



Informatica® PowerExchange for Email
Server

10.1.1

User Guide for PowerCenter

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Preface

The *Informatica PowerExchange® for Email Server User Guide for PowerCenter®* provides information about extracting data from an email source. It is written for database administrators and developers who are responsible for extracting data from email sources. This book assumes you have knowledge of mail servers and PowerCenter.

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- Review your support cases.
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If you are an Informatica Network member, you can access Informatica Velocity resources at <http://velocity.informatica.com>.

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CHAPTER 1

Understanding PowerExchange for Email Server

This chapter includes the following topics:

- [Understanding PowerExchange for Email Server Overview, 8](#)
- [PowerCenter and Mail Server Integration, 8](#)
- [Understanding Mail Servers, 9](#)

Understanding PowerExchange for Email Server Overview

PowerExchange for Email Server provides connectivity between PowerCenter and mail servers to extract email data. Email data includes customer comments and communications, internal research reports, intellectual property, and assets. You can use PowerExchange for Email Server to extract email data from a mail server. You can load the extracted data to a target and then use the data for data mining and analysis.

PowerCenter and Mail Server Integration

PowerExchange for Email Server integrates mail servers with the Designer and the PowerCenter Integration Service. You can import email messages and contacts metadata into PowerCenter and use it in email mappings.

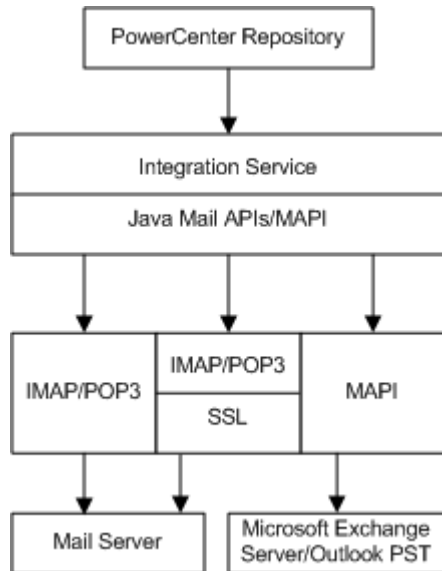
Designer and Mail Server Integration

The Designer connects to the message store of a mail server to import email metadata as a source definition. After importing the source definition, you can create the corresponding email mappings.

PowerCenter Integration Service and Mail Server Integration

The PowerCenter Integration Service connects to a mail server or an Outlook PST file through the JavaMail APIs or Microsoft Messaging APIs (MAPI) to read the source data from the message store.

The following figure shows how the PowerCenter Integration Service connects to a mail server or an Outlook PST file to read email data:



The PowerCenter Integration Service connects to the mail server or Outlook PST through JavaMail APIs or MAPI. The connection is made through IMAP, POP3, or MAPI. IMAP and POP3 can be directed through an SSL layer.

When you configure a session to read email data from a mail server or an Outlook PST file, use an Email Server application connection to connect to the mail server or Outlook PST file.

Understanding Mail Servers

A mail server consists of the following components:

- A storage area where email data is stored for local users.
- A set of user defined rules that determine how the mail server should react to the destination of a specific message.
- A database of user accounts that the mail server recognizes and deals with locally.
- Communications modules, which are the components that actually handle the transfer of messages to and from other mail servers and email clients.

A mail server may provide many functionality such as messaging, calendar, tasks, contacts or address books, meetings, and appointments.

You can use various email protocols to access email messages stored in mail servers. You can also use the MAPI protocol to access data stored in a Microsoft Exchange Server or an Outlook Personal Storage Table (PST) file.

Email Protocols

A protocol is a standard method used by communication channels to transmit information correctly. An email client and a mail server can exchange information with each other using the following protocols:

- Internet Message Access Protocol (IMAP)
- IMAP over Secure Sockets Layer (SSL) (IMAPS)
- Post Office Protocol v3 (POP3)
- POP3 over SSL (POP3S)
- Simple Mail Transfer Protocol (SMTP)
- Hypertext Transfer Protocol (HTTP)

Note: When the PowerCenter Integration Service is running on Windows or UNIX, you can retrieve emails from mail servers such as, Microsoft Exchange Server using MAPI, IMAP, IMAP over SSL, POP3, or POP3 over SSL protocols.

IMAP

IMAP accesses electronic mail messages stored on a mail server. It permits a client email program to access remote message stores as if they were local. Online and disconnected operations are the main features of IMAP, though it can process offline too.

IMAPS

The IMAP directed through the SSL is called IMAPS. It is used to provide secure communication with the mail server.

POP3

POP3 supports offline mail processing. It has limited capabilities while accessing one mailbox. It is not as capable as IMAP. Emails are delivered to a shared server offline. Personal computer users periodically invoke a mail client program that connects to the server and downloads all the pending emails to their machine.

POP3S

The POP3 directed through the SSL is called POP3S. It is used to provide secure communication with the mail server.

SMTP

SMTP is used by the Mail Transfer Agent (MTA) to deliver email to the recipient mail server. The protocol can only be used to send emails, not to receive them.

HTTP

HTTP allows a user to access a mailbox and to compose or retrieve emails from an email account. It is also called web-based email. It is not dedicated to email communications.

Messaging Application Programming Interface

MAPI is a mature mechanism to access information in Microsoft Exchange Server. Use MAPI to access items and folders within public and private stores and the properties stored with each item. Client applications use

MAPI to access user mailbox and public folder information stored in Microsoft Exchange Server and user directory information stored in Active Directory. Client applications using MAPI are typically the email clients and applications that require complex email processing.

Note: You can retrieve emails and contact details from the Outlook PST files and Microsoft Exchange Server using MAPI only when the PowerCenter Integration Service is running on Windows.

Microsoft Exchange Server

Microsoft Exchange Server is a messaging and collaborative software product developed by Microsoft. Microsoft Exchange Server has the following features:

- Electronic mail
- Shared calendars and tasks
- Contacts or address books
- Mobile and web-based access to information
- Storage for very large amounts of data

CHAPTER 2

Installation and Configuration

This chapter includes the following topics:

- [Installation and Configuration Overview, 12](#)
- [Installing PowerExchange for Email Server, 13](#)
- [Registering the Plug-in, 15](#)

Installation and Configuration Overview

This chapter provides information about upgrading, installing, and configuring PowerExchange for Email Server.

Prerequisites

Before you upgrade or install PowerExchange for Email Server, complete the following tasks:

- Install or upgrade PowerCenter. For more information about the PowerCenter versions that PowerExchange for Email Server is compatible with, see the PowerExchange for Email Server Release Notes.
- Verify that you have read and write permissions on the following directories on each machine that runs the PowerCenter Integration Service or PowerCenter Repository Service:

```
<PowerCenter Installation Directory>\server\bin  
<PowerCenter Installation Directory>\server\bin\Plugin  
<PowerCenter Installation Directory>\server\bin\javalib
```

The installer must be able to add and overwrite files in these directories.

- Verify that you have read and write permissions on the following directories of each PowerCenter Client machine:

```
<PowerCenter Installation Directory>\clients\PowerCenterClient\client\bin  
<PowerCenter Installation Directory>\clients\PowerCenterClient\client\bin\javalib  
<PowerCenter Installation Directory>\clients\PowerCenterClient\client\bin\Help  
\<language>
```

The installer must be able to add and overwrite files in these directories.

Installing and Configuring PowerExchange for Email Server

To install and configure PowerExchange for Email Server, complete the following steps:

1. Install PowerExchange for Email Server.
2. Register the plug-in.

After you install and configure PowerExchange for Email Server, you can create connections to access mail servers. Create a Data Source Name (DSN) on the PowerCenter Client machine to import email definitions. Create connection objects in the Workflow Manager so the PowerCenter Integration Service can connect to mail servers.

Upgrading PowerExchange for Email Server

When you upgrade PowerExchange for Email Server, complete the following tasks:

1. Install PowerExchange for Email Server.
2. Upgrade the plug-in registration.

Installing PowerExchange for Email Server

When you install PowerExchange for Email Server, you install the following components that allow PowerCenter to access the mail servers:

- Client component. Allows you to import definitions, create mappings, and create connection objects using the PowerCenter Client.
- Server component. Allows the PowerCenter Repository Service to store and access the mail server metadata in the repository and the PowerCenter Integration Service to run Email Server sessions.

Installing the Client Component

Install the Client component on each PowerCenter Client machine where you want to create or access mail server metadata.

1. Run `install.bat` from the installation package.
2. Click **Next**.
3. Select the Informatica installation directory.

By default, the client is installed in the following location:

```
C:\Informatica\<version folder>
```

4. Click **Next**.
5. Click **Install** to begin the installation.
6. Click **Done** when the installation is complete.

The client component is installed.

Installing the Server Component

The PowerExchange for Email Server server component installs the PowerCenter Integration Service and PowerCenter Repository Service components.

If the PowerCenter Integration Service or PowerCenter Repository Service is configured to run on primary and backup nodes, install the PowerExchange for Email Server server component on each node configured to run the PowerCenter Integration Service or PowerCenter Repository Service.

If the PowerCenter Integration Service is configured to run on a grid, install the PowerExchange for Email Server server component on each node configured to run on the grid. If you cannot install the PowerExchange for Email Server server component on each node in the grid, create a resource in the domain and assign it to each node where you installed the PowerExchange for Email Server server component. When you create a session, configure the session to use the resource.

For example, create a custom resource called Email Server. When you create a session, assign the resource as a required resource. The Load Balancer dispatches the Session task to a node that has the resource.

Installing the Server Component on Windows

Install the PowerExchange for Email Server server component on Windows when the PowerCenter Integration Service or PowerCenter Repository Service runs on Windows.

1. Run `install.bat` from the installation package.
2. Click **Next**.
3. Select the Informatica installation directory.

By default, the server components are installed in the following location:

```
C:\Informatica installation directory\<>version folder<
```

4. Click **Next**.
5. Click **Install** to begin the installation.
6. Click **Done** when the installation is complete.

The PowerCenter Integration Service and PowerCenter Repository Service components are installed.

Installing the Server Component on UNIX

Install the PowerExchange for Email Server server component on UNIX when the PowerCenter Integration Service or PowerCenter Repository Service runs on UNIX.

To install the PowerExchange for Email Server server component on the UNIX platforms that support graphical user interface, perform the same steps that you use to install the server components on Windows.

To install the PowerExchange for Email Server server component on the UNIX platforms that use the command line interface, perform the following steps:

1. Enter `sh install.sh` at the prompt.
2. Enter the path to the Informatica installation directory.

By default, the server components are installed in the following location:

```
<User Home Directory>/Informatica/<version folder>
```

The PowerCenter Integration Service and PowerCenter Repository Service components are installed.

Registering the Plug-in

After you complete the installation, register the plug-in with the repository. If you are upgrading from a previous version, update the plug-in registration when you register the plug-in.

To register the plug-in, the repository must be running in exclusive mode. Use the Administrator tool or the `pmrep RegisterPlugin` command line program to register the plug-in. If you do not have the correct privileges to register the plug-in, contact the user who manages the PowerCenter Repository Service.

The plug-in file is an .xml file that defines the functionality of the adapter. When you install the server component, the installer copies the plug-in file to the following directory: `<PowerCenter installation directory>/server/bin/plugin`

The name of the plug-in file for PowerExchange for Email Server is `EmailServer.xml`.

Registering the Plug-in from the Administrator Tool

Register a repository plug-in to add its functionality to the repository.

1. Run the PowerCenter Repository Service in exclusive mode.
2. In the **Navigator**, select the PowerCenter Repository Service to which you want to add the plug-in.
3. In the **Contents** panel, click the **Plug-ins** view.
4. In the **Actions** menu of the **Domain** tab, select **Register Plug-in**.
5. On the **Register Plugin** page, click the **Browse** button to locate the plug-in file.

6. Enter your user name, password, and security domain.

The **Security Domain** field appears when the Informatica Domain contains an LDAP security domain.

7. Click **OK**.

The PowerCenter Repository Service registers the plug-in with the repository. The results of the registration operation appear in the activity log.

8. Run the PowerCenter Repository Service in normal mode.

Registering the Plug-in from the Command Line Interface

You can use the `pmrep RegisterPlugin` command to register the plug-in from the command line interface.

1. Run the PowerCenter Repository Service in exclusive mode.
2. Run the `pmrep Connect` command to connect to the Repository Service using a user account with Administrator Repository privilege.

The `RegisterPlugin` command uses the following syntax:

```
pmrep connect -r <repository name> -d <domain_name> -n <domain user name> -x  
<domain_password>
```

3. Find `<adaptername>.xml` in the following directory:

```
$INFA_HOME\server\bin\Plugin
```

4. Run the `pmrep RegisterPlugin` command to update the repository.

The `RegisterPlugin` command uses the following syntax:

```
pmrep registerplugin -i <$INFA_HOME\server\bin\Plugin\<adaptername>.xml -e
```

CHAPTER 3

Email Sources

This chapter includes the following topics:

- [Email Sources Overview, 16](#)
- [Creating a DSN for an Email Source Definition, 16](#)
- [Creating an Email Source Definition, 18](#)
- [Updating Email Source Definitions, 22](#)
- [Troubleshooting Email Sources, 23](#)

Email Sources Overview

Email source definitions represent metadata for emails or contacts stored on a mail server or in an Outlook PST file.

When the PowerCenter Integration Service extracts data from an email source, it converts the data based on the datatypes in the Application Source Qualifier transformation associated with the source.

You can import an email source in the Source Analyzer. To import an email source definition, you need to create a Data Source Name (DSN). A DSN contains information to connect to a mail server, such as the mail server name, protocol, user name, and password.

You can configure the DSN to import source metadata over secure protocols, POP3S and IMAPS. POP3S and IMAPS connectivity require a security certificate signed by the Certification Authority. The certificate needs to be in the keystore called cacerts. You can get the security certificate from your mail server administrator. A certificate is generally stored as a .cer file.

Creating a DSN for an Email Source Definition

Create a DSN for each connection to the mail server and provide information specific to the mail server. This information changes for every DSN. You cannot modify a DSN after it is created. You need to create a new DSN to modify any information in the DSN.

1. In the Source Analyzer, click Sources > Import from Email Server.
The Import Email Source dialog box appears.
2. Click the Browse button.
The DSN Creation dialog box appears.

3. Enter a name for the DSN.
4. The following table describes the options that you can use to connect to a mail server or a PST file:

Connectivity Option	Description
IMAP	Uses IMAP to retrieve email data from a mail server.
POP3	Uses POP3 to retrieve email data from a mail server.
MAPI	Uses MAPI to retrieve email data from Microsoft Exchange Server. When you select this option, the Server Name, Password, and SSL Enabled options are disabled.
PST	Uses MAPI to retrieve email data from a PST file. When you select this option, the SSL Enabled option is disabled.

5. The following table describes the DSN attributes that you need to enter:

DSN Attribute	Description
User Name	Use the following formats to enter user name: <ul style="list-style-type: none"> - IMAP. User name that precedes @ in the email ID. - POP3. User name that precedes @ in the email ID. - MAPI. User name in the username@domainname format. The User Name field can contain a maximum of 58 characters. - PST. This option is disabled.
Password	Email account password or PST file password. The PST file password is required when you retrieve data from a password protected file. When you use MAPI to extract data from Microsoft Exchange Server, the Password and Server Name options are disabled.
Server Name	Name of the server you want to connect to.
PST File	Absolute path to the PST file from which you want to extract data.

6. Optionally, select the SSL Enabled option to extract emails from a mail sever over the POP3S or IMAPS secure protocols.
Note: The SSL Enabled option is disabled when you use the MAPI or PST Connectivity options.
7. Click Add Certificate to specify a certificate file.
The Designer adds the certificate to the keystore.
Note: When you import the certificate from a file for the first time, you might get a failed authentication error. This error occurs because the JVM may fail to reload the keystore. Open the Import Email Source dialog box again.
8. Click Authenticate.
After authentication, if you modify any of the DSN attributes, you must authenticate the updated attributes to connect to the mail server or PST. If you do not authenticate the updated attributes, the Designer uses the previously authenticated attributes to connect to the mail server or PST.
Note: If you have selected the MAPI option, the Designer verifies whether the profile for the specified user name exists.
9. Click OK.

Connecting to Microsoft Exchange Server Through MAPI

When you specify the user name in the DSN Creation dialog box and click Authenticate, the Designer verifies whether the user profile exists.

If the user profile exists, the Designer uses the existing profile to extract metadata. A dialog box appears that prompts you to enter password for the user name. Verify that the user name is the same as specified in the DSN Creation dialog box. Enter password and click OK.

If the user profile does not exist, the Server Name option is enabled. Enter server name and authenticate the user profile.

1. Click Authenticate in the DSN Creation dialog box.
A dialog box appears that prompts you to enter password for the user name.
2. Verify that the user name in the dialog box is the same as specified in the DSN Creation dialog box, and enter password.
3. Click OK. The dialog box can prompt you to enter the password again. Enter password and click OK.

Note: If you click Cancel, the Import Email Source dialog box can close.

Creating an Email Source Definition

Import an email source definition from a mail server or a PST file. When you connect to a mail server or a PST file, the Import Email Source dialog box lists the folders on the mail server or in the PST file.

Filtering Source Data

You can filter data that you want to extract from an email source. You can define filter criteria for the source definitions that are based on the email data.

The following table describes the filter conditions for the fields in email folders:

Field Name	Filter Condition	Description
Msg_No	less than	Retrieves emails with message number less than a specified number.
Msg_No	greater than	Retrieves emails with message number greater than a specified number.
Msg_No	equals	Retrieves an email with a particular message number.
Msg_No	between	Retrieves emails with message numbers within a specified range.
Size	less than	Retrieves emails of a size less than a specified number.
Size	greater than	Retrieves emails of a size greater than a specified number.
Size	equals	Retrieves emails of a size within 1 KB range of a specified number.
Size	between	Retrieves emails of a size within a specified range.
From	contains	Retrieves emails from a specified email ID.

Field Name	Filter Condition	Description
To	contains all of	Retrieves emails that contain all the specified email IDs in the To field.
To	contains any of	Retrieves emails that contain any specified email ID in the To field.
CC	contains all of	Retrieves emails that contain all specified email IDs in the CC field.
CC	contains any of	Retrieves emails that contain any specified email ID in the CC field.
BCC	contains all of	Retrieves emails that contain all specified email IDs in the BCC field.
BCC	contains any of	Retrieves emails that contain any specified email ID in the BCC field.
Sent_Date	before	Retrieves emails sent on or before a specified date.
Sent_Date	after	Retrieves emails sent on or after a specified date.
Sent_Date	on	Retrieves emails sent on a particular date.
Sent_Date	between	Retrieves emails sent within a specified date range.
Recv_Date	before	Retrieves emails received on or before a specified date.
Recv_Date	after	Retrieves emails received on or after a specified date.
Recv_Date	on	Retrieves emails received on a particular date.
Subject	contains phrase	Retrieves emails with the exact phrase specified in the subject field.
Subject	contains all words	Retrieves emails that contain all the words specified in the subject field.
Subject	contains any word	Retrieves emails that contain any word specified in the subject field.
Content	contains phrase	Retrieves emails with the exact phrase specified in the content field.
Content	contains all words	Retrieves emails that contain all the words specified in the content field.
Content	contains any word	Retrieves emails that contain any word specified in the content field.

Use the following guidelines when specifying a filter condition:

- To filter emails based on the To, CC, and BCC fields, separate multiple email addresses with commas. For example:

`abc@yahoo.com,def@yahoo.com`

You can specify the following email address types:

- SMTP. For example:

`abc@yahoo.com`

- Exchange-based email address. For example:

`/O=P S P L/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN=Administrator`

- To filter emails based on the Sent_Date or Recv_Date fields, specify the date in the MM/DD/YYYY format.

- To filter emails based on the `Msg_No`, `Size`, `Sent_Date`, and `Recv_Date` fields, use the “between” condition. For example, use the following filter condition to retrieve emails which are of size between 2000 and 3000, including 2000 and 3000:

```
Size between 2000,3000
```

- To filter emails based on the `Subject` or `Content` field, specify the “contains all words” or “contains any word” condition as `value1,value2,value3`. For example:

```
abc,def,xyz
```

- You can define one condition for each field. All the email messages that match the condition are retrieved.

Importing an Email Source Definition

1. In the Source Analyzer, click `Sources > Import from Email Server`.

The Import Email Source dialog box appears.

2. Select the DSN used to connect to source system.

If you extract metadata from Microsoft Exchange Server, a dialog box prompts you to enter the password. Enter the password and click OK.

3. Enter the password to connect to the mail server.

Note: You must have mail server administrative permissions to view the object. You do not require mail server administrative permissions when you use MAPI to extract metadata from Microsoft Exchange Server.

4. Click `Connect`.

A list of folders on the mail server or in the PST file appears.

The list of folders that appears in the `Select to Import` tree view contains all the folders available in the PST file and mail server, such as `Calendar` and `Tasks`. These folders can contain non-email data. The PowerCenter Integration Service retrieves only the email data from these folders.

The PowerCenter Integration Service uses MAPI to retrieve `Contacts` data from Microsoft Exchange Server.

5. Select the folder you want to import.

When you use POP3, you can access the `INBOX` folder.

6. Click the right arrows (`>>`) button to add the selected folder to the import list.

The Field Selection dialog box appears.

The Fields list displays the fields present in the selected folder.

7. Enter a new folder name if required.

8. From the Fields list, select the fields to map and click the right arrows (`>>`) button.

The mapped fields appear in the Mapped Fields list.

Note: Email body is retrieved through the `Content` field with MIME parts separated by the character string `--=__=\.`

9. To change the column name or precision, double-click the field name in the Mapped Fields list.

10. Enter a name for the column.

11. Enter the precision for the column.

12. Click `OK`.

13. To retrieve attachments along with the email data, select **Retrieve Attachments**.

When you select the Retrieve Attachments option, the Attachment and AttachmentName columns are added to the Mapped Fields list. AttachmentName stores the attachment name along with extension. An Attachment stores the data in binary format. Attachments of up to 100 MB are supported.

Note: The PowerExchange for Email Server can extract multiple attachments regardless of the type of file. The PowerExchange for Email Server extracts nested attachments as single attachment in the binary format.

14. Click Filter to filter email data.
The Filter dialog box appears.
15. Specify the filter criteria for fields.
You can define one condition for each field.
16. Click OK.
17. Optionally, click Data Preview in the Field Selection dialog box to preview data for the mapped fields.
You can preview data if the email source definition is based on the email folder.
18. Click OK.
19. In the Import Email Source dialog box, click OK to import the email source definition.
You can import multiple source definitions from the folders on a mail server or in a PST file.

Rules and Guidelines for Mail Server Connections

The following table describes the guidelines that you can use when you specify a protocol to connect to the database:

Protocol	Guidelines
IMAP and IMAPS	<ul style="list-style-type: none"> - To establish secure connection with the mail server using IMAPS, the mail server requires a security certificate. The security certificate must be added to the system JRE in the cacerts keystore. <p>The cacerts keystore is located in the following directory: <PowerCenter Installation Directory>\java\jre\lib\security</p>
POP3 and POP3S	<ul style="list-style-type: none"> - You can access only the INBOX folder. - You cannot see the date when you retrieved or received email messages. - To establish secure connection with the mail server using POP3S, the mail server requires a security certificate. The security certificate must be added to the system JRE in the cacerts keystore. <p>The cacerts keystore is located in the following directory: <PowerCenter Installation Directory>\java\jre\lib\security</p>
MAPI	When you connect to an Outlook PST file or to Microsoft Exchange Server through MAPI, the PowerCenter Client machine must also have Outlook installed.

Updating Email Source Definitions

You can update an email source definition to reflect folders or precision for the fields in the source definition. You can update a source definition in the following ways:

- Reimport the definition. If the changes are significant, you can reimport the definition. This overwrites or renames the existing source definition. You can retain existing descriptions in the source definition being replaced.
- Edit the definition. Manually edit the definition to configure properties that you cannot import or to make minor changes to the definition.

Editing and Reimporting an Email Source Definition

You can reimport an email source definition if you want to edit the filter conditions or the columns in the source definition.

1. Open the Import Email Source dialog box.
2. In the DSN list, select the DSN you used to create the source definition.
3. Enter a password and click Connect.
4. In the Imported Folders list, double-click the folder you want to edit.
5. Optionally, in Folder Name, modify the name of the source definition.

If you modify the name of the source definition, the Designer creates a source definition. Otherwise, it updates the existing source definition.

6. Click the right arrows (>>) button to add fields and the left arrows (<<) button to remove fields.
7. Double-click a field to modify it.

You can edit the field name and precision.

8. Click Add Filter to add or remove filter conditions.
9. To retrieve the attachments along with the email data, select the Retrieve Attachments option.
10. Click OK.
11. In the Import Email Source dialog box, click OK to confirm the changes.

You can also edit the column name and precision for columns in a source definition. To edit the column information, double-click the field name in the right pane of the Field Selection dialog box. The Field Information dialog box appears.

Editing an Email Source Definition

You can edit folders, the precision of columns, and filters in a source definition.

1. Double-click the title bar of the source definition in the Source Analyzer.
The source definition appears.
2. Click the Metadata Extensions tab.
3. Enter filter conditions for a field in the Value field. For example, to retrieve emails containing the exact phrase specified in the Subject field, modify the metadata extension named Subject as follows:

```
contains phrase:email server
```
4. Edit the folder name for the FolderBusinessName metadata extension.

Enter a fully qualified name for a folder if the folder is nested within another folder. Separate the folder names with the delimiter specific to the mail server. For example, if the folder RecentMails is nested within the INBOX folder and slash (/) acts as a delimiter for the mail server, enter the following path:

```
INBOX/RecentMails
```

Troubleshooting Email Sources

[The Select to Import tree view shows only the INBOX folder when I connect to the mail server.](#)

If you connect to the mail server using POP3, INBOX is the only accessible folder. IMAP and Exchange Server/PST Files support access to all folders.

[The Import from Email Server menu option is disabled.](#)

The Import from Email Server menu option may be disabled for the following reasons:

- PowerCenter license key does not contain PowerExchange for Email Server license.
- The license has expired.
- You do not have write permission on the PowerCenter folder.

If you do not have a PowerExchange for Email Server license, or if the license has expired, contact Informatica Global Customer Support. If you do not have write permission on the PowerCenter folder, contact your System Administrator.

CHAPTER 4

Email Sessions

This chapter includes the following topics:

- [Email Sessions Overview, 24](#)
- [Configuring an Email Server Application Connection, 24](#)
- [Configuring Sessions for Email Sources, 27](#)

Email Sessions Overview

After you create mappings in the Designer, you can create a session and use the session to extract, transform, and load data. You can create sessions and workflows in the Workflow Manager.

You can run a session in the following modes:

Real-time mode

When you run a session in real-time mode, the PowerCenter Integration Service extracts emails from the mail folder according to the filter specified in the session attributes and the emails that arrive in real time. To run a session in the real-time mode, set the value of the Real-time Flush Latency session property greater than 0. The PowerCenter Integration Service reads the unread, read, recent, or all mails from the mail folder, and it listens for new mails as they arrive in real time.

Note: The real-time mode also requires a PowerCenter Real Time Edition license.

Non-real time mode

When you do not run a session in real-time mode, the PowerCenter Integration Service extracts emails from the mail folder according to the filter specified in the session attributes.

Before the PowerCenter Integration Service extracts data from email sources, you must configure an application connection in the Workflow Manager.

Configuring an Email Server Application Connection

When you configure an Email Server application connection, you specify connection attributes to connect to a mail server database or an Outlook PST file.

1. In the Workflow Manager, click Connections > Application.
The Application Connection Browser dialog box appears.

2. Click New.
The Select Subtype list appears.
3. Select Email Server Connection from the list.
4. Click OK.
The Connection Object Definition dialog box appears.
5. The following table describes the connection attributes that you can enter:

Connection Attribute	Description
Name	Application connection name.
User Name	Use the following formats to enter user name: <ul style="list-style-type: none"> - IMAP. User name that precedes @ in the email ID. - POP3. User name that precedes @ in the email ID. - MAPI. User name in the username@domainname format.
Password	Mailbox password when connecting to a mail server. Password used to encrypt the PST file, if it is password protected, when connecting to Outlook PST.
Server Name	Name of the mail server you want to connect to.
Protocol	Protocol used to connect to the mail server. Select a protocol that the mail server supports. For more information, see "Rules and Guidelines for Email Server Application Connections" on page 26.
PST Filename	Name of the PST file with the complete path with which connection has to be established. For example, \\ps3464\Outlook\Outlook.pst if the PST file is on another machine or C:\Outlook\Outlook.pst if the PST file is on the machine where the PowerCenter Integration Service runs. The PST file must be accessible from the machine where the PowerCenter Integration Service is running. By default, the PowerCenter Integration Service establishes connection with the PST file specified in the PST File name attribute. If you do not provide the PST file name, the PowerCenter Integration Service establishes connection with the mail server specified in the Server Name attribute.
Trust Certificate Filename	Trust certificate file name signed by the Certification Authority. Required when you select POP3S or IMAPS protocol. For example, E:\Mirapoint.cer.

6. Click OK.

Rules and Guidelines for Email Server Application Connections

The following table describes the guidelines that you can use when you specify a protocol to configure an Email Server application connection:

Protocol	Guidelines
IMAP and IMAPS	<ul style="list-style-type: none"> - You can use IMAP or IMAP over SSL protocols to retrieve email data in real time. - To establish secure connection with the mail server using IMAPS, the mail server requires a security certificate. The security certificate must be added to the system JRE in the cacerts keystore. The cacerts keystore is located in the following directory: <PowerCenter Installation Directory>\java\jre\lib\security
POP3 and POP3S	<ul style="list-style-type: none"> - You can access only the INBOX folder. - You cannot retrieve emails on the basis of read, unread, or recent flags. - You cannot mark retrieve emails as read or unread. - You cannot see the date when you retrieved or received email messages. - To establish secure connection with the mail server using POP3S, the mail server requires a security certificate. The security certificate must be added to the system JRE in the cacerts keystore. The cacerts keystore is located in the following directory: <PowerCenter Installation Directory>\java\jre\lib\security - You cannot read data in real time.
MAPI	<ul style="list-style-type: none"> - When you connect to Outlook PST file or Microsoft Exchange Server, verify that Outlook is installed on the machine where the PowerCenter Integration Service runs. - You cannot retrieve mails on the basis of the recent flag or message number. - When you connect to Microsoft Exchange Server verify that the machine where the PowerCenter Integration Service runs is in the same domain as Microsoft Exchange Server. - When you connect to Microsoft Exchange Server , the PowerCenter Integration Service must be running under the account of a user who is a member of the local administrative group. This user must have the Act as a part of the operating system user right on the machine where the PowerCenter Integration Service runs. The user specified in the User Name connection attribute must have the Log on as a Service user right on the machine hosting the PowerCenter Integration Service. - The PowerCenter Integration Service establishes connection with PST file through MAPI. The PowerCenter Integration Service must be running on Windows.

Configuring Sessions for Email Sources

The following table describes the properties for email sources that you can configure while configuring an email session:

Session Property	Description
Idle Time	Time in seconds for which the PowerCenter Integration Service waits to receive new email messages before it ends the session. Default is -1 and indicates an infinite period of time.
Message Count	Number of messages the PowerCenter Integration Service reads before ending the session. Default is -1 and indicates an infinite number of messages.
Reader Time Limit	Time in seconds to read emails from the source for a stipulated period of time. When you choose the Reader Time Limit session property, the PowerCenter Integration Service reads messages from the source for the time period you specify. After that, the PowerCenter Integration Service stops reading from the email source and ends the session. Default is 0 and indicates an infinite period of time.
Real-time Flush Latency	Configures the session in real time. When the value of the Real-time Flush Latency session property is greater than 0, the session runs in real time, and the PowerCenter Integration Service commits retrieved email data to the target at the end of a specified maximum latency period. The maximum latency period is determined by a combination of the values of Real-time Flush Latency, Message Count, and Reader Time Limit. Default is 0 and indicates that the PowerCenter Integration Service does not run the session in real-time mode.
Poll Interval	Time in seconds to poll the mail server for new emails after the specified time interval. Default is 10 and indicates that the PowerCenter Integration Service polls the mail server for new emails after an interval of 10 seconds. When you specify 0, the PowerCenter Integration Service continuously polls the mail server for new emails.
Retrieve	Retrieves emails from a mail folder based on the following options: <ul style="list-style-type: none">- All. Retrieves all emails from the mail folder.- Read. Retrieves read emails from the mail folder.- Unread. Retrieves unread emails from the mail folder.- Recent. Retrieves emails that have arrived since the last time you accessed the mail folder on a mail server using any email client or the PowerCenter Integration Service.
Mark Retrieved Emails As	Marks retrieved emails based on the following options: <ul style="list-style-type: none">- Don't Mark. Does not mark the retrieved emails as unread, read, or deleted.- Read. Marks retrieved emails as read.- Unread. Marks retrieved emails as unread.- Deleted. Marks retrieved emails as deleted.

Tip: To avoid reading the same emails each time a session runs, configure a real-time session to retrieve unread emails and mark them as Read.

By default, the PowerCenter Integration Service runs the session in non-real time mode. In real-time mode, you can configure the Retrieve and Mark Retrieved Mails As session properties. In addition, to run the session in the real-time mode, you need to configure the following session properties:

- Idle Time

- Message Count
- Reader Time Limit
- Real Time Flush Latency
- Poll Interval

By default, all emails are retrieved and they are not marked upon retrieval as read, unread, or deleted. You cannot mark retrieved emails on mail server as Read, Unread, or Deleted when a folder is opened in read-only mode.

Note: You can view load statistics in the session log. The load summary in the Workflow Monitor does not display load statistics.

APPENDIX A

Datatype Reference

This appendix includes the following topic:

- [Email and Transformation Datatypes, 29](#)

Email and Transformation Datatypes

PowerCenter uses the following datatypes in email mappings:

- Email native datatypes. Email datatypes appear in email definitions in a mapping.
- Transformation datatypes. Set of datatypes that appear in the transformations. They are internal datatypes based on ANSI SQL-92 generic datatypes, which the PowerCenter Integration Service uses to move data across platforms. They appear in all transformations in a mapping.

When the PowerCenter Integration Service reads source data, it converts the native datatypes to the comparable transformation datatypes before transforming the data.

The following table lists the Email datatypes that PowerCenter supports and the corresponding transformation datatypes:

Email Datatype	Description	Transformation Datatype	Description
Date/Time	Jan 1, 1970 A.D. to Dec 31, 9999 A.D. (precision to millisecond)	Date/Time	Jan 1, 0001 A.D. to Dec 31, 9999 A.D. (precision to nanosecond)
DBinary	1 to 104,857,600 bytes	Binary	1 to 104,857,600 bytes
Numeric	Precision 1 to 31, scale 0	Decimal	Precision 1 to 28, scale 0 to 28
String	No limit	String	1 to 104,857,600 characters

APPENDIX B

Error Messages

This appendix includes the following topic:

- [Designer Messages, 30](#)

Designer Messages

The Designer displays messages in message boxes and in the output window. This section lists messages alphabetically.

Connection refused.

Explanation: This error occurs when you click the Authenticate button and the mail server you are trying to connect to does not support the protocol.

User Response: Verify that the protocol over which connection is being established is supported by the target mail server.

-or-

Explanation: The mail server you are trying to connect to has refused the connection.

User Response: Contact the System Administrator.

The Designer could not find the PST file at the specified location.

Explanation: The PST file does not exist at the specified location.

User Response: Verify that the PST file exists at the specified location.

Unknown Server.

Explanation: This error occurs when you click the Authenticate button. The mail server you are trying to connect to either does not exist or is not accessible from your machine.

User Response: Verify that the name of the mail server that you want to connect to is correct and the mail server is accessible from your machine.

-or-

Explanation: The mail server you are trying to connect to does not support the protocol.

User Response: Verify that the protocol over which connection is being established is supported by the target mail server.

Valid trust certificate not found.

Explanation: This error occurs when you click the Authenticate button. You have not added a correct or valid trust certificate for the mail server to the cacerts keystore of the system JRE and you are connecting to the mail server over a secure protocol such as IMAPS or POP3S.

User Response: Verify that you have added a correct and valid trust certificate for the mail server to the cacerts keystore of the system JRE.

The cacerts keystore is located in the following directory:

```
{monospace-font}
```

```
<PowerCenter Installation Directory>\java\jre\lib\security
```

```
</monospace-font}
```

For example, use the following syntax to add the certificate certificate.cer to the cacerts keystore:

```
<PowerCenter Installation Directory>\java\bin\keytool -import -alias <certificate alias> -file  
certificate.cer -keystore <PowerCenter Installation Directory>\java\jre\lib\security\cacerts -v
```

Note: For more information about the trust certificates, contact your system administrator.

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