



# Cisco Workload Automation BusinessObjects Data Services Adapter Guide

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# Preface

This guide describes the installation, configuration, and usage of the BusinessObjects Data Services Adapter with Cisco Workload Automation (CWA).

## Audience

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

## Related Documentation

See the *Cisco Workload Automation 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 CWA 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>.

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## Document Change History

The table below provides the revision history for the BusinessObjects Data Services 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 <i>TES Installation Guide</i> ; usage provided in online Help only.
6.2.1 SP3	May 2016	Consolidated all BusinessObjects Data Services Adapter documentation into one document.
6.3	August 2016	Rebranded “Cisco Tidal Enterprise Scheduler (TES)” to “Cisco Workload Automation (CWA)”.  Miscellaneous edits for the 6.3 release.



# 1

## Introducing the CWA BusinessObjects Data Services Adapter

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

- [Overview, page 7](#)
- [Prerequisites, page 8](#)

### Overview

The Cisco Workload Automation (CWA) Adapter for BusinessObjects Data Services (BODS) is an SAP solution that uses BusinessObjects Data Services Web Services to provide a seamless integration to Business Objects Data Services in the standard CWA screens. This allows Schedulers to connect to BusinessObjects servers and define BusinessObjects Data Services batch jobs as part of CWA job definitions.

As a platform independent solution, the adapter can run on any platform where the CWA master runs. The BODS Adapter enforces BusinessObjects DS security by authenticating through associations between CWA runtime users and BusinessObjects DS users.

Creating a BODS job from CWA is highly secure, but as simple as creating any other job. A job definition refers to a Data Services (formally Data Integrator) batch job which has been published as a Web service. Based on defined scheduling criteria, the adapter submits a Data Services job to BusinessObjects Data Services for execution. 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. Additionally, the Adapter allows you to cancel, hold/resume, abort, and rerun tasks from CWA, a feature that provides significantly more control over the environment than afforded by scripting or other non-integrated scheduling solutions.

The BODS Adapter is event-based. It launches processes based on defined calendars and schedules, and uses asynchronous callbacks for monitoring, enabling you 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 BODS task.

The terms BusinessObjects Data Services, BusinessObjects DS, and BODS will be used interchangeably for the remainder of this document.

Note that Cisco provides multiple BusinessObjects adapters as listed below:

## Prerequisites

SAP Product	CWA Adapters...		
	BusinessObjects (BO)	BusinessObjects BI Platform (BOBIP)	BusinessObjects Data Services (BODS) *
BusinessObjects XI	Yes	Yes	No
BusinessObjects XI 4	No	Yes	No
BusinessObjects Data Services	Yes	No	Yes

\* Documented in this guide. See the *BusinessObjects Adapter Guide* or *BusinessObjects BI Platform Adapter Guide* for documentation on those adapters.

## Prerequisites

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, verify that ports required to communicate with BusinessObjects Data Services are open.

If 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, page 14](#).

- 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.

Verify that:

- Web Services are configured.
- 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, refer to the appropriate BusinessObjects Data Services or Data Integrator documentation.





# 2

## Configuring the BusinessObjects Data Services Adapter

### Overview

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

- [Licensing an Adapter](#) – Apply the license to the Adapter. You cannot define a BusinessObjects Data Services connection until you have applied the license from Cisco.
- [Securing the Adapter](#) – Define BusinessObjects Data Services users that the adapter can use to establish authenticated sessions with the BO Data Services 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 BODS Connection](#) – Define a connection so the master can communicate with the BO Data Services server.

See [Configuring service.props, page 29](#) for details about configuring service.props to control such things as polling, output, and log gathering.

### Licensing an Adapter

Each CWA 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 CWA, 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:

1. Stop the master:

Windows:

- a. Click on **Start** and select **All Programs>Cisco Workload Automation>Scheduler>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**

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.

3. Place the file in the **C:\Program Files\TIDAL\Scheduler\Master\config** directory.

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.

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

## Securing the Adapter

There are two types of users associated with the BODS 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 BODS jobs represent those users and passwords required for authentication. BusinessObjects Data Service operations require authentication against a valid BODS user as defined by a BusinessObjects Data Services administrator. You can also use runtime users to override data source logons used by your reports.

### ■ Schedulers

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

- Security policy that grants or denies add, edit, delete and view capabilities for BODS jobs.
- Authorized runtime user list that grants or denies access to specific authentication accounts for use with BODS jobs.
- Authorized agent list that grants or denies access to specific BODS Adapter connections for use when defining BODS jobs.

## Defining Runtime Users

### To define a runtime user:

1. From the **Navigator** pane, expand the **Administration** node and select **Runtime Users** to display the defined users.
2. Right-click **Runtime Users** and select **Add Runtime User** from the context menu (*Insert mode*).

–or–

Click the **Add** button on the menu bar.

## Securing the Adapter

The **User Definition** dialog displays.

3. Enter the new user name in the **User Name** field.
4. For documentation, enter the **Full Name** or description associated with this user.
5. In the **Domain** field, select a Windows domain associated with the user account required for authentication, if necessary.
6. To define this user as a runtime user for BODS jobs, click **Add** on the **Passwords** tab.

The **Change Password** dialog displays.

7. Select **BusinessObjects DS** from the **Password Type** list.
8. Enter a password (along with confirmation) in the **Password/Confirm Password** fields.

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

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

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

The screenshot shows the 'User Definition' dialog box. It has three tabs: 'Passwords', 'Kerberos', and 'Description'. The 'Passwords' tab is selected. In the top section, there are three text fields: 'User Name' (containing 'BODS Run User'), 'Full Name' (containing 'BODS Runtime User'), and 'Domain' (containing 'CISCO'). To the right of these fields are 'OK' and 'Cancel' buttons. Below the tabs, there is a section for 'Windows/FTP/DataMover' with two empty text fields. Underneath is a table with two columns: 'Adapter' and 'Password'. The table has one row with 'BusinessObjects DS Password' in the 'Adapter' column and '\*\*\*' in the 'Password' column. To the right of the table are 'Add', 'Edit', and 'Delete' buttons.

10. Click **OK** to add or save the user record in the CWA database.

For further information about the **User Definition** dialog, see your *Cisco Workload Automation User Guide*.

## Authorizing Schedulers to Work with BODS Jobs

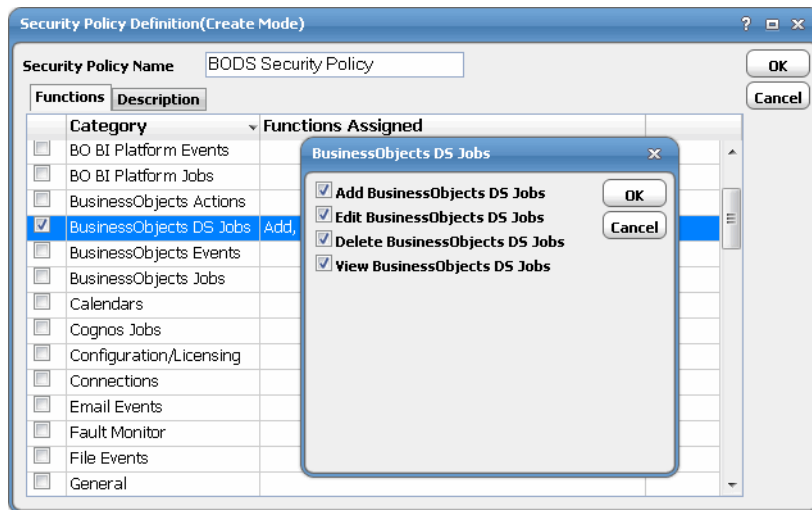
Access to the BODS environment is controlled by assigning a BODS security policy with specified privileges to user accounts. The system administrator should create a new security policy or edit an existing policy in Scheduler as described in the Users chapter of the User Guide, that in addition to the normal user privileges includes the capability to add and/or edit BODS jobs. A user whose assigned security policy does not include BODS privileges cannot create and/or run BODS jobs.

### To authorize Schedulers:

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

## Securing the Adapter

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**.



3. In the **Security Policy Name** field, enter a name for the policy.
4. On the **Functions** page, scroll to the **BusinessObjects DS Jobs** category, click the ellipses on the right-hand side of the dialog and select the check boxes next to the functions that are to be authorized under this policy (**Add**, **Edit**, **Delete** and **View BusinessObjects DS Jobs**).
5. Click **Close** on the **Function** drop-down list.
6. Click **OK** to save the policy.

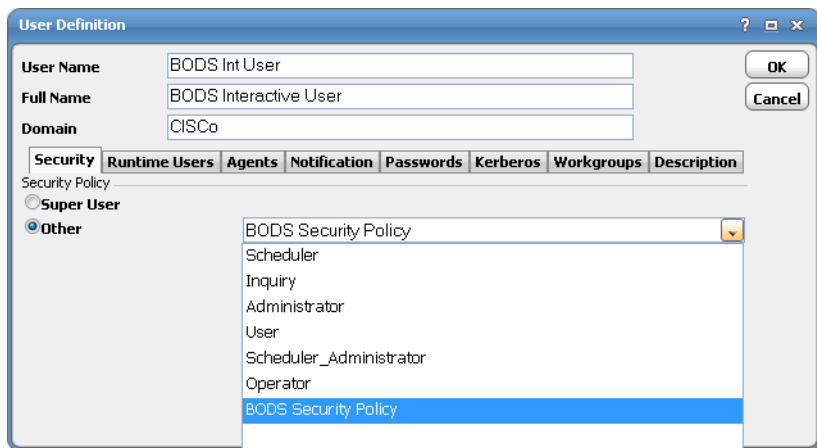
For further information about setting up security policies, see your *Cisco Workload Automation User Guide*.

## Defining BODS Scheduler Users

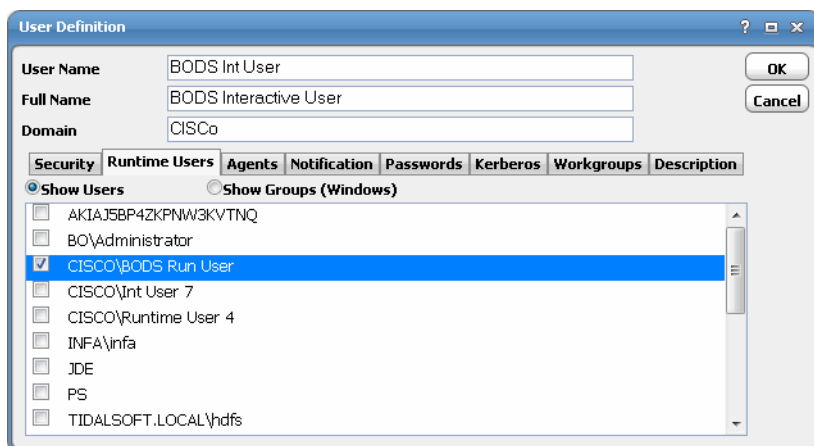
**To define a Scheduler user to work with BODS jobs:**

1. From the **Navigator** pane, expand the **Administrative** node and select **Interactive Users** to display the defined users.
2. Right-click **Interactive Users** and select **Add Interactive User** from the context menu (*Insert mode*). You can also right-click a user in the **Interactive Users** pane and select **Edit Interactive User** from the shortcut menu (*Edit mode*).

The **User Definition** dialog displays.



3. If this is a new user definition, enter the new user name in the **User/Group Name** field.
4. For documentation, enter the **Full Name** or description associated with this user.
5. In the **Domain** field, select a Windows domain associated with the user account required for authentication, if necessary.
6. On the **Security** page, select the **Other** option and then select the security policy that includes authorization for BODS jobs.
7. Click the **Runtime Users** tab.



8. Select the BODS users that this scheduling user can use for BODS authentication from BODS jobs.
9. Click the **Agents** tab.
10. Select the checkboxes for the BODS connections that this scheduling user can access when scheduling jobs.
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:**

1. Go to the **master/services/{87c3269f-bfb8-4671-b97d-1d1333664af9}** folder.
2. Create a subfolder called **config**, if it does not already exist.
3. Create a text file named *service.props* if it does not already exist.
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.

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

See [Configuring service.props, page 29](#) 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 Data Services 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 Data Services 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**

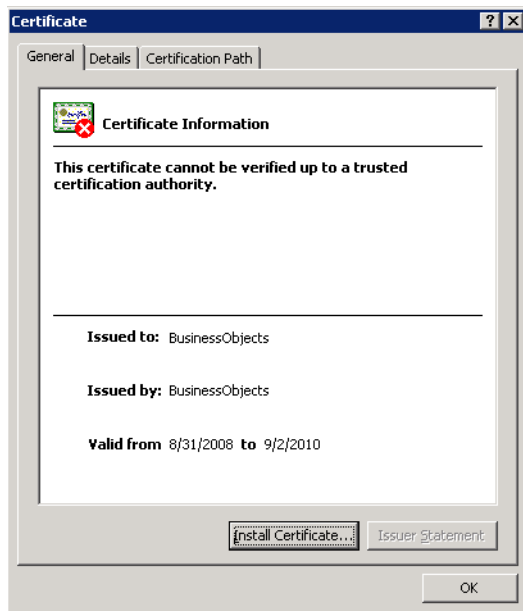
1. Open the Internet Explorer browser and navigate to the following dispatch URL (replacing servername and port as it applies to your environment).

```
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.

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



3. Click **Install Certificate**.
4. On the **Certificate Import Wizard Welcome** panel, click **Next**.
5. On the **Certificate Store** panel, use the default option **Automatically select the certificate store based on the type of certificate** and click **Next**.
6. On the **Completing Certificate Import Wizard** panel, click **Finish**.
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.
8. Click **OK** to close the message and return to the **Certificate** dialog.
9. Click **OK** on the **Certificate** dialog. You can close your browser now.
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

1. On the local computer, create the following directory for the certificates:  
C:\BO-Certs
2. In Internet Explorer, select **Tools>Internet Options**.
3. On the **Internet Options** dialog, select the **Content** tab.

4. In the Certificates area, click **Certificates**.
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, page 14](#)).
6. Scroll through the list of certificates to find the certificates.
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.
8. After all target server certificates have been exported, click **Close** to exit the **Certificates** dialog.
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

1. Open a Windows **Command Prompt** window.
2. Change to the directory where the certificates are stored by entering the following commands:

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

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
```

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



## Defining a BODS Connection

```
Certificate was added to keystore
```

6. Repeat this procedure for each target server.
7. Navigate to the following folder where the CWA BusinessObjects Adapter is installed and create a new directory named **config**:

```
<install_dir>\master\services\{87c3269f-bfb8-4671-b97d-1d1333664af9}\config
```

8. Create a text file named *service.props* if it does not already exist.
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, page 29](#) for other parameters that can be set in service.props related to polling, output, and log gathering.

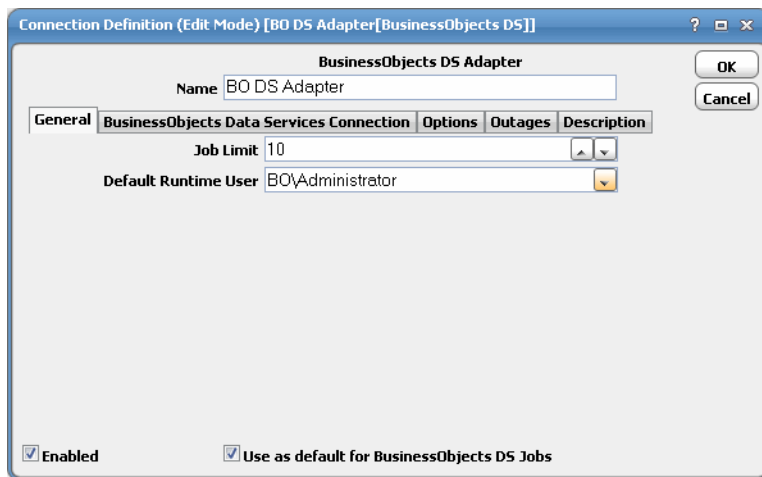
## Defining a BODS Connection

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

### To add a BODS connection:

1. From the **Navigator** pane, navigate to **Administration>Connections** to display the **Connections** pane.
2. Right-click **Connections** and select **Add Connection>BusinessObjects DS Adapter** from the context menu.

The **BusinessObjects DS Adapter Connection Definition** dialog displays.



3. On the **General** page, enter a name for the new connection in the **Name** field.
4. In the **Job Limit** field, select the maximum number of concurrent active processes that CWA should submit to the BusinessObjects Data Services server at one time.
5. From the **Default Runtime User** drop-down list, you have the option to select the name of a default user for BODS jobs. The runtime user is used for authentication with BusinessObjects Data Services to authorize scheduled operations.

## Defining a BODS Connection

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

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

Connection Definition (Edit Mode) [BO DS Adapter[BusinessObjects DS]]

**BusinessObjects DS Adapter**

Name: BO DS Adapter

General BusinessObjects Data Services Connection Options Outages Description

Central Management Server: sjc-bo4-qa1

User: BO\Administrator

Authentication: Enterprise

Port: 8080 ☐ HTTPS

Version: 14.0

Test

☒ Enabled ☒ Use as default for BusinessObjects DS Jobs

7. In the **Central Management Server** field, enter the name of your BusinessObjects CMS 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-boe-01:6400`).

**Note:** This only applies when connecting to Data Services 14.0.

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

This is a persistent user connection to BusinessObjects Data Services 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.

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 Data Services (for example, Enterprise, WinAD or LDAP). See also, [Using WinAD or LDAP Authentication, page 13](#).

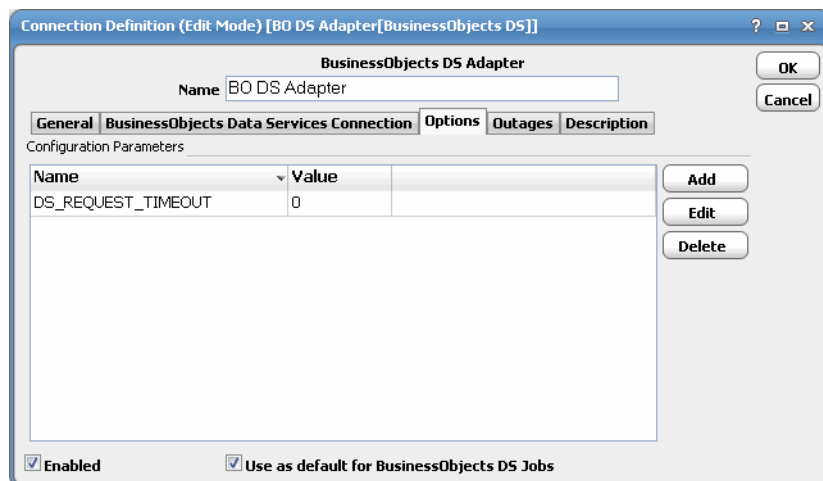
10. In the **Port** field, enter the appropriate port number for the Data Services Web Service.

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

11. From the **Version** list, select the version of Data Services to be connected to.

12. Click the **Test** button to test the connection.

13. Click the **Options** tab to configure parameters for this connection.



The following parameter is available:

- **DS\_REQUEST\_TIMEOUT** – Specifies the maximum amount of time to wait (in minutes) for a response from the Data Service Web service call before timing out.

14. Click **OK** to save the new BusinessObjects DS connection.

The configured connection displays in the **Connections** pane.

The status light next to the connection indicates whether the CWA Master is connected to the BusinessObjects Data Services server. If the light is green, the BusinessObjects Data Services server is connected.

A red light indicates that the master cannot connect to the BusinessObjects Data Services server. BODS jobs will not be submitted without a connection to the BusinessObjects Data Services 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 DS Connection** dialog describing the problem. Or go to **Operator>Logs** to look for error messages associated with this connection.





# 3

## Using the BusinessObjects Data Services Adapter

### Overview

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

- [Defining BODS Jobs](#)
- [Monitoring Job Activity](#)
- [Controlling Adapter and Agent Jobs](#)

### Defining BODS Jobs

This section provides instructions for defining a BODS job in Cisco Workload Automation 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 Data Services batch jobs. The following are instructions for defining a BODS job in CWA and descriptions of the various types of tasks and options that can be included in the jobs.

#### To define a BODS job:

1. In the **Navigator** pane, select **Definitions>Jobs** to display the **Jobs** pane.
2. Right-click **Jobs** and select **Add>BusinessObjects Data Services 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 BODS Adapter connection that will be used for the job and a valid runtime user who has the appropriate BusinessObjects Data Services authority for the report being scheduled.

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 BODS owner of the selected report/Web Intelligence. The user must have the appropriate BusinessObjects Data Services authority for the operation.

## Defining BODS Jobs

- **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.
4. Specify the following connection information in the **Agent/Adapter Information** section:
    - **Agent/Adapter Name** – Select the BODS Adapter connection to be used for this job from the drop-down list.
    - **Agent List Name** – San agent list. Refer to your *Cisco Workload Automation User Guide* for information on Agent Lists.
    - **Runtime User** – Select a valid runtime user with the appropriate BusinessObjects Data Services authority for the job from the drop-down list.
  5. Specify the appropriate **Tracking** and **Duration** information for the job. Refer to the *Cisco Workload Automation User Guide* for information on these options.
  6. Click the **BusinessObjects DS Job** tab.

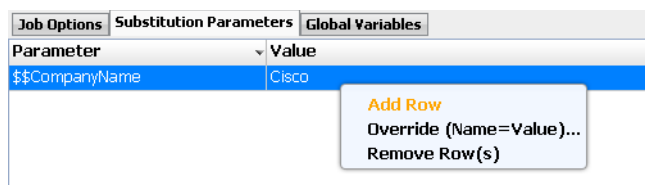
7. From the **Data Services Job** field, select the name of the Data Services job that you want to schedule from the list.
8. Click **Refresh** to refresh the list of Data Services jobs.
9. Click the **Job Options** tab to select the options necessary for running your job.

You can also choose trace categories in the **Trace** section. The trace options determine how much detail is included in the trace log for the job. Right-click in this box to select/deselect all trace categories. 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.

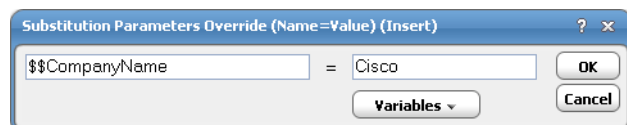
**Note:** If using Business Objects Data Integrator XIR2 or earlier, the Distribution Level option does not display.

## Monitoring Job Activity

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



11. Right-click the blank tab and select **Add Row** from the context menu. The **Substitution Parameters Override** dialog displays.

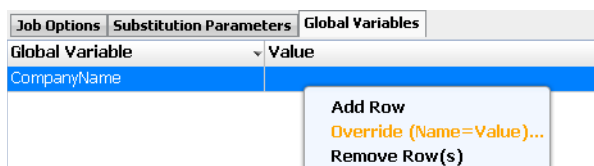


12. Enter the substitution parameter names (always starting with \$\$) along with the substitution parameter value override into the **Value** field. You can insert CWA variables as needed by clicking the **Variables** button and selecting the variable from the list.

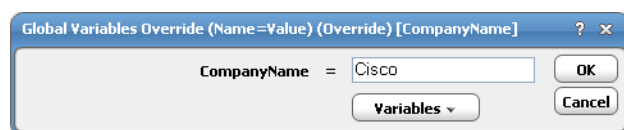
**Note:** If using Business Objects Data Integrator XIR2 or earlier, the Substitution Parameters tab does not display.

Additionally, you can select **Override (Name=Value)** from the context menu to override an existing parameter or select **Remove Row** to remove a parameter.

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



14. Right-click the parameter and select **Override (Name=Value)** from the context menu. The **Global Variables Override** dialog displays.



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

15. Click **OK** to save the job.

## Monitoring Job Activity

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

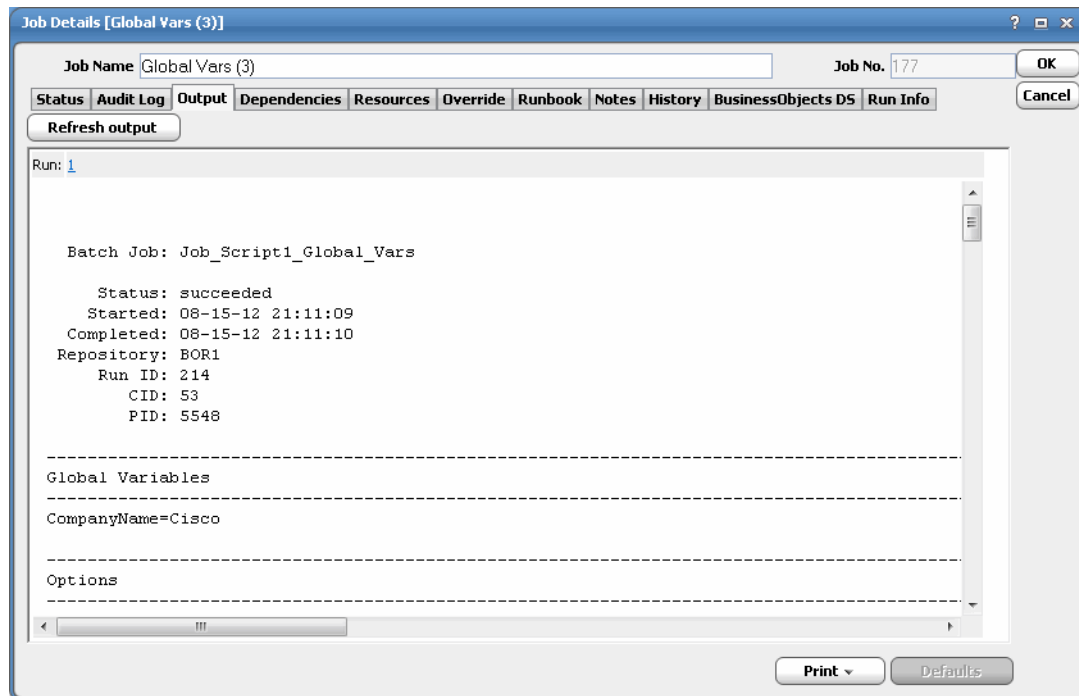
### To monitor job activity:

1. In the **Navigator** pane, select **Operations>Job Activity** to display the **Job Activity** pane.
2. Right-click to select a job and choose **Details** from the context menu.

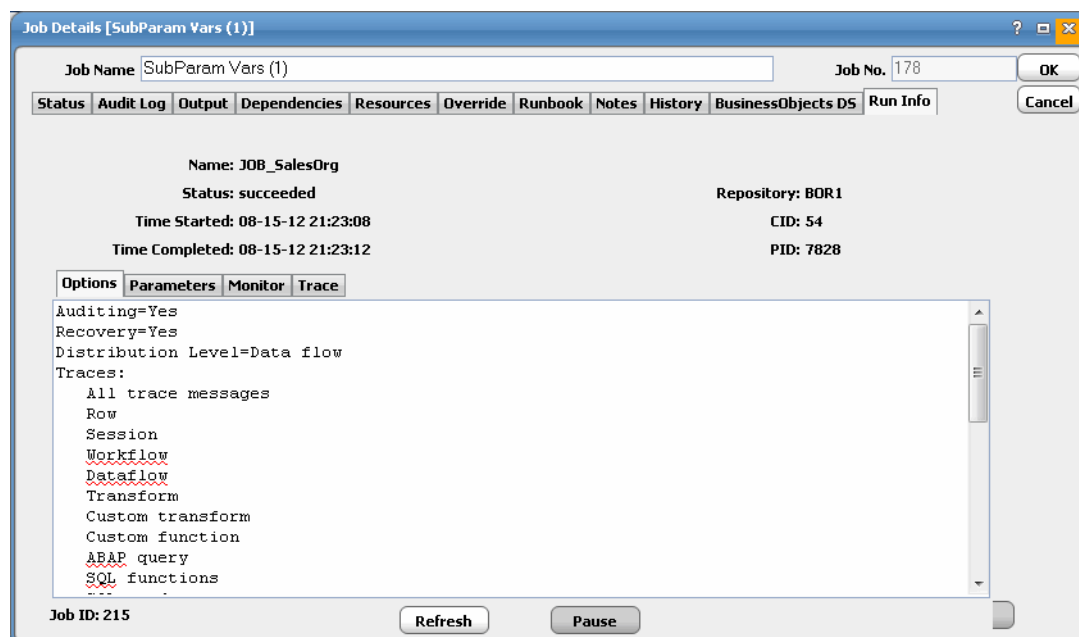
## Monitoring Job Activity

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 BODS job number.

3. Click the **Output** tab to view a task summary after the job completes.



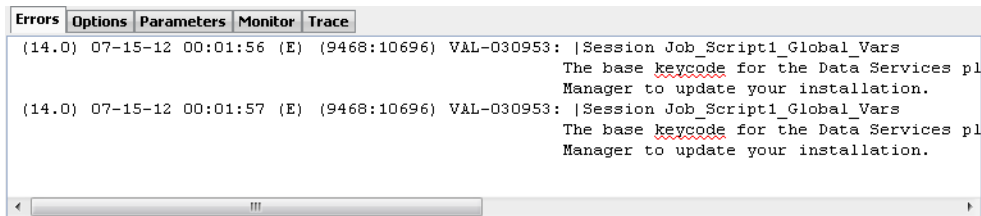
4. Click the **Run Info** tab to view additional details about the job. You can also view this tab to view information about the runtime status while the job is running, including any messages.





## Monitoring Job Activity

5. If you run a job that completes abnormally, you can click the **Errors** tab to view notes associated with the failure.

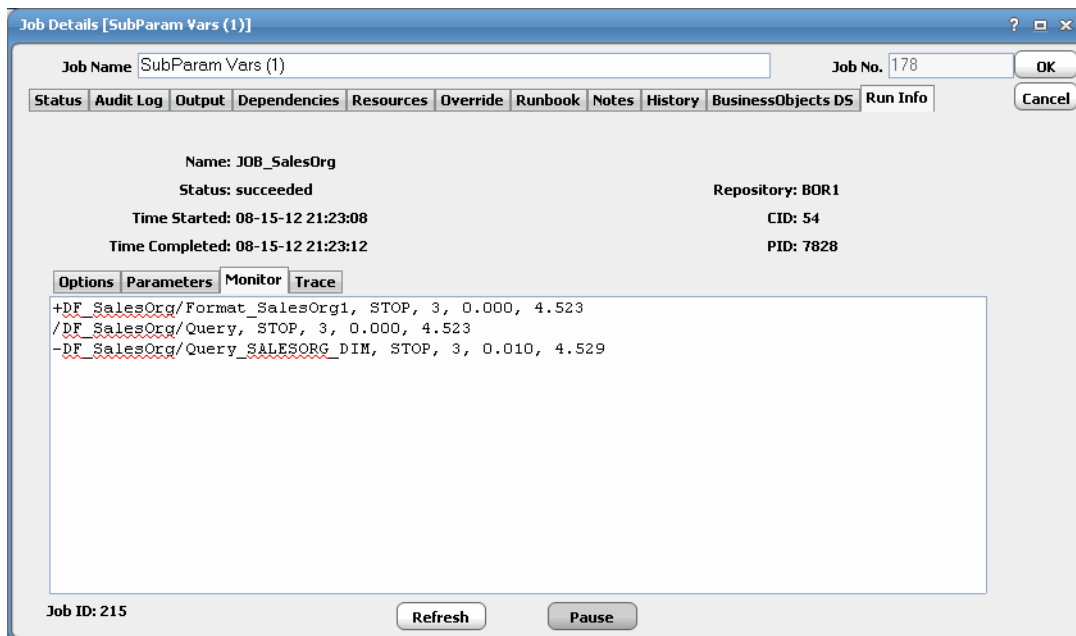


Data Services produces an error log for every job execution. Use the error logs to determine how an execution failed. If the execution completed without error, the error log is blank.

6. Click the **Options** sub-tab to view trace flags and other options that were in effect for the run.
7. Click the **Parameters** sub-tab to view the parameter values that were in effect during this run.



8. Click the **Monitor** sub-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.

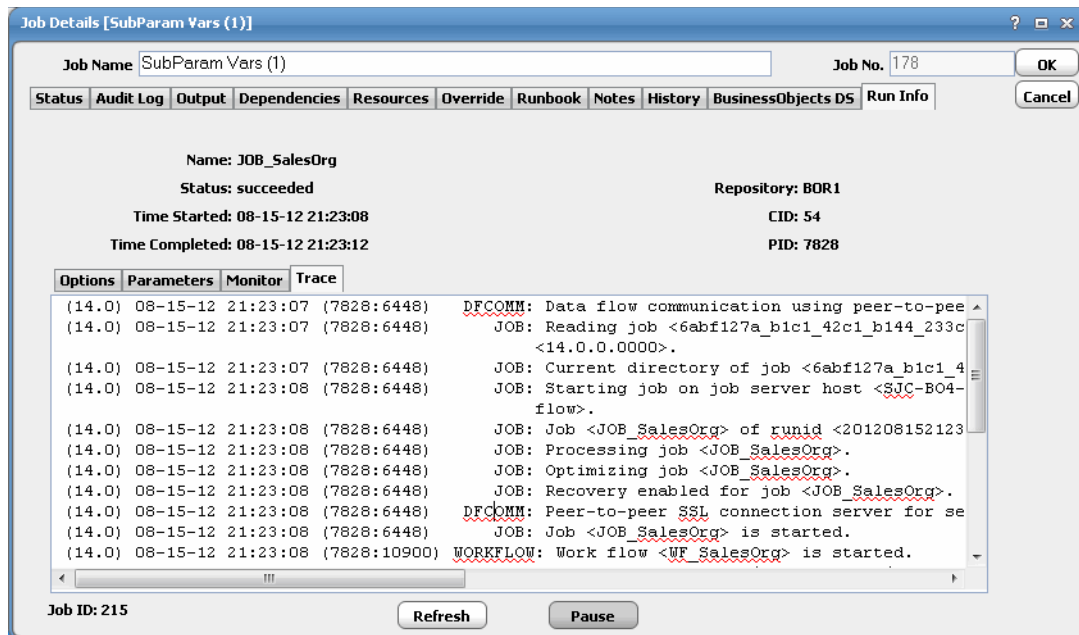


## Controlling Adapter and Agent Jobs

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.

**Note:** If using Business Objects 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.

- Click the **Trace** sub-tab to view itemized steps executed in the job and the time execution began/ended.



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.

- Click the **BusinessObjects Data Services** 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).

- 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:

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

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

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

1. From the **Job Activity** pane, double-click the Adapter/Agent job to display the **Job Details** dialog.
2. Click the Adapter tab.
3. Make the desired changes to the job and click **OK** to close the **Job Details** dialog.
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:**

1. From the **Job Activity** pane, right-click the Adapter/Agent job to be deleted.
2. Select **Remove Job(s) From Schedule**.



# 5

## 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 <i>service.props</i> configuration
CONN_SYNC	Informatica, Oracle Apps, SAP	N	Setting this flag to Y allows synchronous connections without overloading the RDOOnly 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.
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.

## service.props Properties

Property	Applicable Adapter(s)	Default	What It Controls
HADOOP_JAVA_HOME	Sqoop	<none>	If the Java version used in the Hadoop environment is lower than Java 8, then install the same lower JDK version in the in the Master and include the path of the JDK in this property.
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.
kerbkdc	MapReduce	<none>	If the Hadoop cluster is Kerberos secured, use this value to specify the KDC Server. For example, <b>kerbkdc=172.25.6.112</b>
kerbrealm	MapReduce	<none>	If the Hadoop cluster is Kerberos secured, use this value to specify the Kerberos Realm.  For example, <b>kerbrealm=TIDALSOFT.LOCAL</b>
Keystore	BusinessObjects, BusinessObjects BI, BusinessObjects DS, Cognos, JD Edwards, Oracle Applications, UCS Manager, VMware, Web Service	<none>	Specify  Keystore=c:\\<adapter_certificate_directory>\\<your_trusted_keystore>.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.

Property	Applicable Adapter(s)	Default	What It Controls
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\\bscLogin.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, PeopleSoft	50	(Optional) - Number of logs to retain.
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.
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.
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.
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 <i>Informatica Adapter Guide</i> for how to set this for Windows and Unix environments.
TDLINFA_REQUESTTIMEOUT	Informatica	<none>	(Optional) - The number of seconds before an API request times out. The default is 120 seconds, if not specified.
TDLJDBC_LIBPATH	JDBC	<none>	(Windows only, optional) 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.

service.props Properties

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Property	Applicable Adapter(s)	Default	What It Controls
TDLJDBC_LOCALE	JDBC	<none>	The path to the JDBC locale files.
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.