects, any pending scheduled task waiting on the event will kick off.

To define an action:

Step 1   In the **Navigator** pane, select **Definitions>Actions>BusinessObjects Actions** to display the **BusinessObjects Actions** pane.

Step 2   Right-click **BusinessObjects** and select **Add Action** from the context menus.
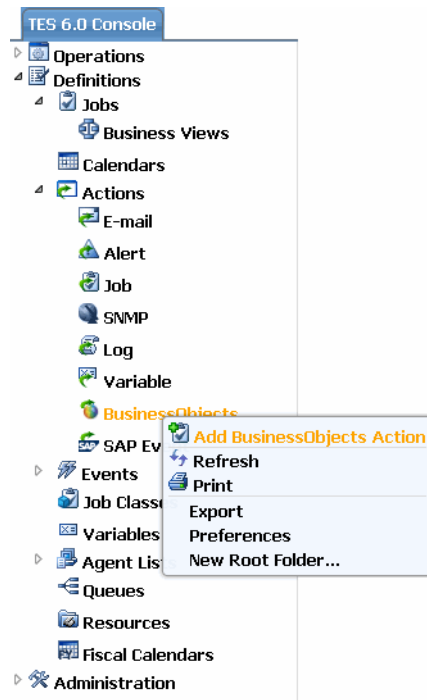
Step 3   On the Scheduler toolbar, click the **Add** button to display the **Action Definition** dialog.
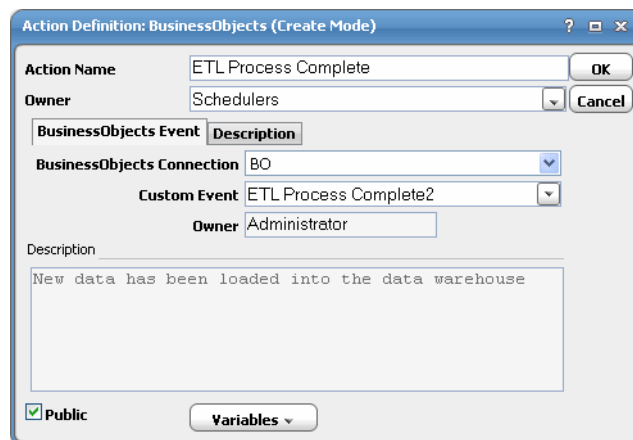
Step 4   In the **Action Name** field, enter the name of the new action.

Step 5   Select the owner of the action from the **Owner** list.

Step 6   From the **BusinessObjects Connection** list, select the CMS server where you want to trigger an event.

> ✎
>
> **Note** For the BusinessObjects custom event trigger to work reliably from a Scheduler action, the clocks on the CMS server machine and the Scheduler master machine must be synchronized (using a time service or other synchronization mechanism).

Step 7 From the **Custom Event** list, select the event that you want to trigger with this action.

The **Description** field is a read-only field that displays the description corresponding to the selected custom event.

Monitoring BusinessObjects Job Activity

As BusinessObjects tasks run as pre-scheduled or event-based jobs, you can monitor the jobs as you would any other type of job in Enterprise Scheduler using the **Job Details** dialog. You can also use Business Views to monitor job activity and view when the jobs are active (see the *Tidal Enterprise Scheduler User Guide* for instructions on using Business Views).

To monitor job activity:

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

Step 2 Right-click to select a job and choose **Details** from the context menu.

The **Job Details** dialog displays. The **Status** page displays by default. You can view the status of the job, the start and end time, how long it ran, and how it was scheduled. The external ID is the BusinessObjects job number.

Step 3 Click the **Output** tab to view a task summary after the job completes.
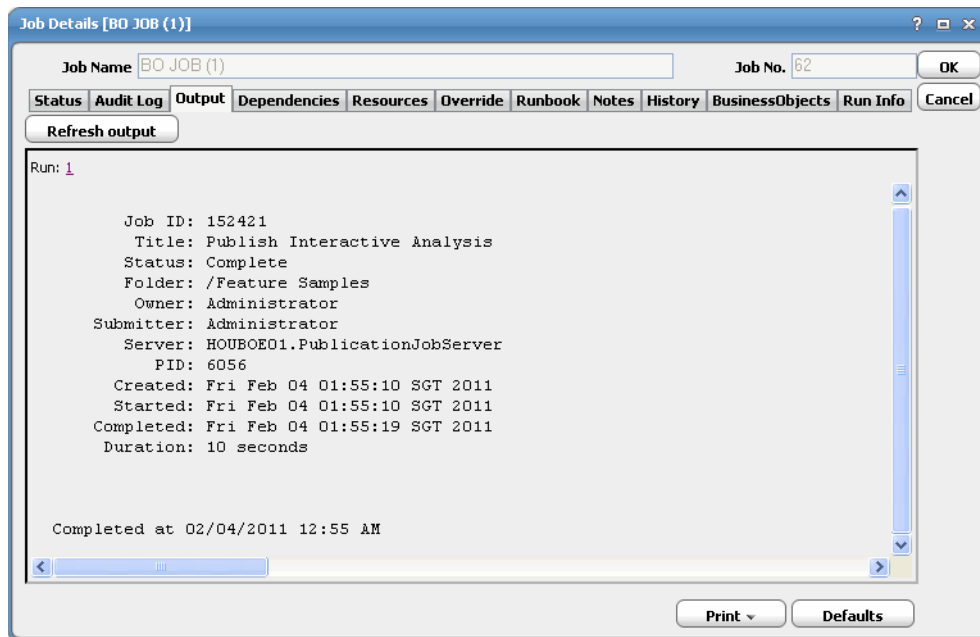
Step 4 Click the **Run Info** tab to view additional details about the job. You can also view this tab to view information about the runtime status while the job is running, including any messages.
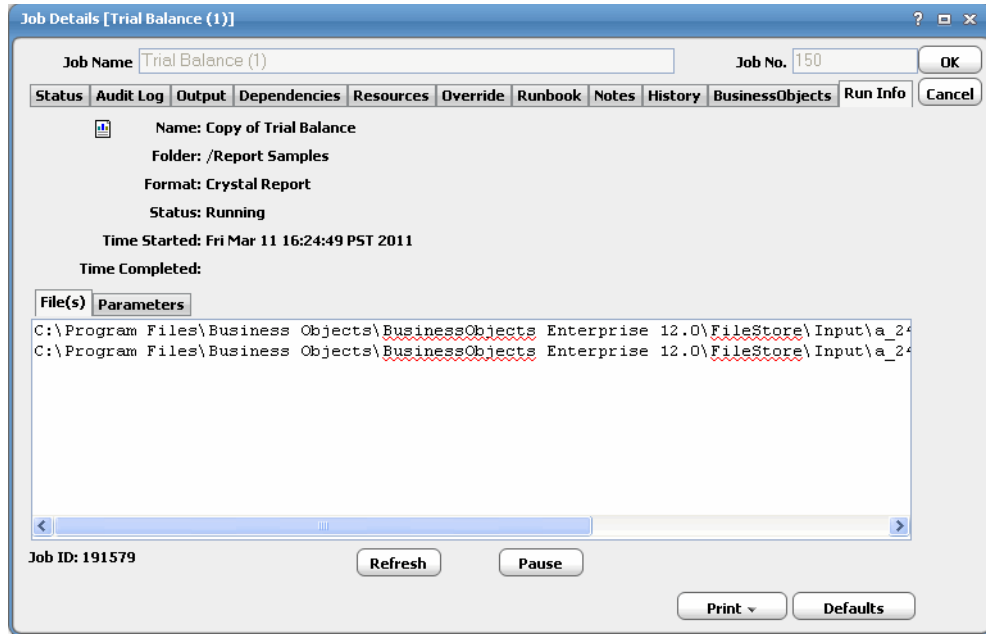
Step 5   Click the **Parameters** tab. Here you will see the parameter values that were in effect during this run.
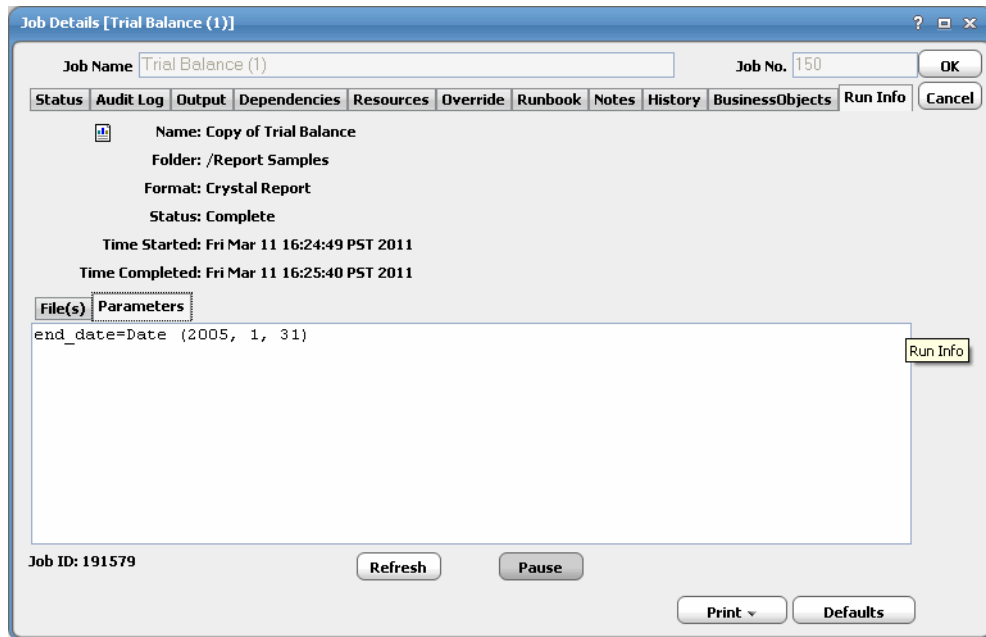
Step 6   If you run a job that completes abnormally, you can click the **Errors** tab to view notes associated with the failure.
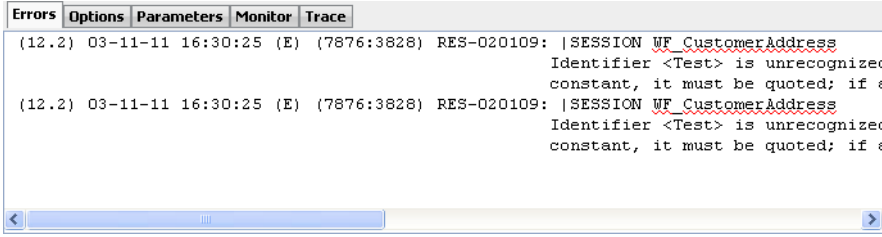
Data Services produces an error log for every job execution. Use the error logs to determine how an execution failed. If the execution completed without error, the error log is blank.

After a Data Services job is complete, the **Options**, **Monitor** and **Trace** tabs display.

Step 7   After running a Data Services job, click the **Options** tab to view trace flags and other options that were in effect for the run.
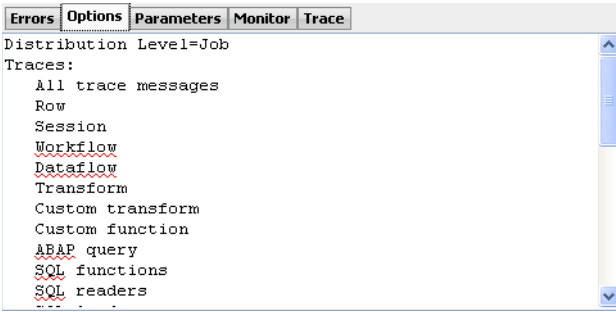
Step 8   Click the **Monitor** tab to view each step of each data flow in the job, the number of rows streamed through each step, and the duration of each step.

The monitor log quantifies the activities of the components of the job. It lists the time spent in a given component of a job and the number of data rows that streamed through the component.

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Note   If using BusinessObjects Data Integrator XIR2 or earlier, the Run Info number will not display the Job ID or Repository as it does for the new Data Services job. A CID will be displayed instead.

Step 9   After a Data Services job is complete, you can also view itemized steps executed in the job and the time execution began and ended on the **Trace** tab.

Use the trace logs to determine where an execution failed, whether the execution steps occur in the order you expect, and which parts of the execution are the most time consuming.

Step 10   Click the **BusinessObjects** tab to view the job definition details and the variables that were used when the job was submitted.
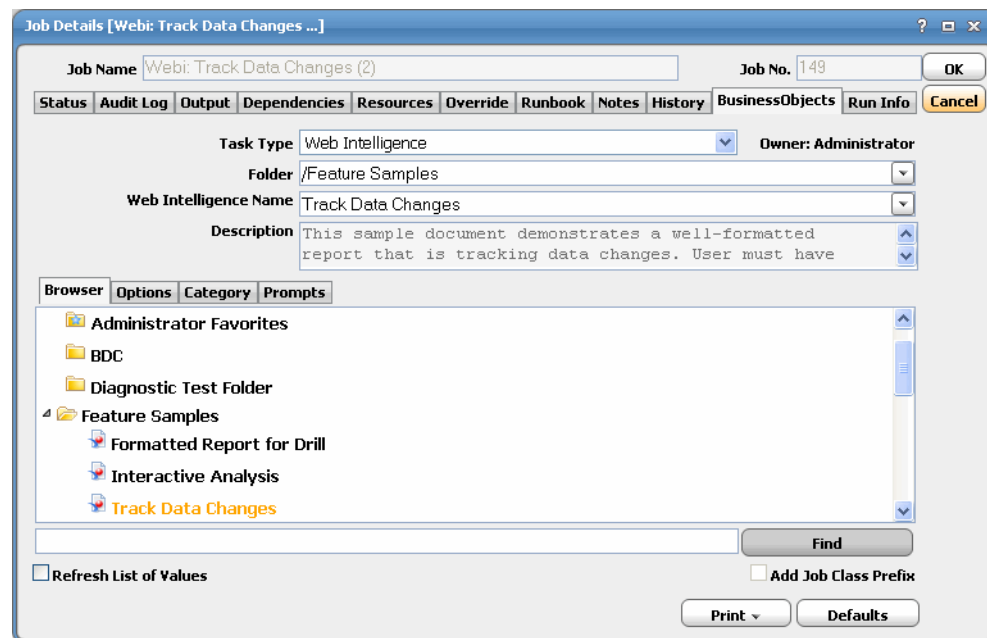
While the job is running, the fields are disabled; however, prior to running or rerunning the job, you can override any value on this screen. Your changes here only apply to this instance of the job (the original job definition is not affected).

Step 11   When you have finished viewing the job activity details, click **OK** to close the dialog.

Controlling Adapter and Agent Jobs

Scheduler provides the following job control capabilities for either the process currently running or the job as a whole:

- Holding a Job—Hold a job waiting to run.
- Aborting a Job—Abort an active job.

- Rerunning a Job—Rerun a job that completed.
- Making One Time Changes to an Adapter or Agent Job Instance—Make last minute changes to a job.
- Deleting a Job Instance before It Has Run—Delete a job instance before it has run.

Holding a Job

Adapter/agent jobs are held in the same way as any other Scheduler jobs.

Adapter/agent jobs can only be held before they are launched. Once a job reaches the Adapter/Agent system, it cannot be held or suspended.

To hold a job:

Step 1   From the **Job Activity** pane, right-click on the job.

Step 2   Select **Job Control>Hold/Stop**.

Aborting a Job

Adapter/agent jobs are aborted in the same way as any other Scheduler jobs.

To abort a job:

Step 1   From the **Job Activity** pane, right-click on the job.

Step 2   Select **Job Control>Cancel/Abort**.

Rerunning a Job

On occasion, you may need to rerun an Adapter/Agent job. You can override parameter values first, if necessary, from the Adapter/Agent tab.

To rerun a job:

Step 1   From the **Job Activity** pane, right-click the Adapter/Agent job you need to rerun.

Step 2   Select **Job Control>Rerun** option from the context menu.

Making One Time Changes to an Adapter or Agent Job Instance

Prior to a run or rerun, you can edit data on the specific **Adapter/Agent** tab. To ensure that there is an opportunity to edit the job prior to its run, you can set the **Require operator release** option on the **Options** tab in the Adapter **Job Definition** dialog. Use this function to make changes to an Adapter job after it enters Waiting on Operator status as described in the following procedure.

To make last minute changes:

Step 1   From the **Job Activity** pane, double-click the Adapter/Agent job to display the **Job Details** dialog.

Step 2   Click the Adapter tab.

Step 3   Make the desired changes to the job and click **OK** to close the **Job Details** dialog.

Step 4   If this job is Waiting on Operator, perform one of the following tasks:

- To release the job, select **Job Control->Release**.

- To rerun the job with changes, select **Job Control->Rerun**.

Deleting a Job Instance before It Has Run

Adapter/Agent job instances are deleted in the same way as any other Scheduler job.

Deleting a job from the **Job Activity** pane removes the job from the Scheduler job activity only. The original definition is left in tact.

To delete a job instance:

Step 1   From the **Job Activity** pane, right-click the Adapter/Agent job to be deleted.

Step 2   Select **Remove Job(s) From Schedule**.

4

Configuring service.props

About Configuring service.props

The **service.props** file is used to configure adapter behavior. **service.props** is located in the \config directory located under the Adapter's GUID directory, You can create both the directory and file if it does not yet exist. Properties that can be specified in service.props control things like logging and connection configuration. Many of the properties are specific to certain adapters; others are common across all adapters.

service.props Properties

The table below lists many of the parameters that can be specified in service.props. Some properties apply to all adapters (shaded in the table) and some properties are adapter-specific as indicated by the **Applicable Adapter(s)** column. The properties are listed in alphabetical order.

Property	Applicable Adapter(s)	Default	What It Controls
BYPASS_SEC_VALIDATION	Oracle Apps	N	If set to Y, the secondary user validation is bypassed. If not, secondary user validation is performed.
CLASSPATH	All	<none>	(Optional) – The path to the JDBC driver. If the default CLASSPATH used when the Adapter process is started does not include an appropriate JDBC driver jar required to connect to the PowerCenter Repository Database, you will need to specify this *service.props* configuration
CONN_SYNC	All	N	Setting this flag to Y allows synchronous connections without overloading the RDOnly Thread. If set to N, the adapter might stop trying to reconnect after an outage or downtime.
DISCONN_ON_LOSTCONN	Informatica	N	Setting this flag to Y avoids an unnecessary logout call to the Informatica server when the connection is lost. This logout call usually hangs.

Property	Applicable Adapter(s)	Default	What It Controls
EnableDynamicPollingInterval	All	N	Use to avoid frequent polling on long-running jobs. When set to Y in service.props of a particular adapter, these properties are enabled: MinDynamicPollInterval—Minimum value should be 5 seconds. MaxDynamicPollIntervalInMin—Maximum value should be 5 minutes. PercentOfEstDuration—Default value is 5.
IGNORE_CODES	Informatica	<none>	This parameter can be set in service.props, job configuration and connection configuration parameters. The order of precedence is service.props (applicable for all jobs running in all connections), job level (only for that particular job), and connection (applicable for all jobs in the connection). This parameter is used to specify Informatica-specific error codes, separated by commas (,), that you want to ignore while running a job.
IGNORESUBREQ	Oracle Apps	N	Y or N. Setting this flag to Y stops huge job xml file transfers back and forth between the adapter and the AdapterHost during polls when a single request set has multiple sub-requests of more than 100. The default value is N or empty.
jarlib	Hive and MapReduce	<none>	Specifies the specific Java library to use for the adapter: • For Apache 1.1.2, add: **jarlib=apache1.1.2** • For Cloudera 3, add: **jarlib=cloudera** • For Cloudera 4, add: **jarlib=cdh4** • For MapR add: **jarlib=apache1.1.2**
kerbrealm	MapReduce	<none>	If the Hadoop cluster is Kerberos secured, use this value to specify the Kerberos Realm. For example, **kerbrealm=TIDALSOFT.LOCAL**
kerbkdc	MapReduce	<none>	If the Hadoop cluster is Kerberos secured, use this value to specify the KDC Server. For example, **kerbkdc=172.25.6.112**

Property	Applicable Adapter(s)	Default	What It Controls
Keystore	BusinessObjects, BusinessObjects BI, BusinessObjects DS, Cognos, JD Edwards, Oracle Applications, UCS Manager, VMware, Web Service	\<none\>	Specify `Keystore=c:\\<adapter_certifica te_directory>\\<your_trusted_ke ystore>.keystore` when importing certificates into a Java keystore.
LAUNCH_DELAY (in milliseconds)	Informatica	\<none\>	This parameter can be set in service.props, job configuration and connection configuration parameters. The order of precedence is service.props (applicable for all jobs running in all connections), job level (only for that particular job), and connection (applicable for all jobs in the connection). If a non-zero value is set for this parameter, then the jobs are delayed for the specified number of milliseconds before being submitted to Informatica.
LoginConfig	BusinessObjects BI Platform, BusinessObjects Data Services	\<none\>	Specifies the location of the login configuration if using WinAD or LDAP authentication. For example: `LoginConfig=c:\\windows\\bscLo gin.conf` where `"c:\\windows\\bscLogin.conf"` is the location of the login configuration information. Note the use of \\ if this is a Windows location.
MaxLogFiles	Informatica, JDBC	50	(Optional) – Number of logs to retain. Defaults to 50 if not specified.
OUTPUT_ASYNC_LOGOUT	Informatica	N	Setting this flag to Y avoids jobs getting stuck in Gathering Output status.
OUTPUT_SYNC	All	Y	Enables concurrent output gathering on a connection. To enable this feature, set the value to N in service.props of this adapter.
POLL_SYNC	All	Y	Enables concurrent polling on connections of the same type. This is helpful when there is a heavily load on one connection of an adapter. The heavily loaded connection will not affect the other adapter connection. To enable this feature, set the value to N in the service.props of this adapter.
QUERY_TIMEOUT	Oracle Apps	N	Y or N. If set to Y, the timeout value defined using the parameter QUERY_TIMEOUT_VALUE is applied to the SQL queries. Default value is N or empty.

Property	Applicable Adapter(s)	Default	What It Controls
QUERY_TIMEOUT_VALUE	Oracle Apps	unset	The time period in seconds that SQL queries wait before timeout. If 0 or not set, there is no timeout.
READPCHAINLOG	SAP	Y	Used to control the log gathering in SAP Process Chain jobs. This property depends on the Summary Only check box of the job definition Options tab.
SCANFOR_SESSIONSTATS	Informatica	Y	Y or N - Set this parameter to N to turn off the default behavior of Informatica jobs collecting the session statistics during the job run.
SCANFOR_SESSIONSTATS_AFTER_WF_ENDS	Informatica	N	Y or N - Set this parameter to Y to turn off the gathering of session statistics during each poll for the status of Informatica jobs.
TDLINFA_LOCALE	Informatica	<none>	Points to the Load Manager Library locale directory. See "Configuring the Informatica Adapter" in the *Informatica Adapter Guide* for how to set this for Windows and Unix environments.
TDLJDBC_LIBPATH	JDBC (Windows only, optional)	<none>	An alternate path to the JDBC library files. The library file path should have been configured given system environment variables. This option is available in case you wish to use an alternate set of libraries and may be helpful for trouble-shooting purposes.
TDLJDBC_LOCALE	JDBC	<none>	The path to the JDBC locale files.
TDLINFA_REQUESTTIMEOUT	Informatica	<none>	(Optional) – The number of seconds before an API request times out. The default is 120 seconds, if not specified.
TRANSACTION_LOG_BATCH_SIZE	MS SQL	5000	Set this parameter if more than 5000 lines need to be read from the transaction table.
version_pre898	JD Edwards	N	If running on a JD Edwards server version that is less than 8.9.8, set version_pre898=Y.