BEA WebLogic Adapter for SAP®

User Guide

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BEA WebLogic Adapter for SAP **User Guide**

Part Number	**Date**
N/A	October 2002

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About This Document

The BEA WebLogic Adapter for SAP is organized as follows:

- Chapter 1, “Introducing the BEA WebLogic Adapter for SAP,” introduces the BEA WebLogic Adapter for SAP and describes SAP business objects and WebLogic Integration.
- Chapter 2, “Creating Schemas for SAP Business Objects,” describes how to use the BEA Application Explorer to generate schemas for your SAP business objects.
- Chapter 3, “Configuring the BEA WebLogic Adapter for SAP,” describes how to configure the event adapter and service adapter.
- Chapter 4, “The BEA WebLogic Adapter for SAP and IDocs,” describes how to configure and test SAP to send IDocs to the event adapter.
- Chapter 5, “Sending SAP Events Using ABAP Programs,” describes how to send events programmatically using the BEA WebLogic Adapter for SAP.
- Appendix A, “Sample Files,” provides sample request and response documents sent between SAP and the BEA WebLogic Adapter for SAP.

What You Need to Know

This document is written for system integrators who develop client interfaces between SAP and other applications. It describes how to use the BEA WebLogic Adapter for SAP in order to integrate SAP IDocs, RFCs, and BAPIs with WebLogic Integration. It is assumed that readers know Web technologies and have a general understanding of Microsoft Windows and UNIX systems as well as the WebLogic Integration and WebLogic Server infrastructure.

Related Information

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

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

  `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`

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

If you have any questions about this version of BEA WebLogic Adapter for SAP, or if you have problems using the BEA WebLogic Adapter for SAP, contact BEA Customer Support through BEA WebSupport at `www.bea.com`. You can also contact Customer Support by using the contact information provided on the Customer Support Card that 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
boldface text	Indicates terms defined in the glossary.
Ctrl+Tab	Indicates that you must press two or more keys simultaneously.
italics	Indicates emphasis or book titles.

`monospace text`	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.
	Examples:
	`#include <iostream.h> void main ( ) the pointer psz`
	`chmod u+w *`
	`\tux\data\ap`
	`.doc`
	`tux.doc`
	`BITMAP`
	`float`

`monospace boldface text`	Identifies significant words in code. *Example*: `void` **`commit`** `( )`
`monospace italic text`	Identifies variables in code. *Example*: `String` *`expr`*
UPPERCASE TEXT	Indicates device names, environment variables, and logical operators. *Example*s: LPT1 SIGNON OR

Convention	Item
`{ }`	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.
	Example:
	`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:
	■ That an argument can be repeated several times in a command line
	■ That the statement omits additional optional arguments
	■ That you can enter additional parameters, values, or other information
	The ellipsis itself should never be typed.
	Example:
	`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.

CHAPTER

1 Introducing the BEA WebLogic Adapter for SAP

This section introduces the BEA WebLogic Adapter for SAP and describes SAP business objects and WebLogic Integration. It includes the following topics:

- WebLogic Integration
- How the BEA WebLogic Adapter for SAP Works

You can use the BEA WebLogic Adapter for SAP to mine your existing SAP business procedures and applications for reuse with other applications and to participate in distributed e-business processes. High-speed, low-impact access to SAP exposes the critical business logic, and the data contained within, for reuse. This is the key to building a successful e-business or integrated enterprise.

The BEA WebLogic Adapter for SAP is designed specifically to provide simple, standard access to business objects such as SAP Remote Function Call (RFC) modules, BAPIs (Business Application Programming Interfaces), and IDocs (Intermediate Documents), which are used to support existing business processes.These business objects are available to the service adapter as requests of SAP, and are available to the event adapter when SAP invokes its remote requests. They work in the following way:

- **Remote Function Call (RFC)** modules are sessions established from the calling application to the SAP system. A user ID is logged on and then a call is issued, triggering processing inside the call. When the call is processed it usually returns information, such as a return code and application data. The calling application waits for processing to complete, then receives the data. It continues processing, taking the result into account. It can even issue multiple RFCs during one session.
- **Business Application Programming Interfaces (BAPIs)** are interfaces within the business framework, which are used to link SAP components to one another or to third-party components. BAPIs are called synchronously and return information. For BAPIs, the client needs to do the appropriate error handling.
- **Intermediate Documents (IDocs)** are documents that are processed asynchronously– that is, no information is returned to the client. As soon as one asynchronous method is involved, the overall communication flow is asynchronous. As a result, the sender should not be on standby awaiting an answer.

The BEA WebLogic Adapter for SAP quickly and easily integrates your SAP IDocs, RFCs, and BAPIs via WebLogic Integration workflows. The adapter and WebLogic Integration provide all the functionality you need to integrate your mission critical SAP system with other enterprise applications. Adapter benefits include:

- Eliminating the need for custom coding.
- Running SAP IDocs, BAPIs, and RFCs both synchronously and asynchronously from WebLogic Integration.
- Allowing SAP to initiate bidirectional business process management workflows using the event adapter.
- Creating application views directly from SAP metadata using BEA Application Explorer.

- As a JCA and JMS-based service and event adapter, ensuring reusability from the entire WebLogic Server platform.
- Integrating SAP events and services with WebLogic Integration.

WebLogic Integration

WebLogic Integration is a single solution that delivers application server, application integration, business process management, and B2B integration for the enterprise. With its comprehensive business process management capabilities, WebLogic Integration provides a powerful J2EE, EJB, and XML-based business process engine that enables customers to design, execute, and optimize enterprise-wide business processes involving systems, applications, and human decision makers.

These enterprise-wide solutions require integration with both external and internal systems in order for projects to be successful. Some of these systems are packaged applications in which organizations have made a substantial investment of time and money. To justify the investments, these systems must be accessible from WebLogic Integration. While some user organizations attempt to manually integrate JCA-based connections to the packaged applications, and even achieve limited success in these efforts, most organizations take the recommendations of industry analysts in seeking out vendor-supplied application adapters.

SAP R/3 is probably the most widely used packaged application that must be accessible from WebLogic Integration for companies to successfully complete their integration projects. The BEA WebLogic Adapter for SAP allows an organization to fully integrate its SAP R/3, mySAP.com, SAP Markets, or SAP Portals application systems with virtually any other legacy system, DBMS, EDI, B2B, ERP, CRM, or SCM application on any platform.

How the BEA WebLogic Adapter for SAP Works

The paradigm that the BEA WebLogic Adapter for SAP uses includes application views, event adapters, and services adapters. An application view is a standard self-describing interface to an application. The BEA WebLogic Adapter for SAP services are exposed in WebLogic Integration Studio using design elements, or plug-ins, known as nodes. These include Task nodes, which specify the operations to be performed by a BEA WebLogic Adapter for SAP, and Event nodes, which set the business processes that occur when a specific event is “pushed” from the adapter.

For outbound processing, the BEA WebLogic Adapter for SAP is invoked from the Action node and will, in turn, perform a transaction against SAP using the IFR XML, BAPI, RFC, or IDoc interfaces. For inbound processing, the adapter converts the specific SAP event into an XML document that triggers the start of a business process.

The BEA WebLogic Adapter for SAP interfaces are exposed as application views, providing the XSD XML schemas for event, request, and response document schemas that are imported into the WebLogic Integration repository. Once WebLogic Integration knows of these documents, they can be used in WebLogic Integration Studio and other WebLogic Integration tools. In addition, since application views are supported by the WebLogic Server strategy, the same BEA WebLogic Adapter for SAP can be leveraged by other WebLogic Server JCA-based applications to increase ROI.

The BEA WebLogic Adapter for SAP enables users to execute SAP IFR XML, IDocs, BAPI calls, and custom RFCs from WebLogic Integration as application views. To do this, the user creates the event, request, and response XML document schemas using BEA Application Explorer, which is implemented as a stand-alone Java Swing GUI. This GUI exposes all the components of your SAP system and enables you to select the ones for which you want to create an application view. By connecting the BEA Application Explorer to your SAP system, you can ensure that all the necessary communication and security information is gathered using SAP calls, and then stored in a WebLogic Integration Connection Factory database, to be used at execution time by the BEA WebLogic Adapter for SAP. This allows the application views to separate the business logic—contained in the XML event, request, and response documents—

from the physical connection data, which is stored in the WebLogic Integration repository. This shields users from the details of executing SAP IFR XML, IDoc, BAPIs, and RFCs.

The deployed application view from BEA WebLogic Adapter for SAP has the following features:

- Support for Remote Function Calls (RFC), Business Application Programming Interfaces (BAPI), and Intermediate Documents (IDoc) interfaces to SAP. RFCs and BAPIs are called synchronously by the adapter and always return data (either technical error information or a well-formed response document). IDocs are processed asynchronously.
- Consistent data representation—a standard XML representation of event and service request/response documents for SAP. The developer is freed from the specific details of the SAP interface (BAPI, RFC, IDoc, IFR XML) and the specific configuration details of the target SAP system.
- XML validation. The schemas used by WebLogic Integration are validated against SAP Business Object Repository (BOR) to ensure that each message conforms to the correct configuration of the target SAP system. Since the schemas are built dynamically from the target SAP system, this all but eliminates the possibility of errors in formatting or executing SAP requests.
- Adheres to SAP ABAP serialization rules and SAP Interface Repository standards published by SAP AG.

Besides being able to run SAP IFR XML, IDocs, BAPIs, and RFCs from WebLogic Integration, the adapter can also receive RFCs and IDocs directly from SAP and make them available to WebLogic Integration. The SAP system can be configured to send an IDoc or RFC out to a logical system when a certain event occurs. The output sent by SAP can be in any of these forms:

- An RFC request—for example, `RFC_CUSTOMER_GET`.
- A BAPI request—for example, `BAPI_COMPANYCODE_GETLIST`.
- An IDoc as an XML document—for example, `DEBMAS01`.
- An IDoc in raw data form.

2 Creating Schemas for SAP Business Objects

This section describes how to use the BEA Application Explorer to generate schemas that describe your SAP business objects. It contains the following topics:

- Overview
- Generating Schemas Using the BEA Application Explorer

Overview

The BEA WebLogic Adapter for SAP, in order to interact with your SAP business objects, requires schemas describing those objects. You can generate the schemas using the BEA Application Explorer:

1. Specify the directory in which you want the schemas to reside.
2. Browse your SAP system to identify the business object for which you want to create a schema.
3. Generate the schema.

   You can create an event schema describing the data that the SAP system sends to the event adapter, or a pair of request and response schemas for service calls from the service adapter to SAP.

Note: It is important to understand that the connection information and the event, request, and response schema information that you enter and that is created by the BEA Application Explorer, directly affects the connections, events, and services available to the BEA WebLogic Adapter for SAP.

Service adapter requests are Remote Procedure Calls (RPCs) sent by the service adapter to SAP for execution. The request runs a process through the application system connection. The request specifies input parameters that are described by its request schema. For each adapter, the BEA Application Explorer displays summary information and request details. The service request expects a response, called a service adapter response.

Service adapter responses are answer sets returned from the application system connection in response to a service request. SAP uses service responses to return results to the service adapter. A service response is described by its service response schema.

Events are requests arriving from SAP that are triggered by SAP activity. For example, a call center worker may enter a purchase order or update a customer record through a GUI screen connected directly to SAP. This SAP event may trigger a process that makes a remote call to the BEA WebLogic Adapter for SAP, which arrives at the event adapter.

Business Objects are the available SAP RFC modules, BAPI methods, and IDocs that appear in the BEA Application Explorer when you connect to the SAP system.

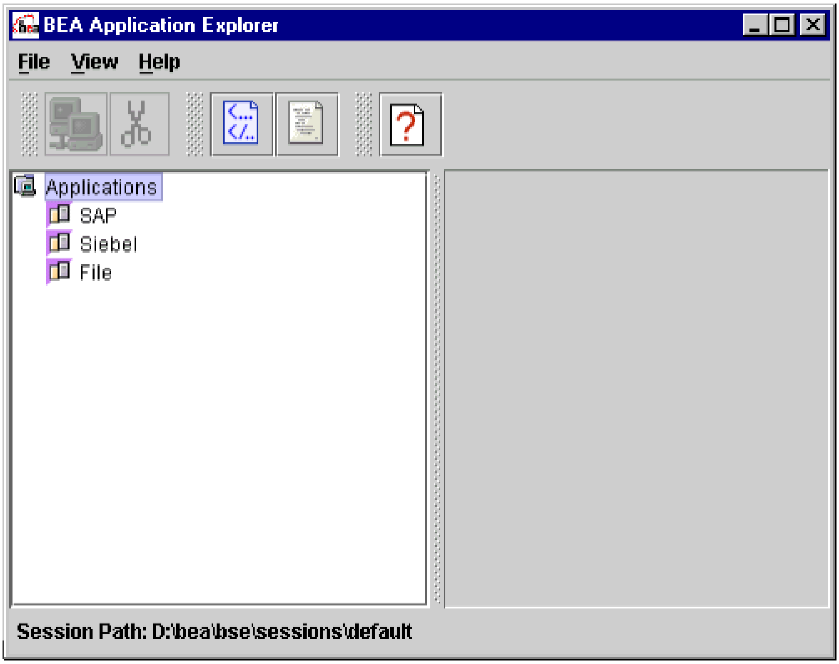
For comprehensive information about the BEA Application Explorer, see the BEA Application Explorer *Installation & Configuration Guide*.

Generating Schemas Using the BEA Application Explorer

To generate schemas for an SAP business object using the BEA Application Explorer:

1. Open the BEA Application Explorer:
   - From the Windows Start menu, navigate to the Programs menu and choose the command for the BEA Application Explorer.
   - On other platforms, run the `startup script beabse.sh` or Java command `java com.ibi.common.ui.StartPanel`.

Figure 2-1 BEA Application Explorer Initial Window

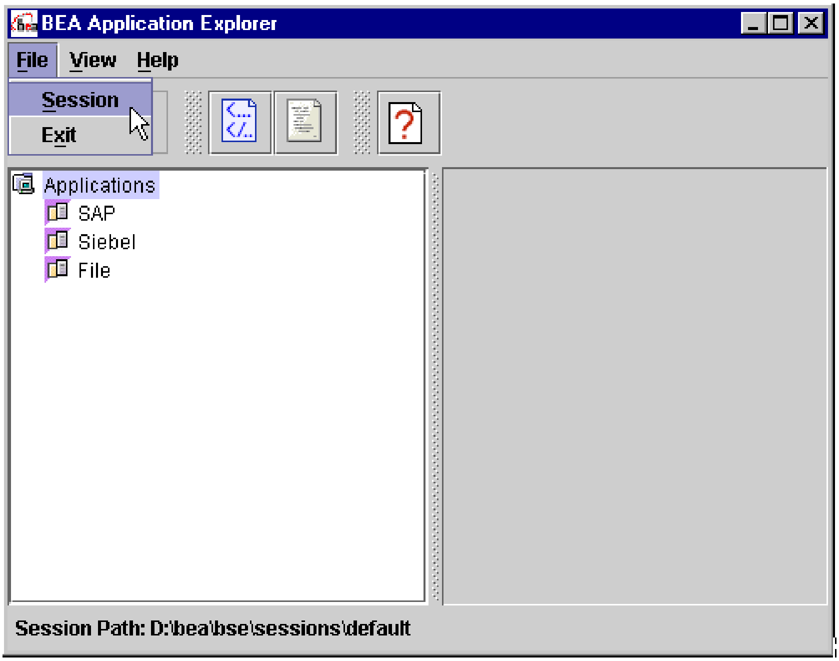


Session Path: D:\bea\bse\sessions\default

2. From the File menu, choose Session to change the default session path.

   The session path is where the schemas you are created will be stored.

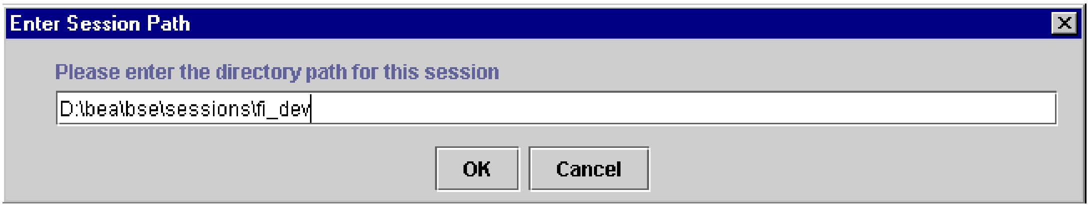
Figure 2-2 BEA Application Explorer Window - Selecting Session from File



Session Path: D:\bea\bse\sessions\default

3. Enter a session path. You may want to specify one that corresponds to your project or logical grouping of services and events.

Figure 2-3 Enter Session Path Window



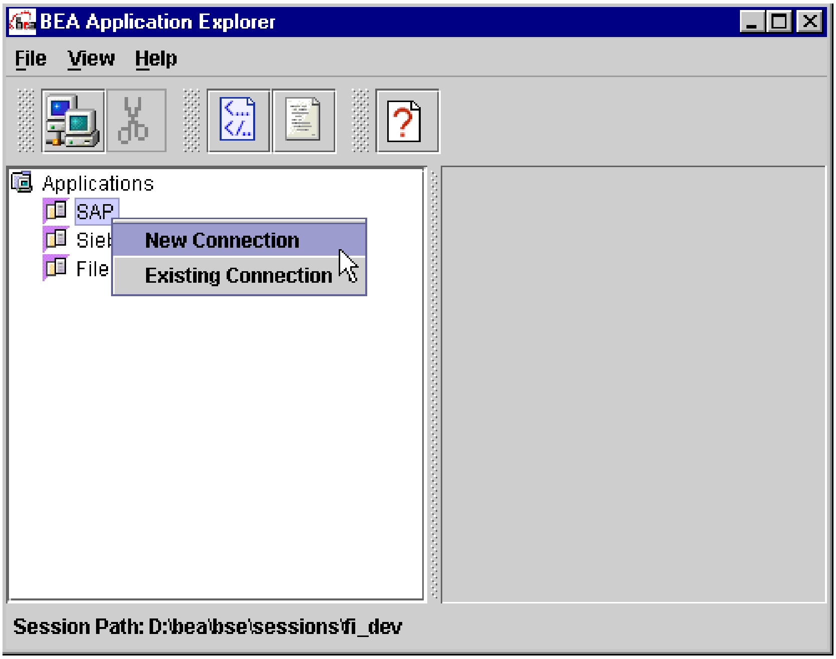
Please enter the directory path for this session

D:\bea\bse\sessions\fi_dev

4. Right-click SAP and choose New Connection to create a new connection, or Existing Connection and the specific connection for an existing connection.

   If you specified an existing connection, skip ahead to step 8; otherwise, continue with step 5.

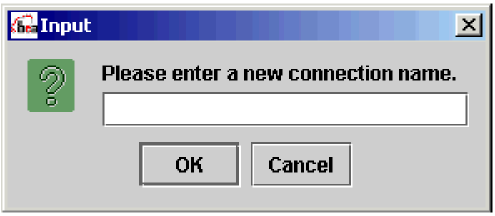
Figure 2-4 BEA Application Explorer Window - Selecting New Connection



Session Path: D:\bea\bse\sessions\fi_dev

5. Enter a descriptive name for this connection and click OK.

Figure 2-5 Enter New Connection Name Input Window



Please enter a new connection name.

6. Enter the appropriate connection information in the System and the User tabs.

7. Click OK when completed.

Figure 2-6 SAP Logon Window - System Tab

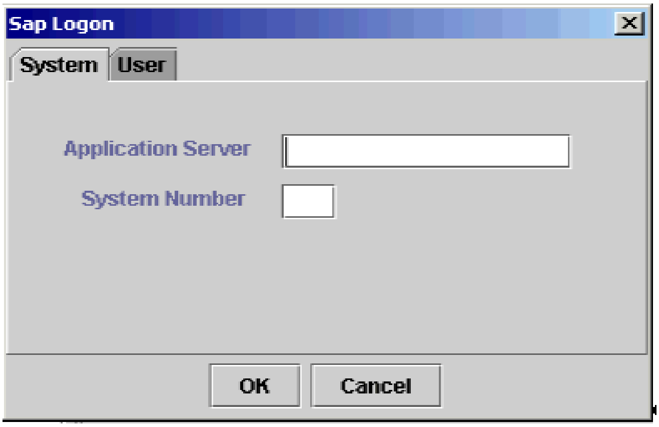
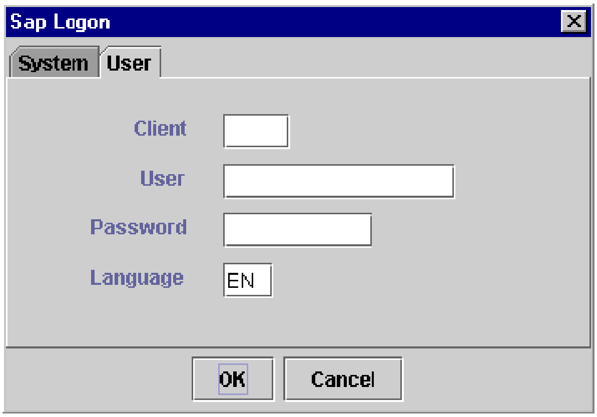


Figure 2-7 SAP Logon Window - User Tab

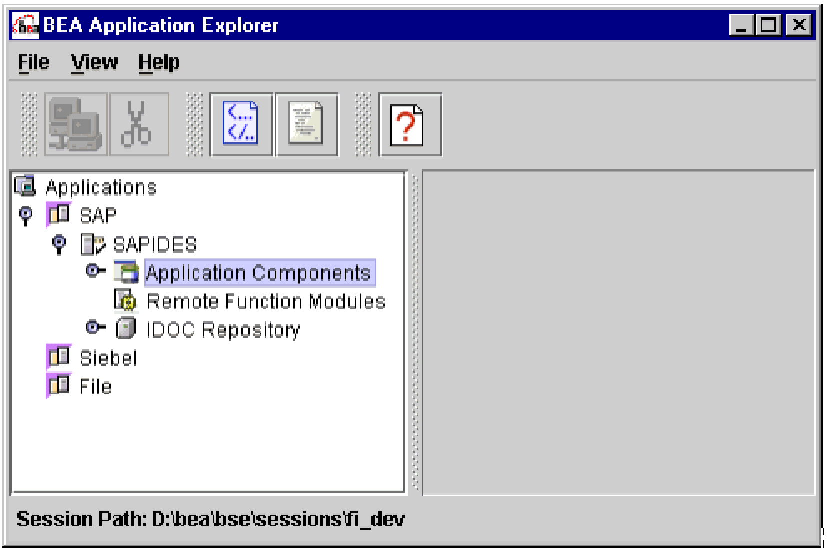


Language: EN

8. Select a type of business object, browse its objects, and select the object for which you wish to create a schema. Note that:

   - BAPIs are listed under Application Components.
   - RFCs are listed under Remote Function Modules.
   - IDocs are listed under IDOC Repository.

Figure 2-8 BEA Application Explorer - Selecting Application Components

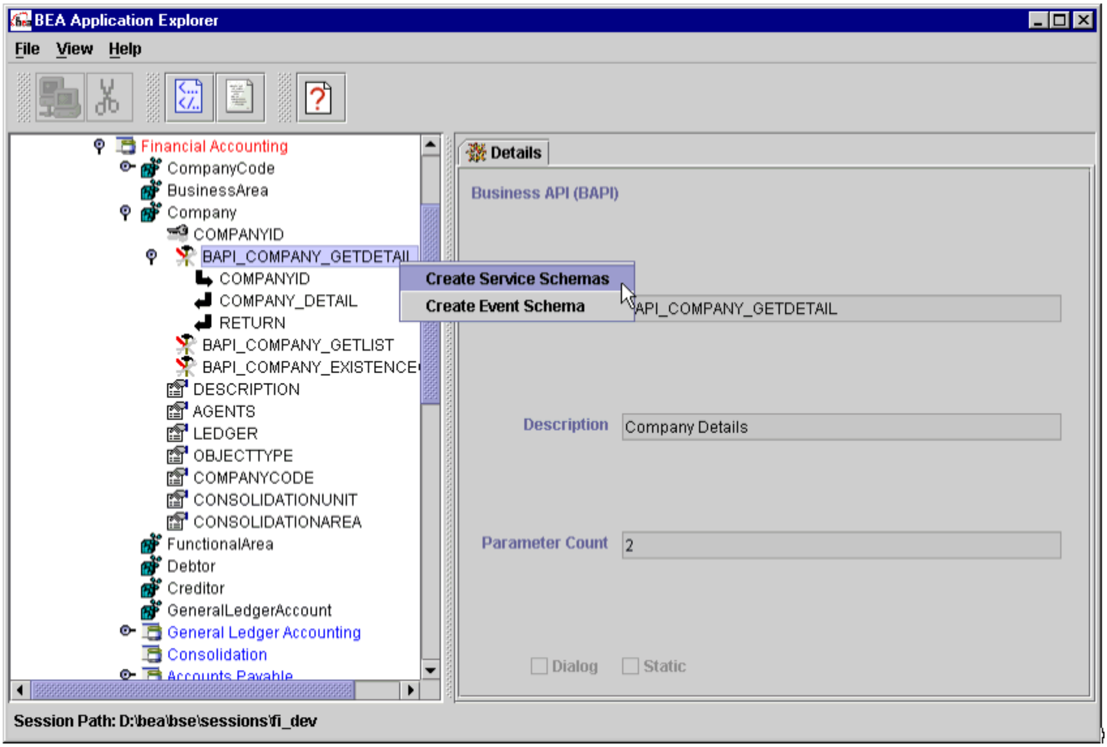


Session Path: D:\bea\bse\sessions\fi_dev

In this example, navigate through Application Components into Financial Accounting, Company and select the BAPI named `BAPI_COMPANY_GETDETAIL`.

9. Right-click the desired business object to create the service schema or event schema.

Figure 2-9 BEA Application Explorer - Selecting a BAPI and Choosing Creating Service Schema



Business API (BAPI) API_COMPANY_GETDETAIL

Description Company Details

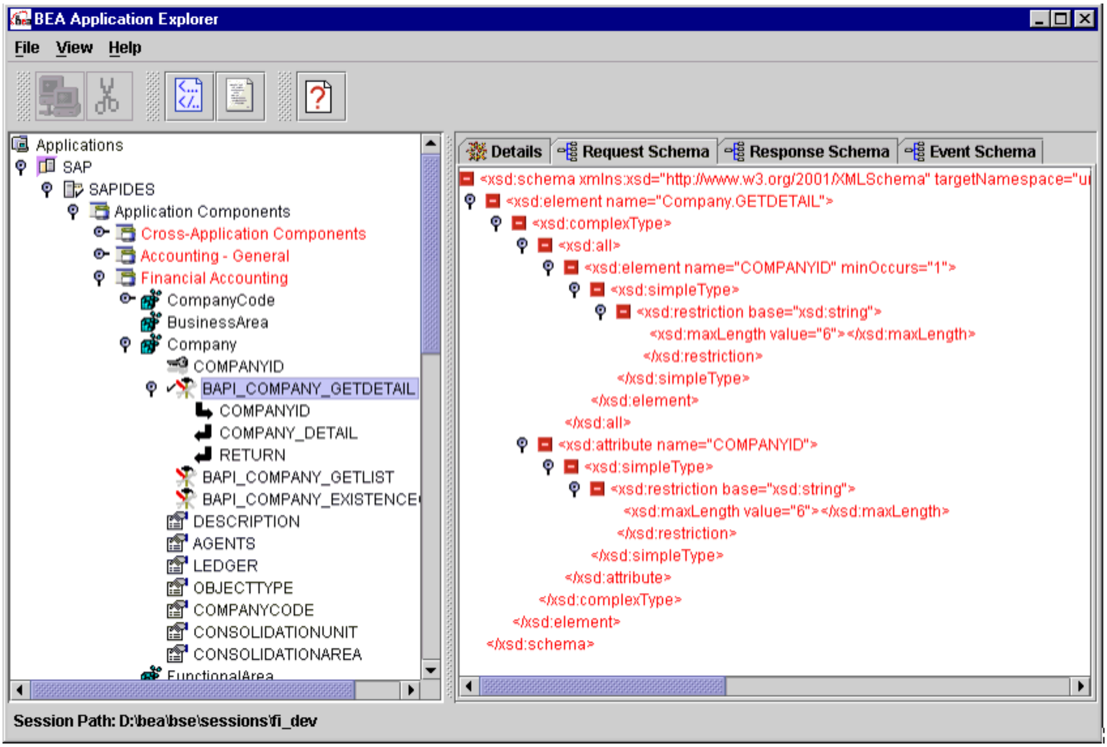
Parameter Count 2

□ Dialog □ Static

Session Path: D:\bea\bse\sessions\fi_dev

After the schemas are created, the right pane displays the different schemas when you select the appropriate tabs.

Figure 2-10 BEA Application Explorer - Displaying the BAPI's Schemas

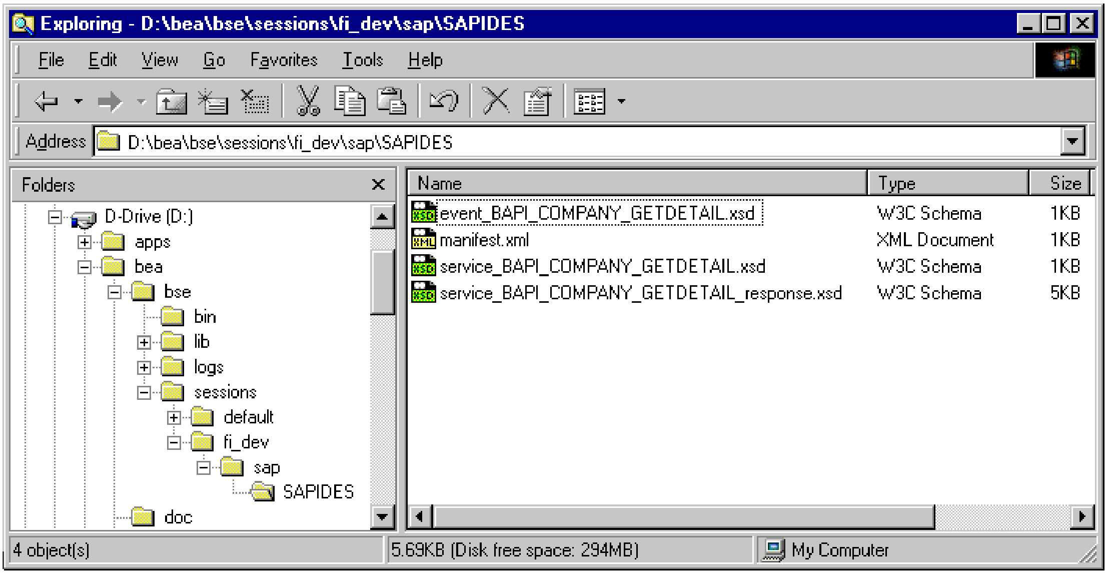


```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" targetNamespace="u
  <xsd:element name="Company.GETDETAIL">
    <xsd:complexType>
      <xsd:all>
        <xsd:element name="COMPANYID" minOccurs="1">
          <xsd:simpleType>
            <xsd:restriction base="xsd:string">
              <xsd:maxLength value="6"></xsd:maxLength>
            </xsd:restriction>
          </xsd:simpleType>
        </xsd:element>
      </xsd:all>
      <xsd:attribute name="COMPANYID">
        <xsd:simpleType>
          <xsd:restriction base="xsd:string">
            <xsd:maxLength value="6"></xsd:maxLength>
          </xsd:restriction>
        </xsd:simpleType>
      </xsd:attribute>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

Session Path: D:\bea\bse\sessions\fi_dev

The following is a sample directory structure generated for the SAP connection named `SAPIDES` under the session named `fi_dev`.

Figure 2-11 Explorer Window - Directory Structure for an SAP connection



Exploring - D:\bea\bse\sessions\fi_dev\sap\SAPIDES

Address D:\bea\bse\sessions\fi_dev\sap\SAPIDES

```
D-Drive (D:)
    apps
    bea
        bse
            bin
            lib
            logs
            sessions
                default
                fi_dev
                    sap
                        SAPIDES
        doc
```

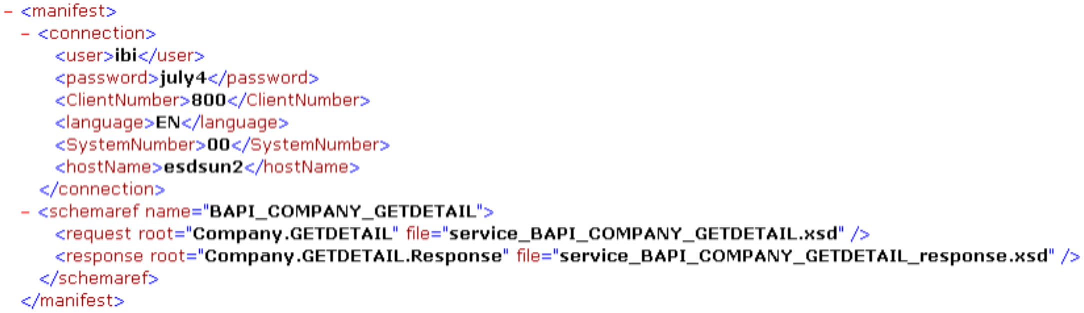
Name	Type	Size
event_BAPI_COMPANY_GETDETAIL.xsd	W3C Schema	1KB
manifest.xml	XML Document	1KB
service_BAPI_COMPANY_GETDETAIL.xsd	W3C Schema	1KB
service_BAPI_COMPANY_GETDETAIL_response.xsd	W3C Schema	5KB

4 object(s) | 5.69KB (Disk free space: 294MB) | My Computer

The generated metadata includes a manifest file (`manifest.xml`), the service request schema (`service_BAPI_COMPANY_GETDETAIL.xsd`), the response schema (`service_BAPI_COMPANY_GETDETAIL_response.xsd`), and the event schema (`event_BAPI_COMPANY_GETDETAIL.xsd`).

The following is a sample of the generated `manifest.xml` file.

Figure 2-12 Manifest.xml File

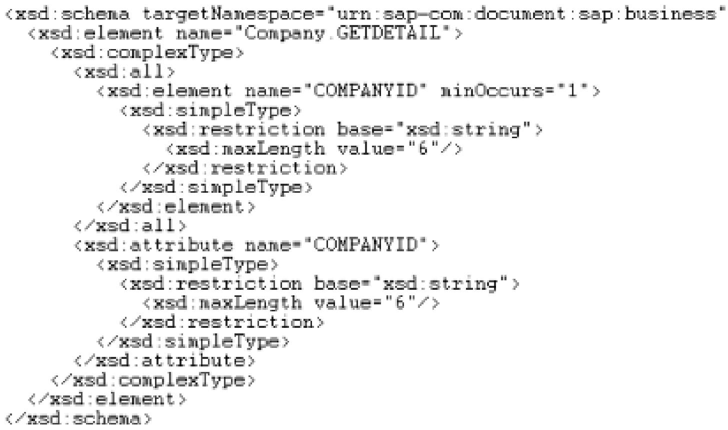


```
- <manifest>
  - <connection>
      <user>ibi</user>
      <password>july4</password>
      <ClientNumber>800</ClientNumber>
      <language>EN</language>
      <SystemNumber>00</SystemNumber>
      <hostName>esdsun2</hostName>
    </connection>
  - <schemaref name="BAPI_COMPANY_GETDETAIL">
      <request root="Company.GETDETAIL" file="service_BAPI_COMPANY_GETDETAIL.xsd" />
      <response root="Company.GETDETAIL.Response" file="service_BAPI_COMPANY_GETDETAIL_response.xsd" />
    </schemaref>
  </manifest>
```

The BEA WebLogic Adapter for SAP uses the `manifest.xml` file and accompanying schema(s) to connect to and define the interaction with the application system from an application view. The location of this repository is pointed to in configuration of the adapter during application view creation, as described in Chapter 3, “Configuring the BEA WebLogic Adapter for SAP.” During creation of a service or an event, this manifest and the accompanying schemas define the interaction with the EIS.

The following is a sample request schema generated for an SAP BAPI.

Figure 2-13 Sample Request Schema



```
<xsd:schema targetNamespace="urn:sap-com:document:sap:business"
  <xsd:element name="Company.GETDETAIL">
    <xsd:complexType>
      <xsd:all>
        <xsd:element name="COMPANYID" minOccurs="1">
          <xsd:simpleType>
            <xsd:restriction base="xsd:string">
              <xsd:maxLength value="6"/>
            </xsd:restriction>
          </xsd:simpleType>
        </xsd:element>
      </xsd:all>
      <xsd:attribute name="COMPANYID">
        <xsd:simpleType>
          <xsd:restriction base="xsd:string">
            <xsd:maxLength value="6"/>
          </xsd:restriction>
        </xsd:simpleType>
      </xsd:attribute>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

CHAPTER

3 Configuring the BEA WebLogic Adapter for SAP

This section describes how to create, configure, and test event adapter application views and service adapter application views. It includes the following topics:

- Creating an Application View Folder
- Event Adapter Application Views
- Service Adapter Application Views

Creating an Application View Folder

Application views reside within WebLogic Integration. WebLogic Integration provides you with a root folder in which you can store all of your application views. If you wish, you can create additional folders to organize related application views into groups.

To create an application view folder:

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.

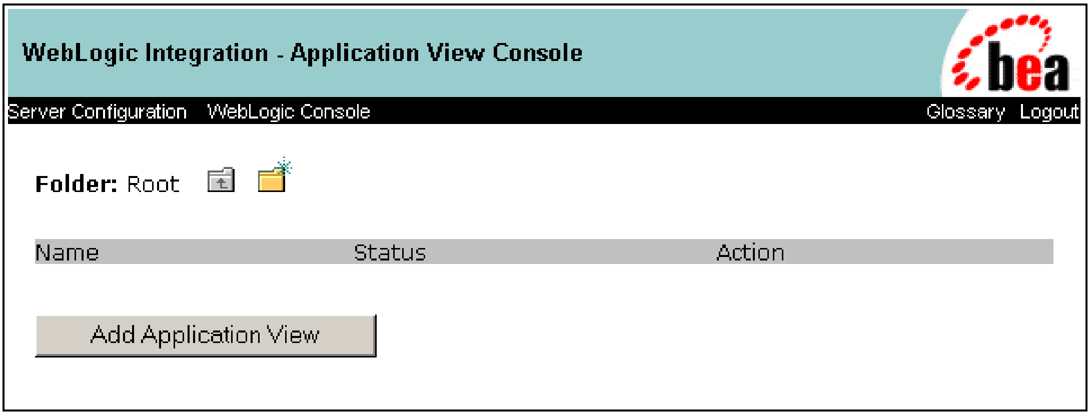
2. If prompted, enter a user name and password.

   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 SAP Installation and Configuration Guide*.

3. Click Login.

   The WebLogic Integration Application View Console opens.

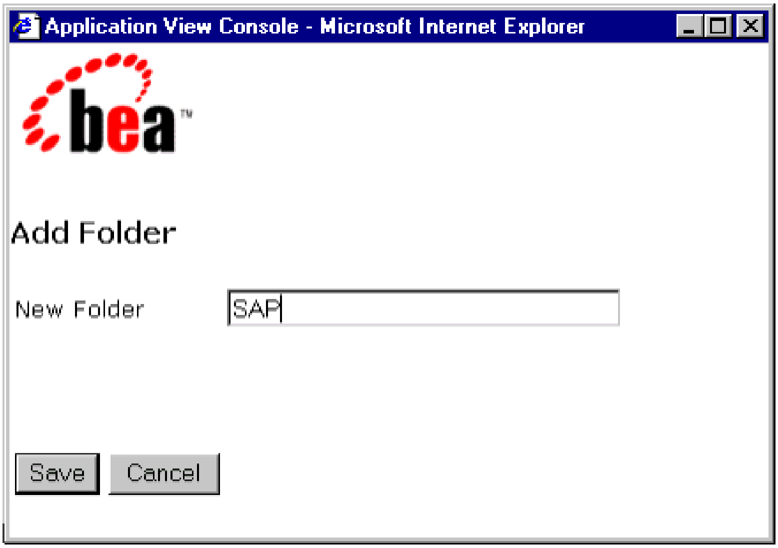
Figure 3-1 WebLogic Integration Application View Console Window



WebLogic Integration - Application View Console

4. Double-click the new folder icon. The Add Folder window opens.

Figure 3-2 Application View Console Window



Add Folder

New Folder SAP

5. Enter a name for the folder and click Save.

You have finished creating the application view folder. To create a service adapter application view, see "Configuring a Service Adapter Application View" on page 3-4. To create an event adapter application view, see "Event Adapter Application Views" on page 3.

Event Adapter Application Views

Event adapters allow WebLogic Integration to receive incoming events and associated documents. The following topics describe how to configure an event adapter for SAP.

Creating the Event Adapter Application View

To create an event adapter application view:

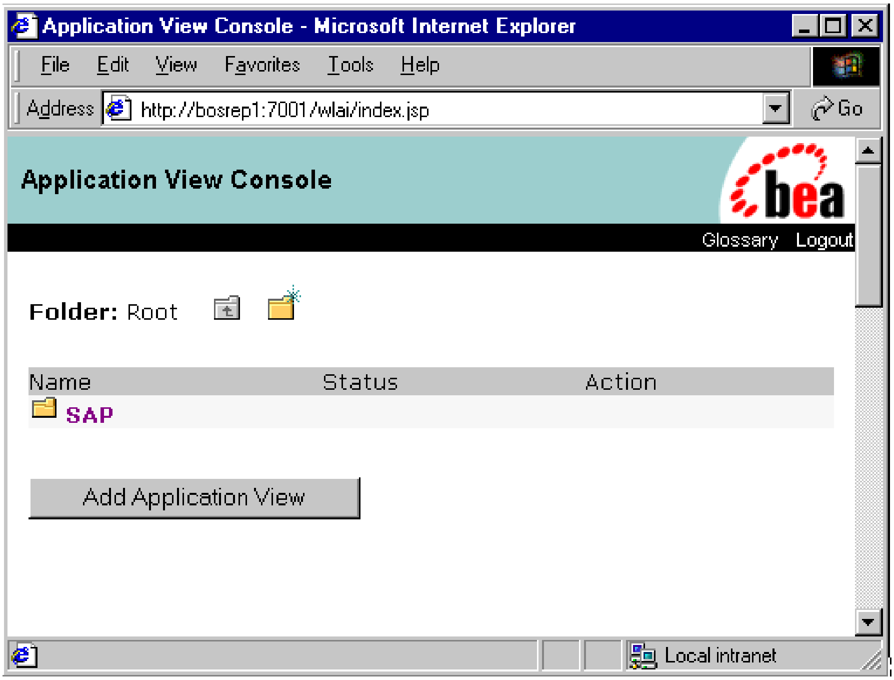
1. Open the Application View Console, which is found at the following location:

   `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. Select the desired Application View folder.

Figure 3-3 Application View Folder Window



Application View Console - Microsoft Internet Explorer

Address: http://bosrep1:7001/wlai/index.jsp

Application View Console

Folder: Root

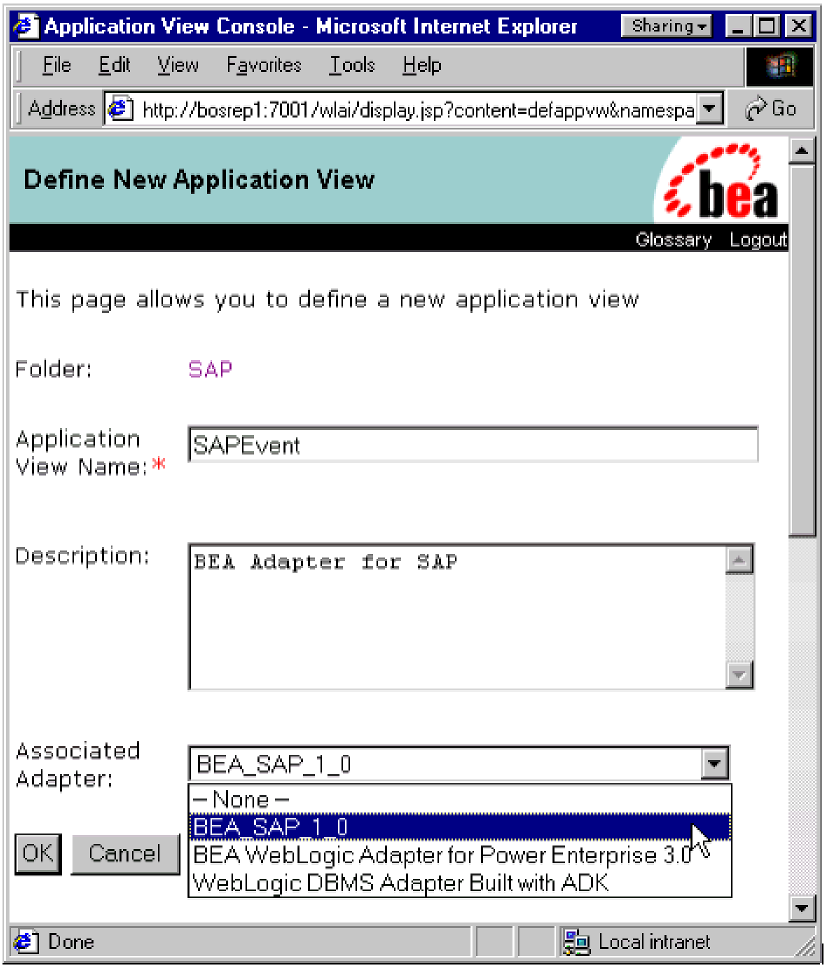
Name	Status	Action
SAP		

3. Click Add Application View in the Application View Console. The Define New Application View window opens.

4. Enter a name and description for the application view.

5. Select `BEA_SAP_1_0` from the Associated Adapter list.

Figure 3-4 Define New Application View Window



Address: http://bosrep1:7001/wlai/display.jsp?content=defappvw&namespa

Define New Application View

This page allows you to define a new application view

Folder: SAP

Application View Name:* SAPEvent

Description: BEA Adapter for SAP

Associated Adapter: BEA_SAP_1_0

- -- None --
- BEA_SAP_1_0
- BEA WebLogic Adapter for Power Enterprise 3.0
- WebLogic DBMS Adapter Built with ADK

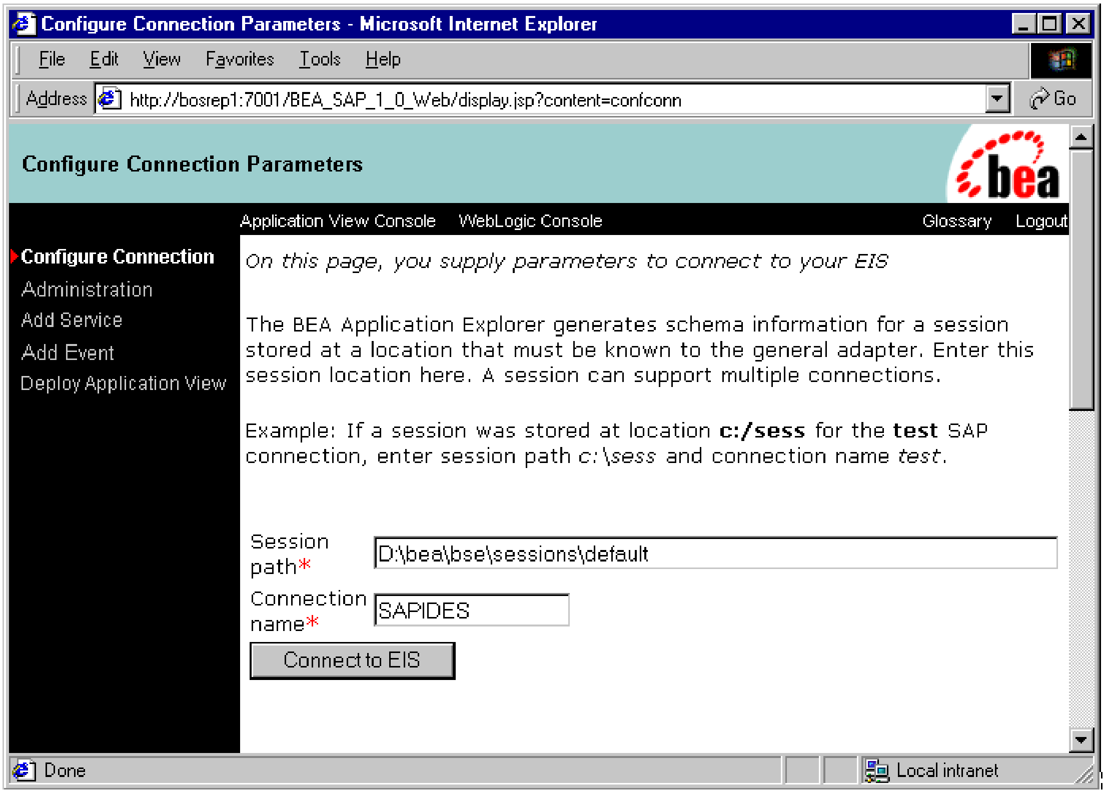
6. Click OK. The Configure Connection Parameters window opens.

   The Configure Connection Parameters window enables you to enter the information required to communicate with the EIS system.

For SAP, the required communication and schema information was created in the BEA Application Explorer. The location of the base session repository appears on this screen to access this information.

7. Enter the base directory holding your SAP connection and schema information.

Figure 3-5 Configure Connection Parameters Window



Configure Connection Parameters - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp?content=confconn
Go
Configure Connection Parameters
bea
Application View Console
WebLogic Console
Glossary
Logout
Configure Connection
Administration
Add Service
Add Event
Deploy Application View
Connect to EIS
Done
Local intranet

On this page, you supply parameters to connect to your EIS

The BEA Application Explorer generates schema information for a session stored at a location that must be known to the general adapter. Enter this session location here. A session can support multiple connections.

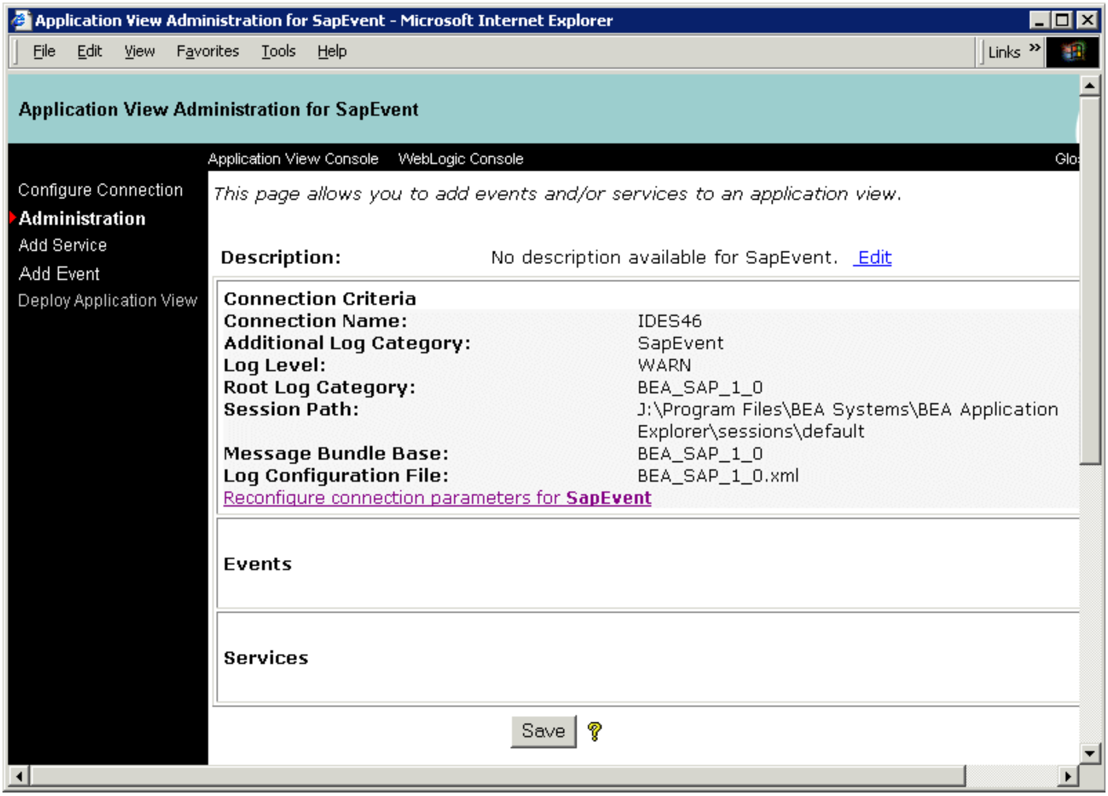
Example: If a session was stored at location **c:/sess** for the **test** SAP connection, enter session path *c:\sess* and connection name *test*.

Session path* D:\bea\bse\sessions\default

Connection name* SAPIDES

After adding an application view, the Application View Administration window opens.

Figure 3-6 Application View Administration Window



Application View Administration for SapEvent

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

Description: No description available for SapEvent. Edit

Connection Criteria

Connection Name:	IDES46
Additional Log Category:	SapEvent
Log Level:	WARN
Root Log Category:	BEA_SAP_1_0
Session Path:	J:\Program Files\BEA Systems\BEA Application Explorer\sessions\default
Message Bundle Base:	BEA_SAP_1_0
Log Configuration File:	BEA_SAP_1_0.xml

Reconfigure connection parameters for **SapEvent**

Events

Services

This window is also available at any time while the application is not deployed, and if deployed can be accessed by “undeploying” the application.

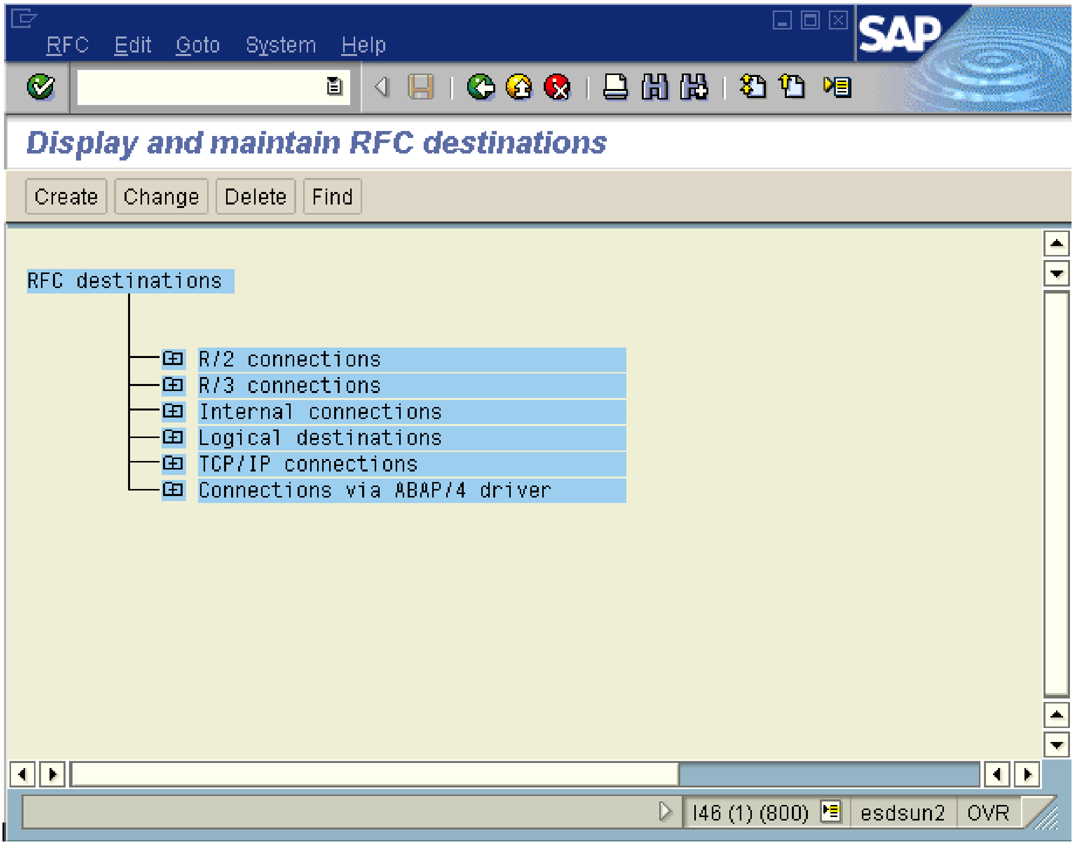
Creating an SAP Remote Destination

To enable your SAP system to issue remote function calls (RFCs) or BAPIs to the SAP event adapter, you must define an RFC destination on the SAP system. This process is also required when you want an SAP system to send IDocs to the SAP event adapter. You start with the SAP GUI product. The first step is the creation of an RFC destination.

The RFC destination is a symbolic name specifying the target system for an RFC. The RFC destination must be configured to connect to the SAP event adapter. Create an RFC destination called BEASAPDEST.

1. Start the SAPGUI and log on to the SAP System.
2. Choose Tools→Administration→Administration→Network→RFC destinations.
3. Execute transaction `/nsm59` into the transaction field (Transaction SM59).
4. Right-click TCP/IP connections and select Create.

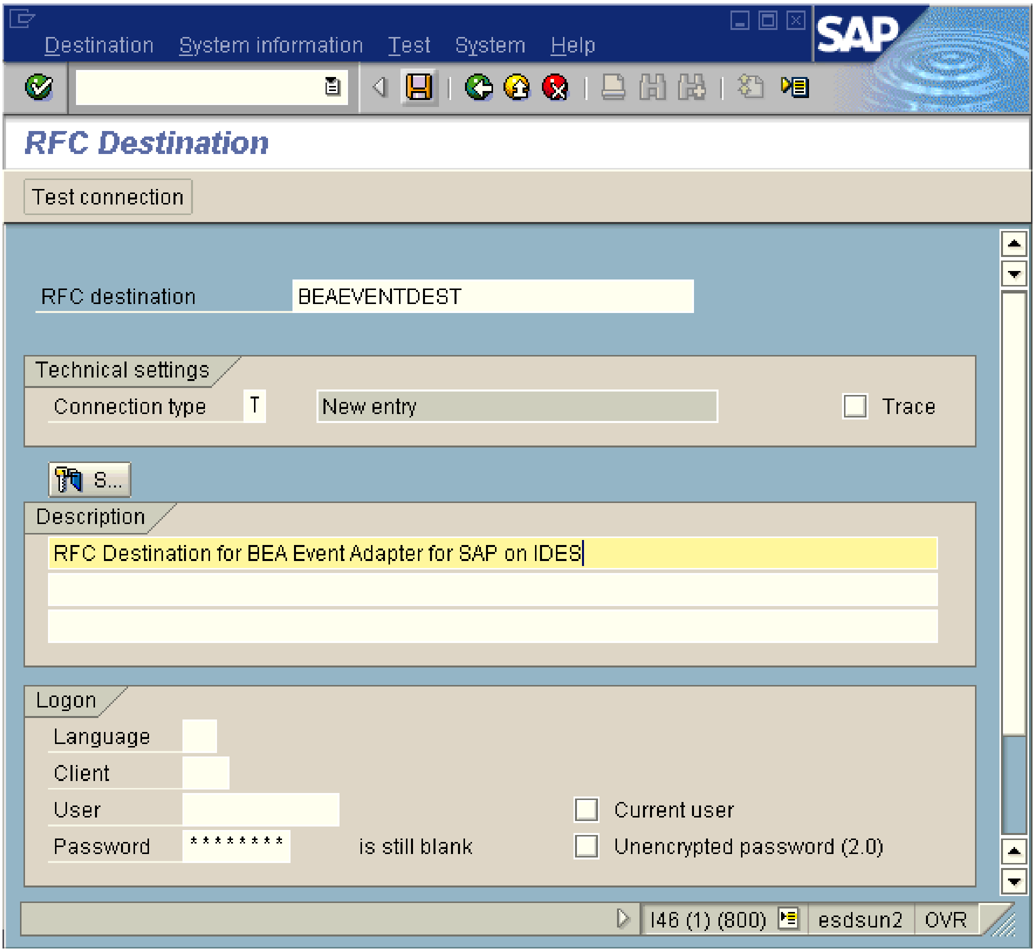
Figure 3-7 RFC Destinations Windows



RFC destinations

- R/2 connections
- R/3 connections
- Internal connections
- Logical destinations
- TCP/IP connections
- Connections via ABAP/4 driver

Figure 3-8 RFC Destination for BEA Event Adapter for SAP Window



RFC Destination

RFC destination BEAEVENTDEST

Technical settings

Connection type T New entry □ Trace

Description

RFC Destination for BEA Event Adapter for SAP on IDES

Logon

Language

Client

User □ Current user

Password ******** is still blank □ Unencrypted password (2.0)

I46 (1) (800) esdsun2 OVR

5. In field RFC destination, enter a name, for example, BEAEVENTDEST.

   Note: This is case sensitive.

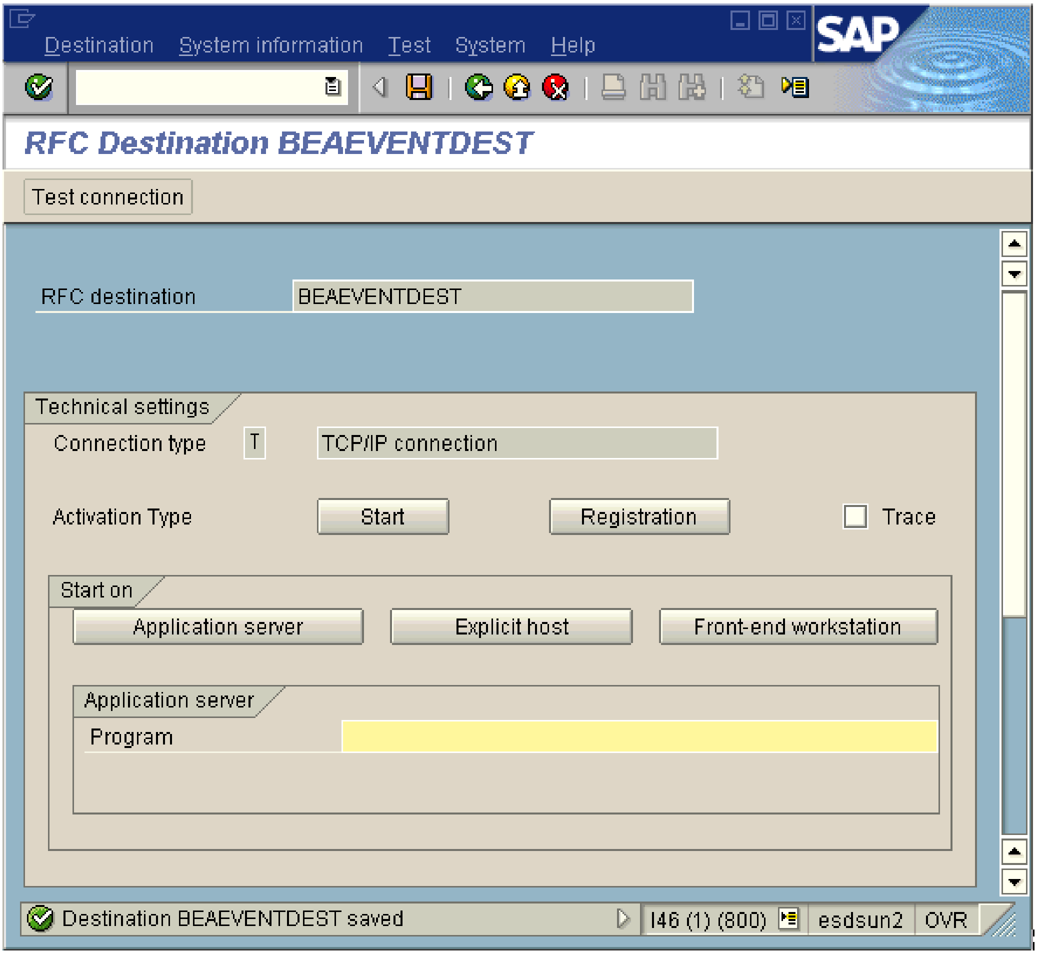
6. Enter T in the field Connection type (destination type TCP/IP).

7. Enter comments in the Description section.

8. Click Change on the toolbar or choose Save from the Destination menu.

The following window opens.

Figure 3-9 RFC Destination BEAEVENTDEST Window



RFC Destination BEAEVENTDEST

RFC destination: BEAEVENTDEST

Technical settings

Connection type: T TCP/IP connection

Activation Type

□ Trace

Start on

Application server

Program:

Destination BEAEVENTDEST saved

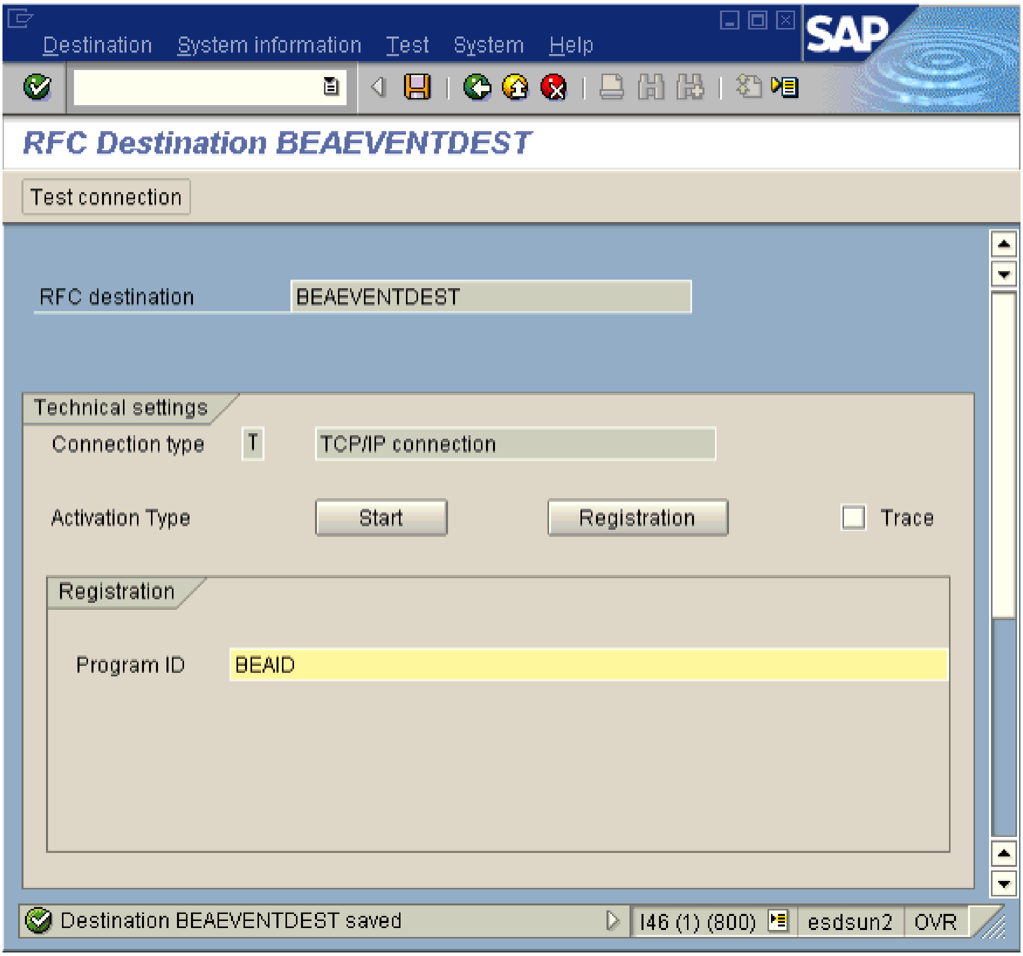
I46 (1) (800) esdsun2 OVR

9. Click Registration as Activation Type.

10. In field Registration Program ID field, type BEAID.

11. Click Change on the toolbar or choose Save from the Destination menu.

Figure 3-10 Destination Menu Window



RFC Destination BEAEVENTDEST

RFC destination BEAEVENTDEST

Connection type T TCP/IP connection

Activation Type

□ Trace

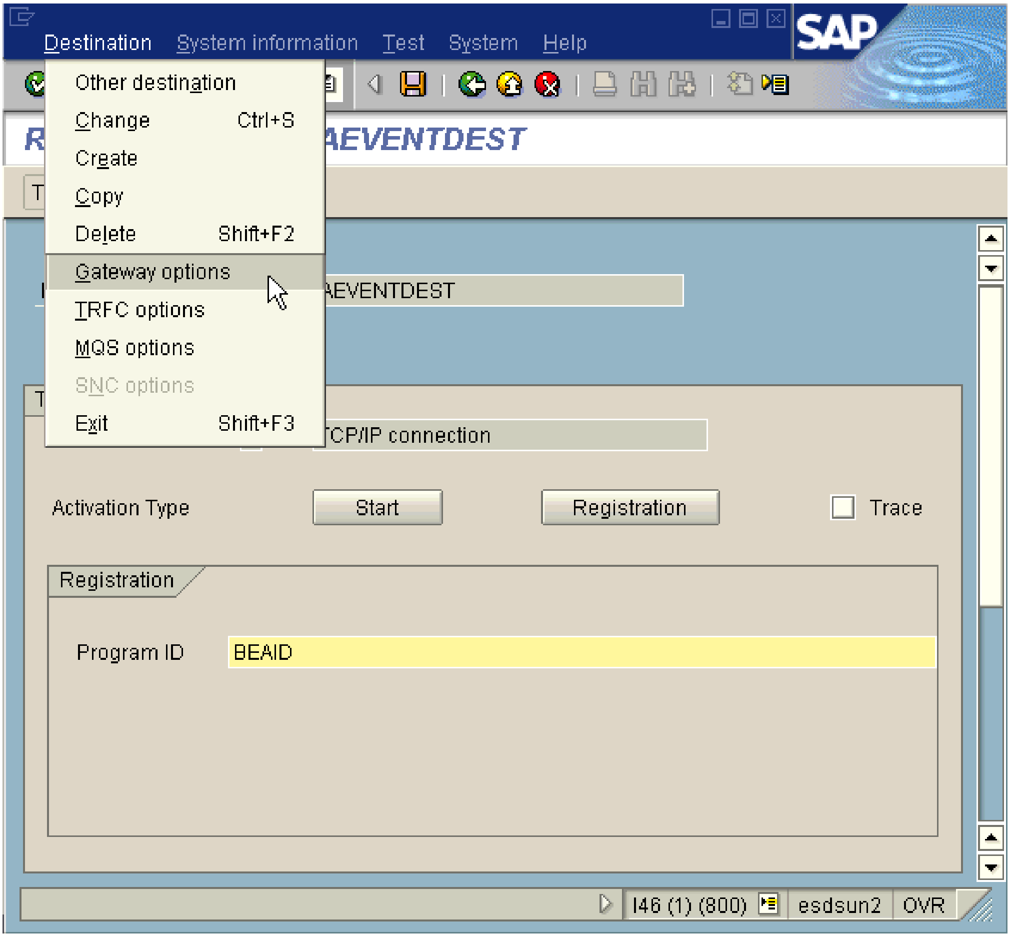
Program ID BEAID

Destination BEAEVENTDEST saved

I46 (1) (800) esdsun2 OVR

12. From the Destination Menu, choose Gateway options.

Figure 3-11 Gateway Options Window



AEVENTDEST

AEVENTDEST

TCP/IP connection

Activation Type: Registration

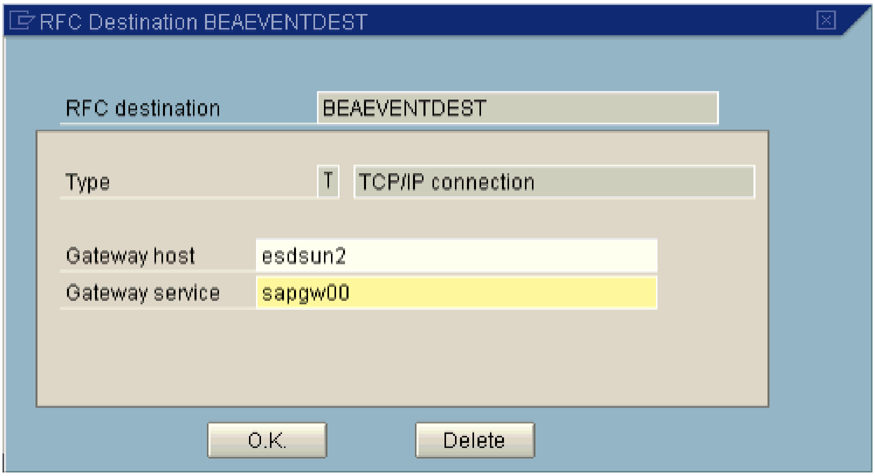
Program ID: BEAID

13. Enter the host name of the machine in field Gateway host.

14. Enter sapgw and the SAP system number in field Gateway service, for example, sapgw00.

15. Click OK.

Figure 3-12 Gateway Host and Service Window



RFC destination: BEAEVENTDEST

Type: T TCP/IP connection

Gateway host: esdsun2

Gateway service: sapgw00

Configuring the Event Adapter Application View

The event adapter application view contains all events that are expected to arrive at this instance of the event adapter. As such, many services may be added to the application view. For all events that should be handled by this adapter, add a service for each.

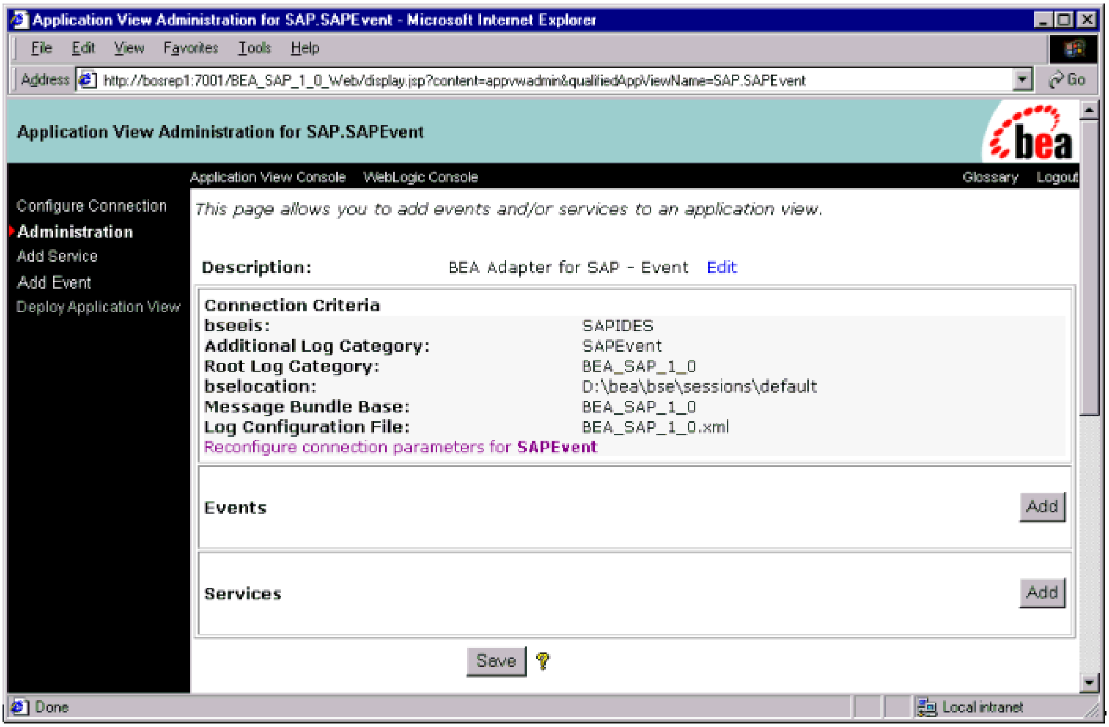
To configure the event adapter application view:

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`
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.

4. Click Add Event. The following window opens.

Figure 3-13 Application View Console Administration Window



http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp?content=appvwadmin&qualifiedAppViewName=SAP.SAPEvent

Application View Administration for SAP.SAPEvent

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

Description: BEA Adapter for SAP - Event Edit

Connection Criteria

bseeis:	SAPIDES
Additional Log Category:	SAPEvent
Root Log Category:	BEA_SAP_1_0
bselocation:	D:\bea\bse\sessions\default
Message Bundle Base:	BEA_SAP_1_0
Log Configuration File:	BEA_SAP_1_0.xml

Reconfigure connection parameters for **SAPEvent**

Events Add

Services Add

The values that appear in the window are based on the connection information originally used in the Application Explorer. You are free to change these design time values for your particular run-time behavior.

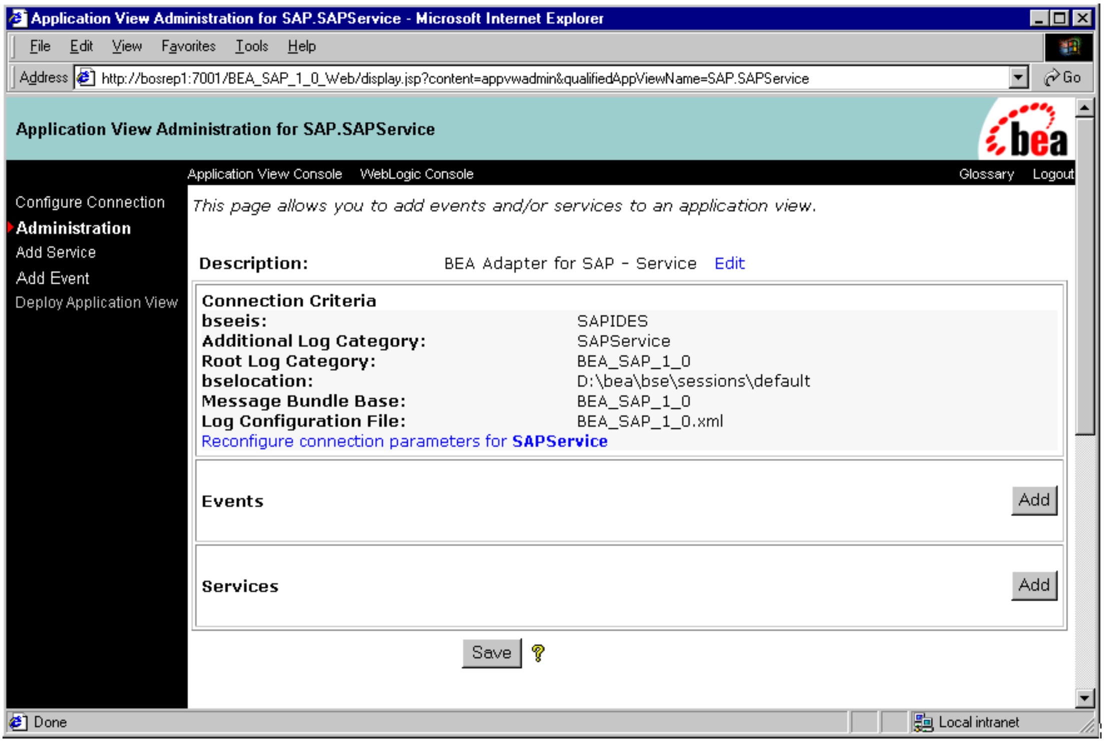
The settings on this window correspond to the TCP connectivity that the adapter creates with SAP to receive SAP events in BAPI, RFC, or IDoc format.

- **gwhost**: Host name of the machine running SAP gateway server.
- **gwserv**: SAP gateway server.
- **progid**: RFC program ID created previously (for example, BEAID).
- **sapclient**: SAP Client.
- **sapuser**: Associated SAP user name.
- **sappasswd**: Associated SAP user’s password.
- **saplang**: Your desired SAP language, for example, EN for English.
- **sapashost**: Host name of the machine running SAP application server.
- **sapsysnr**: SAP system number.
- **active**: A flag indicating whether this event adapter should be active.

The schema drop-down list box corresponds to the manifest generated for you during your BEA Application Explorer session. All event schemas created during the session should be listed.

5. Select Add and then, Continue, from the Application View Administration window.

Figure 3-14 Application View Administration Window


Application View Administration for SAP.SAPService - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp?content=appvwadmin&qualifiedAppViewName=SAP.SAPService
Go
bea
Application View Console
WebLogic Console
Glossary
Logout
Configure Connection
Administration
Add Service
Add Event
Deploy Application View
Add
Add
Save
Done
Local intranet

Application View Administration for SAP.SAPService

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

Description: BEA Adapter for SAP - Service Edit

Connection Criteria	
bseeis:	SAPIDES
Additional Log Category:	SAPService
Root Log Category:	BEA_SAP_1_0
bselocation:	D:\bea\bse\sessions\default
Message Bundle Base:	BEA_SAP_1_0
Log Configuration File:	BEA_SAP_1_0.xml

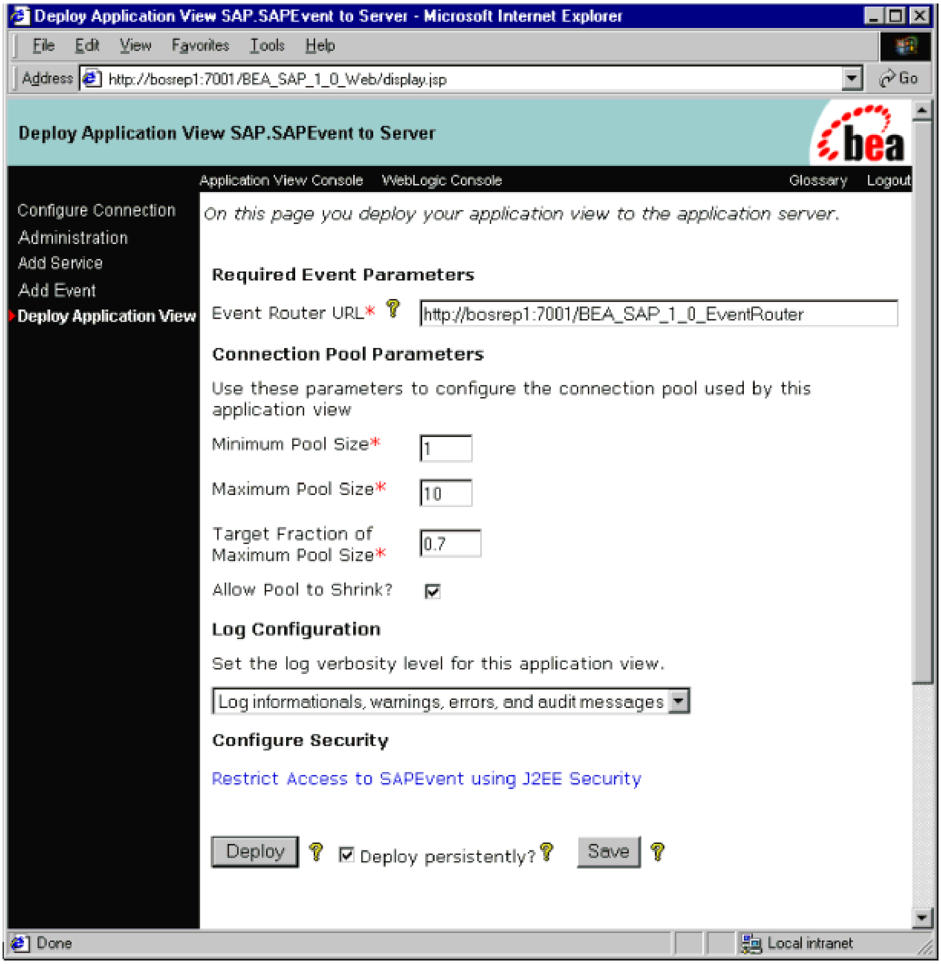
Reconfigure connection parameters for **SAPService**

Events

Services

6. Select Continue to display the Deploy Application View window.

Figure 3-15 Deploy Application View Window



Address: http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp

Deploy Application View SAP.SAPEvent to Server

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

Required Event Parameters

Event Router URL* http://bosrep1:7001/BEA_SAP_1_0_EventRouter

Connection Pool Parameters

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

Minimum Pool Size* 1

Maximum Pool Size* 10

Target Fraction of Maximum Pool Size* 0.7

Allow Pool to Shrink? ☑

Log Configuration

Set the log verbosity level for this application view.

Log informationals, warnings, errors, and audit messages

Configure Security

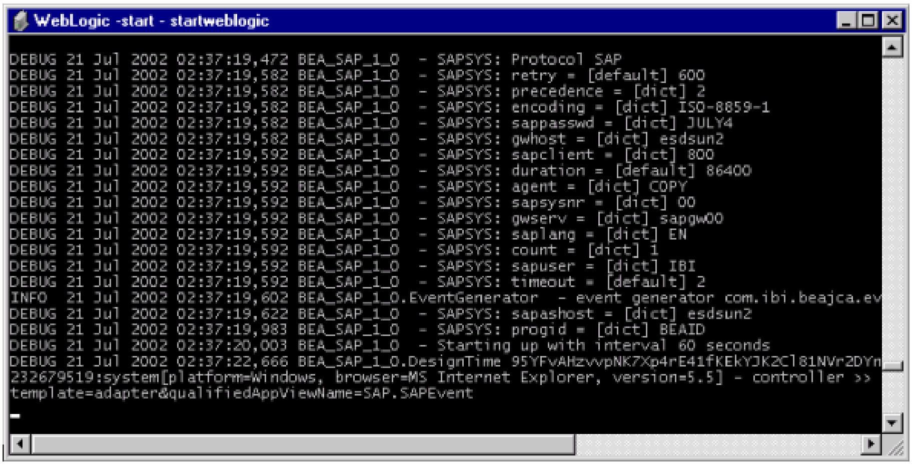
Restrict Access to SAPEvent using J2EE Security

☑ Deploy persistently?

7. If required, update the settings, and click Deploy to save and deploy the event adapter.

In the WebLogic Server log or command console, you should see the following entries as the event adapter starts up.

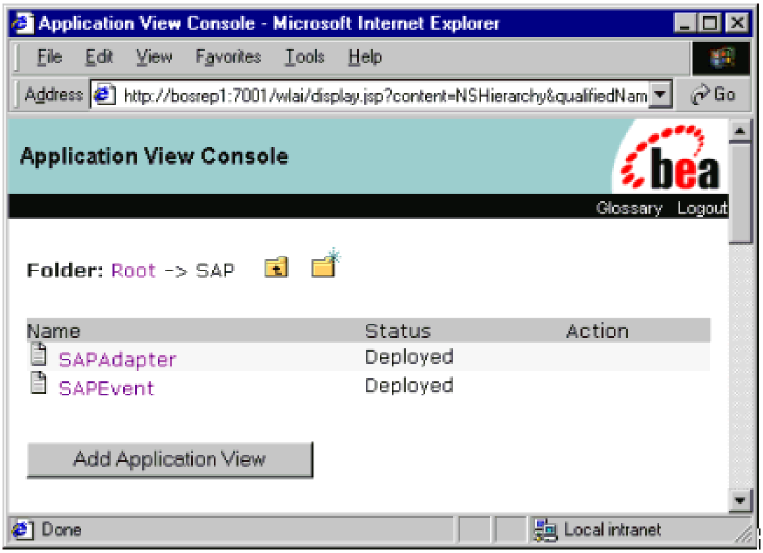
Figure 3-16 WebLogic Server Log Window



```
DEBUG 21 Jul 2002 02:37:19,472 BEA_SAP_1_0  - SAPSYS: Protocol SAP
DEBUG 21 Jul 2002 02:37:19,582 BEA_SAP_1_0  - SAPSYS: retry = [default] 600
DEBUG 21 Jul 2002 02:37:19,582 BEA_SAP_1_0  - SAPSYS: precedence = [dict] 2
DEBUG 21 Jul 2002 02:37:19,582 BEA_SAP_1_0  - SAPSYS: encoding = [dict] ISO-8859-1
DEBUG 21 Jul 2002 02:37:19,582 BEA_SAP_1_0  - SAPSYS: sappasswd = [dict] JULY4
DEBUG 21 Jul 2002 02:37:19,582 BEA_SAP_1_0  - SAPSYS: gwhost = [dict] esdsun2
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: sapclient = [dict] 800
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: duration = [default] 86400
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: agent = [dict] COPY
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: sapsysnr = [dict] 00
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: gwserv = [dict] sapgw00
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: saplang = [dict] EN
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: count = [dict] 1
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: sapuser = [dict] IBI
DEBUG 21 Jul 2002 02:37:19,592 BEA_SAP_1_0  - SAPSYS: timeout = [default] 2
INFO  21 Jul 2002 02:37:19,602 BEA_SAP_1_0.EventGenerator  - event generator com.ibi.beajca.ev
DEBUG 21 Jul 2002 02:37:19,622 BEA_SAP_1_0  - SAPSYS: sapashost = [dict] esdsun2
DEBUG 21 Jul 2002 02:37:19,983 BEA_SAP_1_0  - SAPSYS: progid = [dict] BEAID
DEBUG 21 Jul 2002 02:37:20,003 BEA_SAP_1_0  - Starting up with interval 60 seconds
DEBUG 21 Jul 2002 02:37:22,666 BEA_SAP_1_0.DesignTime 95YFvAHzvvpNK7Xp4rE41fKEkYJK2Cl81NVr2DYn
232679519:system[platform=Windows, browser=MS Internet Explorer, version=5.5] - controller >>
template=adapter&qualifiedAppViewName=SAP.SAPEvent
```

There should be two created and deployed application views now visible, one for the service adapter and one for the event adapter.

Figure 3-17 Application View Console Window


Application View Console - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://bosrep1:7001/wlai/display.jsp?content=NSHierarchy&qualfiedNam
Go
Application View Console
bea
Glossary Logout
Add Application View
Done
Local intranet

Folder: Root -> SAP

Name	Status	Action
SAPAdapter	Deployed	
SAPEvent	Deployed	

At this point, you can test your service adapter as described in “Testing the Event Adapter in the Application View Console” on page 3-21 and “Testing the Event Adapter in Studio” on page 3-26.

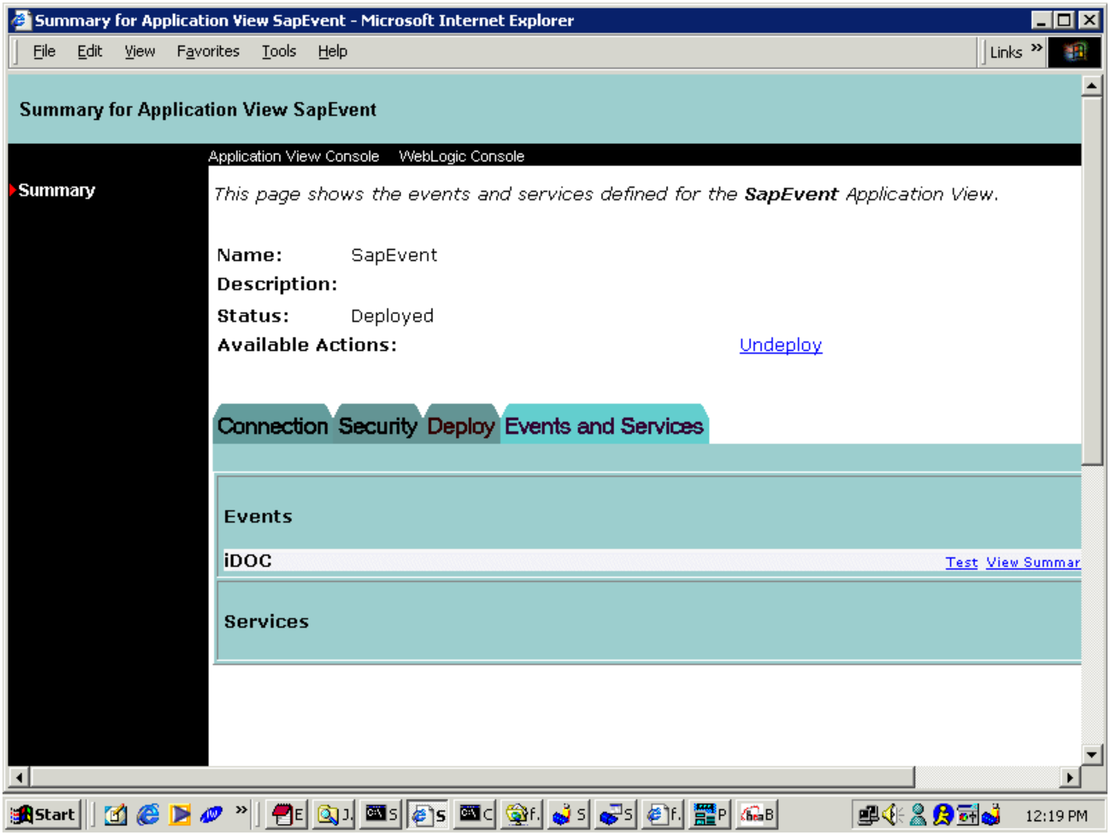
Testing the Event Adapter in the Application View Console

After you create and deploy an event adapter application view as described in "Creating the Event Adapter Application View" on page 3-4 and "Configuring the Event Adapter Application View" on page 3-14, you can test its events.

After deployment, the Summary for Application View window opens.

1. Click Test for the service configured in the service adapter.

Figure 3-18 Summary for Application View Window



Summary for Application View SapEvent - Microsoft Internet Explorer

Summary for Application View SapEvent

*This page shows the events and services defined for the **SapEvent** Application View.*

Name: SapEvent
Description:
Status: Deployed
Available Actions: Undeploy

Events

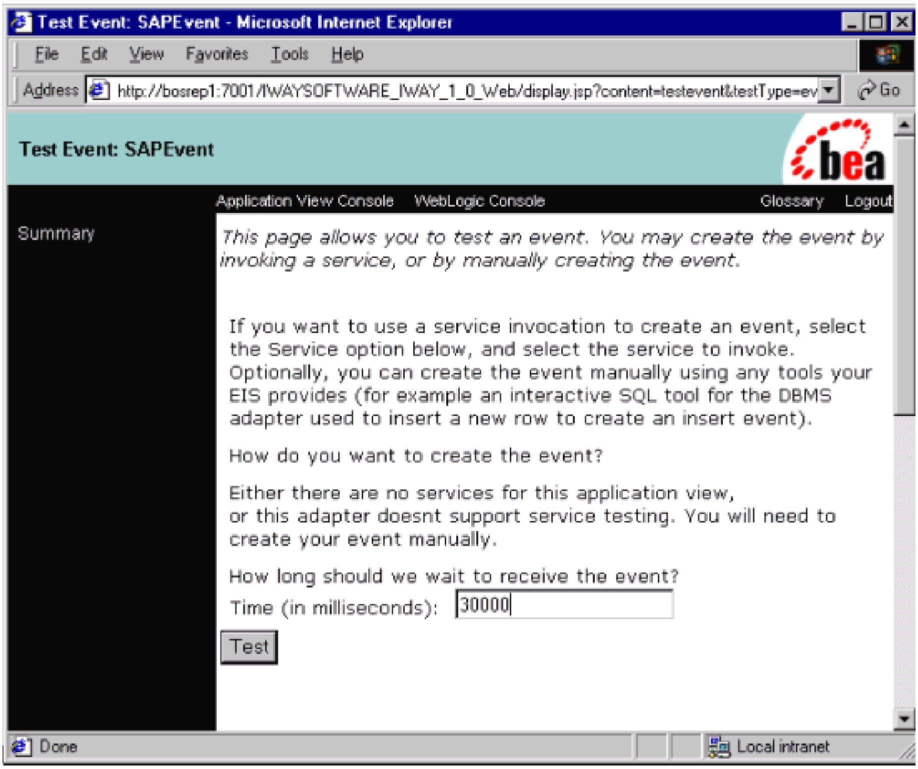
iDOC Test View Summar

Services

You manually invoke the request from SAP to the SAPEvent event adapter.

2. From the test screen, enter a suitable wait time (in milliseconds, for example, 30,000 or 30 seconds) to enable you to navigate to SAP GUI and invoke the remote function call.

Figure 3-19 Test Event Window


Test Event: SAPEvent - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://bosrep1:7001/IWAYSOFTWARE_IWAY_1_0_Web/display.jsp?content=testevent&testType=ev
Go
Application View Console WebLogic Console Glossary Logout
Summary
Done
Local intranet

Test Event: SAPEvent

This page allows you to test an event. You may create the event by invoking a service, or by manually creating the event.

If you want to use a service invocation to create an event, select the Service option below, and select the service to invoke. Optionally, you can create the event manually using any tools your EIS provides (for example an interactive SQL tool for the DBMS adapter used to insert a new row to create an insert event).

How do you want to create the event?

Either there are no services for this application view, or this adapter doesnt support service testing. You will need to create your event manually.

How long should we wait to receive the event?

Time (in milliseconds): 30000

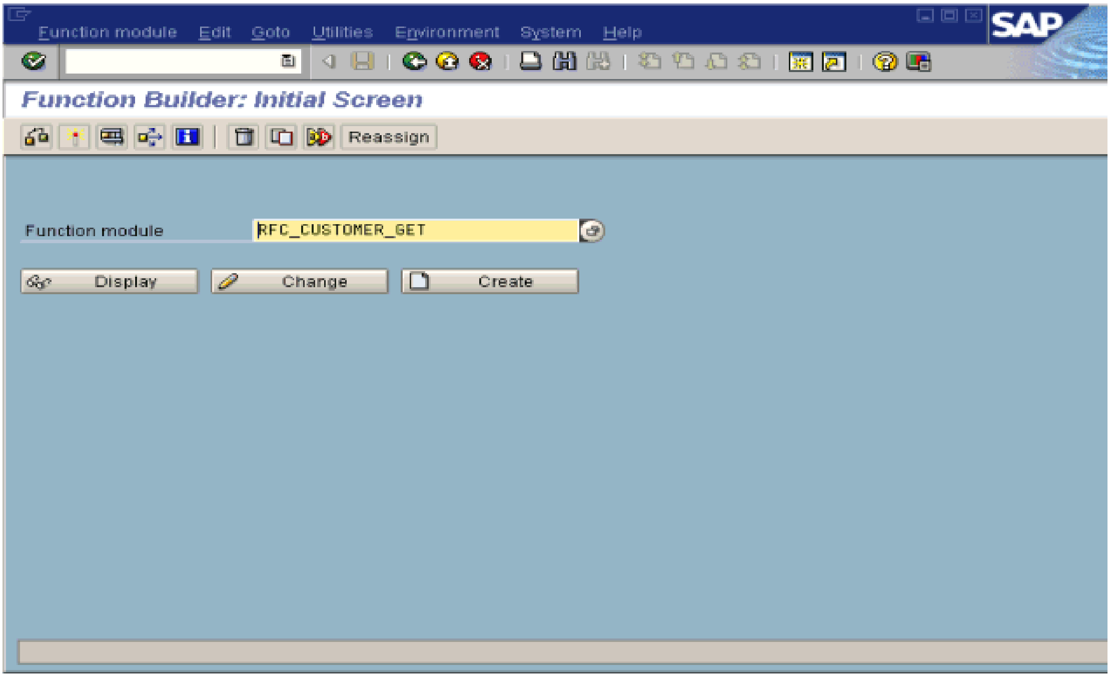
Test

In the SAP Server, the transaction `/nSE37` displays the following screen where you can send RFCs to any logical system; in this case to the BEA WebLogic Adapter for SAP with an SAP event adapter configured for Program ID BEAID.

From SAP GUI:

1. Execute transaction `/nSE37`.
2. Select a function module, for example, `RFC_CUSTOMER_GET`.

Figure 3-20 Function Builder: Initial Window

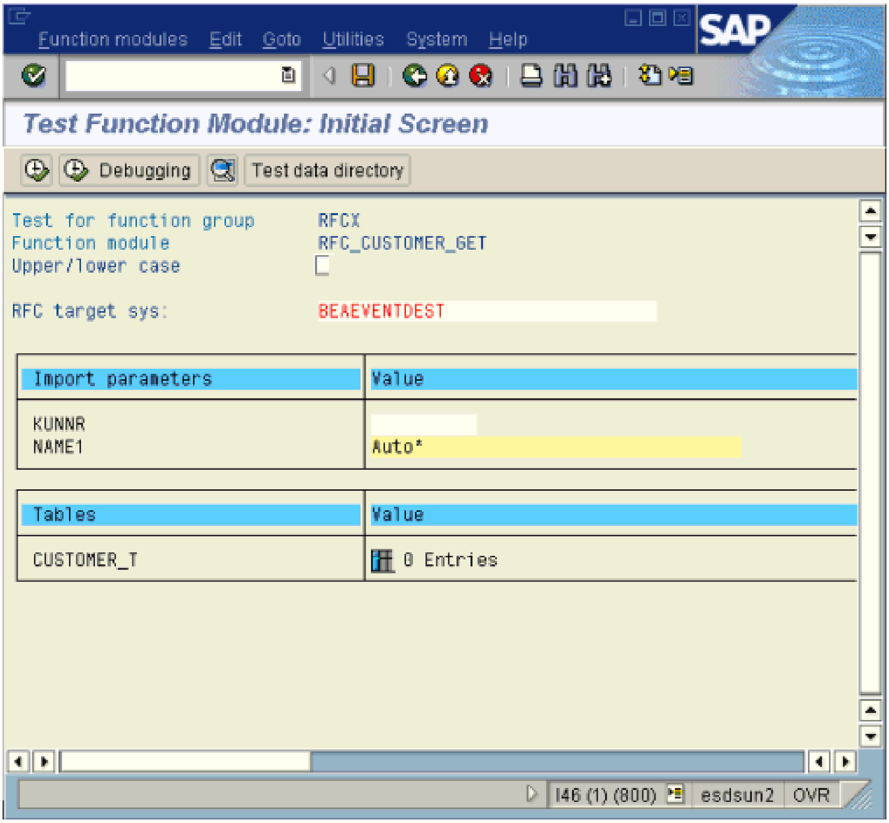


Function module RFC_CUSTOMER_GET

3. Choose single test (PF8).
4. Enter RFC target system, for example, `BEAEVENTDEST`.
5. Enter input data for the particular RFC module; for example, `Auto* in NAME1`.

6. Execute (PF8).

Figure 3-21 Test Function Module: Initial Window



Test Function Module: Initial Screen

Test for function group RFCX
Function module RFC_CUSTOMER_GET
Upper/lower case □

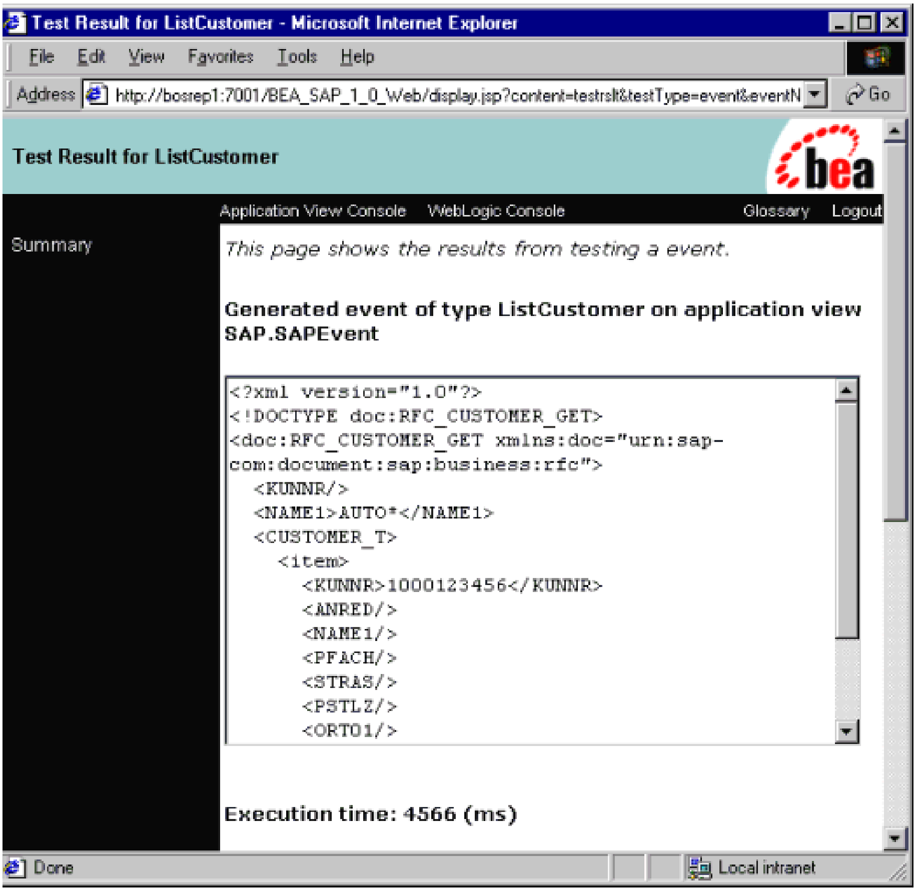
RFC target sys: BEAEVENTDEST

Import parameters	Value
KUNNR	
NAME1	Auto*

Tables	Value
CUSTOMER_T	0 Entries

7. A results screen appears with an RFC XML document sent to the BEA WebLogic Adapter for SAP.

Figure 3-22 Test Result for ListCustomer Window


Test Result for ListCustomer - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp?content=testrslt&testType=event&eventN
Go
bea
Application View Console
WebLogic Console
Glossary
Logout
Summary
Done
Local intranet

Test Result for ListCustomer

This page shows the results from testing a event.

Generated event of type ListCustomer on application view SAP.SAPEvent

```
<?xml version="1.0"?>
<!DOCTYPE doc:RFC_CUSTOMER_GET>
<doc:RFC_CUSTOMER_GET xmlns:doc="urn:sap-
com:document:sap:business:rfc">
  <KUNNR/>
  <NAME1>AUTO*</NAME1>
  <CUSTOMER_T>
    <item>
      <KUNNR>1000123456</KUNNR>
      <ANRED/>
      <NAME1/>
      <PFACH/>
      <STRAS/>
      <PSTLZ/>
      <ORT01/>
```

Execution time: 4566 (ms)

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`

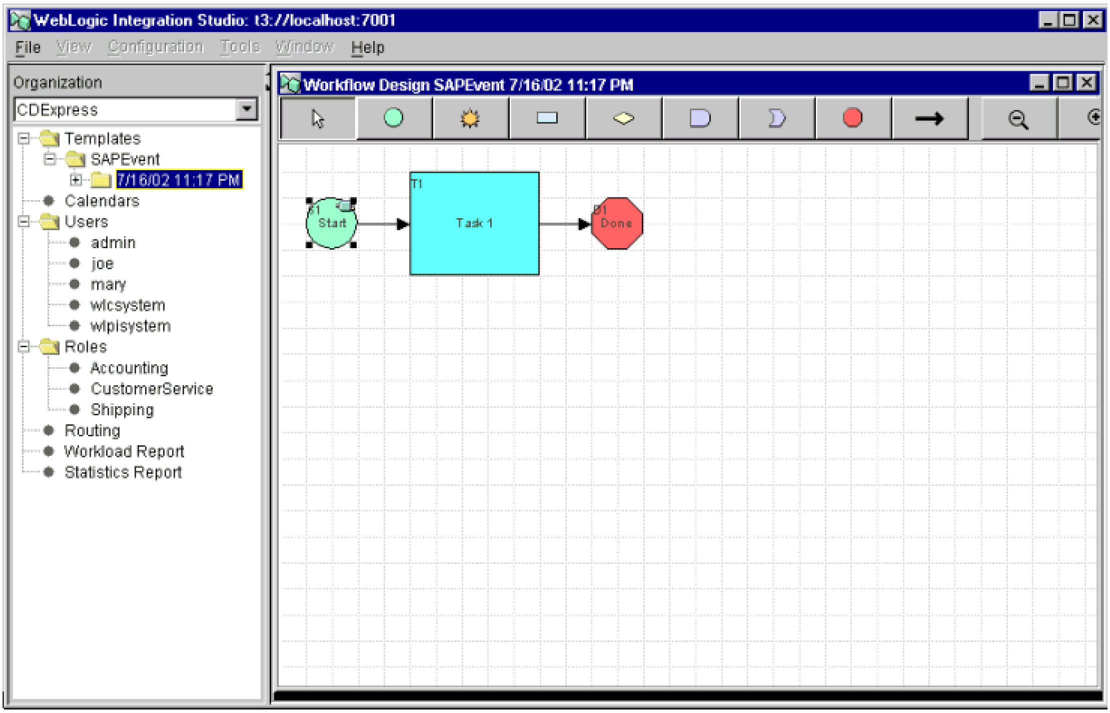
Testing the Event Adapter in Studio

After you create and deploy an event adapter application view as described in “Creating the Event Adapter Application View” on page 3-4 and “Configuring the Event Adapter Application View” on page 3-14, you can test its events.

A completed event adapter can be tested using the WebLogic Integration Studio.

1. Create a new template.

Figure 3-23 New Template Window



From the Start Properties form:

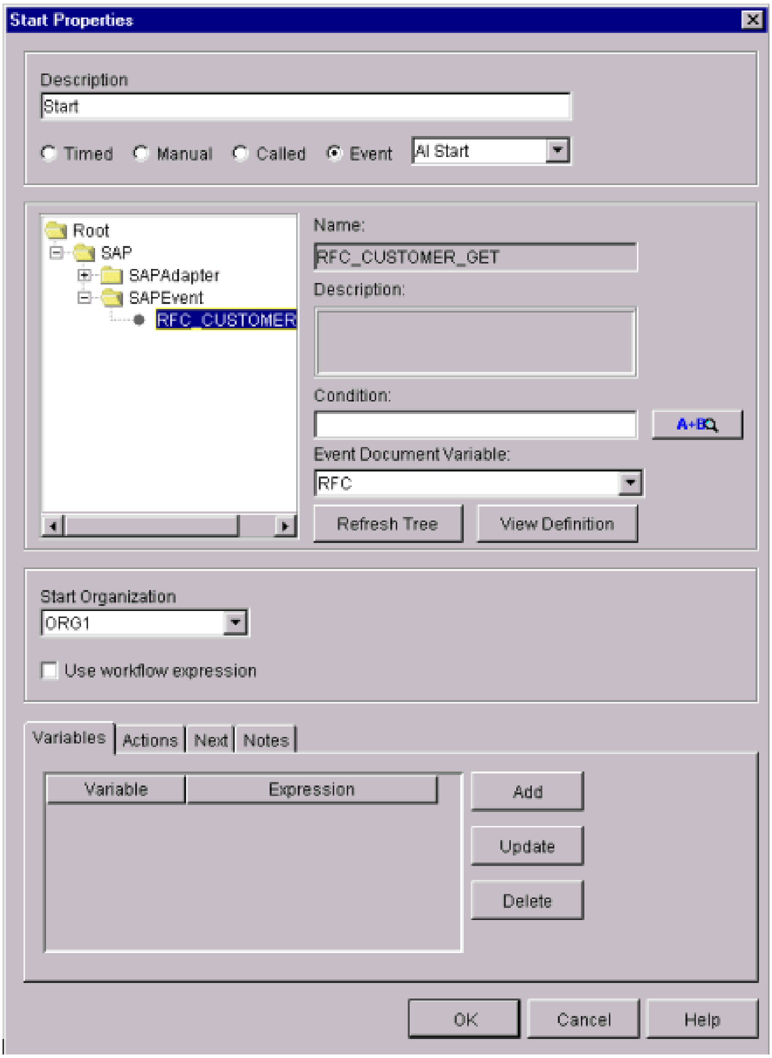
2. Choose Event→AI Start and select the SAP event adapter.

3. Create a <new> Event Document Variable and type a name. This variable enables you to monitor the values passed into the workflow.

4. After the workflow configuration is complete, save the template.

After you save the template, you may monitor the running instances (right-click the template and select Instances).

Figure 3-24 Start Properties Form Window



Start Properties

Description: Start

○ Timed ○ Manual ○ Called ● Event AI Start

Name: RFC_CUSTOMER_GET

Description:

Condition:

Event Document Variable: RFC

Start Organization: ORG1

□ Use workflow expression

Variable	Expression

Service Adapter Application Views

This section describes how to create, configure, and test a service adapter application view. Service adapters allow WebLogic Integration to request information from SAP.

Creating a Service Adapter Application View

To create a service adapter application view:

1. Log on to the Application View Console at *`//appserver-host:port/`*`wlai`. Here, *`appserver-host`* is the IP address or host name on which the WebLogic Integration Server is installed, and *`port`* is the socket on which the server is listening. The port, if not changed during installation, defaults to 7001.
2. If prompted, enter a user name and password.

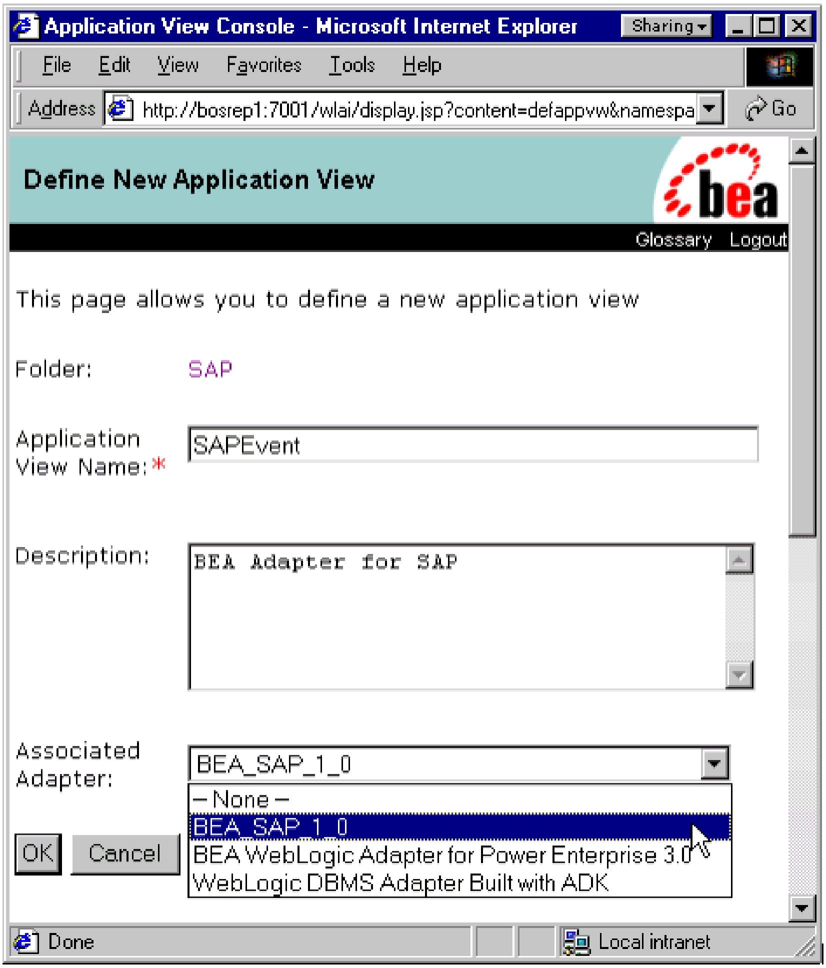
   Note: If the user name is not `system`, it must be included in the `adapter` group. For more information on adding the administrative server user name to the `adapter` group, see the *BEA WebLogic Adapter for SAP Installation and Configuration Guide*.
3. Click Login.

   The WebLogic Integration Application View Console opens.
4. Select the desired application view folder.
5. Click Add Application View.

   The Define New Application View window opens.
6. Enter a name and description for the application view.

7. Select BEA_SAP_1_0 from the Associated Adapter list.

Figure 3-25 Define New Application View Window



http://bosrep1:7001/wlai/display.jsp?content=defappvw&namespa

Define New Application View

This page allows you to define a new application view

Folder: SAP

Application View Name:* SAPEvent

Description: BEA Adapter for SAP

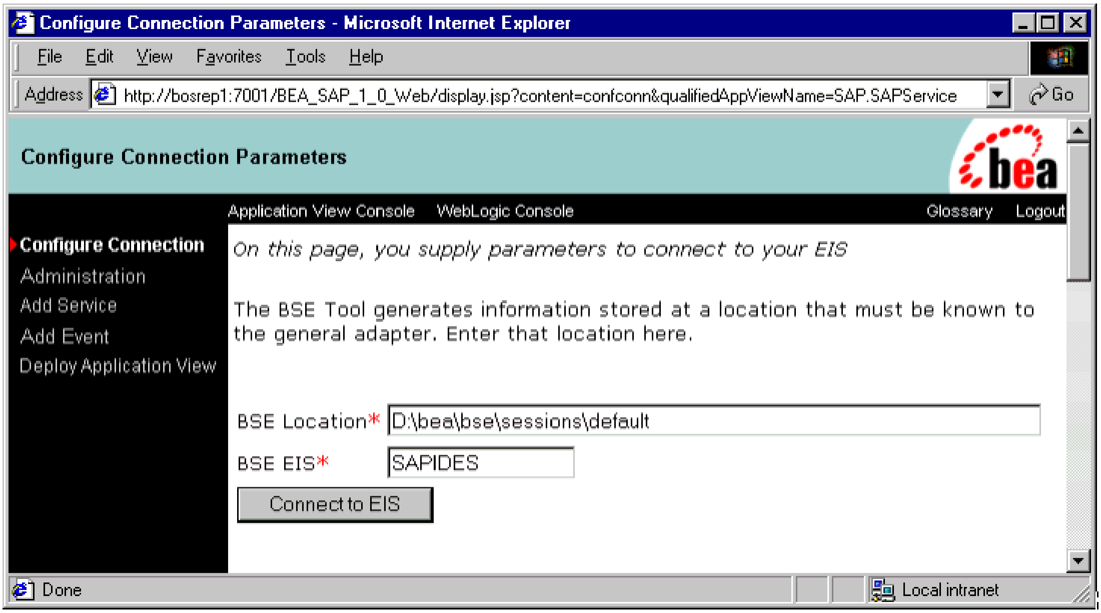
Associated Adapter: BEA_SAP_1_0

- None -
BEA_SAP_1_0
BEA WebLogic Adapter for Power Enterprise 3.0
WebLogic DBMS Adapter Built with ADK

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

The Configure Connection Parameters window enables you to specify parameters for connecting to the BEA WebLogic Adapter for SAP and creating a schema repository.

Figure 3-26 Configure Connection Parameters Window


Configure Connection Parameters - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp?content=confconn&qualifiedAppViewName=SAP.SAPService
Go
Configure Connection Parameters
bea
Application View Console
WebLogic Console
Glossary
Logout
Configure Connection
Administration
Add Service
Add Event
Deploy Application View
Connect to EIS
Done
Local intranet

On this page, you supply parameters to connect to your EIS

The BSE Tool generates information stored at a location that must be known to the general adapter. Enter that location here.

BSE Location* D:\bea\bse\sessions\default

BSE EIS* SAPIDES

The BSE Location represents the location of the connection session information to the particular type of EIS system, in this case, SAP.

The BSE EIS represents the particular SAP connection to which you want to connect.

You can now configure services and events as described in "Configuring the Service Adapter Application View" on page 3-32 and "Configuring the Event Adapter Application View" on page 3-14.

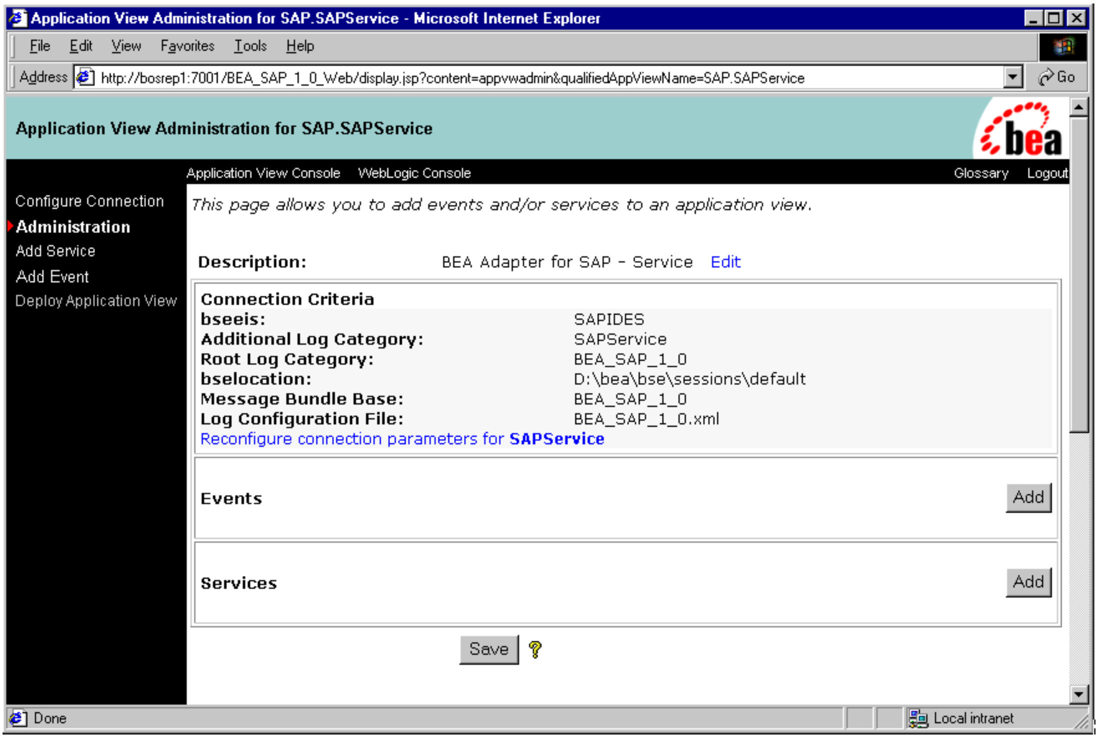
Configuring the Service Adapter Application View

To configure the service adapter 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`
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 3-27 Application View Console Administration Window



http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp?content=appvwadmin&qualifiedAppViewName=SAP.SAPService

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

Description: BEA Adapter for SAP - Service

Connection Criteria

bseeis:	SAPIDES
Additional Log Category:	SAPService
Root Log Category:	BEA_SAP_1_0
bselocation:	D:\bea\bse\sessions\default
Message Bundle Base:	BEA_SAP_1_0
Log Configuration File:	BEA_SAP_1_0.xml

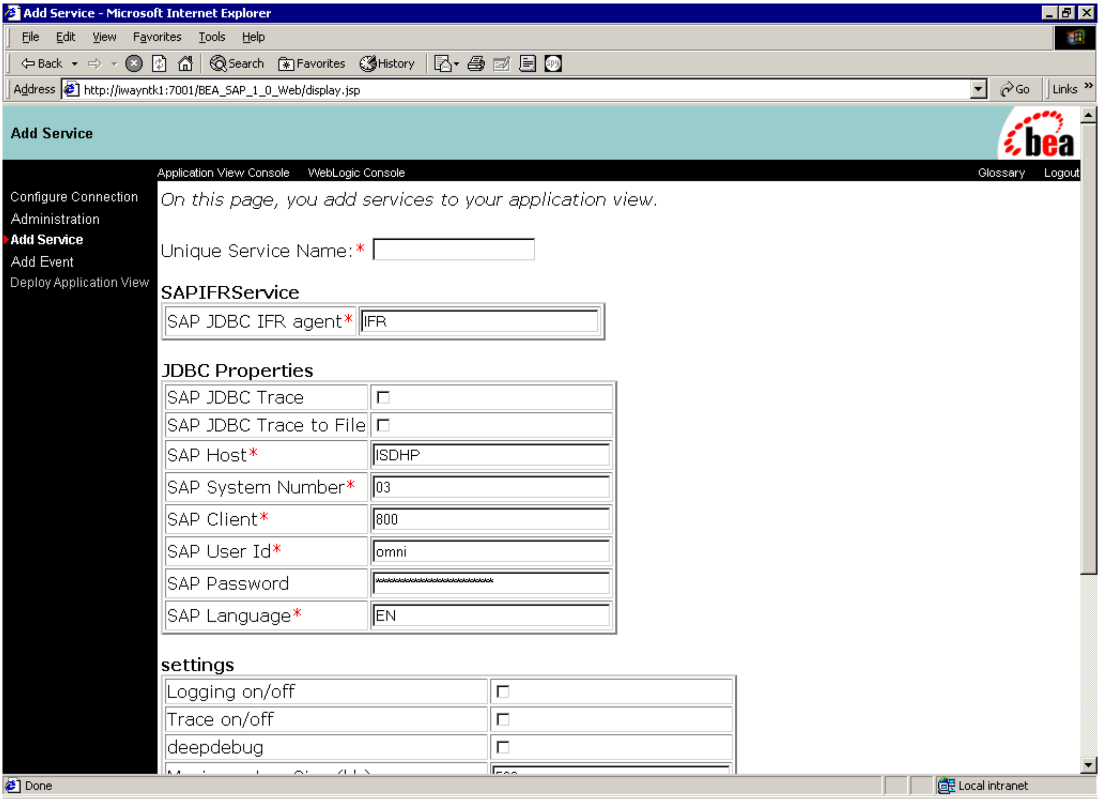
Reconfigure connection parameters for **SAPService**

Events

Services

1. Click Add Service.

Figure 3-28 Add Service Window


Add Service - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://iwayntk1:7001/BEA_SAP_1_0_Web/display.jsp
Go Links
Add Service
bea
Application View Console WebLogic Console Glossary Logout
Configure Connection
Administration
Add Service
Add Event
Deploy Application View
Done
Local intranet

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

Unique Service Name:*

SAPIFRService

SAP JDBC IFR agent*	IFR

JDBC Properties

SAP JDBC Trace	□
SAP JDBC Trace to File	□
SAP Host*	ISDHP
SAP System Number*	03
SAP Client*	800
SAP User Id*	omni
SAP Password	**********************
SAP Language*	EN

settings

Logging on/off	□
Trace on/off	□
deepdebug	□

The BEA WebLogic Adapter for SAP is based on a JDBC interface, so the properties of this connection are based on this framework.

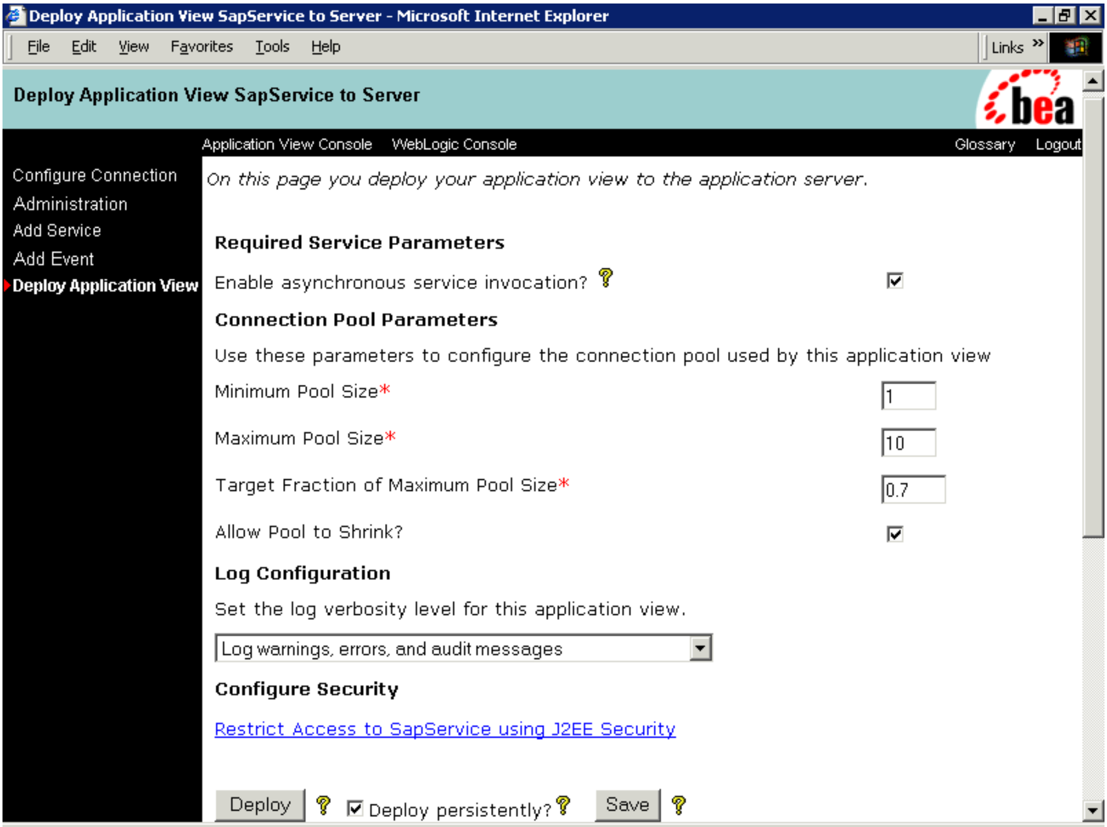
2. Enter the properties as:

traceOn	Can be turned on to increase the messages logged.
traceToFile	Leaving false will send messages only to the console.
hostName	Host of the SAP system.

systemNumber	SAP System Number.
clientNumber	SAP Client.
language	EN for English.
user	SAP User ID.
password	Associated SAP user's password.

3. Click Add. The Deploy Application View window opens.

Figure 3-29 Deploy Application View Window



Deploy Application View SapService to Server

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

Required Service Parameters

Enable asynchronous service invocation? ☑

Connection Pool Parameters

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

Minimum Pool Size* 1

Maximum Pool Size* 10

Target Fraction of Maximum Pool Size* 0.7

Allow Pool to Shrink? ☑

Log Configuration

Set the log verbosity level for this application view.

Log warnings, errors, and audit messages

Configure Security

Restrict Access to SapService using J2EE Security

☑ Deploy persistently?

4. If required, update the settings, and click Deploy. The Summary for Application View window opens.

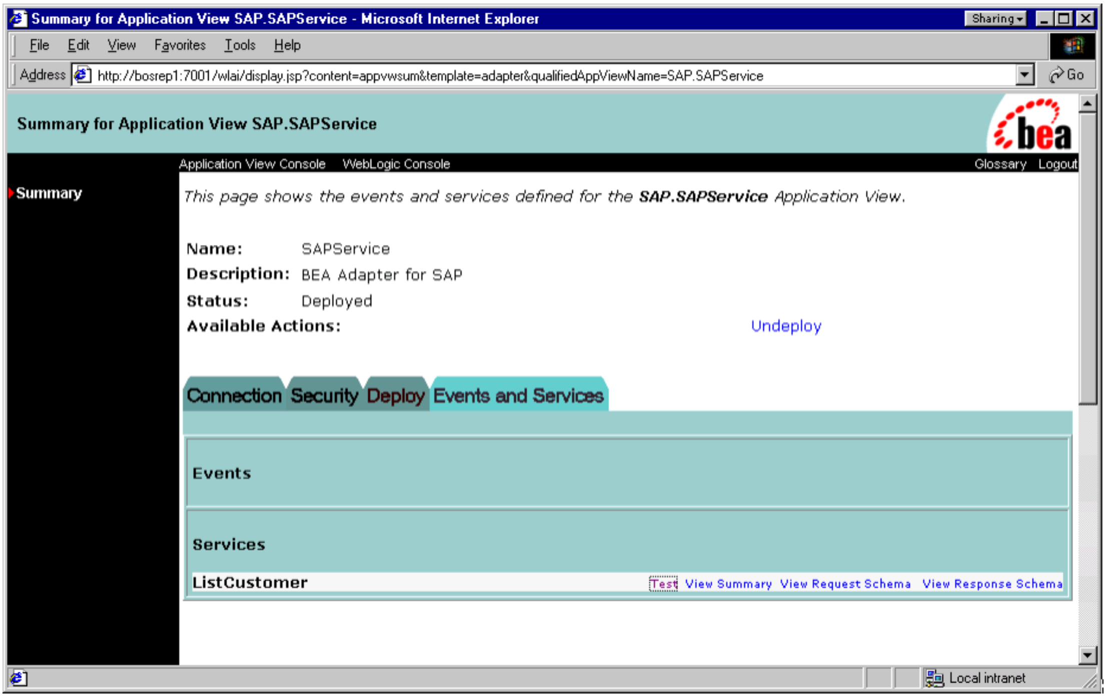
At this point, you can test your service adapter as described in "Testing the Service Adapter."

Testing the Service Adapter

After you create and deploy an application view as described in "Creating a Service Adapter Application View" on page 3-29 and "Configuring the Service Adapter Application View" on page 3-32, you can test its services.

1. In the Summary for Application View window, click Test for the service configured in the service adapter.

Figure 3-30 Summary for Application View Window



http://bosrep1:7001/wlai/display.jsp?content=appvwsum&template=adapter&qualifiedAppViewName=SAP.SAPService

Summary for Application View SAP.SAPService

This page shows the events and services defined for the ***SAP.SAPService*** *Application View.*

Name: SAPService
Description: BEA Adapter for SAP
Status: Deployed
Available Actions: Undeploy

Events

Services

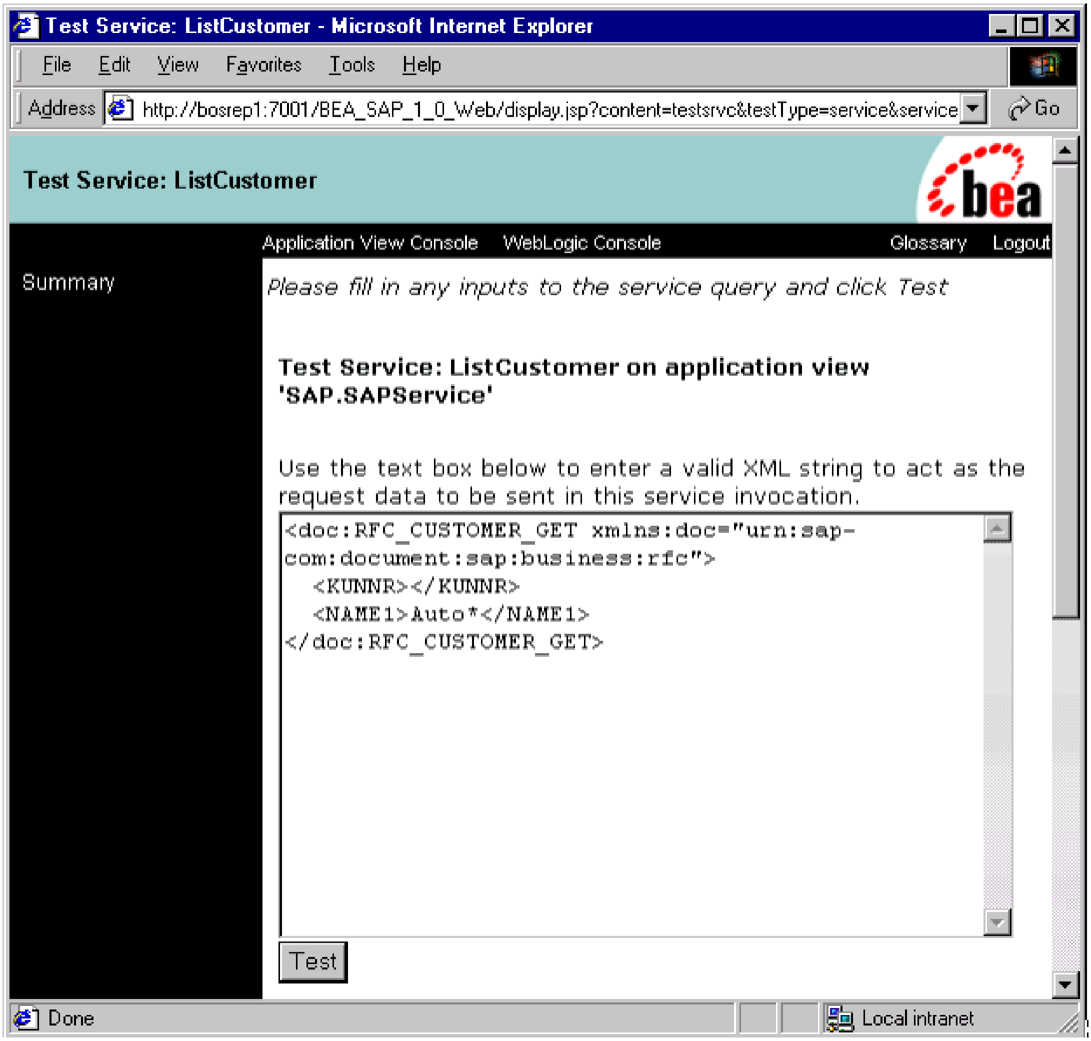
ListCustomer

The Test Service window opens.

2. Enter a sample BEA WebLogic Adapter for SAP Request, for example, `RFC_CUSTOMER_GET`:

```
<doc:RFC_CUSTOMER_GET
xmlns:doc="urn:sap-com:document:sap:business:rfc">
    <KUNNR></KUNNR>
    <NAME1>Auto*</NAME1>
</doc:RFC_CUSTOMER_GET>
```

Figure 3-31 Test Service Window



Test Service: ListCustomer - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp?content=testsrvc&testType=service&service
Go
Test Service: ListCustomer
bea
Application View Console WebLogic Console Glossary Logout
Summary

Please fill in any inputs to the service query and click Test

Test Service: ListCustomer on application view 'SAP.SAPService'

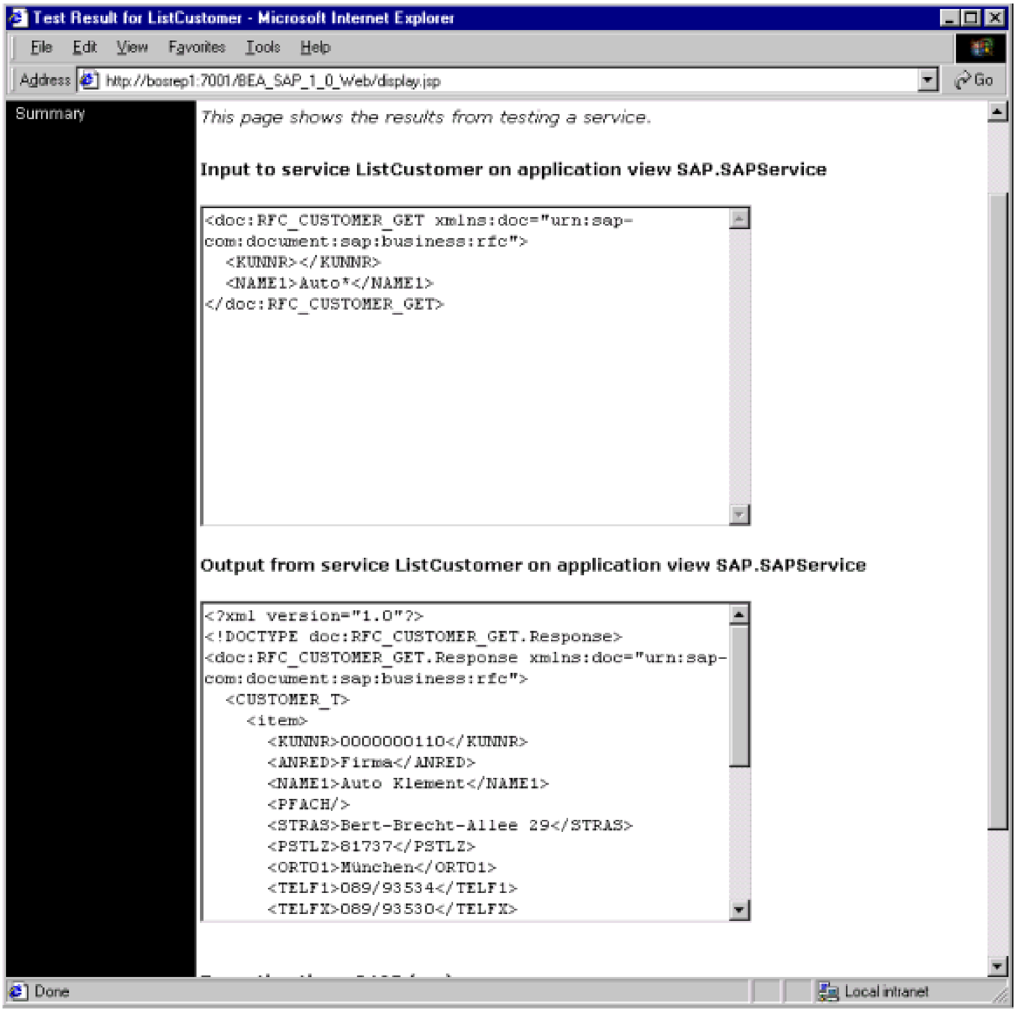
Use the text box below to enter a valid XML string to act as the request data to be sent in this service invocation.

```
<doc:RFC_CUSTOMER_GET xmlns:doc="urn:sap-
com:document:sap:business:rfc">
   <KUNNR></KUNNR>
   <NAME1>Auto*</NAME1>
</doc:RFC_CUSTOMER_GET>
```

3. Click Test to send the request through the SAP service adapter to the SAP EIS system.

The response document should look similar to the following.

Figure 3-32 Test Results Window


Test Result for ListCustomer - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://bosrep1:7001/BEA_SAP_1_0_Web/display.jsp
Go
Summary
Done
Local intranet

This page shows the results from testing a service.

Input to service ListCustomer on application view SAP.SAPService

```
<doc:RFC_CUSTOMER_GET xmlns:doc="urn:sap-
com:document:sap:business:rfc">
  <KUNNR></KUNNR>
  <NAME1>Auto*</NAME1>
</doc:RFC_CUSTOMER_GET>
```

Output from service ListCustomer on application view SAP.SAPService

```
<?xml version="1.0"?>
<!DOCTYPE doc:RFC_CUSTOMER_GET.Response>
<doc:RFC_CUSTOMER_GET.Response xmlns:doc="urn:sap-
com:document:sap:business:rfc">
  <CUSTOMER_T>
    <item>
      <KUNNR>0000000110</KUNNR>
      <ANRED>Firma</ANRED>
      <NAME1>Auto Klement</NAME1>
      <PFACH/>
      <STRAS>Bert-Brecht-Allee 29</STRAS>
      <PSTLZ>81737</PSTLZ>
      <ORT01>München</ORT01>
      <TELF1>089/93534</TELF1>
      <TELFX>089/93530</TELFX>
```

The full response document follows.

Listing 3-1 Full Response Document from ListCustomer

```
<doc:RFC_CUSTOMER_GET.Response
xmlns:doc="urn:sap-com:document:sap:business:rfc">
   <CUSTOMER_T>
      <item>
         <KUNNR>0000000110</KUNNR>
         <ANRED>Firma</ANRED>
         <NAME1>Auto Klement</NAME1>
         <PFACH/>
         <STRAS>Bert-Brecht-Allee 29</STRAS>
         <PSTLZ>81737</PSTLZ>
         <ORT01>Mnnchen</ORT01>
         <TELF1>089/93534</TELF1>
         <TELFX>089/93530</TELFX>
      </item>
      <item>
         <KUNNR>0000001012</KUNNR>
         <ANRED>Firma</ANRED>
         <NAME1>Autohaus Franzl GmbH</NAME1>
         <PFACH/>
         <STRAS>Schwarzhauptstrasse 51</STRAS>
         <PSTLZ>80939</PSTLZ>
         <ORT01>Muenchen</ORT01>
         <TELF1>089/3546721</TELF1>
         <TELFX>089/3546722</TELFX>
      </item>
   </CUSTOMER_T>
</doc:RFC_CUSTOMER_GET.Response>
```

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`

CHAPTER

4 The BEA WebLogic Adapter for SAP and IDocs

The BEA WebLogic Adapter for SAP's event adapter receives IDocs from SAP using the RFCs `INBOUND_IDOC_PROCESS` or `IDOC_INBOUND_ASYNCHRONOUS`. This section describes how to configure and test your SAP system to send IDocs to an event adapter; for additional information, see your SAP documentation. This section includes the following topics:

- Defining a Logical Port
- Creating a Logical System
- Creating a Partner Profile
- Creating a Distribution Model for the Partner and Message Type
- Manually Sending an IDoc

Defining a Logical Port

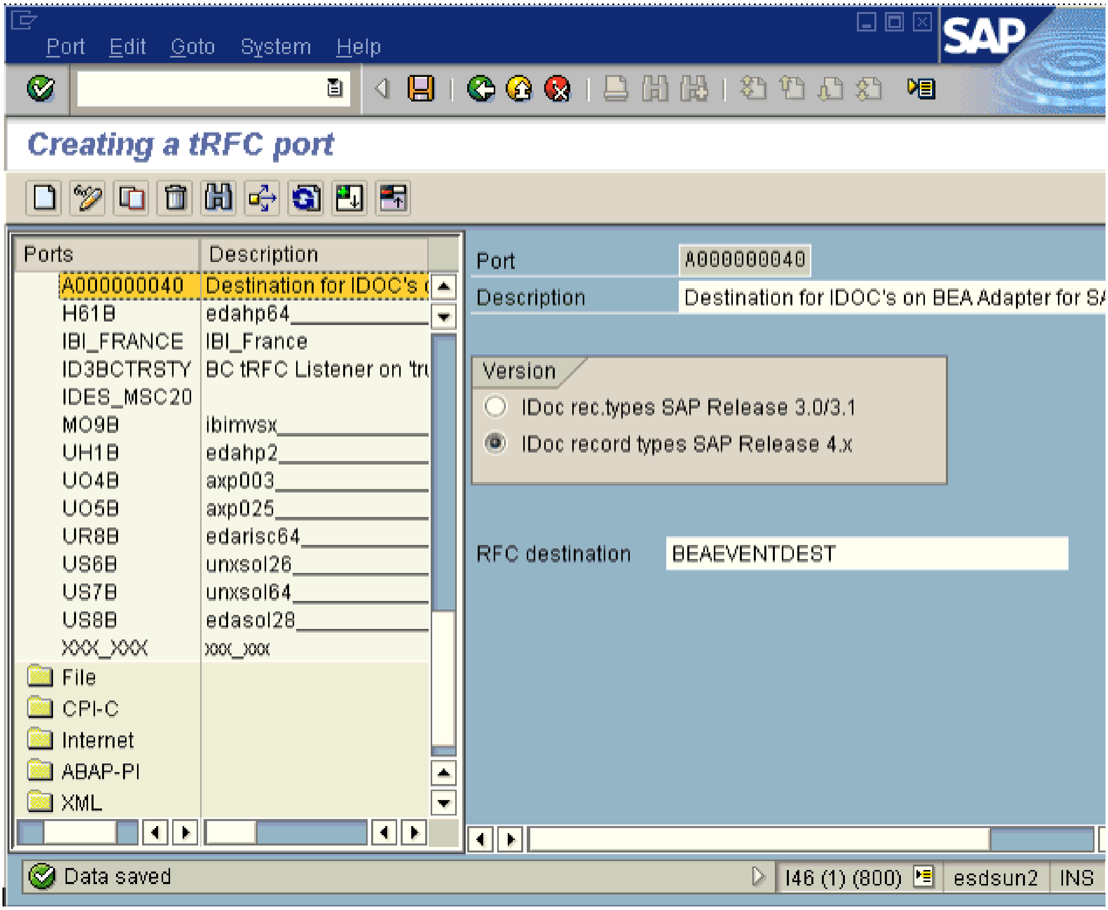
The lower level networking requires that a system port number be associated with the RFC destination. The logical port identifies the port to which messages are sent. The logical port can only be used if an RFC destination was previously created.

1. In the SAP Main window, choose Tools→Business Communications→IDOCs Basis→IDOC→Port Definition, or execute transaction `WE21`.
2. Select the Transactional RFC tree item and click Create.
3. Select generate port name.

   The system generates the port name.
4. Enter the IDoc version you want to send through this port.
5. Click the destination you created, for example, BEASAPDEST.

6. Save the session, making note of the system-generated RFC Port.

Figure 4-1 SAP Main Window / Creating a tRFC port



Ports	Description
A000000040	Destination for IDOC's (
H61B	edahp64
IBI_FRANCE	IBI_France
ID3BCTRSTY	BC tRFC Listener on 'tr
IDES_MSC20	
MO9B	ibimvsx
UH1B	edahp2
UO4B	axp003
UO5B	axp025
UR8B	edarisc64
US6B	unxsol26
US7B	unxsol64
US8B	edasol28
XXX_XXX	xxx_xxx
File	
CPI-C	
Internet	
ABAP-PI	
XML	

Port A000000040

Description Destination for IDOC's on BEA Adapter for S/

Version

○ IDoc rec.types SAP Release 3.0/3.1

● IDoc record types SAP Release 4.x

RFC destination BEAEVENTDEST

✓ Data saved

I46 (1) (800) esdsun2 INS

Creating a Logical System

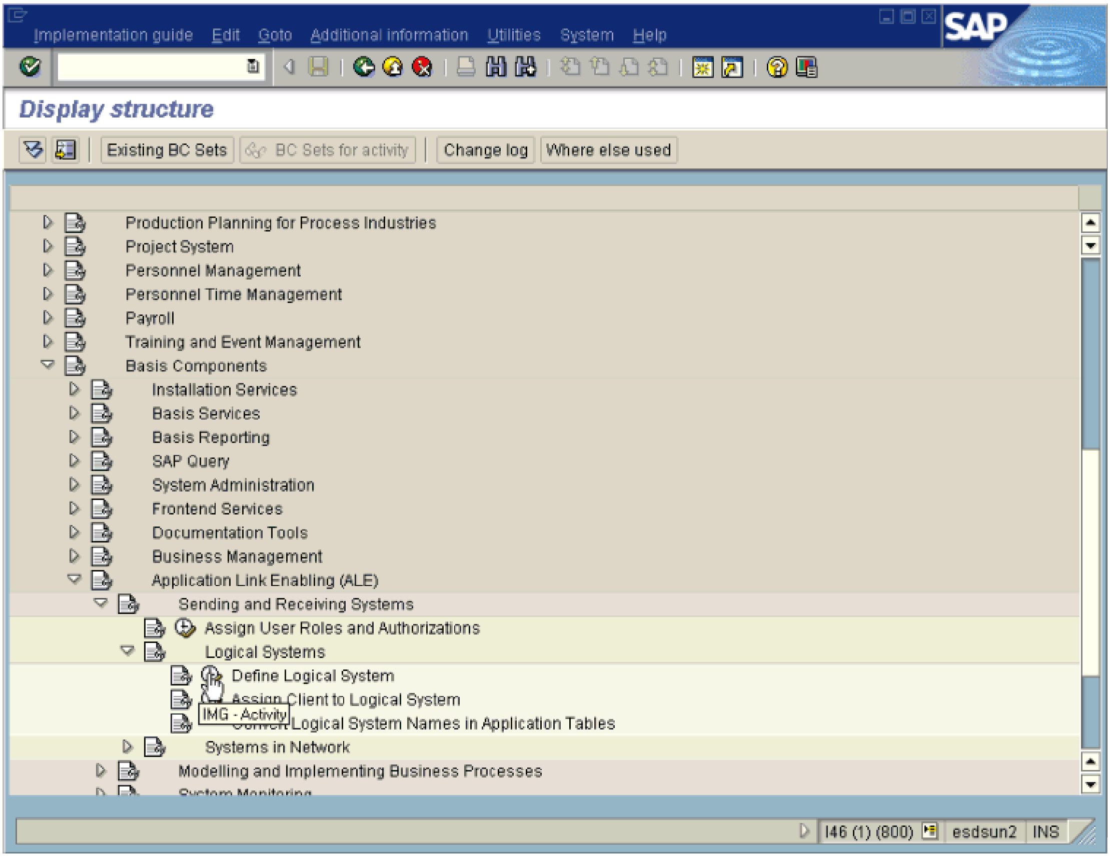
One type of partner is a logical system. A logical system manages one or more RFC destinations. To create a logical system called BEALOG:

1. In the SAP Main screen, choose Tools→AcceleratedSAP→Customizing→Project Management (transaction `SPRO_ADMIN`), or else execute transaction `SPRO`.

2. Select SAP Reference IMG.

3. Expand the following nodes: Basis Components→Application Link Enabling (ALE)→Sending and Receiving Systems→Logical Systems→Define Logical System. Click the green hook beside Define Logical System.

Figure 4-2 SAP Main Window / Display Structure

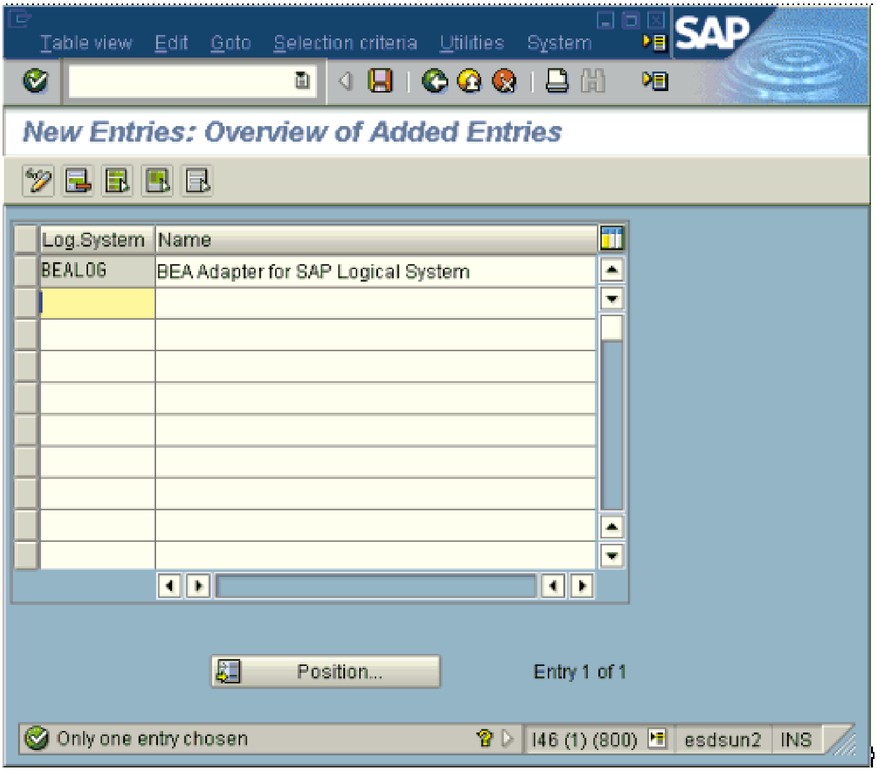


Production Planning for Process Industries
Project System
Personnel Management
Personnel Time Management
Payroll
Training and Event Management
Basis Components
    Installation Services
    Basis Services
    Basis Reporting
    SAP Query
    System Administration
    Frontend Services
    Documentation Tools
    Business Management
    Application Link Enabling (ALE)
        Sending and Receiving Systems
            Assign User Roles and Authorizations
            Logical Systems
                Define Logical System
                Assign Client to Logical System
                Current Logical System Names in Application Tables
            Systems in Network
        Modelling and Implementing Business Processes
        System Monitoring

4. Select New Entries.

5. Enter a meaningful name for your partner and provide a short description (for example, BEALOG).

Figure 4-3 SAP Main Window / New Entries: Overview of Added Entries



Log.System	Name
BEALOG	BEA Adapter for SAP Logical System

Entry 1 of 1

Only one entry chosen

I46 (1) (800) esdsun2 INS

6. Save the session.

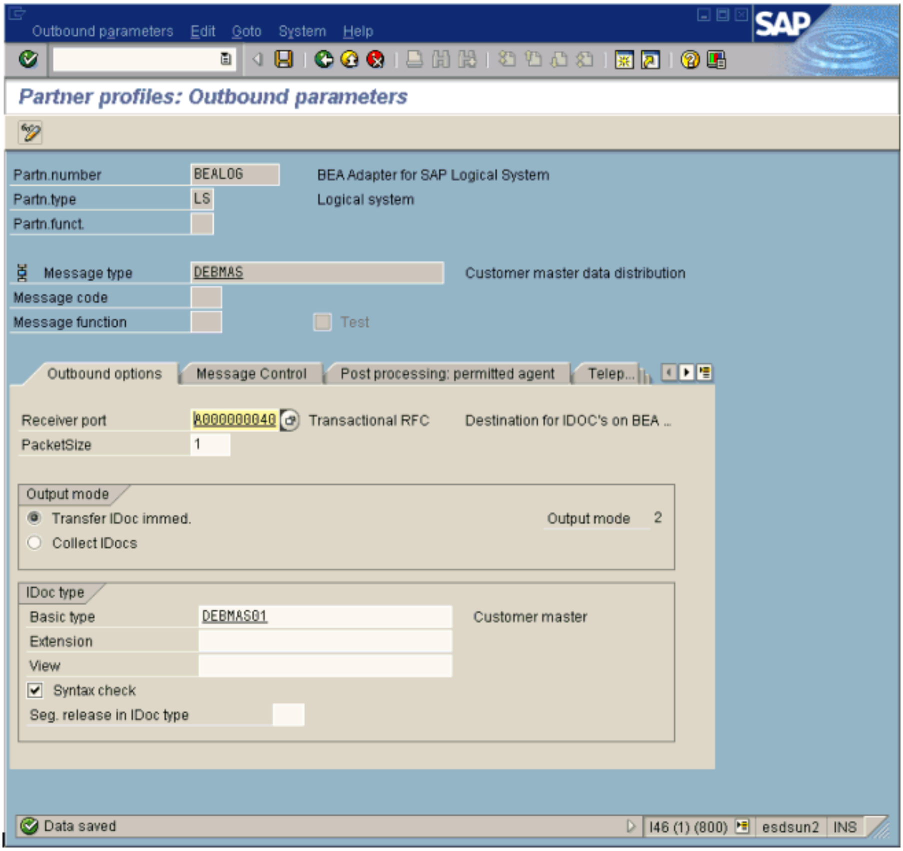
Creating a Partner Profile

To create a partner profile:

1. In the SAP Main screen, choose Tools→Business Communication→IDOC Basis→IDOC→Partner profile, or else execute transaction `WE20`.
2. Select Partner type LS (Logical system) and select Create (F5).
3. Enter Type as USER and enter Agent as OMNI (this is the user ID of the SAP system).
4. Select Create outbound parameter below the outbound parameter table control.
5. Partn.type is LS, Message Type is DEBMAS (this is the IDoc document type), and leave Partn.funct blank.
6. Select the Outbound options tab.
7. Select Transfer IDOCs Immed.
8. Enter message type of the IDoc (for example, DEBMAS).
9. Enter receiver port for example (A000000040 from the previous example screens).

10. Save the session.

Figure 4-4 SAP Window / Partner Profiles: Outbound Parameters



Partner profiles: Outbound parameters

Partn.number BEALOG BEA Adapter for SAP Logical System

Partn.type LS Logical system

Partn.funct.

Message type DEBMAS Customer master data distribution

Message code

Message function

□ Test

Receiver port A000000040 Transactional RFC Destination for IDOC's on BEA ...

PacketSize 1

Output mode

● Transfer IDoc immed.

○ Collect IDocs

Output mode 2

IDoc type

Basic type DEBMAS01 Customer master

Extension

View

☑ Syntax check

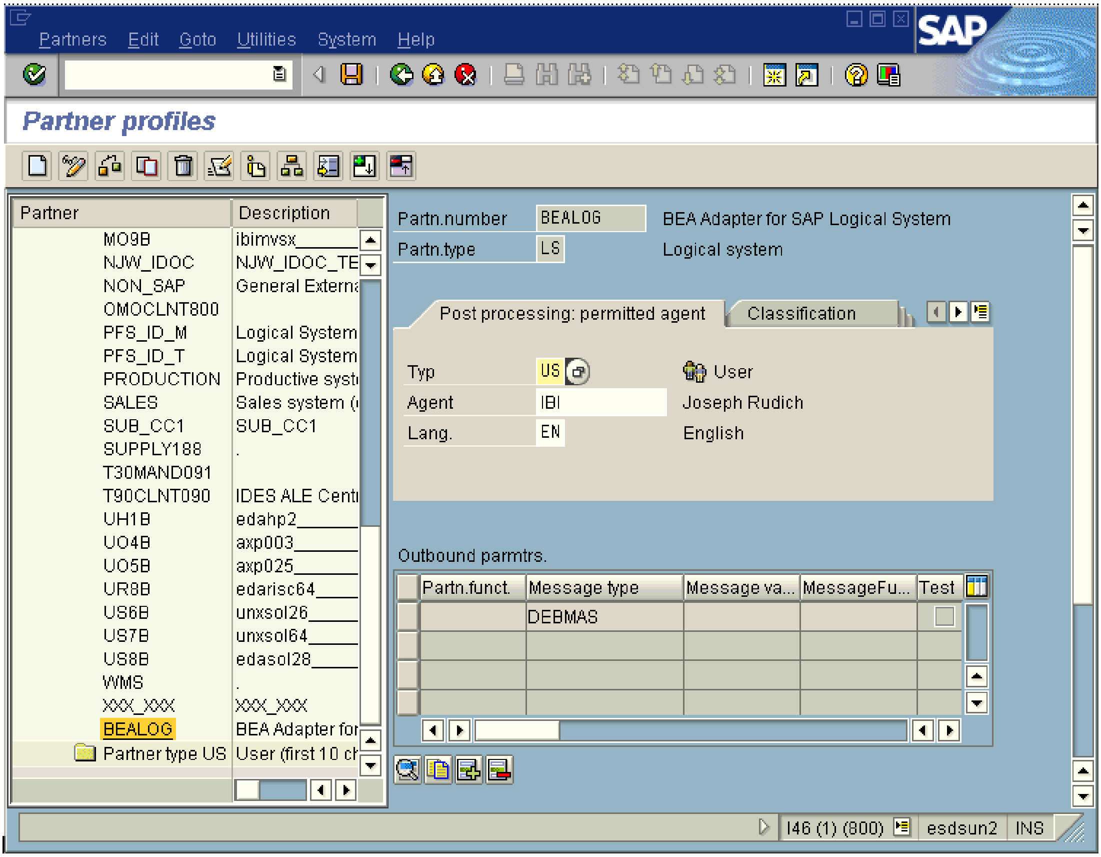
Seg. release in IDoc type

Data saved

I46 (1) (800) esdsun2 INS

11. Exit the session. The SAP Partner Profiles summary window opens, displaying information for the logical system that you just created.

Figure 4-5 SAP Window / Partner Profiles Summary



Partner profiles

Partner	Description
MO9B	ibimvsx_____
NJW_IDOC	NJW_IDOC_TE
NON_SAP	General Externa
OMOCLNT800	
PFS_ID_M	Logical System
PFS_ID_T	Logical System
PRODUCTION	Productive syst
SALES	Sales system (
SUB_CC1	SUB_CC1
SUPPLY188	.
T30MAND091	
T90CLNT090	IDES ALE Centr
UH1B	edahp2______
UO4B	axp003______
UO5B	axp025______
UR8B	edarisc64_____
US6B	unxsol26_____
US7B	unxsol64_____
US8B	edasol28_____
WMS	.
XXX_XXX	XXX_XXX
BEALOG	BEA Adapter for
Partner type US	User (first 10 ch

Partn.number BEALOG BEA Adapter for SAP Logical System

Partn.type LS Logical system

Post processing: permitted agent | Classification

Typ US User

Agent IBI Joseph Rudich

Lang. EN English

Outbound parmtrs.

Partn.funct.	Message type	Message va...	MessageFu...	Test
	DEBMAS			□

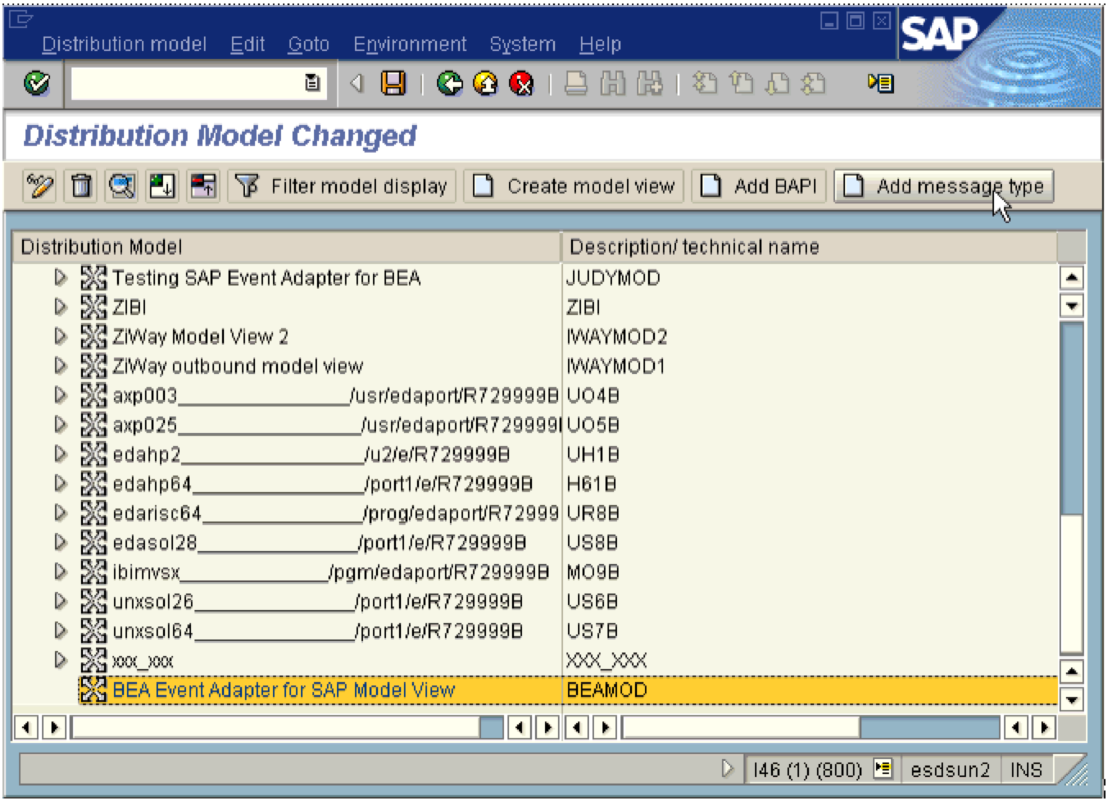
I46 (1) (800) esdsun2 INS

Creating a Distribution Model for the Partner and Message Type

To create a distribution model called BEAMOD:

1. In the SAP Main screen, choose Tools→AcceleratedSAP→Customizing→Project Management, or else execute transaction `BD64`.
2. Select Create model view. (You may need to switch processing mode to edit, within Distribution Model/Switch Processing).
3. Enter a short text string and a technical name for your new model view.
4. Select your new model view in the tree Distribution Model and select Add message type.

Figure 4-6 SAP Window / Distribution Model Changed

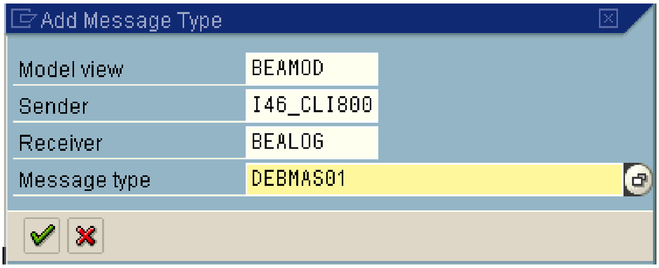


Distribution Model	Description/ technical name
Testing SAP Event Adapter for BEA	JUDYMOD
ZIBI	ZIBI
ZiWay Model View 2	IWAYMOD2
ZiWay outbound model view	IWAYMOD1
axp003________________/usr/edaport/R729999B	UO4B
axp025________________/usr/edaport/R729999I	UO5B
edahp2________________/u2/e/R729999B	UH1B
edahp64________________/port1/e/R729999B	H61B
edarisc64_______________/prog/edaport/R72999	UR8B
edasol28_______________/port1/e/R729999B	US8B
ibimvsx_______________/pgm/edaport/R729999B	MO9B
unxsol26_______________/port1/e/R729999B	US6B
unxsol64_______________/port1/e/R729999B	US7B
xxx_xxx	XXX_XXX
BEA Event Adapter for SAP Model View	BEAMOD

In the dialog box, you can view:

- Sender: for example, I46_CLI800, which points to the SAP system that will SEND the IDoc (in this case, an SAP 4.6B system).
- Receiver: Logical system. For example, BEALOG.
- Message type: Type of IDoc. For example, DEBMAS.

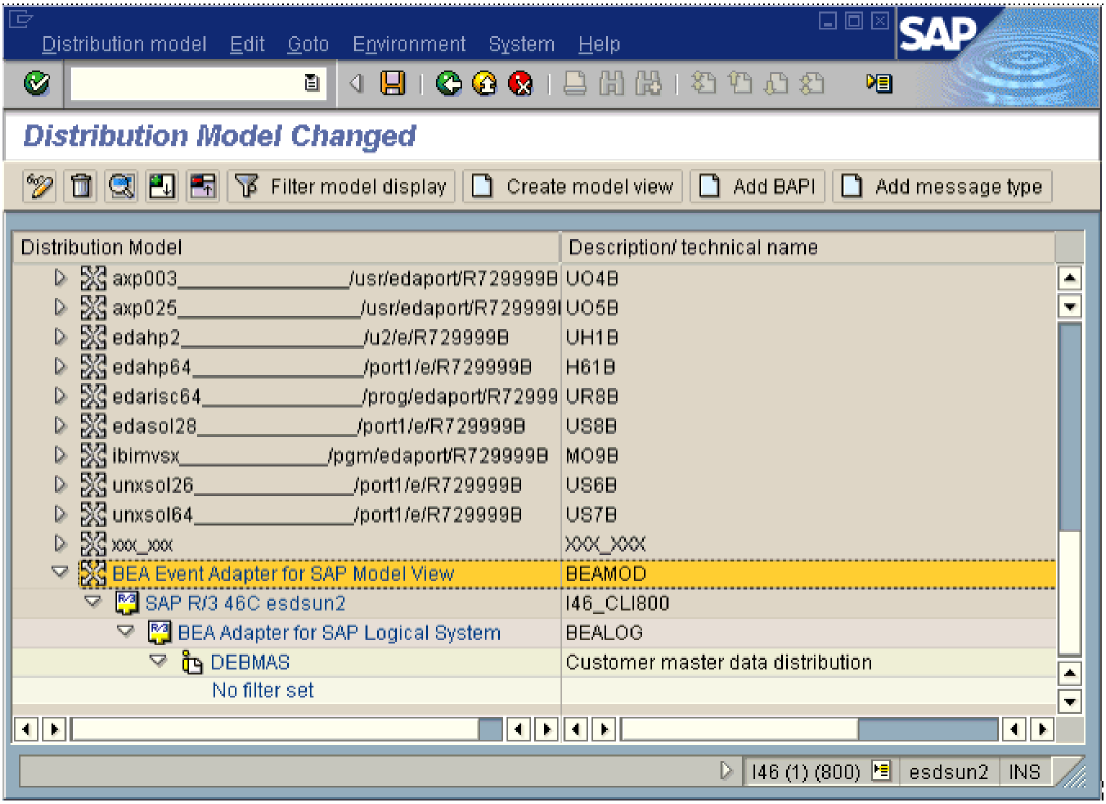
Figure 4-7 SAP Window / Add Message Type



Model view	BEAMOD
Sender	I46_CLI800
Receiver	BEALOG
Message type	DEBMAS01

The following screen shows the new model view that can be used to send message type DEBMAS from the I46_CLI800 SAP system to the BEALOG logical system.

Figure 4-8 SAP Window / Distribution Model Changed (New Model View)



Distribution Model	Description/ technical name
axp003_______________/usr/edaport/R729999B	UO4B
axp025________________/usr/edaport/R729999I	UO5B
edahp2________________/u2/e/R729999B	UH1B
edahp64_______________/port1/e/R729999B	H61B
edarisc64______________/prog/edaport/R72999	UR8B
edasol28______________/port1/e/R729999B	US8B
ibimvsx______________/pgm/edaport/R729999B	MO9B
unxsol26______________/port1/e/R729999B	US6B
unxsol64______________/port1/e/R729999B	US7B
xxx_xxx	XXX_XXX
BEA Event Adapter for SAP Model View	BEAMOD
SAP R/3 46C esdsun2	I46_CLI800
BEA Adapter for SAP Logical System	BEALOG
DEBMAS	Customer master data distribution
No filter set	

You are now ready to test the connection to the WebLogic Server, as described in "Manually Sending an IDoc" on page 4-14.

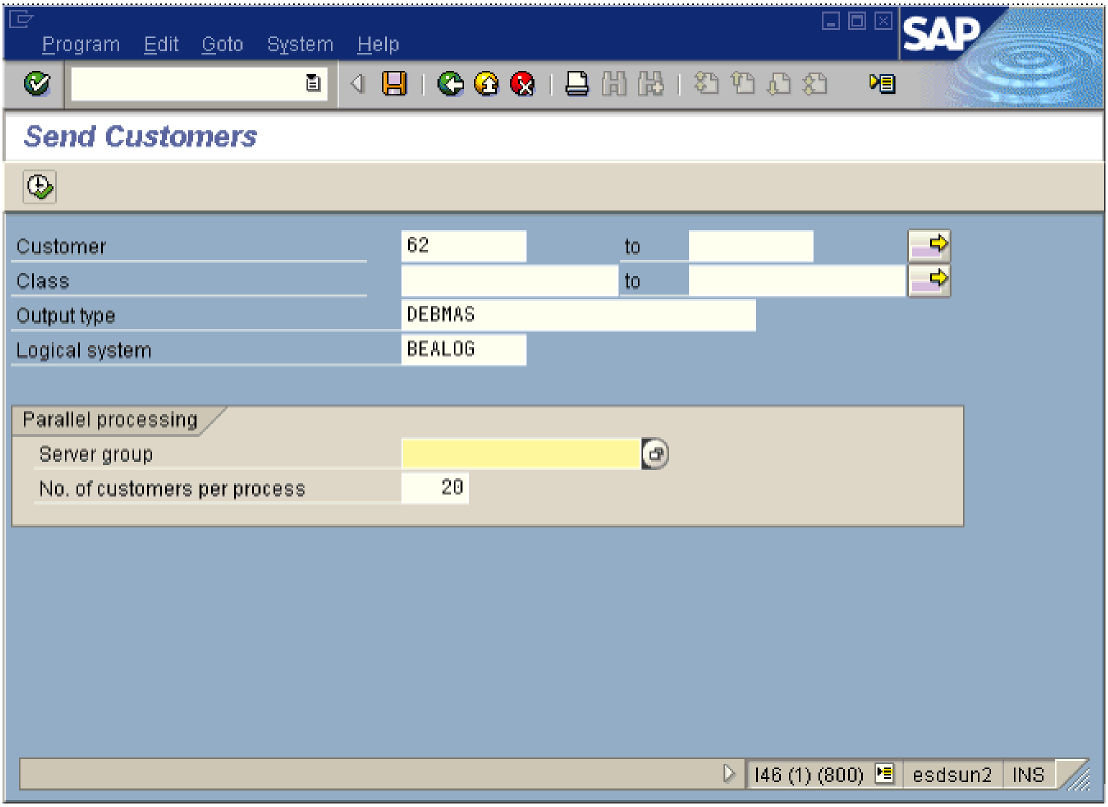
Manually Sending an IDoc

In the SAP Server, the transaction `BD12` brings you to the following screen where you can send IDocs to any logical system, in this example to WebLogic Integration with an SAP event adapter (RFC listener) for program ID BEAID.

1. Add an SAP event adapter to WebLogic Integration.
2. Use the BEA Application Explorer to create appropriate schemas.
3. Enter the IDoc message type DEBMAS in the Output type field.
4. Enter the logical system (for example, BEALOG).
5. Click Run (transfer data).

6. The event adapter receives the IDoc in XML format. No response is expected from WebLogic Integration.

Figure 4-9 SAP Window / Send Customers



Send Customers

Customer 62 to

Class to

Output type DEBMAS

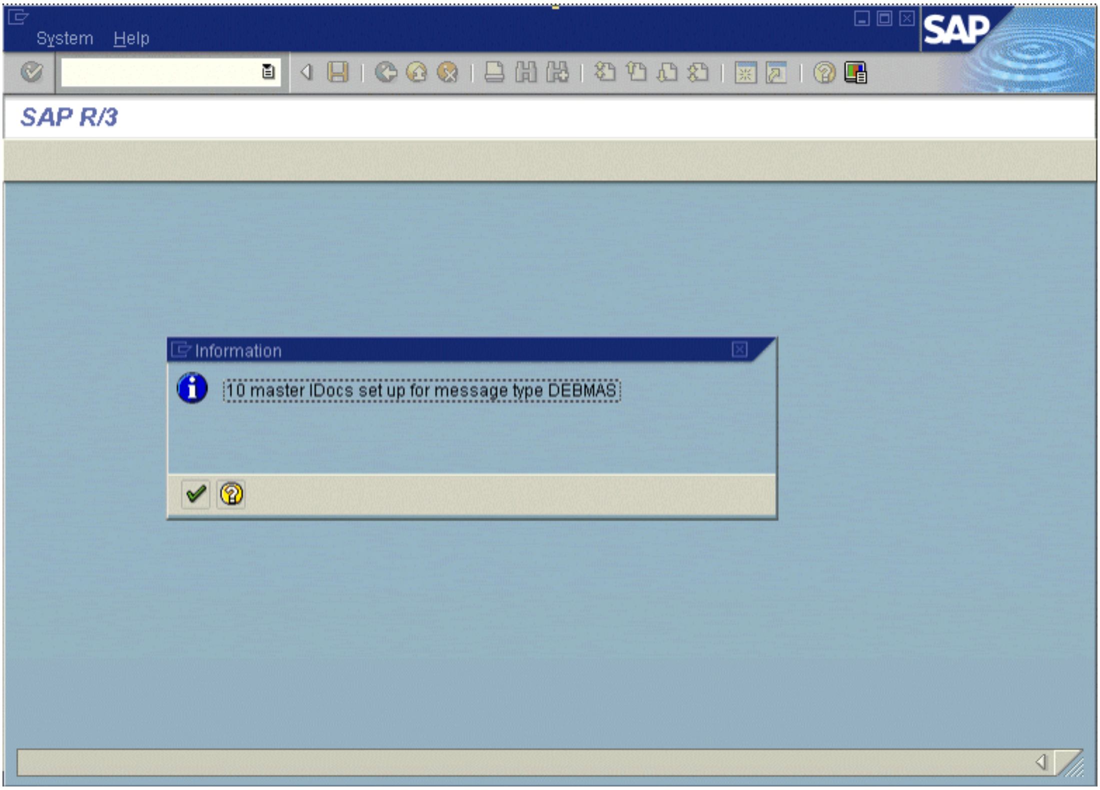
Logical system BEALOG

Parallel processing

Server group

No. of customers per process 20

Figure 4-10 SAP Window / Master IDocs Set Up for Message Type DEBMAS



10 master IDocs set up for message type DEBMAS

CHAPTER

5 Sending SAP Events Using ABAP Programs

Once the BEA WebLogic Adapter for SAP's event adapter and the RFC destination are configured, you can write ABAP code to execute calls at your new destination (that is, the event adapter).

This section describes how to send RFC or BAPIs to the event adapter. It includes the following topic:

- Writing an RFC Module

Writing an RFC Module

The following is sample code that makes use of the user-defined RFC module `Z_EVENT_DISPATCH`.

Listing 5-1 Sample Code With User-Defined RFC

```
FUNCTION Z_01_EVENT_DISPATCH.
CALL FUNCTION 'Z_EVENT_DISPATCH'
  DESTINATION 'BEADEST'
  EXPORTING
    EVENT = EVENT
    RECTYPE = RECTYPE
    OBJTYPE = OBJTYPE
    OBJKEY = OBJKEY
  TABLES
    EVENT_CONTAINER = EVENT_CONTAINER.
ENDFUNCTION.
```

A Sample Files

This section provides sample request and response documents sent between SAP and the BEA WebLogic Adapter for SAP. It includes the following samples:

- Sample RFC Request Document
- Sample RFC Response Document
- Sample IDoc XML for Message Type DEBMAS

Sample RFC Request Document

Listing A-2 Sample RFC Request Document

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

<doc:RFC_WALK_THRU_TEST
xmlns:doc="urn:sapcom:document:sap:business:rfc">

   <TEST_IN>

      <RFCFLOAT>0.0</RFCFLOAT>
      <RFCCHAR1></RFCCHAR1>
      <RFCINT2>0</RFCINT2>
      <RFCINT1>0</RFCINT1>
      <RFCCHAR4></RFCCHAR4>
      <RFCINT4>10</RFCINT4>
      <RFCHEX3>000000</RFCHEX3>
      <RFCCHAR2></RFCCHAR2>
      <RFCTIME>10:09:32</RFCTIME>
      <RFCDATE>2001-09-05</RFCDATE>
      <RFCDATA1>Hello World</RFCDATA1>
      <RFCDATA2></RFCDATA2>
   </TEST_IN>
   <DESTINATIONS>
   </DESTINATIONS>
   <LOG>
   </LOG>
</doc:RFC_WALK_THRU_TEST>
```

Sample RFC Response Document

Listing A-3 Sample RFC Response Document

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

<doc:RFC_WALK_THRU_TEST.Response
xmlns:doc="urn:sapcom:document:sap:business:rfc">

   <TEST_OUT>

      <RFCFLOAT>0.0</RFCFLOAT>
      <RFCCHAR1></RFCCHAR1>
      <RFCINT2>0</RFCINT2>
      <RFCINT1>0</RFCINT1>
      <RFCCHAR4></RFCCHAR4>
      <RFCINT4>10</RFCINT4>
      <RFCHEX3>000000</RFCHEX3>
      <RFCCHAR2></RFCCHAR2>
      <RFCTIME>10:09:32</RFCTIME>
      <RFCDATE>2001-09-05</RFCDATE>
      <RFCDATA1>Hello World</RFCDATA1>
      <RFCDATA2></RFCDATA2>
   </TEST_OUT>
   <DESTINATIONS>
   </DESTINATIONS>
   <LOG>
   </LOG>
</doc:RFC_WALK_THRU_TEST.Response>
```

Sample IDoc XML for Message Type DEBMAS

Listing A-4 Sample IDoc XML for Message Type DEBMAS

```
<?xml version="1.0" ?>
<DEBMAS01>
   <IDOC BEGIN="1">
      <EDI_DC40 SEGMENT="1">
         <TABNAM>EDI_DC40</TABNAM>
         <MANDT>800</MANDT>
<DOCNUM>0000000000236015</DOCNUM>
         <DOCREL>46C</DOCREL>
         <STATUS>30</STATUS>
         <DIRECT>1</DIRECT>
         <OUTMOD>2</OUTMOD>
         <EXPRSS></EXPRSS>
         <TEST></TEST>
         <IDOCTYP>DEBMAS01</IDOCTYP>
         <CIMTYP></CIMTYP>
         <MESTYP>DEBMAS</MESTYP>
         <MESCOD></MESCOD>
         <MESFCT></MESFCT>
         <STD></STD>
         <STDVRS></STDVRS>
         <STDMES></STDMES>
         <SNDPOR>SAPI46</SNDPOR>
         <SNDPRT>LS</SNDPRT>
         <SNDPFC></SNDPFC>
         <SNDPRN>I46_CLI800</SNDPRN>
         <SNDSAD></SNDSAD>
         <SNDLAD></SNDLAD>
         <RCVPOR>A000000018</RCVPOR>
         <RCVPRT>LS</RCVPRT>
         <RCVPFC></RCVPFC>
         <RCVPRN>SAMP</RCVPRN>
         <RCVSAD></RCVSAD>
         <RCVLAD></RCVLAD>
         <CREDAT>2001-09-04</CREDAT>
         <CRETIM>16:44:52</CRETIM>
         <REFINT></REFINT>
         <REFGRP></REFGRP>
         <REFMES></REFMES>
```

```
    <ARCKEY></ARCKEY>
    <SERIAL>20010904164452</SERIAL>
</EDI_DC40>
<E1KNA1M SEGMENT="1">
   <MSGFN>005</MSGFN>
   <KUNNR>0000000001</KUNNR>
   <ANRED></ANRED>
   <AUFSD></AUFSD>
   <BAHNE></BAHNE>
   <BAHNS></BAHNS>
   <BBBNR>0000000</BBBNR>
   <BBSNR>00000</BBSNR>
   <BEGRU></BEGRU>
   <BRSCH></BRSCH>
   <BUBKZ>0</BUBKZ>
   <DATLT></DATLT>
   <FAKSD></FAKSD>
   <FISKN></FISKN>
   <KNRZA></KNRZA>
   <KONZS></KONZS>
   <KTOKD>0001</KTOKD>
   <KUKLA></KUKLA>
   <LAND1>US</LAND1>
   <LIFNR></LIFNR>
   <LIFSD></LIFSD>
   <LOCCO></LOCCO>
   <LOEVM></LOEVM>
   <NAME1>Apple Corp</NAME1>
   <NAME2></NAME2>
   <NAME3></NAME3>
   <NAME4></NAME4>
   <NIELS></NIELS>
   <ORT01>Floral Park</ORT01>
   <ORT02></ORT02>
   <PFACH></PFACH>
   <PSTL2></PSTL2>
   <PSTLZ>10010</PSTLZ>
   <REGIO>NY</REGIO>
   <COUNC></COUNC>
   <CITYC></CITYC>
   <RPMKR></RPMKR>
   <SORTL>APPLE</SORTL>
   <SPERR></SPERR>
   <SPRAS>E</SPRAS>
   <STCD1></STCD1>
   <STCD2></STCD2>
  <STKZA></STKZA>
  <STKZU></STKZU>
  <STRAS>123 Main street</STRAS>
```

```
<TELBX></TELBX>
<TELF1></TELF1>
<TELF2></TELF2>
<TELFX></TELFX>
<TELTX></TELTX>
<TELX1></TELX1>
<LZONE>0000000001</LZONE>
<XZEMP></XZEMP>
<VBUND></VBUND>
<STCEG></STCEG>
<GFORM></GFORM>
<BRAN1></BRAN1>
<BRAN2></BRAN2>
<BRAN3></BRAN3>
<BRAN4></BRAN4>
<BRAN5></BRAN5>
<UMJAH>0000</UMJAH>
<UWAER></UWAER>
<JMZAH>000000</JMZAH>
<JMJAH>0000</JMJAH>
<KATR1></KATR1>
<KATR2></KATR2>
<KATR3></KATR3>
<KATR4></KATR4>
<KATR5></KATR5>
<KATR6></KATR6>
<KATR7></KATR7>
<KATR8></KATR8>
<KATR9></KATR9>
<KATR10></KATR10>
<STKZN></STKZN>
<UMSA1>0</UMSA1>
<TXJCD></TXJCD>
<PERIV></PERIV>
<KTOCD></KTOCD>
<PFORT></PFORT>
<DTAMS></DTAMS>
<DTAWS></DTAWS>
<HZUOR>00</HZUOR>
<CIVVE>X</CIVVE>
<MILVE></MILVE>
<SPRAS_ISO>EN</SPRAS_ISO>
<FITYP></FITYP>|
<STCDT></STCDT>
<STCD3></STCD3>
<STCD4></STCD4>
<XICMS></XICMS>
<CFOPC></CFOPC>
<TXLW1></TXLW1>
```

```
  <TXLW2></TXLW2>
  <CCC01></CCC01>
  <CCC02></CCC02>
  <CCC03></CCC03>
  <CCC04></CCC04>
  <CASSD></CASSD>
  <KDKG1></KDKG1>
  <KDKG2></KDKG2>
  <KDKG3></KDKG3>
  <KDKG4></KDKG4>
  <KDKG5></KDKG5>
  <NODEL></NODEL>
  <XSUB2></XSUB2>
 <WERKS></WERKS>
<E1KNVVM SEGMENT="1">
   <MSGFN>005</MSGFN>
   <VKORG>0001</VKORG>
   <VTWEG>01</VTWEG>
   <SPART>01</SPART>
  <BEGRU></BEGRU>
  <LOEVM></LOEVM>
  <VERSG></VERSG>
  <AUFSD></AUFSD>
  <KALKS>1</KALKS>
  <KDGRP></KDGRP>
  <BZIRK></BZIRK>
  <KONDA></KONDA>
  <PLTYP></PLTYP>
  <AWAHR>100</AWAHR>
  <INCO1></INCO1>
  <INCO2></INCO2>
  <LIFSD></LIFSD>
  <AUTLF></AUTLF>
  <ANTLF>9</ANTLF>
  <KZTLF></KZTLF>
  <KZAZU>X</KZAZU>
  <CHSPL></CHSPL>
  <LPRIO>00</LPRIO>
  <EIKTO></EIKTO>
  <VSBED>01</VSBED>
  <FAKSD></FAKSD>
  <MRNKZ></MRNKZ>
  <PERFK></PERFK>
  <PERRL></PERRL>
  <WAERS>EUR</WAERS>
  <KTGRD></KTGRD>
   <ZTERM></ZTERM>
   <VWERK></VWERK>
   <VKGRP></VKGRP>
```

```
<VKBUR></VKBUR>
<VSORT></VSORT>
<KVGR1></KVGR1>
<KVGR2></KVGR2>
<KVGR3></KVGR3>
<KVGR4></KVGR4>
<KVGR5></KVGR5>
<BOKRE></BOKRE>
<KURST></KURST>
<PRFRE></PRFRE>
<KLABC></KLABC>
<KABSS></KABSS>
<KKBER></KKBER>
<CASSD></CASSD>
<RDOFF></RDOFF>
<AGREL></AGREL>
<MEGRU></MEGRU>
<UEBTO>0.0</UEBTO>
<UNTTO>0.0</UNTTO>
<UEBTK></UEBTK>
<PVKSM></PVKSM>
<PODKZ></PODKZ>
<PODTG>         0</PODTG>
<E1KNVPM SEGMENT="1">
    <MSGFN>005</MSGFN>
    <PARVW>AG</PARVW>
    <KUNN2>0000000001</KUNN2>
    <DEFPA></DEFPA>
    <KNREF></KNREF>
    <PARZA>000</PARZA>
</E1KNVPM>
<E1KNVPM SEGMENT="1">
    <MSGFN>005</MSGFN>
    <PARVW>RE</PARVW>
    <KUNN2>0000000001</KUNN2>
    <DEFPA></DEFPA>
    <KNREF></KNREF>
    <PARZA>000</PARZA>
</E1KNVPM>
<E1KNVPM SEGMENT="1">
    <MSGFN>005</MSGFN>
    <PARVW>RG</PARVW>
    <KUNN2>0000000001</KUNN2>
    <DEFPA></DEFPA>
    <KNREF></KNREF>
    <PARZA>000</PARZA>
</E1KNVPM>
<E1KNVPM SEGMENT="1">
    <MSGFN>005</MSGFN>
```

```
            <PARVW>WE</PARVW>
            <KUNN2>0000000001</KUNN2>
            <DEFPA></DEFPA>
            <KNREF></KNREF>
            <PARZA>000</PARZA>
        </E1KNVPM>
        <E1KNVIM SEGMENT="1">
             <MSGFN>005</MSGFN>
             <ALAND>DE</ALAND>
             <TATYP>MWST</TATYP>
             <TAXKD>0</TAXKD>
        </E1KNVIM>
     </E1KNVVM>
   </E1KNA1M>
  </IDOC>
</DEBMAS01
>
```