



Cisco Tidal Enterprise Scheduler Email Adapter Guide

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Preface

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

Audience

This guide is for administrators who install and configure the Email 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>.

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Document Change History

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

Version Number	Issue Date	Reason for Change
6.1.0	October 2012	<ul style="list-style-type: none">• New Cisco version.
6.2.1	June 2014	<ul style="list-style-type: none">• Available in online Help only.
6.2.1 SP2	June 2015	<ul style="list-style-type: none">• Configuration provided in the <i>TES Installation Guide</i>; usage provided in online Help only.
6.2.1 SP3	May 2016	<ul style="list-style-type: none">• Consolidated all Email Adapter documentation into one document.



Introducing the Email Adapter

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

- [Overview](#)

Overview

The Email Adapter allows you to configure a connection to the Exchange server that will be used to monitor the email message traffic. The adapter screens the messages of a mailbox (fixed for POP3, and specifiable for IMAP) and matches with the given pattern(s). Email events are user-defined conditions for monitoring for defined conditions within email. The condition is a specified text string in an email originating from a designated email server.



Configuring the Email Adapter

Overview

The Email Adapter software is installed as part of a standard installation of Enterprise Scheduler. However, you must perform the following steps to license, secure and configure the adapter before you can schedule and create Email events and actions:

- [Licensing an Adapter](#) – Apply the license to the Email Adapter. You cannot define an Email Adapter connection until you have applied the Email Adapter license from Tidal Software.
- [Securing the Email Adapter](#) – Define Email Adapter users that the adapter can use to establish authenticated sessions with the Email server.
- [Defining an Email Connection](#) – Define an Email Adapter connection so the master can communicate with the Email server.
- [Verifying Email Connection Status](#) – Verify the Email connection is healthy.

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:

Windows:

- 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.

Securing the Email Adapter

There are two types of users associated with the Email 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 Email events is used as default user identity for creating a connection.
- **Schedulers**
Schedulers are those users who will define and/or manage Email events. There are three aspects of a user profile that grant and/or limit ability to use Email Events:
 - Security policy that grants or denies add, edit, delete and view capabilities for Email events.
 - Authorized runtime user list that grants or denies access to specific accounts for use with Email events.
 - Authorized agent list that grants or denies access to specific Email adapter connections for use when defining Email events.

Defining Runtime Users

To define an Email runtime user:

-
- Step 1** From the **Navigator** pane, select **Administration>Runtime Users** to display the **Users** pane.
- Step 2** Right-click and select **Add Runtime Users** from the context menu, or select an existing user and choose **Edit Users** 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** To define this user as a runtime user for Email events, click **Add** on the **Passwords** tab to display the **Change Password** dialog.
- Step 7** Enter a password (along with confirmation) for **Email Password**.
Only those users with a password specified for Email will be available for use with Email events. The password may be the same as the one specified for Windows/FTP jobs.
- Step 8** Click **OK** to return to the **User Definition** dialog.

The screenshot shows the 'User Definition' dialog box. It has a title bar with a question mark, maximize, and close button. The main area contains several fields: 'User Name' (Email Adapter User), 'Full Name' (Email Adapter User), and 'Domain' (CISCO). Below these are three tabs: 'Passwords', 'Kerberos', and 'Description'. The 'Passwords' tab is selected. Underneath, there are two input fields for 'Windows/FTP'. Below that is a table with columns 'Adapter', 'Password', and 'Description'. The first row has 'Email Password' in the 'Adapter' column and '***' in the 'Password' column. To the right of the table are three buttons: 'Add', 'Edit', and 'Delete'. At the top right of the dialog are 'OK' and 'Cancel' buttons.

- Step 9** Click **OK** to add or save the user record in the TES database.

Authorizing Schedulers to Work With Email Events

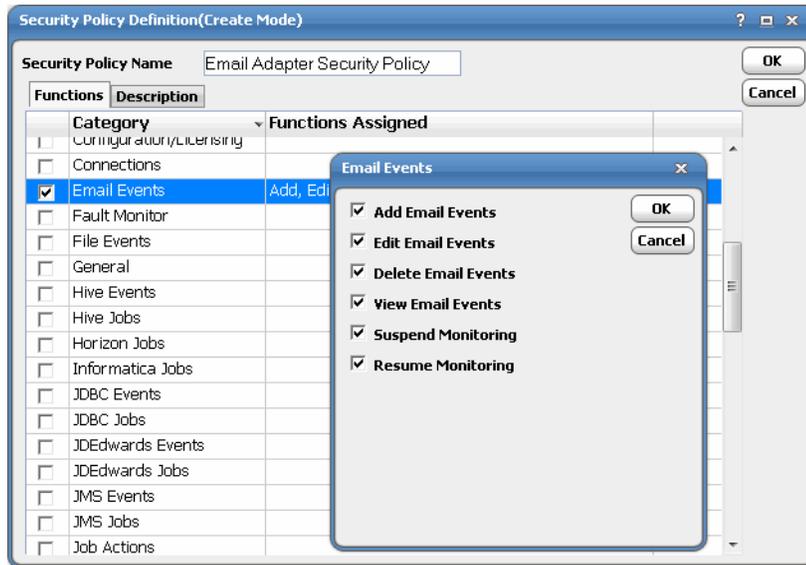
To define a Security Policy that authorizes access to Email events:

- Step 1** From the **Navigator** pane, select **Administration > Security Policies** to display the **Security Policies** pane, listing all defined users.
- Step 2** Right-click and select **Add Security Policy** from the context menu, or select an existing policy and choose **Edit** to display the **Security Policy Definition** dialog.



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

- Step 3** On the **Functions** tab, scroll down to the **Email Events** category, double-click the record and select the functions to be authorized under this policy (**Add**, **Edit**, **Delete** and **View Email Events**, **Suspend Monitoring**, **Resume Monitoring**).



Step 4 Click **OK**.

Step 5 Click **OK** to save the policy.

To define a Scheduler user to work with Email events:

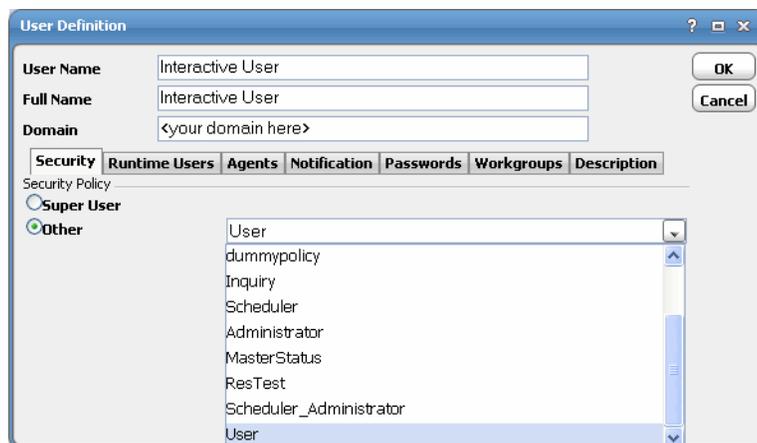
Step 1 From the **Navigator** pane, select **Administration > Interactive Users** to display the **Users** pane, listing all defined users.

Step 2 Right-click and select **Add Interactive Users** from the context menu, or select an existing user and choose **Edit Interactive Users** to display the **User Definition** dialog.

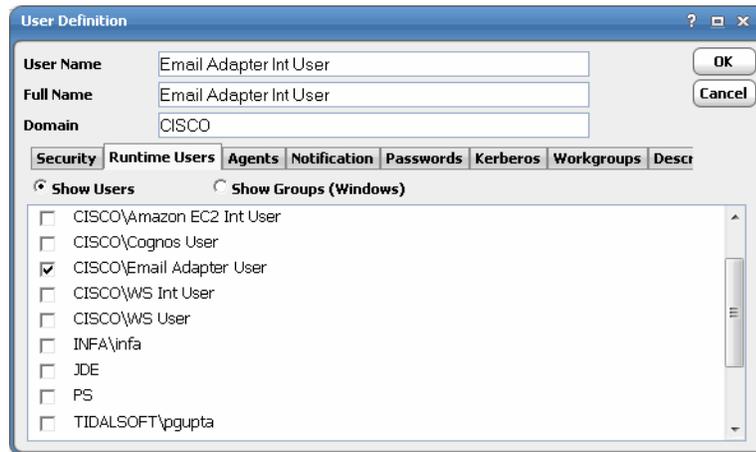


Note Refer to the *Cisco Tidal Enterprise Scheduler User Guide* for a general discussion on setting up a user to work with Scheduler.

Step 3 On the **Security** tab, select a security policy that includes authorization for Email events.



Step 4 Click the **Runtime Users** tab.



Step 5 Select the Email runtime user that will be used as default user identity for creating the connection

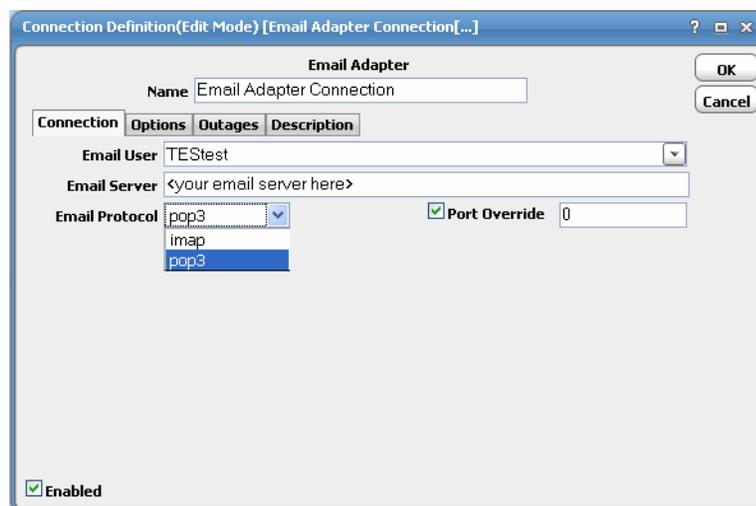
Step 6 Click the **Agents** tab.

Step 7 Select which Email connections that this scheduling user can access when scheduling events.

Step 8 Click **OK** to save the user definition.

Defining an Email Connection

You must create one or more email adapter connections and these connections also must be licensed before TES can use them. A connection is created through the **Connection Definition** dialog.



Adding an Email Connection

To add a connection:

-
- Step 1** From the **Navigator** pane, select **Administration>Connections** to display the **Connections** pane.
 - Step 2** Click the **Add** button or right-click and select **Add Connection>Email Adapter** from the context menu to display the **Email Connection Definition** dialog.
 - Step 3** In the **Name** field, enter the name of this connection.
 - Step 4** From the **Email User** list, select the name of the email box to be monitored.
 - Step 5** In the **Email Server** field, enter the name of the email server that relays email to the mailbox.
 - Step 6** From the **Protocol** list, select the type of email protocol being used by the email server. The two protocols supported are IMAP and POP3.
 - Step 7** Select the **Port Override** option to override the default port used by the protocol if the port is being used by another application. After selecting this option, enter the new port number in the adjacent text field.
 - Step 8** Click **OK** to save the definition.

Verifying Email Connection Status

If the Scheduler master cannot connect or loses its connection to an Email instance, you will see a red status light next to your Email connection in the **Connections** pane. You can still define events from the Tidal Web client regardless of the connection status.



Defining Email Events and Actions

Overview

Email events are user-defined conditions for monitoring for defined conditions within email. The condition is a specified text string in an email originating from a designated email server.

Email actions can be created to send an email message in response to a job event or system event. You cannot send email to a workgroup unless that workgroup (not just the individual members) has a mailbox or is defined as a mailing list in your email system.

This chapter covers these topics:

- [Defining an Email Event](#)
- [Defining an Email Action](#)

Defining an Email Event

An event monitor can be defined to scan email originating from a designated IMAP or POP3 server for specified text. The subject, sender and body of the email and any text file attachments are scanned for a match to the designated text. Once an email that meets the monitor's criteria is detected, the email monitor either marks the email as read, moves it to a folder or deletes the email. The detection of such an email can be used to trigger an associated action.

To monitor email on an email server, a connection to that email server must be defined.

To define an Email event:

-
- Step 1** From the **Navigator** pane, select **Definitions>Events>Email** to display the **Email Events** pane. Email events available to you and your workgroups are sorted and displayed in alphabetical order.
- Step 2** Click the **Add** button  or right-click and select **Add Email Event** from the context menu to display the **Email Event Definition** dialog.

Email Event Definition (Edit Mode)

Event Name: Email Event (IMAP) [OK] [Cancel]

Owner: Schedulers

Monitor

Email Connection: Mail - houdev

Folder: Inbox

Scan for Text	In	Case Sensitive
test1	Sender	Y
test2	Subject	N

Disposition

Operation: Delete message

Target:

Return message body as output

Public Enabled

- Step 3** In the **Event Name** box, enter a name for the email event.
- Step 4** By default, the user defining the event is the **Owner** but you can select one of the other listed users from the list as the owner.
- Step 5** In the **Email Connection** list, select a connection to an Exchange server.
The connection must be already defined before it will appear in the list.
- Step 6** In the **Folder** field, enter the name of the monitored account target folder.
- Step 7** Designate what text is to be considered an event when it is detected.
Click on the adjacent **Insert** button to add a line to the **Conditions** section.
- In the **Scan for Text** column, enter a text string that the monitor will scan for in the email going to the designated mail account.
 - In the **In** column, select from the list where in the email that the monitor should look for the text.
 - In the **Case Sensitive** column, designate whether the text match is dependent upon case.
- Step 8** In the **Disposition** section, select what will occur once the monitor detects the specified text.
- In the **Operation** list, select an option.
 - If you select the **Move message to folder** option, in the **Target** field, enter the path to the folder where you want the message stored.
 - If you want to access the message text from within Scheduler, select the **Return message body to Scheduler** option.
- Step 9** Click **OK** to save the definition.
- For further information about completing the remaining tabs on this dialog, refer to your *Cisco Tidal Enterprise Scheduler User Guide*.

Defining an Email Action

The **Action Definition: Email** dialog displays when creating or editing an existing email message action. An email action sends an email message in response to a job event or system event. You can send email to any individual or group with a valid email address in the mail system you have chosen. The individual does not have to be a user of Scheduler.



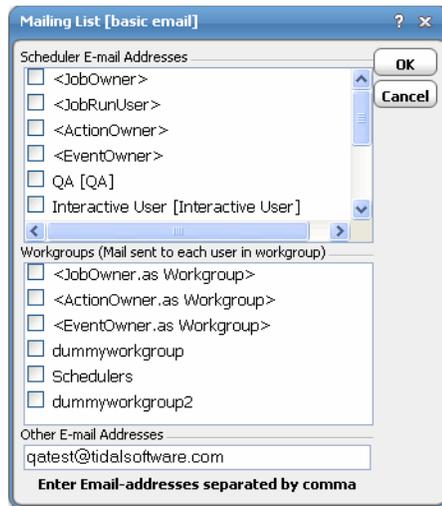
Note

To send email to a Scheduler workgroup, that workgroup (not just the individual members) must have a mailbox or be defined as a mailing list in your email system. For help setting up a mailbox or mailing list, see your system or mail administrator.

To define an email action:

- Step 1** From the **Navigator** pane, select **Definitions>Actions>Email** to display the **Email Actions** pane. Email actions available to you and your workgroups are sorted and displayed in alphabetical order.
- Step 2** Click the **Add** button  or right-click and select **Add Email Action** from the context menu to display the **Email Action Definition** dialog.

- Step 3** In the **Action Name** field, type a name for this action (up to 30 characters). The name must be unique.
- Step 4** To make the action public, select the **Public** option. When an action is public, the action is available to all Scheduler users, within the bounds of their security policy.
- Step 5** Select the desired **Owner** from the list in the **Owner** field.
- Step 6** On the **Details** tab, click the ellipsis button in the **To** field to display the **Mailing List** dialog.



Step 7 Select the recipients of this email action when it is triggered, then click **OK**.

Step 8 In the **Subject** field, type a subject title for your email message.

You can insert one or more Scheduler variables.

To insert a variable, click where you want to insert the variable, and then click the **Variables** button and select a variable from the variables context menu.

Step 9 In the **Message** field, type the message to send when this email action is triggered.

You can insert one or more Scheduler variables.

To insert a variable, click where you want the variable, and then click the **Variables** button and select a variable from the variables context menu.

Step 10 To enter a description for your email action, click on the **Description** tab, and type your description in the **Description** field.

Step 11 Click **OK** to accept the action.

The action displays in the **Actions** pane and is available from the **Job Event Definition** and **System Events** dialogs.



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	All	N	Setting this flag to Y allows synchronous connections without overloading the ROnly 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: <ul style="list-style-type: none"> 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
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
kerbrealm	MapReduce	<none>	If the Hadoop cluster is Kerberos secured, use this value to specify the Kerberos Realm. For example, kerbrealm=TIDALSOFT.LOCAL

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_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.
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	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.

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 <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.
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.