



# BEA WebLogic Adapter for Email

## User Guide

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### BEA WebLogic Adapter for Email User Guide

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# About This Document

The *BEA WebLogic Adapter for Email User Guide* is organized as follows:

- [Chapter 1, “Introducing the BEA WebLogic Adapter for Email,”](#) introduces the BEA WebLogic Adapter for Email, describes its features, and gives an overview of how it works.
- [Chapter 2, “Metadata, Schemas, and Repositories,”](#) describes metadata, how to name a schema repository and the schema manifest, how to create a schema, how to store directory and template files for transformations.
- [Chapter 3, “Defining an Application View for the BEA WebLogic Adapter for Email,”](#) describes how application views are created.
- [Chapter 4, “Service and Event Configuration,”](#) describes how to add services and events to application views.
- [Chapter 5, “BEA WebLogic Adapter for Email Integration Using Studio,”](#) describes how events are incorporated into workflow design.
- [Chapter 6, “Transforming Document Formats,”](#) describes how to utilize Message Format Language (MFL) files to transform a document.

## What You Need to Know

This document is written for system integrators who develop client interfaces between Email and other applications. It describes how to use the BEA WebLogic Adapter for Email and how to develop application environments with specific focus on message integration. It is assumed that readers know Web technologies and have a general understanding of Microsoft Windows and UNIX systems.

## Related Information

The following documents provide additional information for the associated software components:

- *BEA WebLogic Adapter for Email Installation and Configuration Guide*
- *BEA WebLogic Adapter for Email Release Notes*
- *BEA Application Explorer Installation Guide*
- BEA WebLogic Server installation and user documentation, which is available at the following URL:

[http://edocs.bea.com/more\\_wls.html](http://edocs.bea.com/more_wls.html)

- BEA WebLogic Integration installation and user documentation, which is available at the following URL:

[http://edocs.bea.com/more\\_wli.html](http://edocs.bea.com/more_wli.html)

## Contact Us!

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In your e-mail message, please indicate which version of the BEA WebLogic Adapter for Email documentation you are using.

If you have any questions about this version of the BEA WebLogic Adapter for Email, or if you have problems using the BEA WebLogic Adapter for Email, contact BEA Customer Support through BEA WebSupport at [www.bea.com](http://www.bea.com). You can also contact Customer Support by using the contact information provided on the Customer Support Card, which is included in the product package.

When contacting Customer Support, be prepared to provide the following information:

- Your name, e-mail address, phone number, and fax number
- Your company name and company address
- Your machine type and authorization codes
- The name and version of the product you are using
- A description of the problem and the content of pertinent error messages

# Documentation Conventions

The following documentation conventions are used throughout this document.

Convention	Item
<b>boldface text</b>	Indicates terms defined in the glossary.
Ctrl+Tab	Indicates that you must press two or more keys simultaneously.
<i>italics</i>	Indicates emphasis or book titles.
monospace text	<div>Indicates code samples, commands and their options, data structures and their members, data types, directories, and file names and their extensions. Monospace text also indicates text that you must enter from the keyboard.</div> <div>Examples:</div> <div>#include &lt;iostream.h&gt; void main ( ) the pointer psz chmod u+w * \tux\data\ap .doc tux.doc BITMAP float</div>

Convention	Item
<b>monospace</b> <b>boldface</b> <b>text</b>	Identifies significant words in code. <i>Example:</i> void <b>commit</b> ( )
<i>monospace</i> <i>italic</i> <i>text</i>	Identifies variables in code. <i>Example:</i> String <i>expr</i>
UPPERCASE TEXT	Indicates device names, environment variables, and logical operators. <i>Examples:</i> LPT1 SIGNON OR
{ }	Indicates a set of choices in a syntax line. The braces themselves should never be typed.
[ ]	Indicates optional items in a syntax line. The brackets themselves should never be typed. <i>Example:</i> buildobjclient [-v] [-o name ] [-f file-list]... [-l file-list]...
	Separates mutually exclusive choices in a syntax line. The symbol itself should never be typed.
...	Indicates one of the following in a command line: <ul style="list-style-type: none"><li>■ That an argument can be repeated several times in a command line</li><li>■ That the statement omits additional optional arguments</li><li>■ That you can enter additional parameters, values, or other information</li></ul> The ellipsis itself should never be typed. <i>Example:</i> buildobjclient [-v] [-o name ] [-f file-list]... [-l file-list]...
.	Indicates the omission of items from a code example or from a syntax line. The vertical ellipsis itself should never be typed.



# 1 Introducing the BEA WebLogic Adapter for Email

This section introduces the BEA WebLogic Adapter for Email, describes its features, and gives an overview of how it works. It contains the following topics:

- [Introduction](#)
- [How the BEA WebLogic Adapter for Email Works](#)

## Introduction

From the company that delivers the market's fastest growing integration solution comes a standards-based method of implementing the critical "last mile" of connectivity to your enterprise applications. As an extension to BEA WebLogic Integration™, BEA offers a growing portfolio of application, technology, and utility adapters. These best-of-breed adapters completely conform to the J2EE Connector Architecture specification, and feature enhancements that enable faster, simpler, and more robust integration of your business-critical applications.

E-mail is a vital tool in an enterprise for the exchange of information. The e-mail protocol must be taken into consideration when planning an integration strategy. The BEA WebLogic Adapter for Email incorporates the SMTP protocol with the POP3 protocol to optimize the integration files with enterprise application systems. The BEA

WebLogic Adapter for Email enables integration with e-mail messages using the Simple Mail Transport Protocol (SMTP) communications protocol. The e-mail messages can be XML, non-XML ASCII, or custom data formats. This provides a convenient and simple method for integrating with application systems using BEA WebLogic Integration.

Key features of the BEA WebLogic Adapter for Email include support for:

- Asynchronous, bi-directional message interactions between BEA WebLogic Integration and SMTP/POP3 servers.
- A business process that runs within BEA WebLogic Integration to transfer data to and from SMTP servers.
- Integration of service (inbound) and event (outbound) operations in workflows.
- XML, Comma Separated Variable (CSV), Excel, Message Format Language (MFL), and custom data formats. The adapter converts non-XML files into XML formats (for Excel, the adapter converts for inbound only). Delimited, fixed length, and variable length file formats are supported. Custom data formats are expressed using an XML dictionary file, which generates the appropriate schemas required by WebLogic Integration. These formats are supported either in the body of the e-mail or in an attachment file.
- Events that can be routed through the SMTP messaging system. E-mail messages may contain proprietary custom data formats that need to be transformed. The BEA WebLogic Adapter for Email supports processing of XML, ASCII (CSV, CDF, and Excel) and custom non-XML based messages containing structured, binary, and string data.

# How the BEA WebLogic Adapter for Email Works

The adapter provides transport protocol support so that it can “listen” and “emit” documents using the POP3/SMTP protocol.

The listening capability has been implemented as an event within WebLogic Integration. The event can be configured to act as an e-mail client by supplying an e-mail address, password, e-mail host and so on, along with a number of options that are configured with the BEA Application Explorer and the WebLogic Application View Console:

- **Transformation services.** XML is quickly becoming the standard for exchanging information between applications; it is invaluable in integrating disparate applications. The BEA WebLogic Adapter for Email ensures that any incoming document can be converted to the XML format dictated by your event or service schemas. The BEA WebLogic Adapter for Email can also be used in conjunction with other BEA WebLogic Adapters to process a variety of message types, such as SAP IDoc, SWIFT, FIX, HIPAA, and HL7.

The emitting capability has been implemented as a service within WebLogic Integration. When an outbound document is created, the service provides a number of options that are configured with the BEA Application Explorer and WebLogic Application View Console:

- **Transformation services.** Outbound documents can be transformed to convert XML documents into non-XML formats. The BEA WebLogic Adapter for Email can also be used in conjunction with other BEA WebLogic Adapters to process a variety of message types, such as SAP IDocs, SWIFT, FIX, HIPAA, and HL7.
- **Error Handling.** It is possible to define an alternative error-to option, such that in the event that a remote e-mail server is unavailable, the file could be written to a local file system directory for further processing. Or, if the required outbound file system was full, the outbound file could be placed in another directory on a local system or remote FTP server.



# 2 Metadata, Schemas, and Repositories

This section explains how metadata for your enterprise information system (EIS) is described, how to name a schema repository and the schema manifest, how to create a schema, and how to store directory and template files for transformations. After the metadata for your EIS is described, you can create and deploy application views using the WebLogic Application View Console.

This section includes the following topics:

- [Understanding Metadata](#)
- [Schemas and Repositories](#)
- [The Repository Manifest](#)
- [Creating a Schema](#)
- [Storing Directory and Template Files for Transformations](#)

## Understanding Metadata

When you define an application view, you are creating an XML-based interface between WebLogic Integration and an enterprise information system (EIS) or application within your enterprise. The BEA Adapter for Email is used to define a file-based interface to applications within and outside of the enterprise. Many

applications or information systems use file systems to store and share data. These files contain information required by other applications, and this information can be fed information via the BEA WebLogic Adapter for Email.

The BEA WebLogic Adapter for Email can read, write, or manipulate different types of files stored in multiple file systems or FTP sites. WebLogic integration uses XML as the common format for data being processed in its workflows, which requires information that is not in XML to be transformed to XML. Alternatively, to share information successfully, the file adapter can transform information from the XML format used in WebLogic Integration to widely used formats, such as commercial XML schemas, EDI, SWIFT, HIPAA, HL7, and others.

For example, Excel is a widely used application that allows all types of professionals (from fund managers to administrative assistants) to collate information pertinent to their working environment. This information can be shared by other applications using the adapter's transformation capability, which can convert a worksheet to XML and to other business partners via an EDI stream.

To map this information within the workflow via event and service adapters, the BEA WebLogic Adapter for Email requires XML schemas for identifying and processing these documents. Because some of these documents may be in non-XML form, such as Excel, CSV, SWIFT, or HIPAA, they must be converted to XML and described to WebLogic Integration using these schemas. A manifest file is used to relate schemas to events or services. The schemas and manifest are stored in a folder or directory in the local file system referred to as the EIS repository. The repository location is required when creating an application view from which events and services can be configured.

Events are triggers to workflows. When a particular file arrives at a location, an event can be triggered to read and convert, if necessary, to the XML format that conforms to a particular schema, which then initiates a flow. Services are called from the workflow to perform supported operations.

The adapter converts non-XML, non-self describing documents into XML in two ways. The Format Builder tool can build MFL files that are stored in the WebLogic server local repository. The Format Builder is best used for unconventional or custom format files. The structure of this file can be defined using the Format Builder and used for basic conversion to or from XML. For conventional documents that are not self-describing such as SWIFT, HIPAA, EDI/X12, EDIFACT, and HL7, the structure of the data is described using a data dictionary or .dic file.

Pre-built dictionaries are supplied for these formats, so creating them is not necessary, but you can customize them to conform with specific electronic trading agreements. Transformation templates or .xch files use these dictionaries to map the document to its XML form or vice versa.

Transformation templates use dictionaries as metadata for the file being read or created. The template defines the input value's relationship with the output values using the dictionary and XML schema. For events, the template is used to convert a non-XML format to XML and for services, the conversion can be reversed using an alternative template.

The templates are stored in the templates sub-directory of the EIS repository. Dictionaries are stored in the dictionaries sub-directory. The following is a sample data dictionary.

### Listing 2-1 Data Dictionary Sample

---

```
<?xml version="1.0"?>
<!-- Title = EDI Transaction Dictionary by Transaction Set -->
<!-- Transaction = 276 Health Care Claim Status Request -->

<EDI Type="ASCII" Version="4010" Standard="X12">
<TransactionSet ID="276" Name="Health Care Claim Status Request"
Note="">

<!-- Table 1 -->

    <Segment ID="ST" Name="Transaction Set Header" Req="M"
MaxUse="1">

        <Element ID="01" Name="Transaction Set Identifier Code"
Req="M" Type="ID" MinLength="3" MaxLength="3" Note="The transaction
set identifier 'ST01' is used by the translation routines of the
interchange partners to select the appropriate transaction set
definition 'e.g., 810 select the Invoice Transaction Set'."/>

        <Element ID="02" Name="Transaction Set Control Number" Req="M"
Type="AN" MinLength="4" MaxLength="9"/>

        <Element ID="03" Name="Implementation Convention Reference"
Req="O" Type="AN" MinLength="1" MaxLength="35" Note="The
implementation convention reference 'ST03' is used by the
translation routines of the interchange partners to select the
appropriate implementation convention to match the transaction set
definition."/>
```

```
</Segment>

<Segment ID="BHT" Name="Beginning of Hierarchical Transaction"
Req="M" MaxUse="1">

    <Element ID="01" Name="Hierarchical Structure Code" Req="M"
Type="ID" MinLength="4" MaxLength="4"/>

    <Element ID="02" Name="Transaction Set Purpose Code" Req="M"
Type="ID" MinLength="2" MaxLength="2"/>

    <Element ID="03" Name="Reference Identification" Req="O"
Type="AN" MinLength="1" MaxLength="50" Note="BHT03 is the number
assigned by the originator to identify the transaction within the
originator's business application system."/>
```

---

After the metadata for your EIS has been described, application views can be created and deployed using the WebLogic Integration Application View Console. For more information on creating application views, see [Chapter 3, “Defining an Application View for the BEA WebLogic Adapter for Email.”](#)

# Schemas and Repositories

You describe all the documents entering and exiting your WebLogic Integration system using W3C XML schemas. These schemas describe each event arriving to and propagating out of an event, and each request sent to and each response received from a service. There is one schema for each event and two for each service (one for the request, one for the response). The schemas are usually stored in files with an `.xsd` extension.

Use the WebLogic Integration Application View Console to access events and services, and to assign a schema to each event, request, and response. Assign each application view to a schema repository; several application views can be assigned to the same repository.

BEA WebLogic Adapters all make use of a schema repository to store their schema information and present it to the WebLogic Application View Console. The schema repository is a directory containing:



- A manifest file that describes the event and service schemas.
- The corresponding schema descriptions.

To work with schemas, you must know how to:

- Name a schema repository.
- Create a manifest.
- Create a schema.

## Naming a Schema Repository

The schema repository has a three-part naming convention:

*session\_base\_directory\adapter\connection\_name*

- *session\_base\_directory* is the schema's session base path, which represents a folder under which multiple sessions of schemas may be held.
- *adapter* is the type of adapter (for example, EMAIL or SAP).
- *connection\_name* is a name representing a particular instance of the adapter type.

For example, if the session base path is `/usr/opt/bea/bse`, the adapter type is EMAIL, and the connection name is EMAILDev, then the schema repository is the directory:

`/usr/opt/bea/bse/EMAIL/EMAILDev`

# The Repository Manifest

Each schema repository has a manifest that describes the repository and its schemas. This repository manifest is stored as an XML file named `manifest.xml`.

The following is an example of a sample manifest file showing relationships between events and services and their related schemas.

The manifest file relates documents (through their schemas) to services and events. The manifest exposes schema references to the event relating the required document (via the root tag) to the corresponding schema. Schemas and manifests are stored in the same directory, the repository root of the EIS. The following is an example of the a manifest file with a description of the elements.

### Listing 2-2 Sample Manifest File

---

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<manifest>
  <connection/>
  <schemaref name="service_only">
    <request root="INVOICE" file="INVOICE.xsd"/>
    <response root="emitStatus" file="FileEmit.xsd"/>
  </schemaref>
  <schemaref name="event_only">
    <event root="PURCHASE_ORDER" file="PURCHASE_ORDER.xsd"/>
  </schemaref>
  <schemaref name="shared">
    <request root="STOCK_STATUS" file="STOCK_STATUS.xsd"/>
    <response root="emitStatus" file="FileEmit.xsd"/>
    <event root="STOCK_UPDATE" file="STOCK_UPDATE.xsd"/>
  </schemaref>
</manifest>
```

---

The manifest has a connection section (which is not used by the BEA WebLogic Adapter for Email) and a schema reference section, named `schemaref`. The schema reference name is displayed in the schema drop-down list on the Add Service and Add Event windows in the WebLogic Integration Application View Console. This sample manifest has three schema references or `schemaref` tags; one for services only, one for events only, and one for a combination of services and events. Events require only one

schema, defined by the *event* tag. This relates the root tag of an XML document to a schema in the EIS repository. For services, two schemas are required: one for the document being passed to the service, represented by the *request* tag, and one for the expected *response* document received from the service operation, represented by the *response* tag.

## Creating a Repository Manifest

The repository manifest is an XML file with the root element `manifest` and two sub-elements:

- `connection`, which appears once, and which you can ignore because it is not used by the BEA WebLogic Adapter for Email.
- `schemaref`, which appears multiple times, once for each schema name, and which contains all three schemas—request, response, and event.

To create a manifest:

1. Create an XML file with the following structure:

```
<manifest>
  <connection>
  </connection>
</manifest>
```

2. For each new event or service schema you define, create a `schemaref` section using this model:

```
<schemaref name="OrderIn">
  <request root="OrderIn" file="service_OrderIn_request.xsd"/>
  <response root="emitStatus" file="MQEmitStatus.xsd"/>
  <event root="OrderIn" file="event_OrderIn.xsd"/>
</schemaref>
```

Here, the value you assign to:

- `file` is the name of the file in the schema repository.
- `root` is the name of the root element in the actual instance documents that will arrive at, or be sent to, the event or service.

# Creating a Schema

Schemas describe the rules of the XML documents that will traverse WebLogic Integration. You can generate a schema manually or through a schema-generating tool.

WebLogic Integration interacts with application view events and services by sending and receiving XML messages. The XML messages are defined by XML schemas. The schemas are stored in directories specific for each adapter.

You must set up at least one directory for each adapter you use. This directory can contain multiple subdirectories, each of which can hold schemas specific to different instances of your application. You should name the parent directory to represent your adapter; you can name the subdirectories according to what is appropriate for your application.

For example, if you have four instances of an application that exchanges messages between the BEA WebLogic Adapter for Email and WebLogic Integration, you should set up four subdirectories to store the schemas; the subdirectories should be in a parent Email directory:

```
D:\TraderSystems\BEAapps\Email\FTPprod
D:\TraderSystems\BEAapps\Email\FTPdev
D:\TraderSystems\BEAapps\Email\FTPut
```

The schemas for the documents being processed are stored within those directories.

The following is an example of an instance document for the OrderIn event referred to in [“Creating a Repository Manifest” on page 2-7](#).

### Listing 2-3 Instance Document for OrderIn Event

```
<?xml version="1.0"?>

<OrderIn>
  <Store_Code>1003CA</Store_Code>
  <LineItem>
    <Prod_Num>1003</Prod_Num>
    <Quantity>100</Quantity>
    <Price>1.69</Price>
  </LineItem>
  <LineItem>
    <Prod_Num>1004</Prod_Num>
    <Quantity>10</Quantity>
    <Price>1.79</Price>
  </LineItem>
</OrderIn>
```

The following is a schema matching this instance document and may be manually coded or generated from any XML editor:

### Listing 2-4 Schema Matching OrderIn Event Instance Document

```
<?xml version="1.0" encoding="UTF-8"?>

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:element name="OrderIn">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="Store_Code"/>
        <xsd:element ref="LineItem" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="LineItem">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="Prod_Num"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

```
        <xsd:element ref="Quantity"/>
        <xsd:element ref="Price"/>
    </xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:element name="Price">
    <xsd:simpleType>
        <xsd:restriction base="xsd:decimal">
            <xsd:enumeration value="1.69"/>
            <xsd:enumeration value="1.79"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
<xsd:element name="Prod_Num">
    <xsd:simpleType>
        <xsd:restriction base="xsd:short">
            <xsd:enumeration value="1003"/>
            <xsd:enumeration value="1004"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
<xsd:element name="Quantity">
    <xsd:simpleType>
        <xsd:restriction base="xsd:byte">
            <xsd:enumeration value="10"/>
            <xsd:enumeration value="100"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
<xsd:element name="Store_Code" type="xsd:hexBinary"/>
</xsd:schema>
```

---

# Storing Directory and Template Files for Transformations

The BEA WebLogic Adapter for Email supports the exchange of XML and non-XML messages with WebLogic Integration. Templates and dictionaries are created and associated with the BEA WebLogic Adapter for Email events and services. Dictionaries (.dic extension) are documents that describe an incoming non-XML document. Templates (.xch extension) describe the conversion from one format to

another (XML to non-XML, and vice versa). Sample dictionaries and templates are supplied with the product and must be placed in a `transform` subdirectory in the root directory for your domain, as shown in the following paths:

```
DOMAIN_HOME\transform\xch  
DOMAIN_HOME\transform\xslt  
DOMAIN_HOME\transform\dic
```

## Samples File

Supplied with the BEA WebLogic Adapter for Email are sample files (xml and edi format) that can be used to help test that your environment is correctly set up and working. The `BEA_SAMPLES.zip` file also includes sample manifest and schema files.





# **3 Defining an Application View for the BEA WebLogic Adapter for Email**

This section describes how metadata is used and how application views are created. It contains the following topics:

- [Schemas, Dictionaries, and Transformation Templates](#)
- [Creating a Transformation Template](#)
- [Creating a New Application View](#)

# Schemas, Dictionaries, and Transformation Templates

When you define an application view, you are creating an XML-based interface between WebLogic Server and a particular Enterprise Information System (EIS) application within your enterprise. In the case of the BEA WebLogic Adapter for Email, this is a set of files that your applications have to create or respond to.

For example, Excel is a widely used application that allows professionals to collate information pertinent to their working environment. SAP is also a valuable application used in the IT environment for CRM solutions. Information in these disparate systems can be effectively shared in the IT environment for an organization.

Information stored in Excel documents can be easily used to update data stored in SAP. With the BEA WebLogic Adapter for Email, an Excel document embedded in an e-mail can trigger an event after being automatically converted to XML. Documents can be emitted in XML or non-XML format using the adapter.

The adapter requires schemas for processing these documents. As some of these documents may be in non-XML form (for example, Excel, CSV, SWIFT, and HIPAA), they have to be converted to XML and described to WebLogic Integration using schemas. For more information on schemas, see [Chapter 2, “Metadata, Schemas, and Repositories.”](#)

For non-XML, non-self-describing documents, the structure of the data needs to be described using a data dictionary such as the one shown in the following listing:

**Listing 3-1 Data Dictionary**

---

```
<?xml version="1.0"?>
<!-- Title = EDI Transaction Dictionary by Transaction Set -->
<!-- Transaction = 276 Health Care Claim Status Request -->

<EDI Type="ASCII" Version="4010" Standard="X12">
<TransactionSet ID="276" Name="Health Care Claim Status Request"
Note="">

<!-- Table 1 -->

    <Segment ID="ST" Name="Transaction Set Header" Req="M"
MaxUse="1">

        <Element ID="01" Name="Transaction Set Identifier Code"
Req="M" Type="ID" MinLength="3" MaxLength="3" Note="The transaction
set identifier 'ST01' is used by the translation routines of the
interchange partners to select the appropriate transaction set
definition 'e.g., 810 select the Invoice Transaction Set'."/>

        <Element ID="02" Name="Transaction Set Control Number" Req="M"
Type="AN" MinLength="4" MaxLength="9"/>

        <Element ID="03" Name="Implementation Convention Reference"
Req="O" Type="AN" MinLength="1" MaxLength="35" Note="The
implementation convention reference 'ST03' is used by the
translation routines of the interchange partners to select the
appropriate implementation convention to match the transaction set
definition."/>

    </Segment>

    <Segment ID="BHT" Name="Beginning of Hierarchical Transaction"
Req="M" MaxUse="1">

        <Element ID="01" Name="Hierarchical Structure Code" Req="M"
Type="ID" MinLength="4" MaxLength="4"/>

        <Element ID="02" Name="Transaction Set Purpose Code" Req="M"
Type="ID" MinLength="2" MaxLength="2"/>

        <Element ID="03" Name="Reference Identification" Req="O"
Type="AN" MinLength="1" MaxLength="50" Note="BHT03 is the number
assigned by the originator to identify the transaction within the
originator's business application system."/>
```

---

## Creating a Transformation Template

You can create a transformation template file by running the Session Connection utility from the BEA Application Explorer. The utility creates the template and the schema automatically, and configures the `manifest.mf` file accordingly. To create a transformation template file, the dictionary must have been defined as described in [“Schemas, Dictionaries, and Transformation Templates”](#) on page 3-2.

The templates are stored in the libraries created in the `wldomain` directory in the correct folder (`transform/xch`). Dictionaries must be stored in the `transform/dic` directory. For more information on file locations, see the *BEA WebLogic Adapter for Email Installation and Configuration Guide*.

Once the metadata for your EIS has been described, application views can be created and deployed using the WebLogic Integration Application View Console.

## Creating a New Application View

You can create an application view once the metadata for your EIS has been described.

To create a new application view:

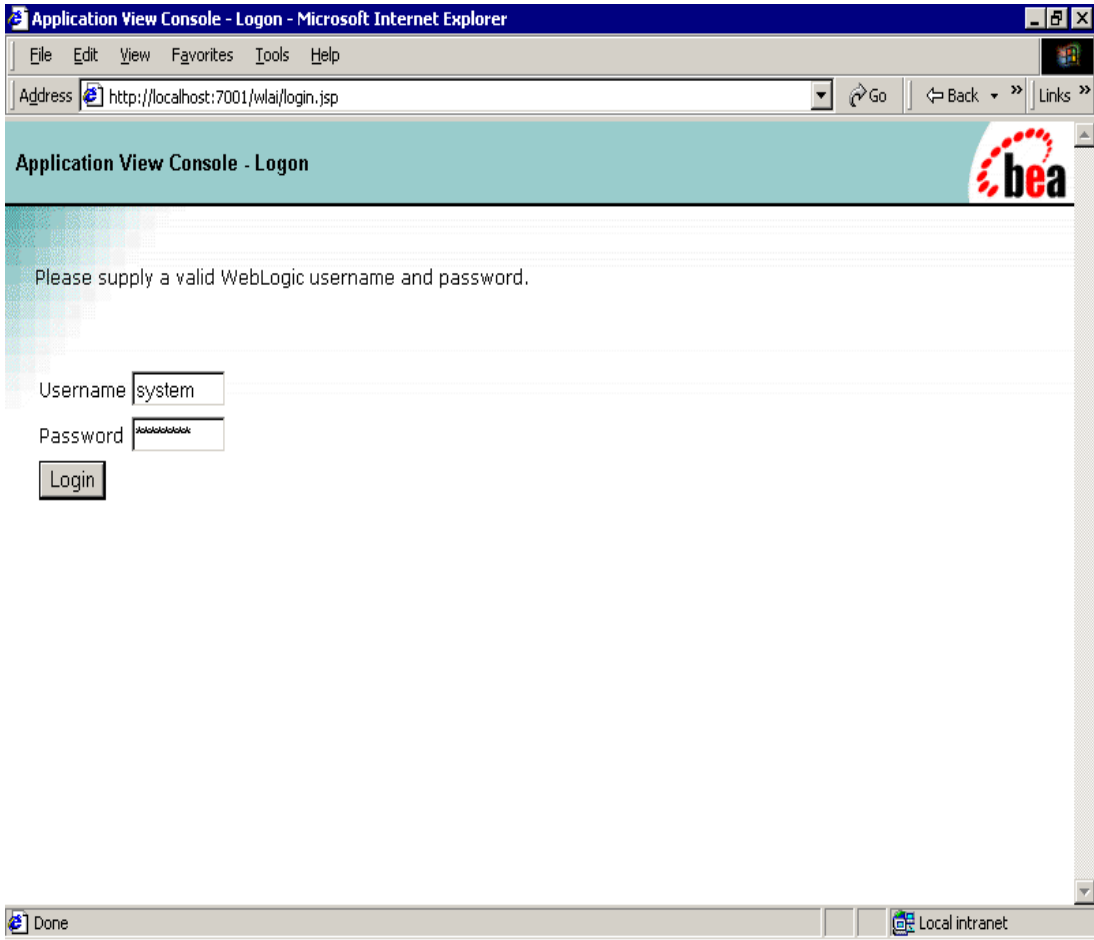
1. Open the Application View Console, which is found at the following location:

`http://host:port/wlai`

Here, *host* is the TCP/IP address or DNS name where WebLogic Integration Server is installed, and *port* is the socket on which the server is listening. The default port at the time of installation is 7001.

2. If prompted, enter a user name and password, as shown in the following figure.

**Figure 3-1 Application View Console Logon Window**



**Note:** If the user name is not `system`, it must be included in the adapter group. For more information on adding the administrative server user name to the adapter group, see the *BEA WebLogic Adapter for Email Installation and Configuration Guide*.

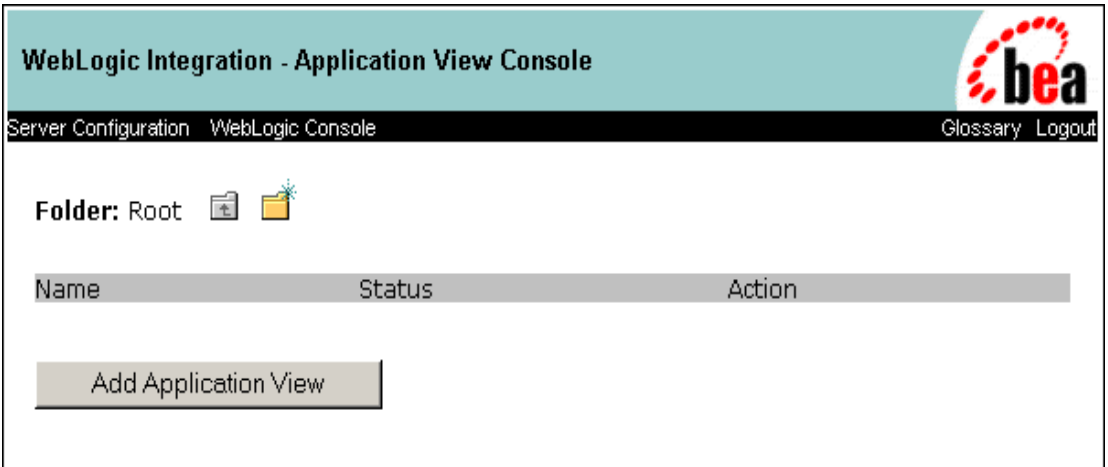
### 3 *Defining an Application View for the BEA WebLogic Adapter for Email*

---

3. Click Login.

The WebLogic Integration Application View Console opens.

**Figure 3-2 Application View Console Window**



4. Click Add Application View to create an application view for the adapter. The Define New Application View dialog box opens. An application view enables a set of business processes for this adapter's target EIS application. For more information, see “Defining an Application View” in *Using Application Integration*:
  - For WebLogic Integration 7.0, see <http://edocs.bea.com/wli/docs70/aiuser/2usrdef.htm>
  - For WebLogic Integration 2.1, see [http://edocs.bea.com/wlintegration/v2\\_1sp/aiuser/2usrdef.htm](http://edocs.bea.com/wlintegration/v2_1sp/aiuser/2usrdef.htm)

**Figure 3-3 Define New Application View Window**

Application View Console - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://localhost:7001/wlai/display.jsp?content=defappvw&namespace=> Go Back Links

### Define New Application View

Glossary Logout

This page allows you to define a new application view

Folder: [Root](#)

Application View Name: \*

Description:

Associated Adapter:

OK Cancel

Done Local intranet

### **3**    *Defining an Application View for the BEA WebLogic Adapter for Email*

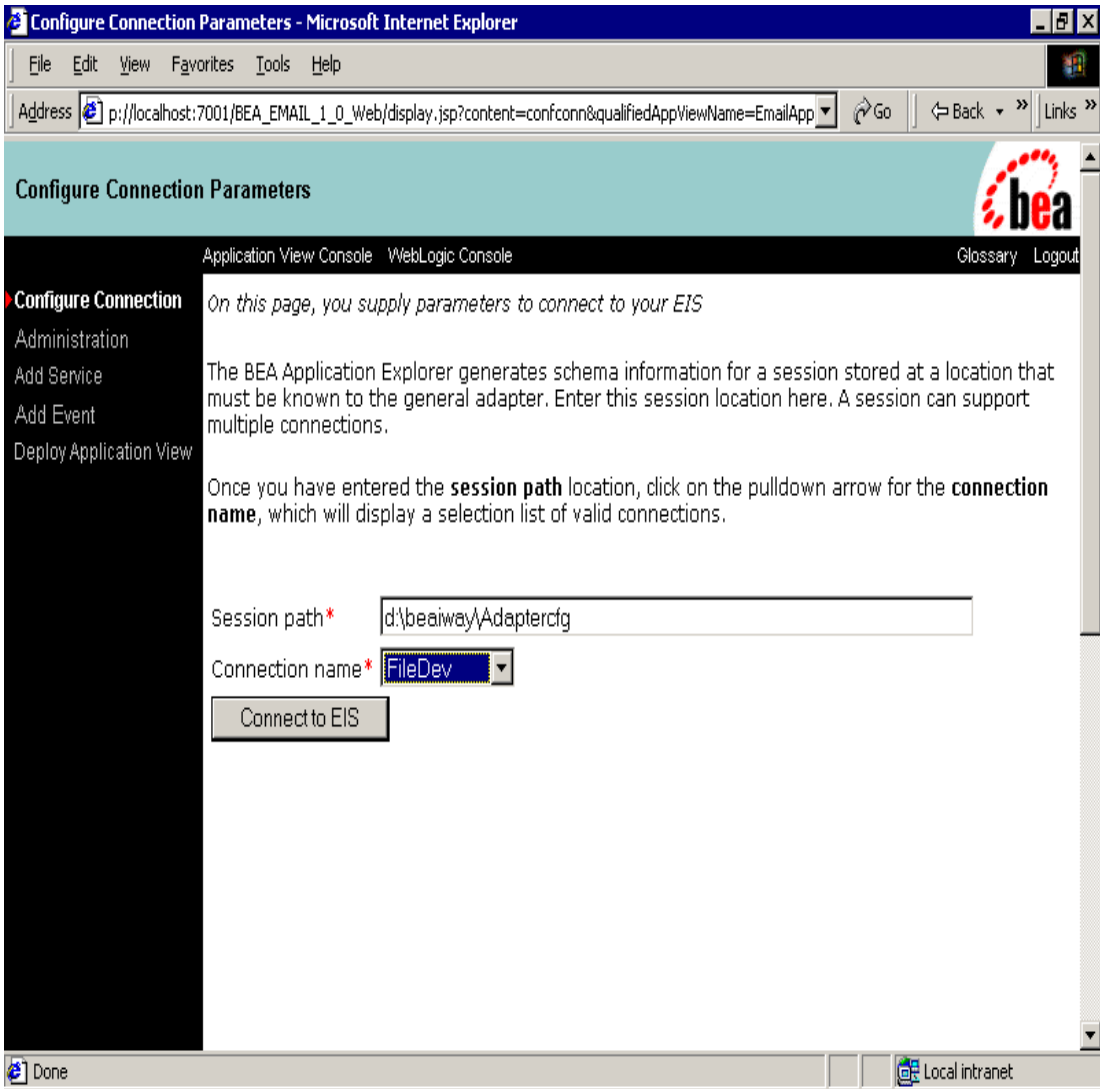
---

5. In the Application View Name field, enter a name. The name should describe the set of functions performed by this application. Each application view name must be unique to its adapter. Valid characters are a-z, A-Z, 0-9, and \_ (underscore).
6. In the Description field, enter any relevant notes. These notes are viewed by users when they use this application view in workflows using business process management functionality.
7. From the Associated Adapter list, select `BEA_EMAIL_1_0` to associate the BEA WebLogic Adapter for Email with this application view.



8. Click OK. The Configure Connection Parameters window opens.

**Figure 3-4 Configure Connection Parameters Window**



### 3 *Defining an Application View for the BEA WebLogic Adapter for Email*

---

The BEA Application Explorer is used to explore and present metadata relating to the BEA WebLogic Adapters. The BEA Application Explorer creates and exports the schemas required by WebLogic Integration Server to configure services and events. This metadata is stored in a file system (definable by the application designer) and needs to be supplied to the application view setup window. See [“Schemas, Dictionaries, and Transformation Templates” on page 3-2](#).

9. Enter the root directory containing your schema subdirectories. For example, `d:\beaiway\Adaptercfg`.
10. Select the connection name (the subdirectory containing schemas and the manifest file) from the drop-down list. For example, `FileDev`.

For more information on schemas and the manifest file, see [Chapter 2, “Metadata, Schemas, and Repositories.”](#)

11. Click Connect to EIS to view the Application View Console Administration window.

**Figure 3-5 Application View Console Administration Window**

Application View Console
WebLogic Console
Glossary
Logout

*This page allows you to add events and/or services to an application view.*

**Description:** No description available for EmailApp. [Edit](#)

<b>Connection Criteria</b>	
<b>bseis:</b>	FileDev
<b>Additional Log Category:</b>	EmailApp
<b>Root Log Category:</b>	BEA_EMAIL_1_0
<b>bselocation:</b>	d:\beaiway\Adaptercfg
<b>Message Bundle Base:</b>	BEA_EMAIL_1_0
<b>Log Configuration File:</b>	BEA_EMAIL_1_0.xml
<a href="#">Reconfigure connection parameters for EmailApp</a>	

Events
Add

Services
Add

Save
?

You can now configure services and events as described in [Chapter 3, “Defining an Application View for the BEA WebLogic Adapter for Email.”](#)

### **3**    *Defining an Application View for the BEA WebLogic Adapter for Email*

---

# 4 Service and Event Configuration

This section describes how to add services and events to application views. It contains the following topics:

- [Adding a Service to an Application View](#)
- [Adding an Event to an Application View](#)
- [Deploying an Application View](#)
- [Testing a Service or Event](#)
- [Email Attachments](#)

# Adding a Service to an Application View

After you create and configure an application view as described in [Chapter 3, “Defining an Application View for the BEA WebLogic Adapter for Email,”](#) you can add services that support the application's functions.

To add a service to an application view:

1. If it is not already open, open the application view to be modified. For more information, see “Editing an Application View” in “Defining an Application View” in *Using Application Integration*:
  - For WebLogic Integration 7.0, see <http://edocs.bea.com/wli/docs70/aiuser/2usrdef.htm>
  - For WebLogic Integration 2.1, see [http://edocs.bea.com/wlintegration/v2\\_1sp/aiuser/2usrdef.htm](http://edocs.bea.com/wlintegration/v2_1sp/aiuser/2usrdef.htm)
2. If the application view is deployed, you must undeploy it before adding the service. See “Optional Step: Undeploying an Application View” in “Defining an Application View” at the URL referenced in the previous step.

3. In the left pane, click Administration from the Configure Connection list. The Application View Console Administration window opens.

**Figure 4-1 Application View Console Administration Window**

Application View Console   WebLogic Console   [Glossary](#)   [Logout](#)

*This page allows you to add events and/or services to an application view.*

**Description:**      No description available for EmailApp.   [\\_Edit](#)

**Connection Criteria**

<b>bseeis:</b>	FileDev
<b>Additional Log Category:</b>	EmailApp
<b>Root Log Category:</b>	BEA_EMAIL_1_0
<b>bselocation:</b>	d:\beaiway\Adaptercfg
<b>Message Bundle Base:</b>	BEA_EMAIL_1_0
<b>Log Configuration File:</b>	BEA_EMAIL_1_0.xml

[Reconfigure connection parameters for EmailApp](#)

**Events**

Add

**Services**

Add

Save

?

4. Click Add in the Services pane.

## 4 Service and Event Configuration

The Add Service window opens.

**Figure 4-2 Add Service Window**

**Add Service**

Application View Console WebLogic Console Glossary Logout

Configure Connection  
Administration  
➔ **Add Service**  
Add Event  
Deploy Application View

On this page, you add services to your application view.

Unique Service Name: \*

**email**

Transform_name	<input type="text"/>
type	flat
Transform_engine	mfl
host*	<input type="text"/>
to	<input type="text"/>
subject	<input type="text"/>
from	<input type="text"/>
cc	<input type="text"/>
bcc	<input type="text"/>
replyto	<input type="text"/>
body	<input type="text"/>
Input_tag_containing_recipient	<input type="text"/>
Input_tag_containing_subject	<input type="text"/>
Input_tag_containing_sender	<input type="text"/>

5. In the Unique Service Name field, enter a name. The name should describe the function performed by this service. Each service name must be unique to its application view. Valid characters are a-z, A-Z, 0-9, and \_ (underscore).



6. Enter the required settings (required fields are marked with an asterisk) to configure your process.

If Trace is selected, trace information is displayed in the run time console.

If Logging is selected, the log information is stored in the `BEA_EMAIL_1_0.log` file in the directory from which the application was started.

**Figure 4-3 Add Service Window**

The screenshot shows the 'Add Service Window' with the following fields and settings:

replyto	
body	
Input_tag_containing_recipient	
Input_tag_containing_subject	
Input_tag_containing_sender	
Input_tag_containing_cc	
Input_tag_containing_bcc	
Input_tag_containing_attachment	
Input_tag_containing_replyto	
Input_tag_containing_body	

schema: EXCEL\_ADDR\_IN

**settings**

Trace_on/off	<input type="checkbox"/>
Logging_on/off	<input type="checkbox"/>
root_to_transform_template_directory	transform/xch
root_to_XML_Style_sheet_directory	transform/xslt

Add

## 4 Service and Event Configuration

Descriptions of the settings are listed below

**Table 4-1 email**

Setting	Properties/Description
Transform_name	<b>Type/Value:</b> String <b>Description:</b> Parser name and settings required for transformation. <b>Values:</b> Name and extension of the transformation template. If it is not stored in the standard location, supply the full path. <b>Note:</b> Do not enter an .mfl extension for a Message Format Language (MFL) file; these files are not stored with an extension.
type	<b>Type/Value:</b> String <b>Description:</b> Output type of the e-mail (flat for non-XML, XML for XML).
Transform_engine	<b>Type/Value:</b> Drop-down list <b>Description:</b> Engine required to transform the document (Message Format Language (mfl), XSL Transformation (xslt), Supplied transformation templates (xch)).
host* (*Required)	<b>Type/Value:</b> String <b>Description:</b> SMTP host DNS name.
to	<b>Type/Value:</b> String <b>Description:</b> E-mail address of the intended recipient.
subject	<b>Type/Value:</b> String <b>Description:</b> Title of e-mail to be sent.
from	<b>Type/Value:</b> String <b>Description:</b> E-mail address of the sender.
cc	<b>Type/Value:</b> String <b>Description:</b> E-mail address of the carbon copy recipient.
bcc	<b>Type/Value:</b> String <b>Description:</b> E-mail address of the blind carbon copy recipient.
replyto	<b>Type/Value:</b> String <b>Description:</b> E-mail address to which replies will be sent.

**Table 4-1 email**

Setting	Properties/Description
body	<b>Type/Value:</b> String <b>Description:</b> Body of the e-mail message.
Input_tag_containing_recipient	<b>Type/Value:</b> String <b>Description:</b> XML tag which identifies the e-mail address of the intended recipient. This setting is valid only if the type setting is XML. The data in this XML tag overrides the to setting.
Input_tag_containing_subject	<b>Type/Value:</b> String <b>Description:</b> XML tag which identifies the title of the e-mail address to be sent. This setting is valid only if the type setting is XML. The data in this XML tag overrides the subject setting.
Input_tag_containing_sender	<b>Type/Value:</b> String <b>Description:</b> XML tag which identifies the e-mail address of the sender. This setting is valid only if the type setting is XML. The data in this XML tag overrides the from setting.
Input_tag_containing_cc	<b>Type/Value:</b> String <b>Description:</b> XML tag which identifies the e-mail address of the carbon copy recipient. This setting is valid only if the type setting is XML. The data in this XML tag overrides the cc setting.
Input_tag_containing_bcc	<b>Type/Value:</b> String <b>Description:</b> XML tag which identifies the e-mail address of the blind carbon copy recipient. This setting is valid only if the type setting is XML. The data in this XML tag overrides the bcc setting.
Input_tag_containing_attachment	<b>Type/Value:</b> String <b>Description:</b> XML tag which identifies the element of the XML document that contains the data that will constitute the attachment.
Input_tag_containing_replyto	<b>Type/Value:</b> String <b>Description:</b> XML tag which identifies the e-mail address required for responses. The data in this XML tag overrides the replyto setting.
Input_tag_containing_body	<b>Type/Value:</b> String <b>Description:</b> XML tag that will contain the body of the email text.

## 4 Service and Event Configuration

7. Select the required schema at the bottom of the window, from the schema drop-down list.
8. Click Add. The Application View Administration window opens.

**Figure 4-4 Application View Administration Window**

Application View Console   WebLogic Console Glossary   Logout

*This page allows you to add events and/or services to an application view.*

*EmailApp updated successfully!*

**Description:**      No description available for EmailApp. [Edit](#)

<b>Connection Criteria</b>	
<b>bseis:</b>	FileDev
<b>Additional Log Category:</b>	EmailApp
<b>Root Log Category:</b>	BEA_EMAIL_1_0
<b>bselocation:</b>	d:\beaiway\Adaptercfg
<b>Log Configuration File:</b>	BEA_EMAIL_1_0.xml
<b>Message Bundle Base:</b>	BEA_EMAIL_1_0

[Reconfigure connection parameters for EmailApp](#)

Events Add

Services Add

EMAILSVC [Edit](#) [Remove Service](#) [View Summary](#) [View Request Schema](#) [View Response Schema](#)

Continue Save ?

9. Click Continue or Save.

At this point, the application can be deployed or more services or events can be configured. Once the application has been deployed, you can test the service. To deploy the application, see [“Deploying an Application View” on page 4-15](#). To test the application, see [“Testing a Service or Event” on page 4-19](#).

# Adding an Event to an Application View

To add events to the application view, schemas must be present and mapped to the BEA WebLogic Adapter for Email EIS that is configured for the application view. For more information on creating an application view, see [Chapter 3, “Defining an Application View for the BEA WebLogic Adapter for Email.”](#)

1. If your application is deployed, you will need to undeploy the application and then edit the application view.

**Figure 4-5 Application View Console Administration Window**

Application View Console WebLogic Console Glossary Logout

*This page allows you to add events and/or services to an application view.*

*EmailApp updated successfully!*

**Description:** No description available for EmailApp. [Edit](#)

Connection Criteria	
<b>bseis:</b>	FileDev
<b>Additional Log Category:</b>	EmailApp
<b>Root Log Category:</b>	BEA_EMAIL_1_0
<b>bselocation:</b>	d:\beaiway\Adaptercfg
<b>Log Configuration File:</b>	BEA_EMAIL_1_0.xml
<b>Message Bundle Base:</b>	BEA_EMAIL_1_0

[Reconfigure connection parameters for EmailApp](#)

**Events** Add

**Services** Add

EMAILSVC
<a href="#">Edit</a> <a href="#">Remove Service</a> <a href="#">View Summary</a> <a href="#">View Request Schema</a> <a href="#">View Response Schema</a>

Continue Save ?

2. From the Application View Console Administration window, click Add in the Events section of the administrative pane.

## 4 Service and Event Configuration

The Add Event window opens.

**Figure 4-6 Add Event Window**

3. Enter a Unique Event Name.
4. Enter the email settings (required fields are marked with an asterisk) to configure your process.

If Trace is selected, trace information is displayed in the run time console.

If Logging is selected, the log information is stored in the `BEA_EMAIL_1_0.log` file in the directory from which the application was started.

Descriptions of settings are shown below.

Setting	Properties/Description
Incoming_mail_host* (*Required)	<b>Type/Value:</b> String <b>Description:</b> Incoming mail (POP3/IMAP) server.
user* (*Required)	<b>Type/Value:</b> String <b>Description:</b> E-mail address of intended recipient.
Password* (*Required)	<b>Type/Value:</b> String <b>Description:</b> Password for e-mail account.
Outgoing_mail_host* (*Required)	<b>Type/Value:</b> String <b>Description:</b> Outgoing mail SMTP server.
Mail_protocol	<b>Type/Value:</b> String <b>Description:</b> Incoming mail server protocol.
filter	<b>Type/Value:</b> String <b>Description:</b> Picks up e-mails with the subject specified.
Process_attachments	<b>Type/Value:</b> Check box <b>Description:</b> Configures event to process attachments.
Attachment_identifier_tag* (*Required)	<b>Type/Value:</b> String <b>Description:</b> XML tag which identifies the attachment. <b>Note:</b> Since the attachment information can change the incoming message, the schema must take this into account.
Save_as* (*Required)	<b>Type/Value:</b> Drop-down list <b>Description:</b> Determines what format the attachment will be in after processing. <b>Values:</b> <ul style="list-style-type: none"><li>■ Document - This determines that the attachment will be read and embedded in the incoming XML document.</li><li>■ File - This configures the event to store the attachment in a file system.</li></ul>
base64_document	<b>Type/Value:</b> String <b>Description:</b> Specifies whether the attachments are to be base64 encoded. <b>Values:</b> true or false

## 4 Service and Event Configuration

---

Setting	Properties/Description
file_directory* (*Required if Save_as is file)	<b>Type/Value:</b> String <b>Description:</b> Directory to which files are written.
file_pattern* (*Required if Save_as is file)	<b>Type/Value:</b> String <b>Description:</b> File name pattern.
Transform_email_ body	<b>Type/Value:</b> Check box <b>Description:</b> Check this box if transformation of the body of the text in the email is required.
Transform_name	<b>Type/Value:</b> String <b>Description:</b> Parser name and settings required for transformation. <b>Values:</b> Name and extension of the transformation template. If it is not stored in the standard location, enter the full path. <b>Note:</b> Do not enter an .mfl extension for a Message Format Language (MFL) file; these files are not stored with an extension.
Transform_engine	<b>Type/Value:</b> Drop-down list <b>Description:</b> The engine required to transform the document. Select Message Format Language (mfl), XSL Transformation (xslt), or Supplied transformation templates (xch).
Accept_non-XML_ (flat)_only	<b>Type/Value:</b> Check box <b>Description:</b> Check this box if the body of the text in the email is non-XML and is being transformed.
Send_errors_to	<b>Type/Value:</b> String <b>Description:</b> Directory path to where the document will be placed on a failure.



5. Select the required schema from the schema drop-down list and click Add.

**Figure 4-7 Add Event Window**

Process Attachments

Attachment_identifier_tag*	attachment
Save_as*	document
base64_document	false
file_directory	
file_pattern	
Transform_email_body	<input type="checkbox"/>
Transform_name	
Transform_engine	mfl
Accepts_non-XML_(flat)_only	false
Send_errors_to	

schema: EXCEL\_ADDR\_IN

**settings**

Trace_on/off	<input type="checkbox"/>
Logging_on/off	<input type="checkbox"/>
root_to_transform_template_directory	transform/xch
root_to_XML_Style_sheet_directory	transform/xslt

Add

6. Click Add.

## 4 Service and Event Configuration

After adding the event process, the following window opens.

**Figure 4-8 Application View Administration Window**

Application View Console

WebLogic Console

Glossary

Logout

*This page allows you to add events and/or services to an application view.*

**Description:** No description available for EmailApp. [Edit](#)

<b>Connection Criteria</b>	
<b>bseels:</b>	FileDev
<b>Additional Log Category:</b>	EmailApp
<b>Root Log Category:</b>	BEA_EMAIL_1_0
<b>bselocation:</b>	d:\beaiway\Adaptercfg
<b>Log Configuration File:</b>	BEA_EMAIL_1_0.xml
<b>Message Bundle Base:</b>	BEA_EMAIL_1_0

[Reconfigure connection parameters for EmailApp](#)

**Events**

Add

eMailEvent	<a href="#">Edit</a> <a href="#">Remove Event</a> <a href="#">View Summary</a> <a href="#">View Event Schema</a>
------------	--

**Services**

Add

Continue

Save ?

7. Click Save to save your settings. You can deploy your application view (complete with configured events and/or services) by following the steps described in [“Deploying an Application View” on page 4-15](#). Then you can test your application view by following the steps described in [“Testing a Service or Event” on page 4-19](#).

# Deploying an Application View

You may deploy an application view when you have added at least one event or service to it. You must deploy an application view before you can test its services and events or use the application view in the WebLogic Server environment. Application view deployment places relevant metadata about its services and events into a run-time metadata repository. Deployment makes the application view available to other WebLogic Server clients. This means business processes can interact with the application view, and you can test the application view's services and events.

After you configure an event or service, you can deploy your application view from the Application View Console Administration window.

## 4 Service and Event Configuration

1. If it is not already open, open the application view to be deployed. For more information, see “Editing an Application View” in “Defining an Application View” in *Using Application Integration*:
  - For WebLogic Integration 7.0, see <http://edocs.bea.com/wli/docs70/aiuser/2usrdef.htm>
  - For WebLogic Integration 2.1, see [http://edocs.bea.com/wlintegration/v2\\_1sp/aiuser/2usrdef.htm](http://edocs.bea.com/wlintegration/v2_1sp/aiuser/2usrdef.htm)

**Figure 4-9 Application View Console Administration Window**

Application View Console   WebLogic Console   [Glossary](#)   [Logout](#)

*This page allows you to add events and/or services to an application view.*

**Description:**      No description available for EmailApp.   [Edit](#)

**Connection Criteria**

<b>bsees:</b>	FileDev
<b>Additional Log Category:</b>	EmailApp
<b>Root Log Category:</b>	BEA_EMAIL_1_0
<b>bseolocation:</b>	d:\beaiway\Adaptercfg
<b>Log Configuration File:</b>	BEA_EMAIL_1_0.xml
<b>Message Bundle Base:</b>	BEA_EMAIL_1_0

[Reconfigure connection parameters for EmailApp](#)

**Events**      [Add](#)

**eMailEvent**      [Edit](#)   [Remove Event](#)   [View Summary](#)   [View Event Schema](#)

**Services**      [Add](#)

[Continue](#)      [Save](#)   [?](#)

2. From the Application View Console Administration window, click Continue.

The Deploy Application View window opens.

**Figure 4-10 Deploy Application View Window**

Deploy Application View eMailEvent to Server - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address Back Links

Configure Connection Administration Add Service Add Event **Deploy Application View**

On this page you deploy your application view to the application server.

**Required Service Parameters**

Enable asynchronous service invocation? ☐

**Required Event Parameters**

Event Router URL\*

**Connection Pool Parameters**

Use these parameters to configure the connection pool used by this application view

Minimum Pool Size\*

Maximum Pool Size\*

Target Fraction of Maximum Pool Size\*

Allow Pool to Shrink? ☒

**Log Configuration**

Set the log verbosity level for this application view.

**Configure Security**

[Restrict Access to eMailEvent using J2EE Security](#)

Deploy ☒ Deploy persistently? Save

Done Local intranet

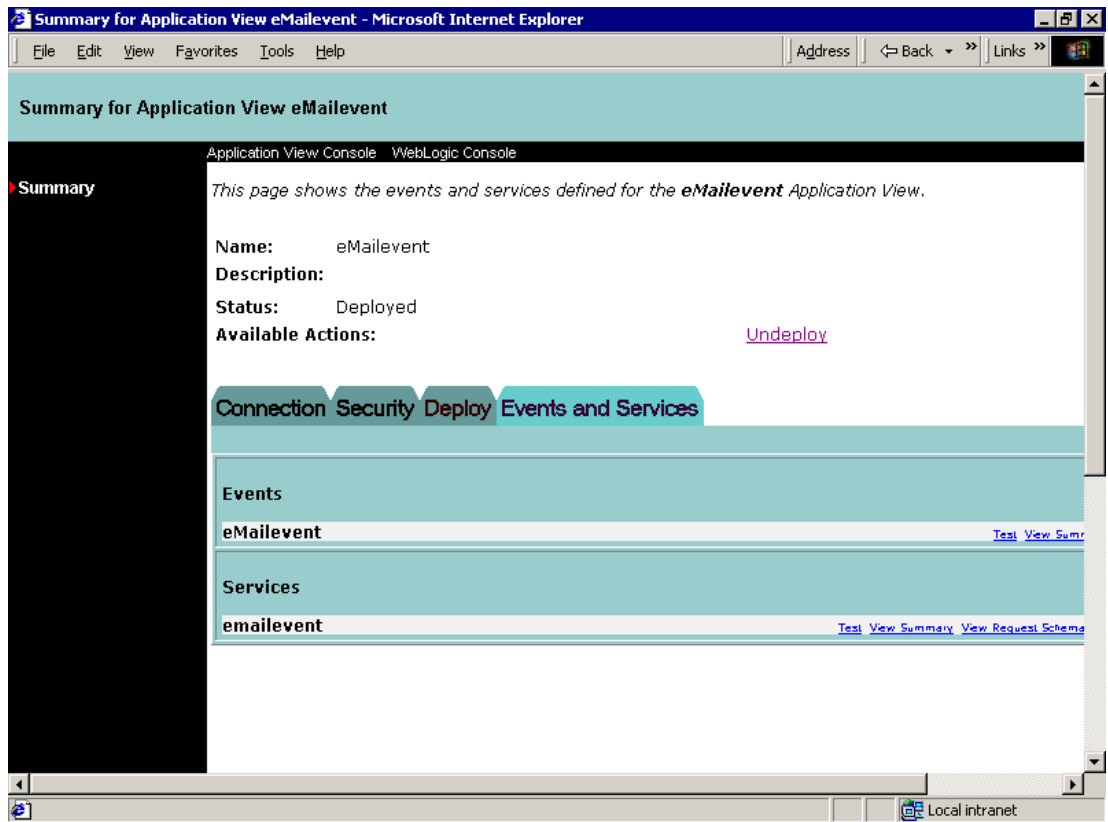
**Note:** To enable business process management functionality or other authorized clients to asynchronously call the services (if any) of this application view, select Enable asynchronous service invocation.

## 4 Service and Event Configuration

3. To deploy the application view, click Deploy Application View. The Summary for Application View window opens.

**Note:** You may choose to click Save and deploy the application later.

**Figure 4-11 Summary for Application View Window**



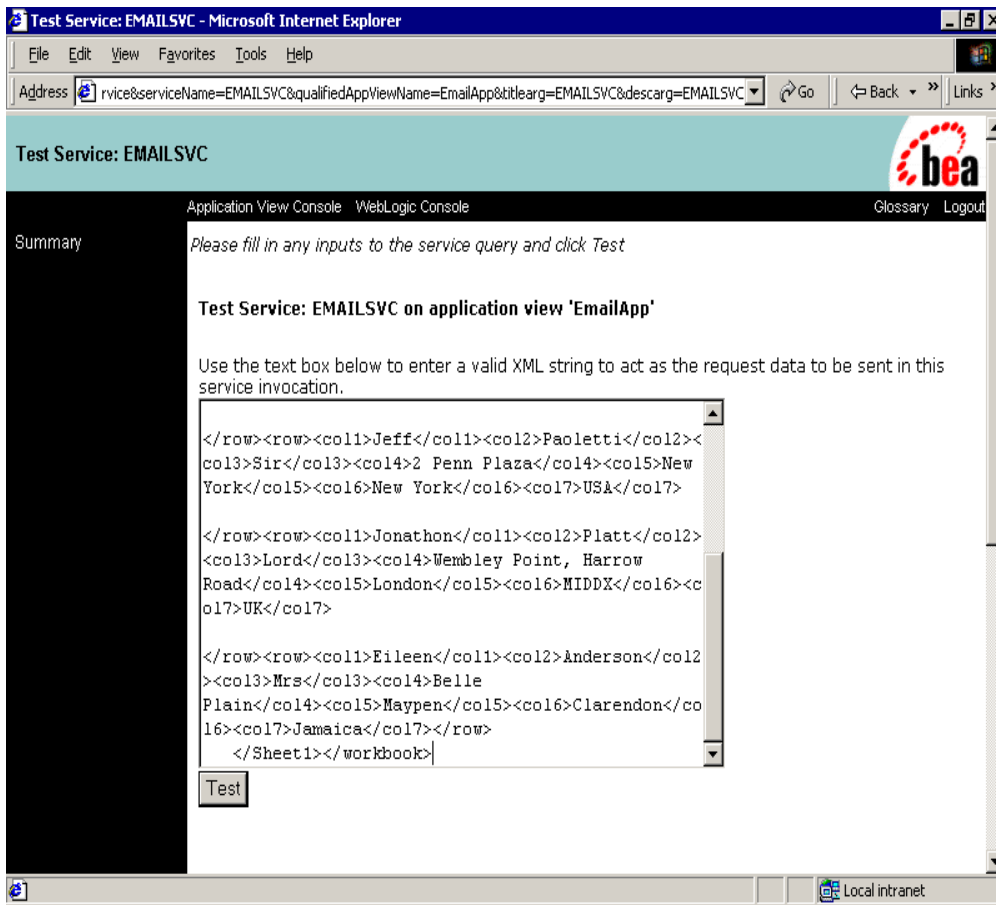
After you create and deploy an application view, you can test the services and events. For more information, see [“Testing a Service or Event”](#) on page 4-19.

# Testing a Service or Event

After you create and deploy an application view, you can test the services and events.

1. In the Summary for Application view window, click Test for the configured service or event. The Test service window opens.

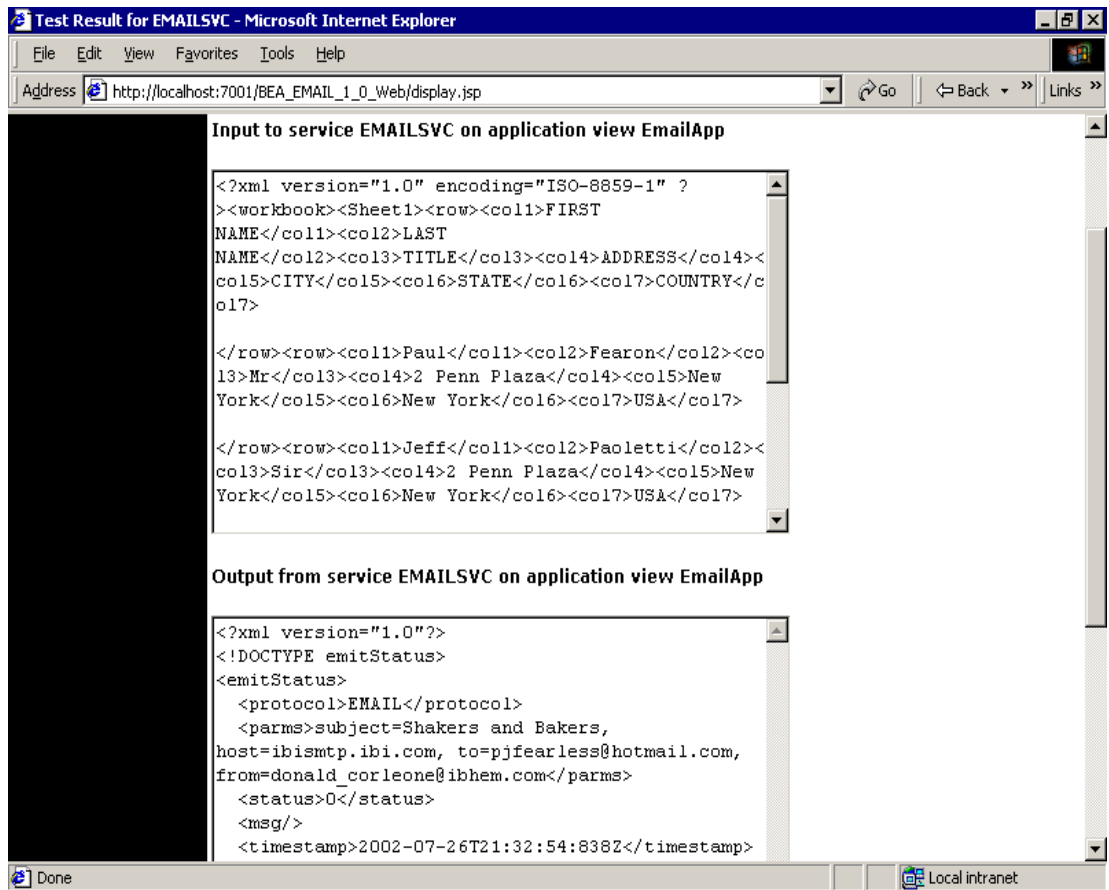
**Figure 4-12 Test Service Window**



## 4 Service and Event Configuration

2. Enter the required XML by cutting and pasting a sample XML document. You can use the sample `Headers.xml` supplied with the product.
3. Click Test. If your service or event has been configured correctly, you receive a response from the file emit process with a status code of "0." Also, you will find that the file has been written to the correct location.

**Figure 4-13 Test Service Window**





Once you have confirmed that the file has been written correctly (in the correct format, if transformation has been configured) your service or event has been successfully configured.

You can now write custom code to exploit the adapter or create a process flow in Studio. For more information, see “Using Application Views in the Studio” in *Using Application Integration*:

- For WebLogic Integration 7.0, see  
<http://edocs.bea.com/wli/docs70/aiuser/3usruse.htm>
- For WebLogic Integration 2.1, see  
[http://edocs.bea.com/wlintegration/v2\\_1sp/aiuser/3usruse.htm](http://edocs.bea.com/wlintegration/v2_1sp/aiuser/3usruse.htm)

## Email Attachments

The way an attachment is handled relies on factors such as the format of the body of the email. For instance, if the body of the email and the attachment to the email are in XML form, then the attached document can be merged with the body of the email and the new XML document can then be passed onto the workflow.

If the body of the email is in XML form, but the attached document is not or if the body of the email is not in XML form, then the attached document can be written to a file system, to be obtained and processed by another relevant adapter (for example the BEA WebLogic Adapter for File). The body of the email can still be transformed (if required).

Configuration options are available for all possibilities in the Service or Event configuration JSP pages.



# 5 BEA WebLogic Adapter for Email Integration Using Studio

This section describes how events are incorporated into workflow design. It contains the following topic:

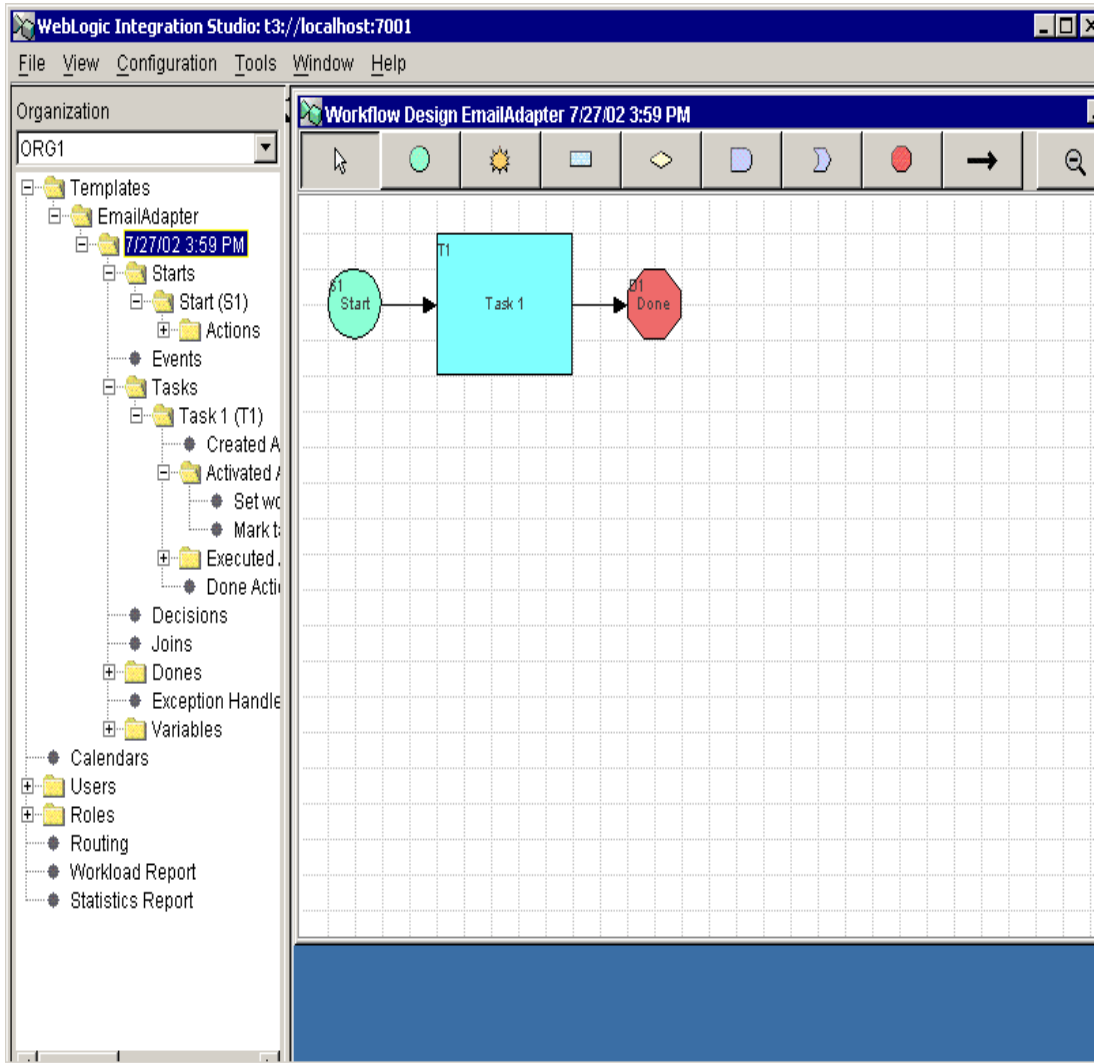
- [Business Process Management Functionality](#)

## Business Process Management Functionality

You can integrate your application view, including services and events, into WebLogic Integration business process management workflow tasks.

The following window depicts a simple workflow design to be triggered by an event described in [Chapter 3, “Defining an Application View for the BEA WebLogic Adapter for Email.”](#) The incoming event converts a document in e-mail form and utilizes a service to propagate the event to a workflow (for example, an Excel file taken from an e-mail is converted to XML and placed in a local file system). The event responds to the e-mail with an embedded Excel document, then converts the Excel document into XML format and propagates it (using the workflow) to the service.

**Figure 5-1 Workflow Design Window**



The following window depicts the sample Excel document being used in this process. This Excel file is contained in a zip file called `BEA_EMAIL_INSTALL.ZIP`, which is supplied with your installation package.

**Figure 5-2 Original Excel Document Window**

The screenshot shows the Microsoft Excel application window titled "Microsoft Excel - Headers.xls". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, and Help. The toolbar contains various icons for file operations and editing. Below the toolbar, there is a "Send this Sheet" button and a "Bcc" button. The email distribution list is visible with the following fields:

- To: pauls\_event\_listener@mymail.com
- Cc:
- Subject: shakers.xls

The main data area shows a table with the following columns: A (FIRST NAME), B (LAST NAME), C (TITLE), D (ADDRESS), E (CITY), F (STATE), G (COUNTRY), H, and I. The data rows are as follows:

	A	B	C	D	E	F	G	H	I
1	FIRST NAME	LAST NAME	TITLE	ADDRESS	CITY	STATE	COUNTRY		
2	Paul	Fearon	Mr	2 Penn Plaza	New York	New York	USA		
3	Jeff	Paoletti	Sir	2 Penn Plaza	New York	New York	USA		
4	Jonathon	Platt	Lord	Wembley Point, Harrow Road	London	MIDDX	UK		
5	Eileen	Anderson	Mrs	Belle Plain	Maypen	Clarendon	Jamaica		
6									
7									
8									

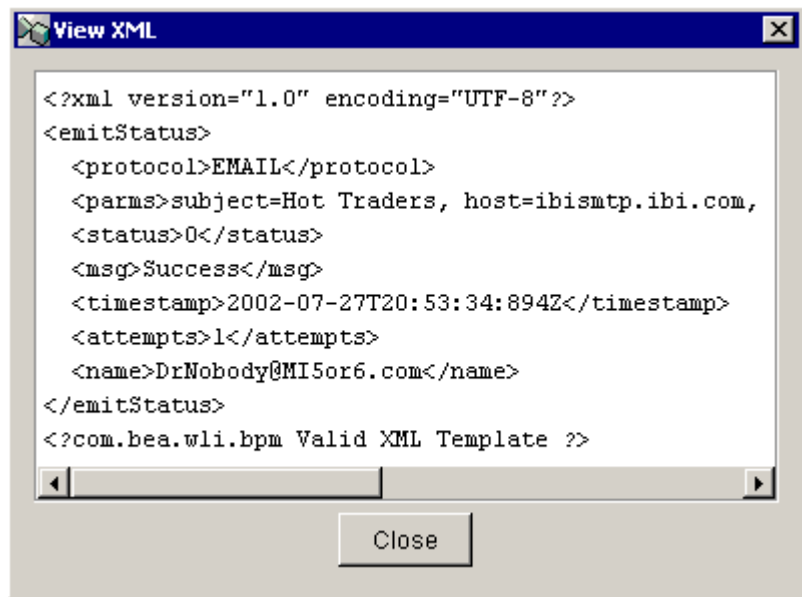
Starting with the original document, this process consists of the following steps:

1. The document is placed in an e-mail and sent to a recipient mailbox (for which the BEA WebLogic Adapter for Email event is configured), to be triggered by the arrival of the Excel document. The event has been pre-configured to convert the document from Excel to XML (using the `prepare` parameter).

Once the adapter completes the process, business process management workflow then propagates the XML document onto the BEA WebLogic Adapter for Email service (configured to send the XML document to an e-mail address). The service can easily be configured to convert the XML passed to it (by the event router) to another supported format (for example, CSV, HL7, or HIPAA).

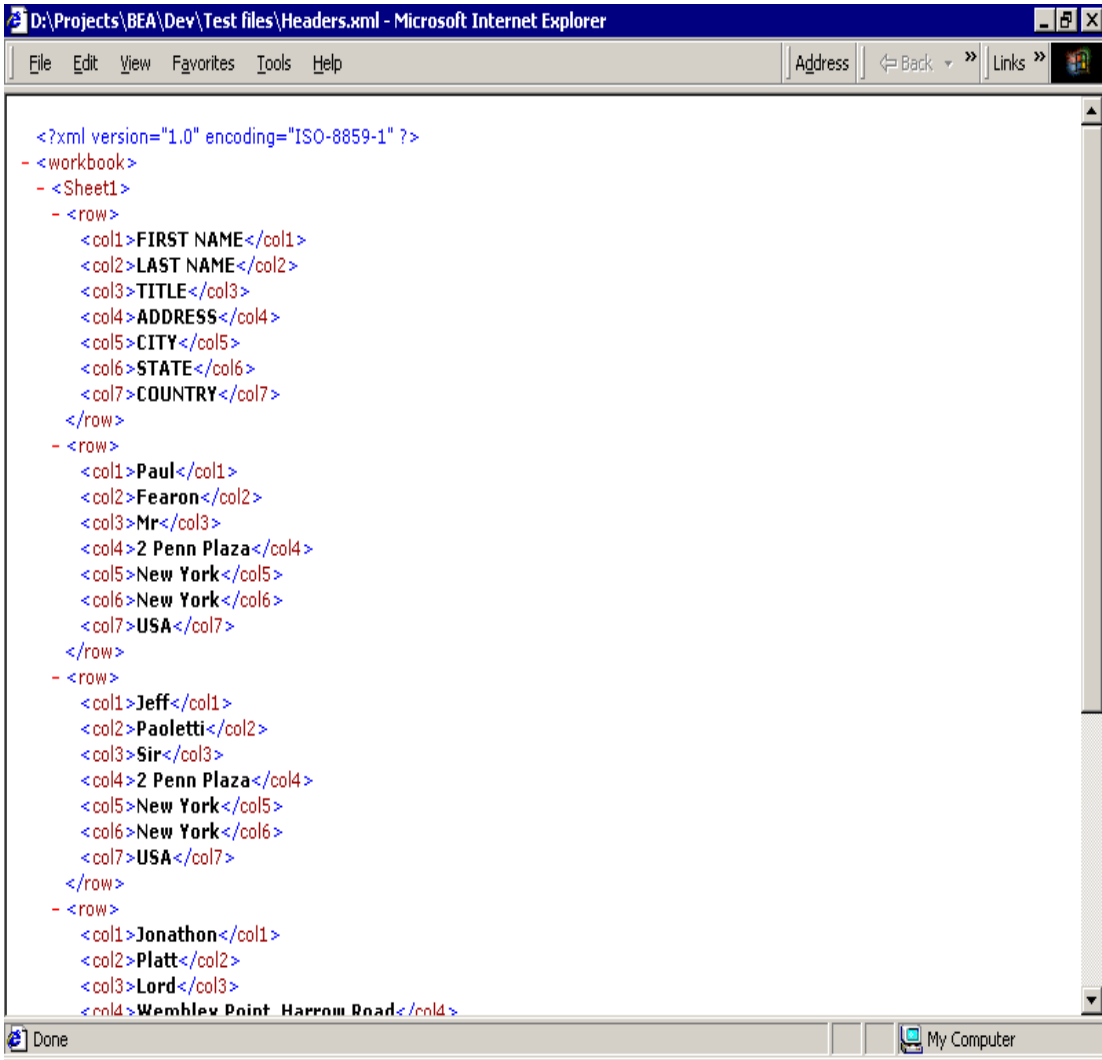
2. Once the service has completed its task, the emission report is returned to the workflow.

**Figure 5-3** Emission Report Window



3. The resulting XML file can then be used with back-end systems that may be expecting an XML document embedded in an e-mail configured by the BEA WebLogic Adapter for Email service.

Figure 5-4 XML File Window







# 6 Transforming Document Formats

This section describes how to utilize Message Format Language (MFL) files to transform a document. It contains the following topic:

- [Message Format Language Transformations](#)

## Message Format Language Transformations

The BEA WebLogic Adapter for Email supports custom defined transformations defined using the WebLogic Integration Format Builder. Once defined and tested, the adapter can utilize these Message Format Language files to apply transformation to an incoming document. [Chapter 3, “Defining an Application View for the BEA WebLogic Adapter for Email,”](#) describes how to configure events and services to use a Message Format Language transformation. This section provides a brief overview of how a Message Format Language template is built and tested using the Format Builder, and how this template can then be tested (once deployed in a application view) using the BEA WebLogic Adapter for Email.

For more information about Message Format Language transformations, see the “Building Format Definitions” in *Translating Data*:

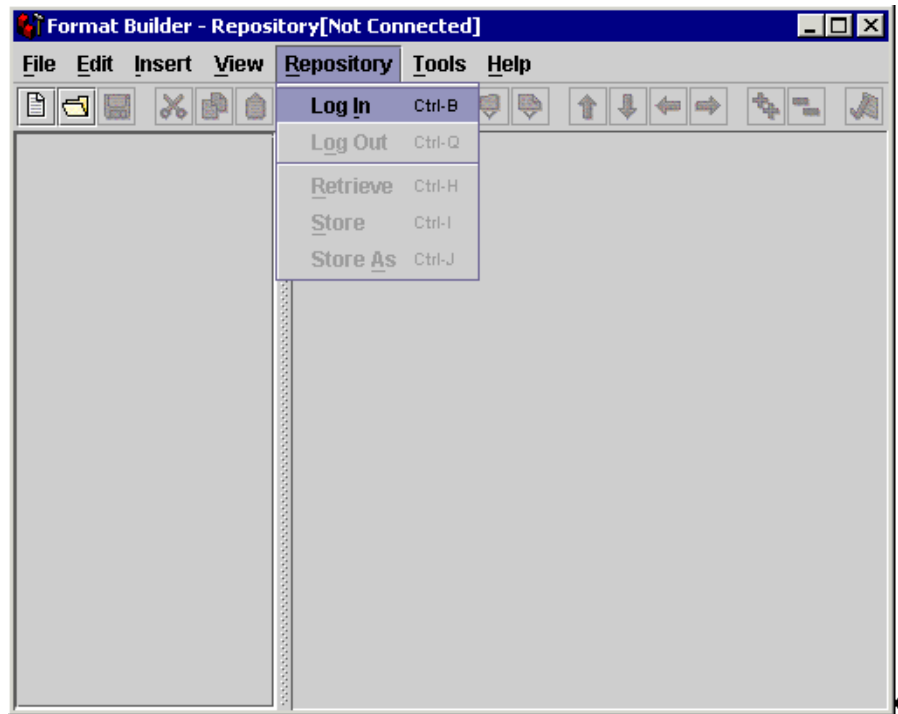
- For WebLogic Integration 7.0, see <http://edocs.bea.com/wli/docs70/diuser/fmtdef.htm>
- For WebLogic Integration 2.1, see [http://edocs.bea.com/wlintegration/v2\\_1sp/diuser/fmtdef.htm](http://edocs.bea.com/wlintegration/v2_1sp/diuser/fmtdef.htm)

## 6 Transforming Document Formats

To test using the sample Message Format Language file supplied with this product (Sprockets\_PO.mfl), follow the procedure outlined below:

1. From the Windows Start menu, choose Programs→BEA WebLogic E-Business Platform→WebLogic Integration 2.1→Format Builder. The Format Builder window opens.

**Figure 6-1 Format Builder Repository Window**



2. Choose Log In from the Repository menu. The WebLogic Integration Repository window opens.

**Figure 6-2 WebLogic Integration Repository Login Window**

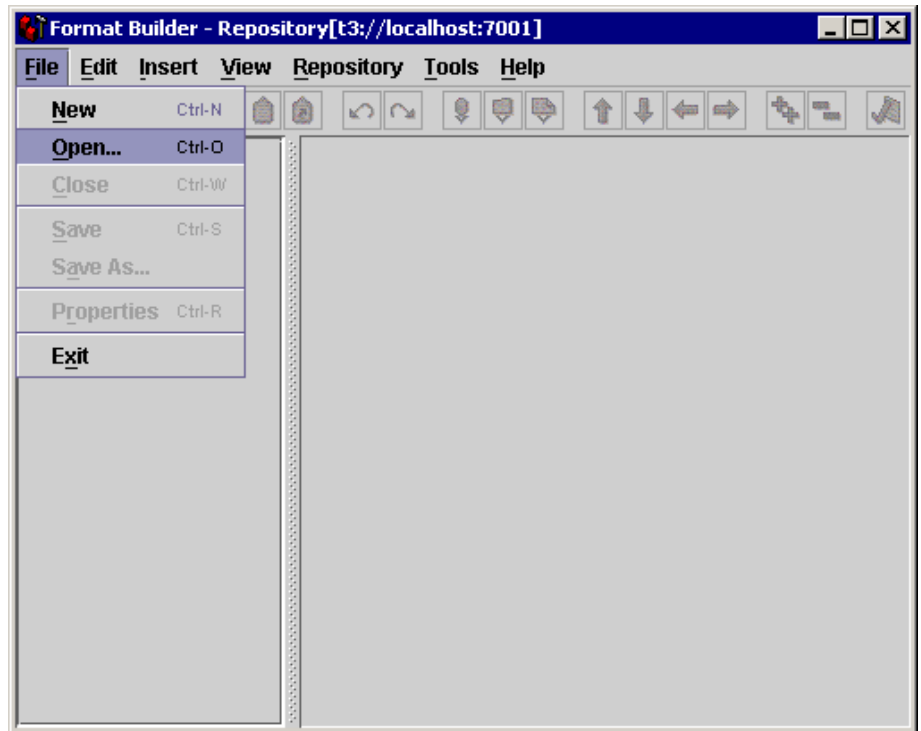


3. Enter your user name and password and click Continue.

After successfully signing on, you can import the sample Message Format Language template.

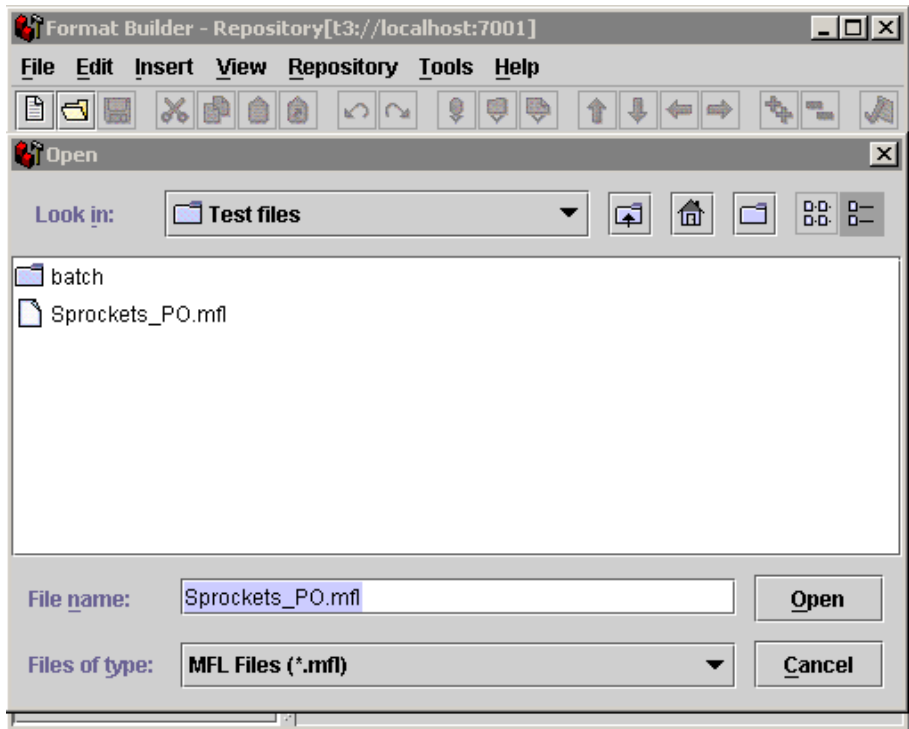
4. Choose Open from the File menu.

**Figure 6-3** Format Builder - Repository Window



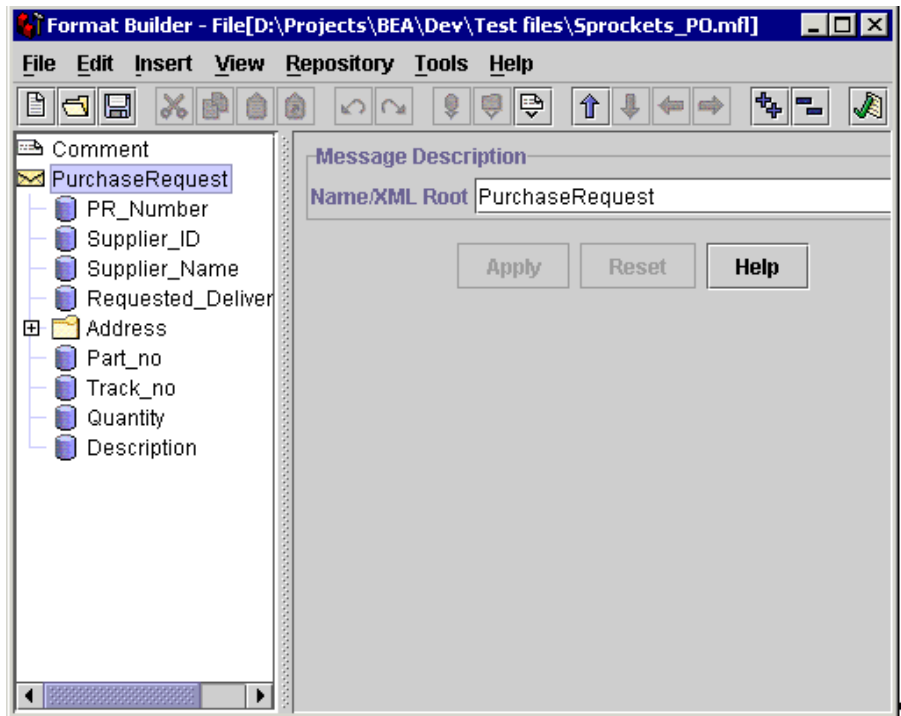
5. Select the `Sprockets_PO.mfl` file that is supplied in the `BEA_SAMPLES.zip` file.

**Figure 6-4 Format Builder - Repository Window**



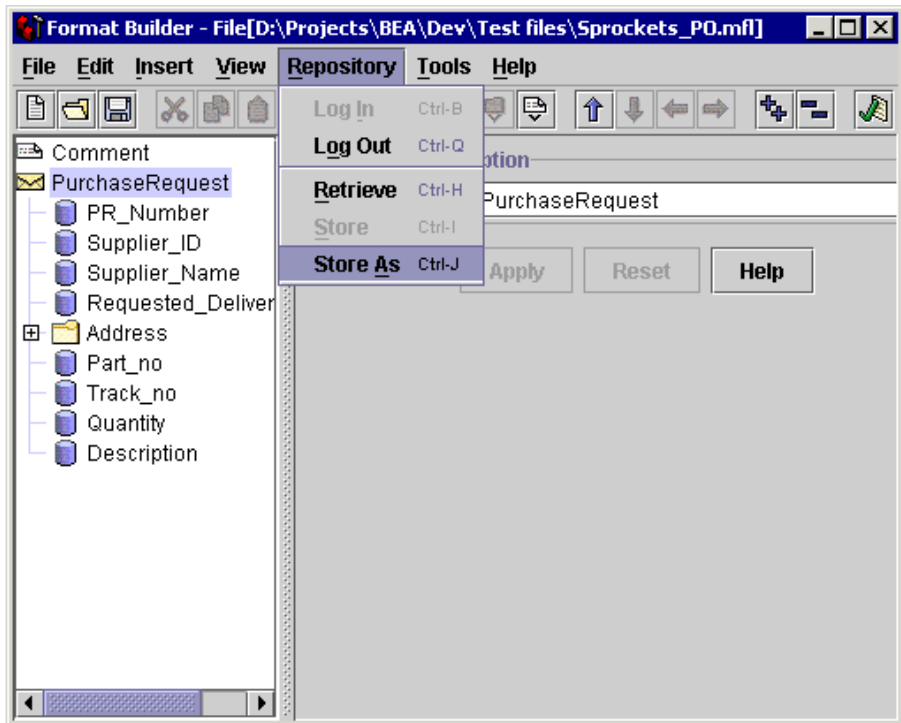
6. Double-click the PurchaseRequest envelope to expand the field definitions below and to see how field types are defined.

**Figure 6-5 Format Builder Window**



7. Choose Store As from the Repository menu.

**Figure 6-6 Format Builder Window**



8. Give your MFL a name and store it in the root folder or any folder you desire. In this example, the MFL PurchaseOrder is stored in a folder called SprocketsRus.

**Figure 6-7 Store Document Window**

The screenshot shows a 'Store Document' dialog box with a blue title bar. Below the title bar is a 'Current Folder:' label and a text field containing 'SprocketsRus'. To the right of the text field are three icons: a folder, a folder with a star, and a folder with a lightning bolt. Below this is a large empty rectangular area. At the bottom, there is a section with labels 'Name:', 'File Type:', 'Description:', and 'Notes:'. The 'Name:' field contains 'PurchaseOrder'. The 'File Type:' is a dropdown menu showing 'MFL Files'. The 'Description:' and 'Notes:' fields are empty. Above the 'Name:' field is a note: 'There is no need to enter file extensions.' To the right of the input fields are two buttons: 'Store' and 'Cancel'.

Once you have stored the adapter service or event, you can test it by configuring it as documented in [Chapter 3, “Defining an Application View for the BEA WebLogic Adapter for Email.”](#) To test this document, use the sample documents supplied in the BEA\_SAMPLES.zip file. Sprockets\_PO.txt can be used to test inbound transformations (for example, event and service File Read operations) or Sprockets\_PO.xml to test outbound service operations. For service and event File Read tests, place the file (Sprockets\_PO.txt) in the location that is being polled for the document. For service tests, the contents of the Sprockets\_PO.xml must be copied and pasted into the text window in the test screen.