

# Accessing Oracle Data Service Integrator (ALDSP 3.0) Data Services Through Oracle Service Bus 10g Release 3

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## Introduction

Oracle Data Service Integrator can be accessed through an Oracle Service Bus transport. In this way Oracle Service Bus can make full use of data services. This approach also allows a more efficient and flexible approach to accessing data services as compared with exposing such services as Web services.

**Note:** Oracle Service Bus 10gR3 is compatible with AquaLogic Data Services Platform (ALDSP) 3.0. The updated ALDSP product name after version 3.0 is Oracle Data Service Integrator. The new product name is used in this document unless procedural accuracy requires using ALDSP terminology. The name of the Oracle Service Bus transport remains "DSP."

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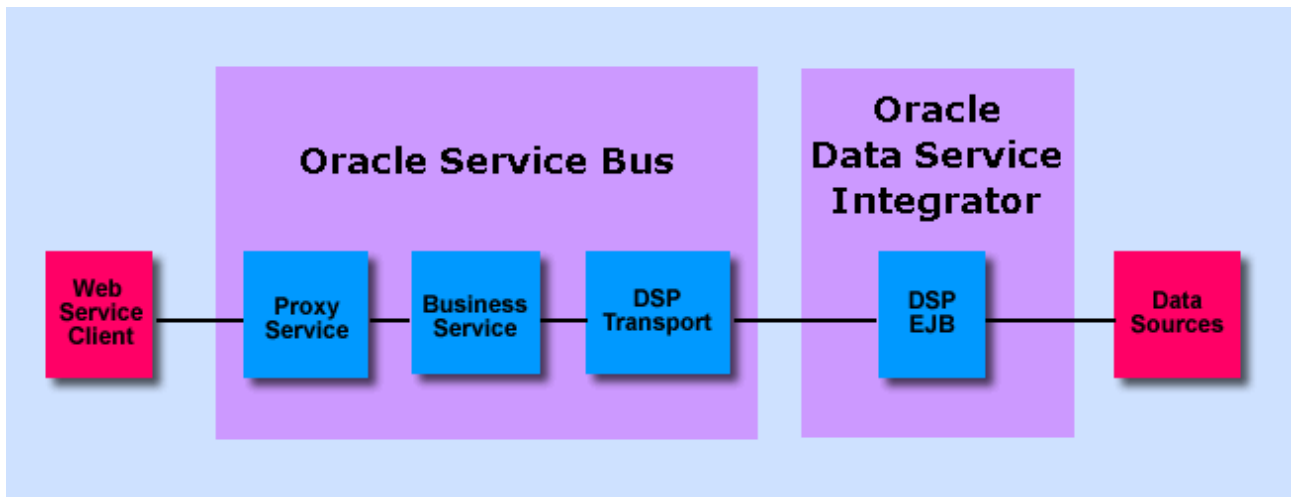
## Enabling Data Services for Oracle Service Bus

To make an Oracle Data Service Integrator data service available to an Oracle Service Bus client you need to:

- ✔ Generate a WSDL file for your data service and import the new WSDL into Oracle Service Bus using the recommended procedure.
- ✔ Configure or create a business service based on the WSDL.
- ✔ Configure or create a proxy service based on the business service.

After you have completed these tasks you can invoke data services through the appropriate version of Oracle Service Bus.

### From Data Source to Web Service Client



## Using the DSP Transport

The example in this section illustrates use of a data service in Oracle Service Bus.

## Actions Needed Within Oracle Data Service Integrator

### Step 1. Start Your Server

Start the Oracle Data Service Integrator server, if it is not already running. (For the purpose of this discussion, the sample RetailDataspaces provided with Oracle Data Service Integrator is used.)

**Start > Programs > BEA Products > BEA AquaLogic Data Services Platform 3.0 > Examples > Start Examples Server**

**See also: Getting started ALDSP tutorial:**  
[Creating Your First Data Services](#)

### Step 2. Generate a WSDL from the Data Service

You can generate a WSDL from your data service in two ways.

#### Option A. Generating a WSDL File Using Data Services Studio

**Detailed instructions available at:**  
[How To Generate a Web Service Map and WSDL from a Data Service](#)

#### Option B. Export a WSDL Through the Oracle Data Service Integrator Console

If a WS file is available, you can use the Oracle Data Service Integrator Console to generate a WSDL file.

1. Launch the Oracle Data Service Integrator Console. On Windows you can do this by choosing:

**Start > Programs > BEA Products > BEA AquaLogic Data Services Platform 3.0 > Examples > AquaLogic Data Services Console**



Alternatively, type <http://localhost:7001/dspconsole> in your Web browser.

2. Log in. The sample uses 'weblogic' (without quotes) as both the username and password.
3. Click Service Explorer.
4. Navigate to the web service map (example: RetailWebServices.ws) corresponding to the data service for which you want to create the WSDL file.
5. Click View WSDL Definition in the General tab. The Oracle Data Service Integrator Console opens a new window and displays the WSDL definition.
6. Using a text editor, copy and paste the WSDL definition into a new text document and save the WSDL file.

#### [Getting Started with ALDSP Administration](#)

If you've not already done so, build your data service application (deployment is automatic with a build). A deployed application is needed in order for a client processes to access data through your data services.

### Step 3: Obtaining the Web Service Address

The URL address to the WSDL is needed. To obtain this address in Data Services Studio:

1. Right-click on the WS file (example: OrderService.ws)
2. Select Test Web Service
3. When the Test Client opens save the URL address. Here is the address for the OrderService example:

```
http://localhost:7001/RetailDataspace/RetailApplication/OrderManagement/OrderService.ws?WSDL
```

### Actions Needed Within Oracle Service Bus

#### Step 4: Import the Data Service WSDL into Oracle Service Bus

The following generally describes the steps needed to import a WSDL generated in Oracle Data Service Integrator into Oracle Service Bus.

1. Start the Oracle Service Bus server, if it is not already running. For the purposes of this example, the Oracle Service Bus example server and the Default project is used. On Windows you can do this by choosing:

**Start > All Programs > Oracle WebLogic > Oracle Service Bus 10gR3 > Examples > Start Examples Server**

2. Launch the Oracle Service Bus Console. On Windows, choose:

**Start > All Programs > Oracle WebLogic > Oracle Service Bus 10gR3 > Examples > Service Bus Console**

 Alternatively, type <http://localhost:7021/sbconsole> in your Web browser.

3. Log in. The default user name and password is 'weblogic' (without quotes).
4. Click Project Explorer
5. Enter a new project name (example: dataServiceTest).
6. Click on the name of your new project.
7. In the Project Explorer locate the Create Resource option.
8. From the Select Resource Type dropdown select:

Bulk > Resources from URL

This opens the wizard from which you can import a WSDL and its associated schema. The following table covers the actions needed to continue the example.

#### Importing a WSDL as a Bulk Resource

	Wizard Page	Option	Action	Comment
1.	<b>Load Resources from URL</b>	URL/Path	<b>paste the WSDL URL</b>	The URL / Path is to the address of the WSDL you created (for an example see <a href="#">Obtaining the Web Service Address</a> )
2.		Resource Name	<b>enter any name</b>	example: orderService
3.		Resource Type	<b>enter WSDL</b>	
4.			<b>Next</b>	
5.	<b>Review Loaded Resources</b>		<b>click Import</b>	

#### Load Resources from Oracle Data Service Integrator WSDL Import

The screenshot shows the WLS console interface. On the left is the 'Change Center' sidebar with session details for 'weblogic session'. The main area displays a success message: 'The import was completed successfully.' Below this is the 'Load Resources' section, which shows an 'Import Result' table. The table lists two resources: 'OrderService' (WSDL) and 'XMLSchema\_1014847514' (XML Schema), both with a status of 'Success'. A 'Load Another' button is visible below the table.

Status	Name	Path	Resource Type	Diagnostic Message
✓	OrderService	myALDSPprojectTest	WSDL	
✓	XMLSchema_1014847514	myALDSPprojectTest	XML Schema	

**See also:**

[Loading Resources from a URL](#)

## Step 5: Create the Business Service

The following generally describes the steps needed to create a business service from a WSDL imported from Oracle Data Service Integrator.

1. In the Project Explorer locate the Create Resource option.
2. From the Select Resource Type dropdown select Business Service.

This opens the wizard from which you can create a business service. The following table covers the actions needed to continue the example.

### Creating Business Service for the Oracle Data Service Integrator Sample Data Service

	Wizard Page	Option	Action	Comment
1.	<b>Creating a Business Service - General Config</b>	Service Name	<b>enter name</b>	example: orderService
2.		Description	<b>any description</b>	
3.		Service Type	<b>WSDL Web Service</b>	
4.			<b>click Browse...</b>	browse to web service; example: orderService
5.		Select a WSDL	<b>click on the WSDL</b>	

6.	<b>Select WSDL definitions</b>	bindings or ports	<b>click on a SoapBindings or SoapPort</b>	example: OrderServiceSoapBinding
7.			<b>click Submit</b>	
8.	<b>Creating a Business Service - General Config</b>		<b>Next</b>	
9.	<b>Creating a Business Service - Transport Config</b>	Protocol	<b>dsp</b>	
10.		Endpoint URI	<b>enter name of Oracle Data Service Integrator project</b> example: <code>t3://localhost:7001/RetailDataspace</code>	
11.			<b>click Add</b>	
12.			<b>Next</b>	Accept defaults
13.			<b>Next</b>	Accept defaults
14.			<b>Save</b>	



**See Also:**

[Creating and Configuring Business Services](#)

## Step 6: Create the Proxy Service

The following generally describes the steps needed to create a proxy service.

1. In the Project Explorer locate the Create Resource option.
2. From the Select Resource Type dropdown select Proxy Service.

This opens the wizard from which you can create a proxy service. The following table covers the actions needed to continue the example.

### Creating a Proxy Service for the Oracle Data Service Integrator Sample Data Service

	<b>Wizard Page</b>	<b>Option</b>	<b>Action</b>	<b>Comment</b>
1.	<b>Creating a Proxy Service - General Config</b>	Service Name	<b>enter name</b>	example: orderService
2.		Description	<b>any description</b>	

3.		Service Type	<b>click on Business Service</b>	
4.		Business Service	<b>click Browse</b>	browse to created business service; example: orderService
5.	<b>Select Business Service</b>	Select a WSDL	<b>click on the radio button associated with the relevant business service</b>	
6.			<b>click Submit</b>	
7.	<b>Creating a Proxy Service - General Config</b>		<b>Next</b>	example: defaults are OK
8.	<b>Creating a Proxy Service - Transport Configuration</b>		<b>Next</b>	example: defaults are OK
9.	<b>Create a Proxy Service - HTTP Transport Configuration</b>		<b>Next</b>	example: defaults are OK
10.	<b>Create a Proxy Service - Operation Selection Configuration</b>		<b>Next</b>	example: defaults are OK
11.			<b>Save</b>	

In practice you would most likely identify the encryption key, digital signature key, and SSL client authentication key. However, for the example, none of these need to be identified.

★ The DSP transport uses the character set provided by the proxy service. Therefore if the default character set needs to be changed prior to invoking a data service transport, the conversion encoding needs to be handled within the proxy service itself.



**See also:**

[Creating and Configuring Proxy Services](#)

## Step 7: Test Your Setup

The following steps would allow you to test access to the Oracle Data Service Integrator data service through the proxy generated in the above steps.



http://localhost:7021 - BEA AquaLogic Service Bus Console - Mozilla Firefox

Proxy Service Testing - orderService2 Help

Back Close

**Request Document**

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  </soap:Header>
  <soapenv:Body>
    <ord:getOrderByCustID xmlns:ord="Id:RetailApplication/OrderManagement/OrderService.ws">
      <ord:custID>CUSTOMER3</ord:custID>
    </ord:getOrderByCustID>
  </soapenv:Body>
</soapenv:Envelope>

```

**Response Document**

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Header/>
  <env:Body xmlns:env="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <ns:getOrderByCustIDResponse xmlns:ns="Id:RetailApplication/OrderManagement/OrderService.ws">
      <ns0:ORDER xmlns:ns0="urn:retailer">
        <ns1:ORDER TYPE="APPL" xmlns:ns1="urn:retailerType">
          <OrderID>ORDER_3_0</OrderID>
          <CustomerID>CUSTOMER3</CustomerID>
          <OrderDate>2001-10-01</OrderDate>
          <ShippingMethod>PRIORITY-1</ShippingMethod>
          <HandlingCharge>6,8</HandlingCharge>
          <SubTotal>649,85</SubTotal>
          <TotalOrderAmount>656,65</TotalOrderAmount>
          <SaleTax>0</SaleTax>
          <EstimatedShipDate>2001-10-03</EstimatedShipDate>
          <Status>CLOSED</Status>
          <ShipTo>ADDR_3_0</ShipTo>
          <ShipToName>Britt Pierce</ShipToName>
          <BillTo>CC_3_1</BillTo>
          <TrackingNumber>ORDER_3_00379624444</TrackingNumber>
          <LINE_ITEM>
            <LineItemID>0</LineItemID>
            <OrderID>ORDER_3_0</OrderID>
            <ProductID>APPA_SH_4</ProductID>
            <ProductDescription>Debra Sandal at Nodstrom</ProductDescription>
            <Quantity>1</Quantity>
            <Price>249,95</Price>
            <Status>CLOSED</Status>
          </LINE_ITEM>
          <LINE_ITEM>
            <LineItemID>1</LineItemID>
            <OrderID>ORDER_3_0</OrderID>
            <ProductID>APPA_SH_5</ProductID>
            <ProductDescription>Audrey Hepbun from Farragamo</ProductDescription>
            <Quantity>1</Quantity>
            <Price>299,95</Price>
            <Status>CLOSED</Status>
          </LINE_ITEM>
          <LINE_ITEM>
            <LineItemID>2</LineItemID>
            <OrderID>ORDER_3_0</OrderID>
            <ProductID>APPA_BA_1</ProductID>
            <ProductDescription>Cucci Dejavu Hobo</ProductDescription>
            <Quantity>1</Quantity>
            <Price>99,95</Price>
            <Status>CLOSED</Status>
          </LINE_ITEM>
        </ns1:ORDER TYPE="APPL" xmlns:ns1="urn:retailerType">
      </ns0:ORDER xmlns:ns0="urn:retailer">
    </ns:getOrderByCustIDResponse xmlns:ns="Id:RetailApplication/OrderManagement/OrderService.ws">
  </env:Body xmlns:env="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
</soapenv:Header/>
</soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">

```

Done

## See Also

- [Using the Oracle Service Bus Console](#)
- [Using the Oracle Service Bus Plug-ins for Workshop for WebLogic](#)