

SYBASE®

Samples

Sybase® WorkSpace

1.5

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About This Book

Audience

This document is for developers who want to use Sybase® WorkSpace integrated development tooling.

How to use this book

This guide is divided into these chapters:

- Chapter 1, “Introduction” provides an overview of the WorkSpace SybStore-based samples.
- Chapter 2, “SybStore Samples Download, Installation, and Setup” explains how to download and install the SybStore-based samples from Sybase CodeXchange.
- Chapter 3, “Running the Samples,” describes how to explore the WorkSpace user interface, how to run the samples, and how to explore sample project artifacts.

Related documents

Sybase WorkSpace tutorials Sybase WorkSpace includes interactive tutorials that show you how to use WorkSpace tools to create basic parts of a service-oriented application.

The tutorial files and documentation are available for download from Sybase CodeXchange.

For more information about the tutorials and samples and instructions on how to download the files, select **Help|Tutorials** from the WorkSpace main menu bar. To get samples information, select the *Tutorial* topic.

Sybase WorkSpace online bookshelf The online bookshelf contains all of the WorkSpace documentation. To access the WorkSpace bookshelf:

- 1 In Windows, select **Start|Programs|Sybase|Sybase WorkSpace|Sybase WorkSpace 1.5** to start Sybase WorkSpace.
- 2 Select **Help|Help Contents** from the WorkSpace main menu bar. The main **Help** window opens.

The left pane displays the bookshelf contents, while the right pane displays the details of the selection in the left pane. Until you make a selection on the left, the right pane displays “Introduction to Sybase Help.”

The WorkSpace document collections are:

-
- *Sybase WorkSpace 1.5 What's New* – summarizes new functionality in this version.
 - *Sybase WorkSpace Development* – includes Getting Started, and help for each major component service.
 - *Sybase WorkSpace Server Administration* – documents how to stop, start, and manage the servers included with Sybase WorkSpace.

Sybase WorkSpace Getting Started CD The Sybase WorkSpace Getting Started CD includes these documents:

- *Sybase WorkSpace 1.5 Installation Guide*
- *Sybase WorkSpace 1.5 Release Bulletin*
- *Sybase Developer Edition Servers Installation Guide*
- *Sybase Adaptive Server Enterprise 15.0 Installation Guide*
- *Sybase Unwired Accelerator 7.0 Installation Guide*

Other sources of information

Use the Sybase Getting Started CD, the SyBooks™ CD, and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.
- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access the manuals in an easy-to-use, HTML-based format.

Some documentation may be provided in PDF format, which you can access through the PDF directory on the SyBooks CD. To read or print the PDF files, you need Adobe Acrobat Reader.

Refer to the *SyBooks Installation Guide* on the Getting Started CD, or the *README.txt* file on the SyBooks CD for instructions on installing and starting SyBooks.

- The Sybase Product Manuals Web site is an online version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

To access the Sybase Product Manuals Web site, go to Product Manuals at <http://www.sybase.com/support/manuals/>.

Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ **Finding the latest information on product certifications**

- 1 Point your Web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
- 2 Click Certification Report.
- 3 In the Certification Report filter select a product, platform, and time frame and then click Go.
- 4 Click a Certification Report title to display the report.

❖ **Finding the latest information on component certifications**

- 1 Point your Web browser to Availability and Certification Reports at <http://certification.sybase.com/>.
- 2 Either select the product family and product under Search by Base Product; or select the platform and product under Search by Platform.
- 3 Select Search to display the availability and certification report for the selection.

❖ **Creating a personalized view of the Sybase Web site (including support pages)**

Set up a MySybase profile. MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

- 1 Point your Web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
- 2 Click MySybase and create a MySybase profile.

Sybase EBFs and software maintenance

❖ **Finding the latest information on EBFs and software maintenance**

- 1 Point your Web browser to the Sybase Support Page at <http://www.sybase.com/support>.
- 2 Select EBFs/Maintenance. If prompted, enter your MySybase user name and password.
- 3 Select a product.

- Specify a time frame and click Go. A list of EBF/Maintenance releases is displayed.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as a Technical Support Contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click Edit Roles to add the “Technical Support Contact” role to your MySybase profile.

- Click the Info icon to display the EBF/Maintenance report, or click the product description to download the software.

Conventions

The following formatting conventions are used in this document:

Formatting example	To indicate
command names and method names	When used in descriptive text, this font indicates keywords such as: <ul style="list-style-type: none"> Command names used in descriptive text C++ and Java method or class names used in descriptive text Java package names used in descriptive text
<i>myCounter</i> variable <i>Server.log</i> <i>myfile.txt</i>	Italic font indicates: <ul style="list-style-type: none"> Program variables Parts of input text that must be substituted Directory and file names
<i>sybase\bin</i>	A backward slash (“\”) indicates cross-platform directory information. A forward slash (“/”) applies to information specific only to UNIX.
File Save	Menu names and menu items display in bold. The vertical bar indicates how to navigate menu selections, such as from the File menu to the Save option.
parse put get Name Address	In syntax and code examples, the vertical bar indicates: <ul style="list-style-type: none"> Options available within code Delimiter within message examples
create table table created	Monospace font indicates: <ul style="list-style-type: none"> Information that you enter on a command line or as program text. Example output fragments

Formatting example	To indicate
Type the Name of the attribute. Click Apply .	GUI field or button name that is the recipient of a procedural action.
setup -is:tempdir <full path to alternate temp directory>	Information that must be supplied by the user is displayed between brackets.

Accessibility features

This document is available in an HTML version that is specialized for accessibility. You can navigate the HTML with an adaptive technology such as a screen reader, or view it with a screen enlarger.

Note You might need to configure your accessibility tool for optimal use. Some screen readers pronounce text based on its case; for example, they pronounce ALL UPPERCASE TEXT as initials, and MixedCase Text as words. You might find it helpful to configure your tool to announce syntax conventions. Consult the documentation for your tool.

For information about how Sybase supports accessibility, see Sybase Accessibility at <http://www.sybase.com/accessibility>. The Sybase Accessibility site includes links to information on Section 508 and W3C standards.

If you need help

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you cannot resolve a problem using the manuals or online help, please have the designated person contact Sybase Technical Support or the Sybase subsidiary in your area.



Introduction

This chapter introduces you to the Sybase WorkSpace SybStore_Sample.

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SybStore_Sample application	2

Overview

Sybase WorkSpace includes sample projects, provided as an adjunct to the WorkSpace tutorials, that you can run as complete working applications or as components. There are two types of WorkSpace samples:

- End-to-end SybStore_Sample – based on a sample application named SybStore, these samples demonstrate the complete development of a service-oriented inventory application, and the development of a JavaServer Faces (JSF)-based Web application.
- Component-based samples – focus on using key component features, such as Adaptive Server[®] Enterprise triggers and stored procedures, and Web Application Development tooling.

This guide provides instructions for installing, exploring, and running the end-to-end SybStore_Sample.

Note For instructions on downloading and using the component-based samples and documentation, select the WorkSpace online help topic *Sybase WorkSpace Development/Getting Started/Samples*.

For instructions on downloading and using the Sybase WorkSpace tutorials, select **Help/Tutorials** from the WorkSpace main menu.

You can refer to the SybStore_Sample at any time—instead of doing a tutorial, before you start a tutorial, while you are working through a tutorial to compare a resource that you create with a prebuilt resource, or after you complete a tutorial to compare your results with the sample or to view the equivalent of a completed tutorial's execution.

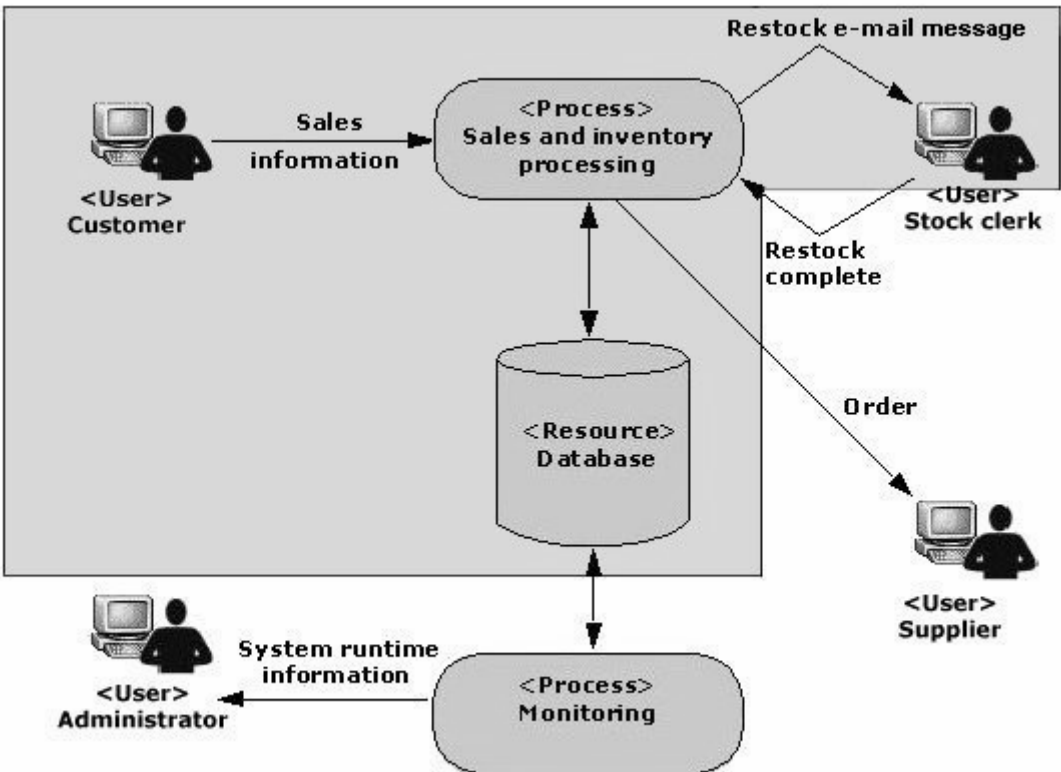
In addition to running the sample applications, you can also explore Sybase WorkSpace, explore the sample's artifacts, and view, deploy, or test SybStore services.

SybStore_Sample application

The end-to-end WorkSpace sample application contains two sample projects—SybStore_Sample and SybStore_Web_Sample.

- SybStore_Sample – a services-based project that demonstrates Enterprise Modeling, Database Development, Service Development, and Mobile Development.
- SybStore_Web_Sample – a simple purchase order project, developed using the JavaServer Faces (JSF) framework, that demonstrates Web Application Development.

The following illustration shows the basic flow of the SybStore application.



The illustration includes several actions that are not implemented in the SybStore application. The actions that are implemented are shown in the shaded area and contain enough examples to demonstrate how to use Sybase WorkSpace.

SybStore_Sample

The SybStore_Sample project is a sales and inventory system that automates the following retail business process:

- 1 A customer buys items from the store, and the cash register records that the items have been removed from the shelves.
- 2 The sales and inventory system notifies the stock clerk on a personal digital assistant (PDA) to restock the items.

- 3 The stock clerk receives an e-mail message (on his or her PDA) to restock specific items when the sales and inventory system determines that restocking is required.
- 4 When restocking is complete, the stock clerk uses the PDA to update the sales and inventory system.

SybStore_Web_Sample

The SybStore_Web_Sample project is a simple purchase order application that demonstrates:

- 1 A welcome page that allows a customer to access inventory, view pending orders, and view pending restock requests.
- 2 The inventory page, which contains an inventory list and an order entry area.
- 3 How a customer orders an item by clicking the item's ID in the inventory list. The information for that item displays in the order entry area. The customer enters the sales ID, the quantity, and the sales date, then clicks a button to submit the order. The order then appears in an existing orders list.

The customer can select an item in the existing orders list, remove the item from the list, then update the list with their changes.
- 4 A read-only restock request page, which lists all pending restock requests.

SybStore Samples Download, Installation, and Setup

This chapter describes how to install the WorkSpace SybStore_Sample.

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Starting and exploring Sybase WorkSpace	5
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Installing Sybase WorkSpace

To use the SybStore_Sample, you must install the Sybase WorkSpace 1.5 Studio license or Evaluation version software.

You must have all Sybase WorkSpace tooling and all Developer Edition servers installed before you begin.

See the *Sybase WorkSpace Installation Guide* and the *Sybase Developer Edition Servers Installation Guide*.

Starting and exploring Sybase WorkSpace

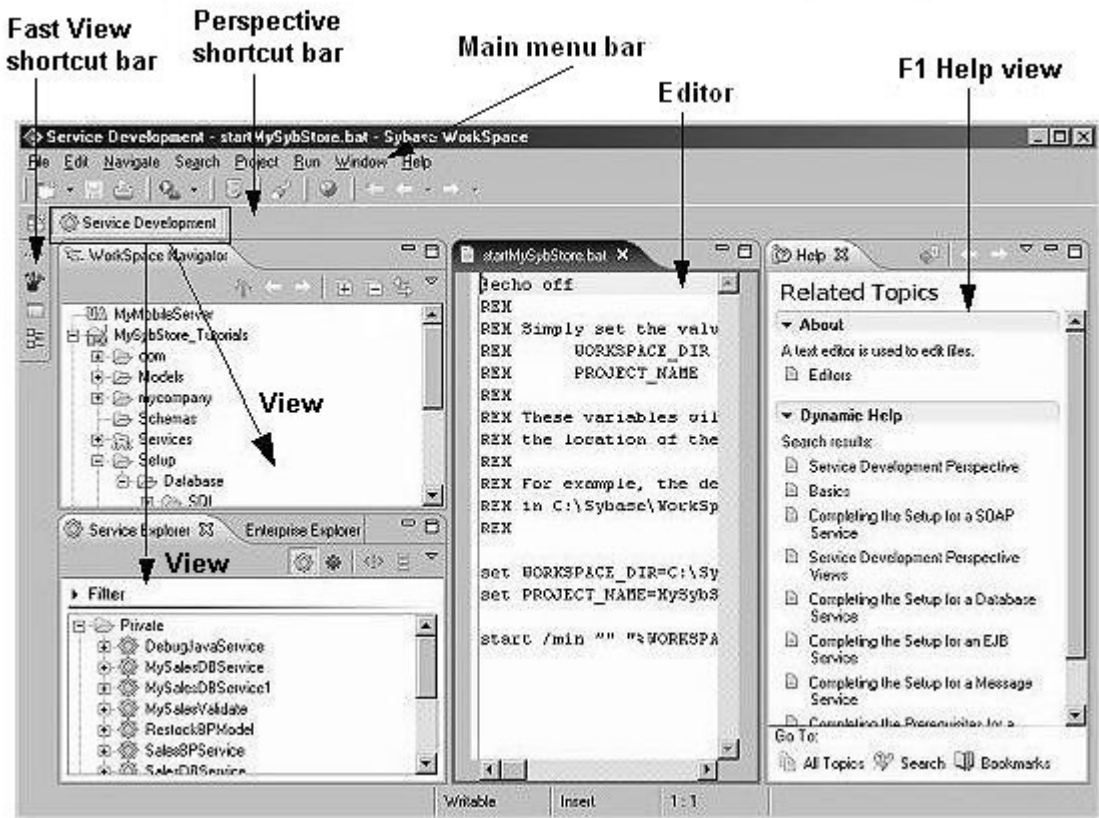
The Sybase WorkSpace main window is called the **workbench**. A **workspace** is the directory where your work is stored. When you initially start the application, you are prompted to select the workspace you want to use. Subsequently, you can choose a new workspace or specify that the program display the most recently used workspace.

Starting Sybase WorkSpace

If WorkSpace is not running, select **Start|Programs|Sybase|Sybase WorkSpace|Sybase WorkSpace 1.5**.

After you enter or select the workspace location, the WorkSpace main window opens, which displays one **perspective**. A perspective displays editors and views, such as the WorkSpace Navigator.

The following screen shows the WorkSpace main window (workbench) that displays the Service Development perspective, which includes the WorkSpace Navigator view, the Service Explorer view, and the Enterprise Explorer view. Also open is the text editor and the F1 Help window. On the far left is the Fast View toolbar, which contains icons for current views that are open but may be hidden.



Exploring the Eclipse environment

If you are new to Eclipse, take some time to review the Eclipse online documentation on the Sybase WorkSpace bookshelf.

To access the Eclipse online documentation, select **Help|Help Contents** from the main menu bar in the Sybase WorkSpace window. When the **Help** window opens, select the *Workbench User Guide* in the **Contents** pane to learn more about Eclipse.

Starting and connecting to the Unwired Accelerator server

Before you can run the SybStore_Sample, start the Unwired Accelerator server and connect to that server in WorkSpace.

Starting the Unwired Accelerator server

There are two versions of Unwired Accelerator available to you:

- A version hosted on EAServer
- A version hosted on the Tomcat Web container

The instructions in this guide use the version of Unwired Accelerator hosted on EAServer.

- 1 Select **Start|Programs|Sybase|Sybase WorkSpace|UA 7.0|Start UA (EAServer)**.

EAServer starts and a command window appears. The Unwired Accelerator runtime server starts, and the Adaptive Server Anywhere database starts and the database icon appears in the Windows system tray.

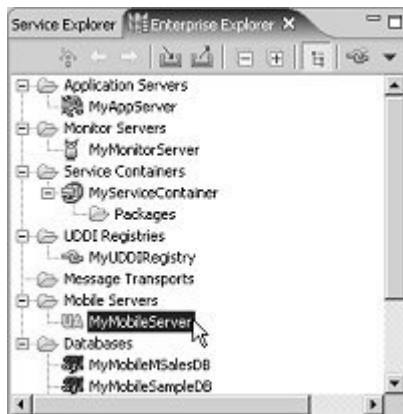
- 2 Minimize (but do not close) any open command windows.

Note You can run the SybStore_Sample and use the instructions in this guide for the Tomcat-hosted version of EAServer; however, WorkSpace starts Tomcat automatically and you do not need to start Unwired Accelerator. You can use the remainder of this guide for EAServer (Tomcat).

Connecting to the Unwired Accelerator server

The Sybase WorkSpace sample uses the default Unwired Accelerator connection profile, MyMobileServer.

- 1 Select **Window|Open Perspective|Service Development** on the WorkSpace main menu bar.
- 2 In the **Enterprise Explorer**, expand the **Mobile Servers** folder to locate the **MyMobileServer** connection profile.



- 3 Right-click **MyMobileServer** and select **Ping** from the context menu.
- 4 When the `Ping Succeeded` message displays, click **OK**.

Note If the ping fails, right-click MyMobileServer in the Enterprise Explorer and select Properties from the context menu to verify that the values entered for the connection properties are correct. Verify that the host is the name of your local machine, that the domain name is correct, and that the port number is 4040 (the default). If you installed Unwired Accelerator using a port number other than 4040, change the port number in the MyMobileServer connection profile to that port number instead.

- 5 In the **Enterprise Explorer**, right-click **MyMobileServer** and select **Connect** from the context menu.

The Unwired Accelerator version number appears beside **MyMobileServer**, indicating the connection was successful.



You have verified the connection profile and connected to the Unwired Accelerator server.

Starting and connecting to the Unwired Orchestrator server

Prior to running the SybStore sample, you must start the Unwired Orchestrator server and connect to that server in WorkSpace.

Starting the Unwired Orchestrator server

Start the Unwired Orchestrator server using the Windows Start menu

- 1 Using the Windows taskbar, select **Start|Programs|Sybase|Sybase WorkSpace|UO 5.1|Start UO**.

A command window appears. The UO51Runtime Adaptive Server Anywhere database starts and the database icon appears in the Windows system tray.

- 2 Minimize (but do not close) any open command windows.

Connecting to the Unwired Orchestrator server

The Sybase WorkSpace sample uses the default Unwired Orchestrator connection profile, MyServiceContainer.

- 1 In WorkSpace main window, select the **Enterprise Explorer** if that view is open. If that view is not open, select **Window|Show View|Enterprise Explorer** to open the view.
- 2 In the **Enterprise Explorer**, expand the **Service Containers** folder to locate the **MyServiceContainer** connection profile.
- 3 Right-click **MyServiceContainer** and select **Ping** from the context menu.
- 4 When the `Ping Succeeded` message displays, click **OK**.

Note If the ping fails, right-click MyServiceContainer in the Enterprise Explorer and select Properties from the context menu to verify that the Unwired Orchestrator server is running and that the values entered for Unwired Orchestrator Server Connection Properties are correct. Verify that the Host is the name of your local machine, and the port number is 1099.

- 5 In the **Enterprise Explorer** view, right-click **MyServiceContainer** and select **Connect** from the context menu.

When the connection is successful, a **Packages** folder appears in the view under **MyServiceContainer**.

Downloading the samples from CodeXchange

The SybStore_Sample is located on Sybase Developer Network (SDN) CodeXchange, an SDN feature that allows for the exchange of code samples, utilities, scripts and other tools among SDN members.

- 1 In an Internet Web browser, go to the Sybase CodeXchange Web site at <https://workspace.codexchange.sybase.com/>.
- 2 If you have a MySybase account, enter your **E-mail Address** and **Password**, click **Login**, and go to step 3.

If you do not have a MySybase account, click **Register now!** and follow the steps to create an account.

Once you are logged in, you see the CodeXchange registration page.

Note Although there are user e-mail and password login field, you do not have to log in here or create another account.

- 3 Select the **Community** tab, and beneath “**Specific Product-related Projects Include,**” select **Sybase WorkSpace**.
- 4 When the **WorkSpace Project Home** page opens, scroll to the **Popular Folders** table and click **SybStore** beneath **Samples v1.5**.
You see the **WorkSpace Documents & Files** page for the SybStore_Sample.
- 5 Download and save the SybStore Sample file:
 - a Right-click **SybStore Sample Project Zip** and select **Save Target As** from the context menu.
 - b When the **File Download** dialog box displays, navigate to where you want to save the file and click **Save**.
 - c You see a progress bar indicating that the file is downloading to the selected location.
- 6 Download and save the SybStore Web Application Sample file.

Note If you are not going to run the SybStore Web Application Sample, you do not have to download this file.

- a On the **WorkSpace Documents & Files** page, right-click **WorkSpace Web App Sample Project Zip** and select **Save Target As** from the context menu.
- b When the **File Download** dialog box displays, navigate to where you want to save the file and click **Open**.
- c You see a progress bar indicating that the file is downloading to the selected location.

You have finished downloading the sample ZIP files. You can now set up the sample projects in WorkSpace.

Setting up the SybStore_Sample project

To prepare your WorkSpace installation to run the SybStore_Sample:

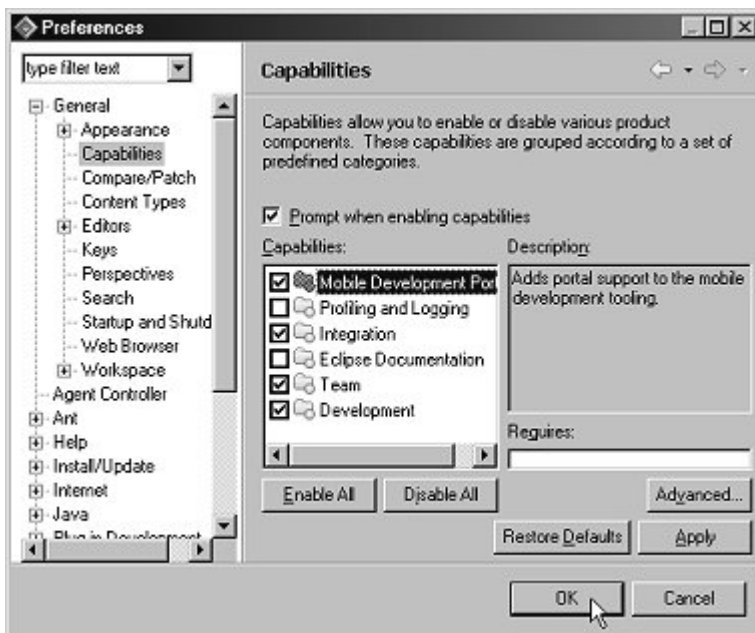
- 1 Enable the Mobile Development preferences.
- 2 Import the Sybase_Sample project.
- 3 Start and connect to the sample database.
- 4 Deploy the InsertSalesOrder service.
- 5 Import the sample mobile applications.
- 6 Modify the sample mobile applications and services.

Each of these steps is discussed in the following sections.

Enabling the mobile development preferences

- 1 Select **Window|Preferences** on the WorkSpace main menu bar.
- 2 When the **Preferences** dialog box displays, expand the **General** category in the tree view on the left by clicking the plus sign, then select **Capabilities**.

- 3 In the **Capabilities** list, select **Mobile Development Portal** and click **OK**.



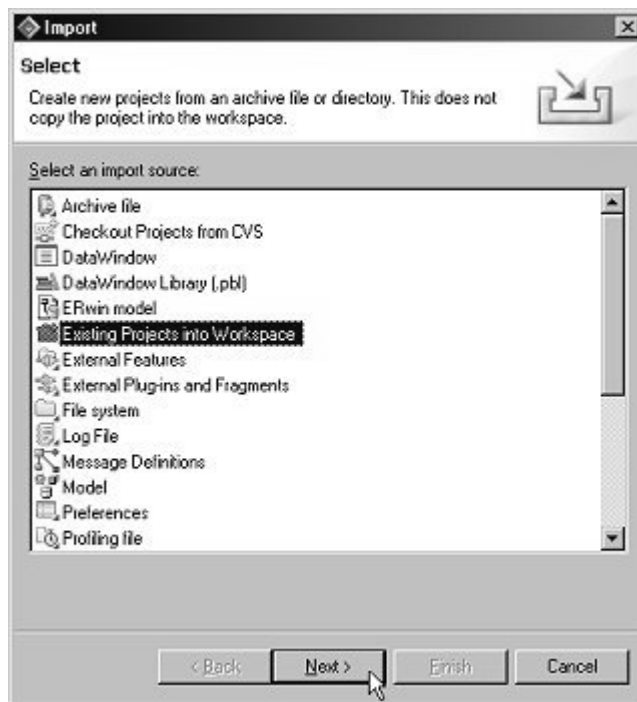
Importing the SybStore_Sample project

- 1 If the **Welcome** page is open in Sybase WorkSpace, select **Window|Close All Perspectives** to start with a blank window.
- 2 Select **Window|Open Perspective|Service Development** from the WorkSpace main menu bar.

Note If the Service Development perspective is not listed on the Open Perspective menu, select **Window|Open Perspective|Other**, choose **Service Development** from the **Select Perspective** dialog box, and click **OK**.

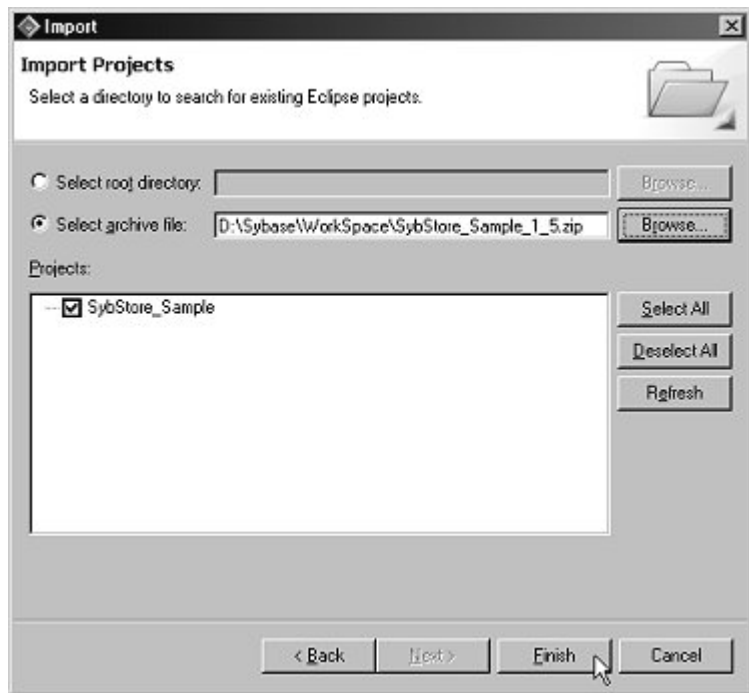
- 3 Select **File|Import** from the WorkSpace main menu bar.

- 4 When the **Import** window opens, select **Existing Projects into Workspace** and click **Next**.

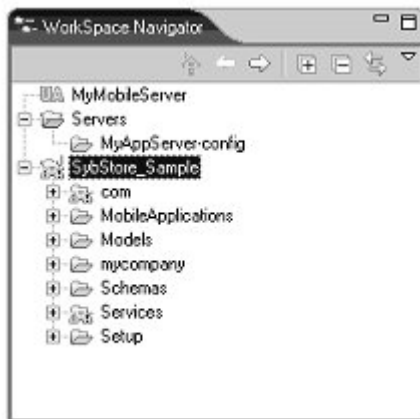


- 5 When the **Import Projects** dialog box opens, choose the **Select Archive File** option and click **Browse**.
- 6 When the file selection window opens, go to where you saved the SybStore sample ZIP file, select **SybStore_Sample_1_5.zip**, and click **Open**.

- 7 In the **Projects** list, verify that **SybStore_Sample** is selected and click **Finish**.



WorkSpace imports the project, which now displays in the WorkSpace Navigator window.



Note If the SybStore_Sample project displays red “X”s on the project icon in the WorkSpace Navigator, right-click the **SybStore_Sample** project name and select **Update WorkSpace Build Path Entries** from the context menu.

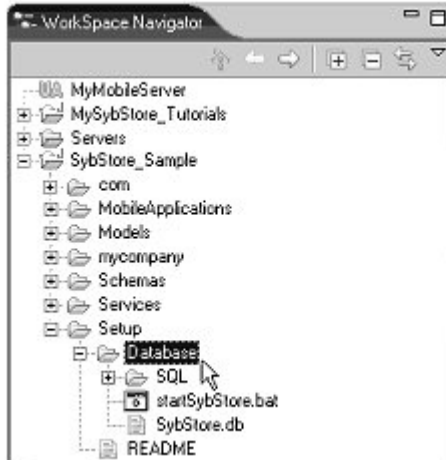
When you see a message stating that WorkSpace has updated the project’s build path entries, click **OK**. The red “X”s clear.

Starting and connecting to the sample database

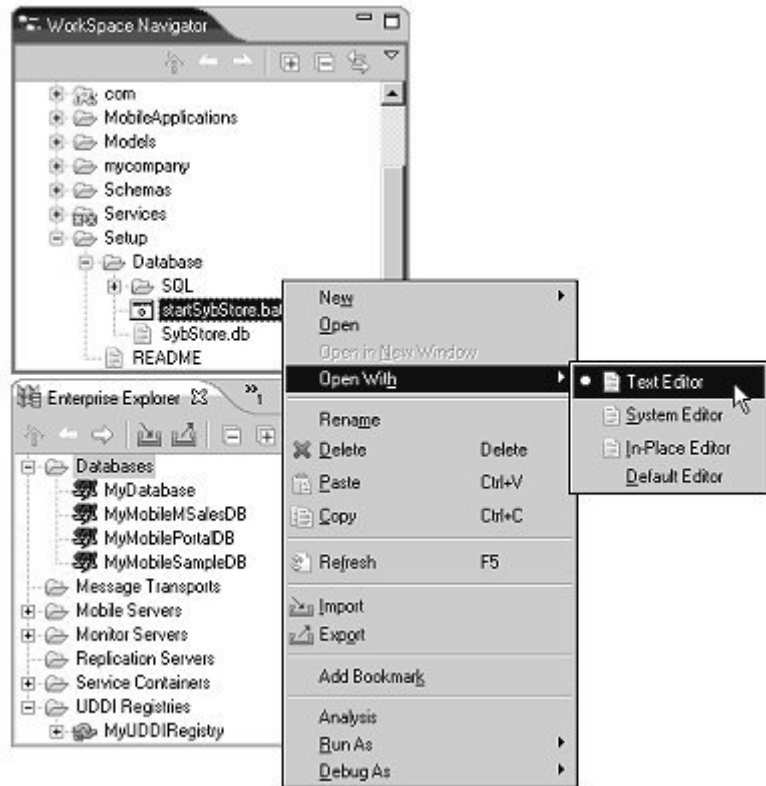
The SybStore database is a Sybase Adaptive Server Anywhere database, located in the SybStore_Sample project. Because the database is required to run the sample, you must start the SybStore database and establish a connection to it in WorkSpace.

Starting the sample database

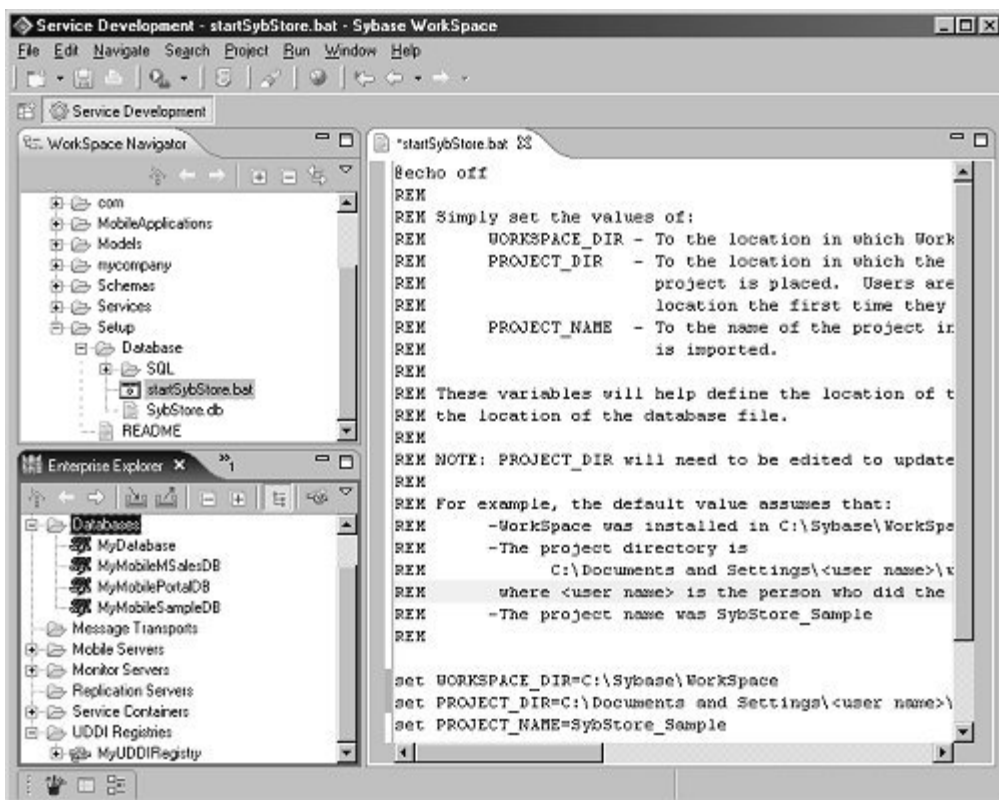
- 1 In the **WorkSpace Navigator**, expand the **SybStore_Sample/Setup/Database** folder.



- 2 In the **WorkSpace Navigator**, right-click **startSybStore.bat**, and select **Open With|Text Editor** from the context menu.



The batch file opens in the text editor.



- 3 Edit these lines in *startSybStore.bat* to set the appropriate variable values for your installation and project name:

```


set WORKSPACE_DIR=C:\Sybase\WorkSpace
set PROJECT_DIR=C:\Documents and Setting\\workspace

```

- *WORKSPACE_DIR* should point to the directory in which Sybase WorkSpace is installed; for example *D:\Sybase\Workspace*.
- *PROJECT_DIR* should point to the directory in which to store project files. The default is *C:\Documents and Settings\\workspace*. If you had the installation create your personal workspace somewhere else, you must change this value.
- Verify that the port number specified on the last line is 2648.

- 4 Select **File|Save** from the main menu bar.

- 5 To close the editor, select **File|Close** from the main menu bar.
- 6 To start the sample database, right-click **startSybStore.bat** and select **Open With|System Editor** from the context menu.

The Adaptive Server Anywhere, Developer Edition pop-up appears for a few seconds, then you should see the Adaptive Server Anywhere icon in your system tray, indicating that the database is running. 

Connecting to the sample database

The SybStore sample database must have a connection profile, which allows WorkSpace to connect to the database.

Note The first time you execute a SQL file, you must specify the connection profile. Subsequently, you do not have to specify the connection profile unless you want to change it. You can assign different connection profiles to different files, which allows you to use different ports or user names and passwords.

A connection profile contains the connection information (for example, host name and port) that WorkSpace uses to connect to a server resource. Use the Enterprise Explorer to create and configure connection profiles.

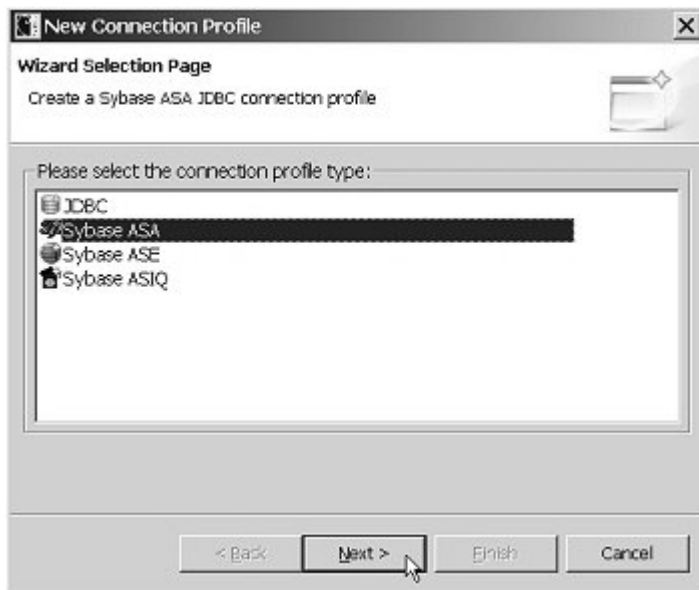
- 1 In the WorkSpace main window, select the **Enterprise Explorer** if that view is open. If that view is not open, select **Window|Show View|Enterprise Explorer** to open the view.



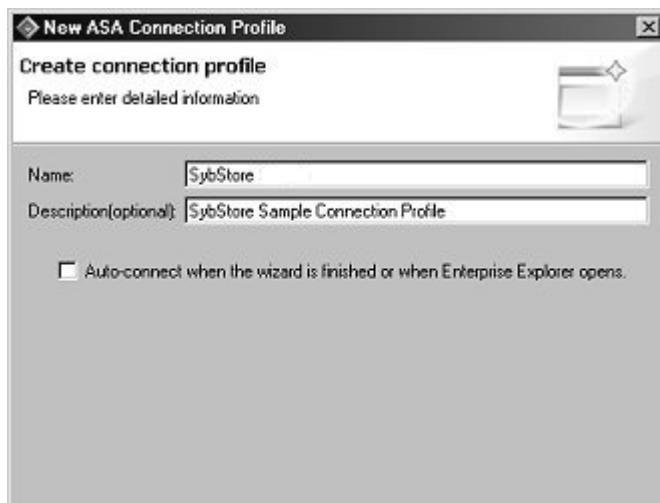
- 2 In the **Enterprise Explorer** view, right-click the **Databases** folder and select **New** from the context menu.



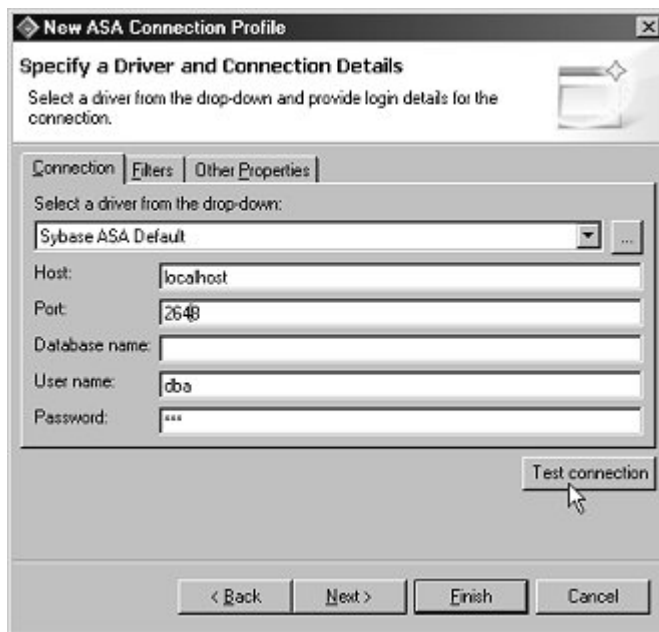
- 3 When the **New Connection Profile** wizard appears, select **Sybase ASA** from the connection profile type list and click **Next**.



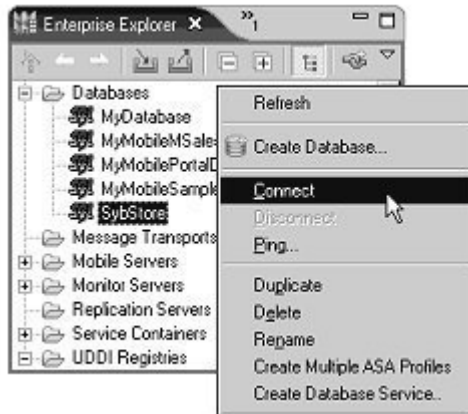
- 4 Enter **SybStore** in the **Name** field, and **SybStore Sample Connection Profile** in the **Description** field. Click **Next**.



- 5 On the **Driver and Connection Details** page of the wizard:
 - Verify that **Port** is set to 2648.
 - Change **Password** to SQL.



- 6 Select **Test Connection** to ensure the values you entered are correct.
- 7 When a prompt indicates that the Ping Succeeded, click **OK**.
If the ping fails, verify that the SybStore database is running (see “Starting the sample database” on page 17), and that the values entered for the connection are correct.
- 8 Click **Finish** to complete the connection profile.
- 9 In the **Enterprise Explorer**, right-click the **SybStore** connection profile in the **Databases** folder and select **Connect** from the context menu.



A successful connection is indicated when the database version appears beside the database name in the Enterprise Explorer view and a database icon displays below the SybStore connection profile.

Deploying the *InsertSalesOrder* service

This section describes how to deploy the *InsertSalesOrder* service, which includes modifying the *SalesEmailSend* service and the *InsertSalesOrder* package.

Modifying the *SalesEmailSend* service

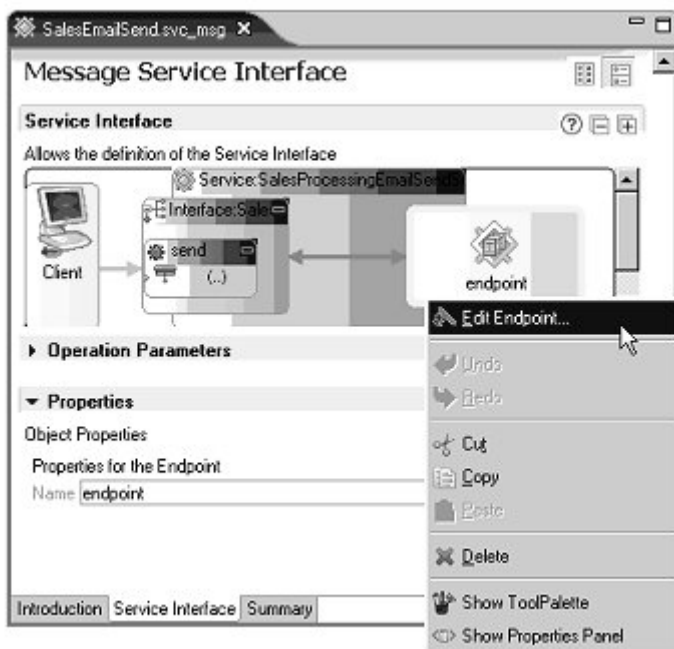
- 1 Edit the *SalesEmailSend* service’s endpoint to match your e-mail server and client information:
 - a In the **WorkSpace Navigator**, expand the folder **SybStore_Sample/Services/Message**.

- b Right-click **SalesEmailSend.svc_msg** and select **Open With|Message Service Editor** from the context menu.



- c When the editor window opens, select the **Service Interface** tab.

- d In the **Service Interface** diagram, right-click the **endpoint** icon, and select **Edit Endpoint** from the context menu.



- e When the **Edit Endpoint Wizard** opens, complete the options for these dialog boxes:
- Endpoint Type – select **Server** and click **Next**.
 - Endpoint Name – enter or accept `endpoint` and click **Next**.
 - Messaging Type – select **Email** and click **Next**.
 - Connection Properties – select **Specify the Endpoint Properties...** and set the **Host**, **Password**, **Port**, and **User** to the appropriate values for your e-mail client; for example:
 - Host – `machinename.yourcompany.com` (the host of your e-mail server)
 - Password – `*****` (your password to access the host, which displays as asterisks)
 - Port – 25 (the default port used to access the host)
 - User – `rob.thomas@yourcompany.com` (your e-mail address)

If you do not know this information, contact your system administrator for assistance.

Press Enter after your last entry and click **Finish**.

- 2 Select **File|Save** from the WorkSpace main menu bar.
- 3 To close the Message Service Editor, select **File|Close** from the WorkSpace main menu.

Modifying the *InsertSalesOrder* package

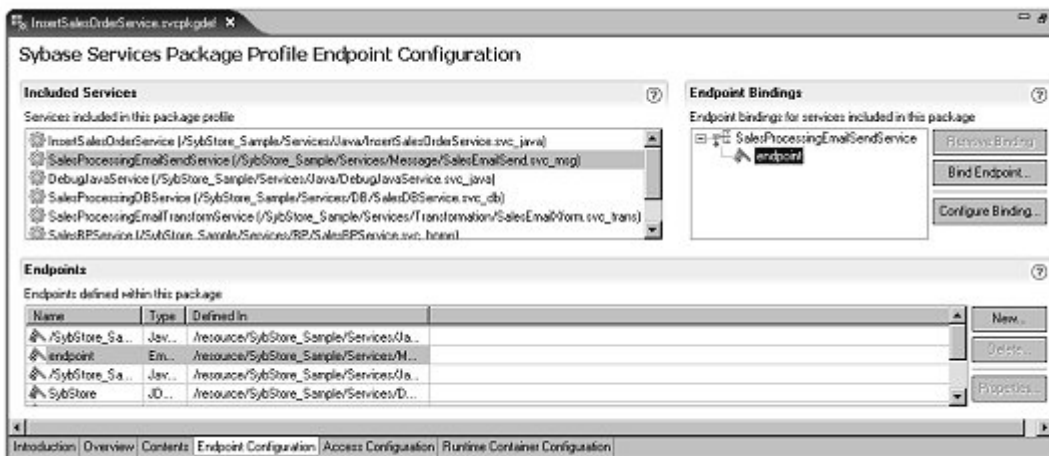
Set the properties for the SalesEmailSend service's **send** operation using the Sybase Service Package Profile Editor.

- 1 In the **WorkSpace Navigator**, expand the folder **SybStore_Sample/Services/Java**.
- 2 Double-click **InsertSalesOrder.svcpkgdef** to open the package in the Sybase Services Package Profile Editor

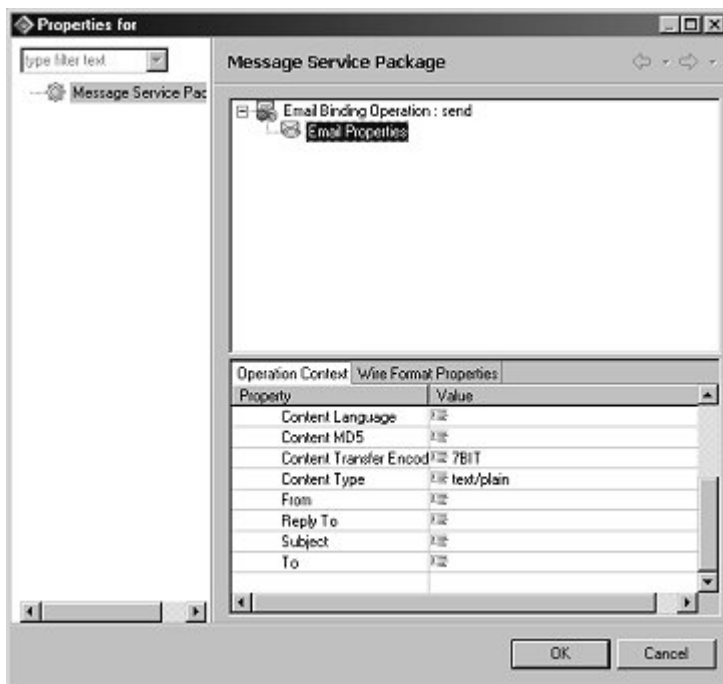


- 3 Select the editor's **Endpoint Configuration** tab.
- 4 In the **Included Services** section, select the **SalesProcessingEmailService** service.

- 5 In the **Endpoint Bindings** section, select **SalesProcessingEmailSendService/endpoint** and click **Configure Binding**.



- When the **Properties** dialog box opens, select **Email Binding Operation : send/Email Properties** in the top right pane, and select the **Operation Context** tab in the bottom right pane.



- In the **Operation Context** pane, scroll down and set the **From**, **Reply To**, **Subject**, and **To** properties, as appropriate for your environment, then click **OK**.

Note The From, Reply To, and To values must be in the form of an e-mail address; for example, rob.thomas@sybase.com.

- Select **File|Save** from the WorkSpace main menu.
- To close the editor, select **File|Close**.

Deploying the *InsertSalesOrder* package

Note Before you begin this procedure, Unwired Orchestrator must be running. See “Starting the Unwired Orchestrator server” on page 9.

Deploy InsertSalesOrder package.

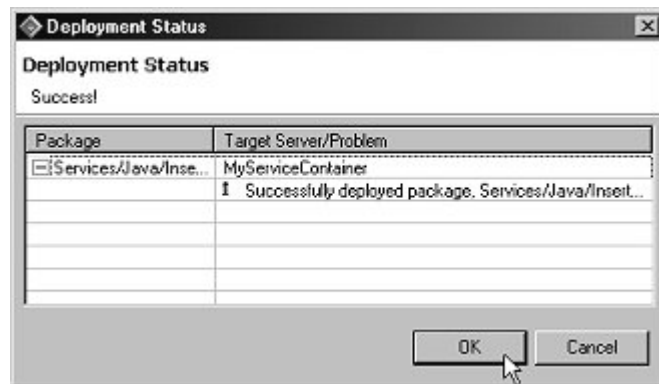
- 1 In the **WorkSpace Navigator**, expand the folder **SybStore_Sample/Services/Java**.
- 2 Right-click the **InsertSalesOrderService.svcpkgdef** file and select **Deploy Package** from the context menu.
- 3 When the **Select Target Server** dialog box opens, select **MyServiceContainer** and click **OK**.
- 4 When a message asks if it should overwrite the existing package, click **Yes To All**.

The Console window displays the results of the package deployment.

Note If a message asks if you want to overwrite an existing package, click **OK**.

- 5 When the process completes, a **Deployment Status** window states that the package was successfully deployed.

Click **OK** to close the window.



- 6 To close the **Console**, click the “X” on the **Console** tab’s title.

Importing the sample mobile applications

The SybStore sample includes several mobile applications. These applications are located in two files in the SybStore_Sample project that you import.

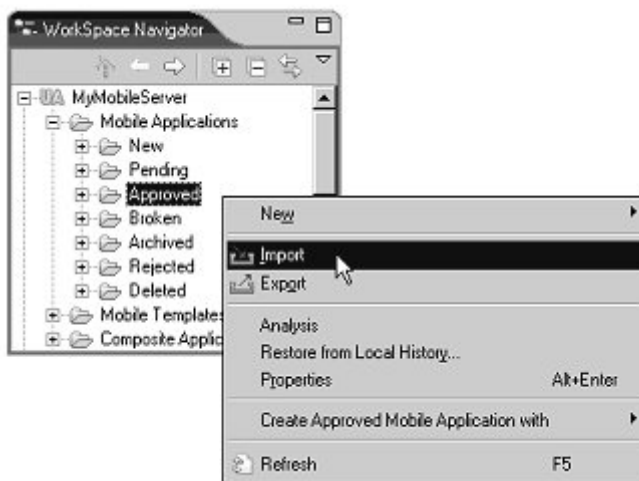
- *ExportedMobileAppls.ua* – contains the ListAllItems and InsertSalesOrder mobile applications.
- *PortalMobileAppls.ua* – contains the SybStoreItems and SybStoreItemDetail mobile applications.

Before you run the sample, you must import the mobile applications from the **SybStore_Sample/Mobile Applications** folder into Unwired Accelerator (**MyMobileServer/Mobile Applications/Approved**).

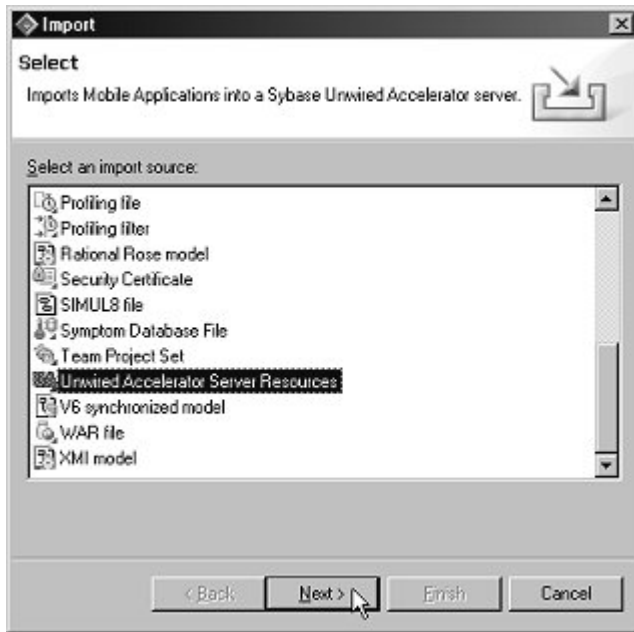
Importing the *ExportedMobileAppls.ua* file

Note Before you import the mobile applications, Unwired Accelerator must be running and there must be a connection established from the MyMobileServer connection profile to Unwired Accelerator in WorkSpace. See “Starting and connecting to the Unwired Accelerator server” on page 7 for instructions.

- 1 If the Service Development perspective is not open, select **Window|Open Perspective|Service Development** from the WorkSpace main menu bar.
- 2 In the **WorkSpace Navigator**, right-click the **MyMobileServer/Mobile Applications/Approved** folder, and select **Import** from the context menu.



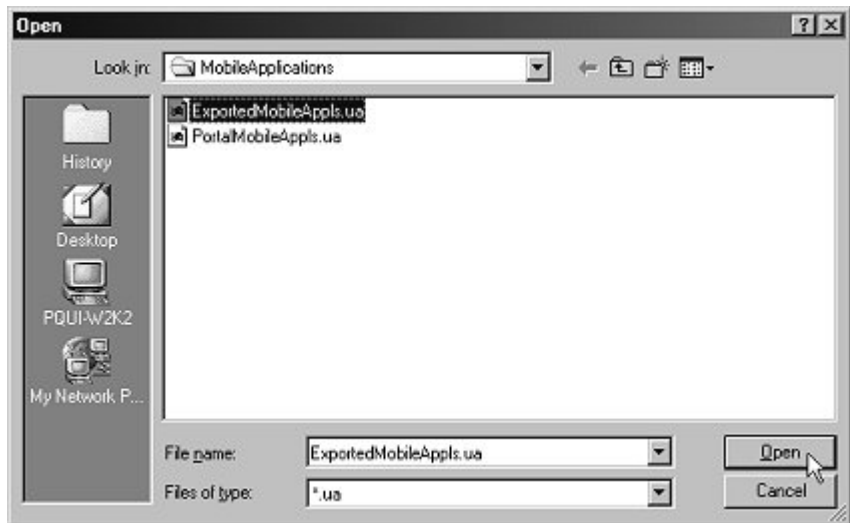
- 3 In the **Import Select** window, select **Unwired Accelerator Server Resources** and click **Next**.



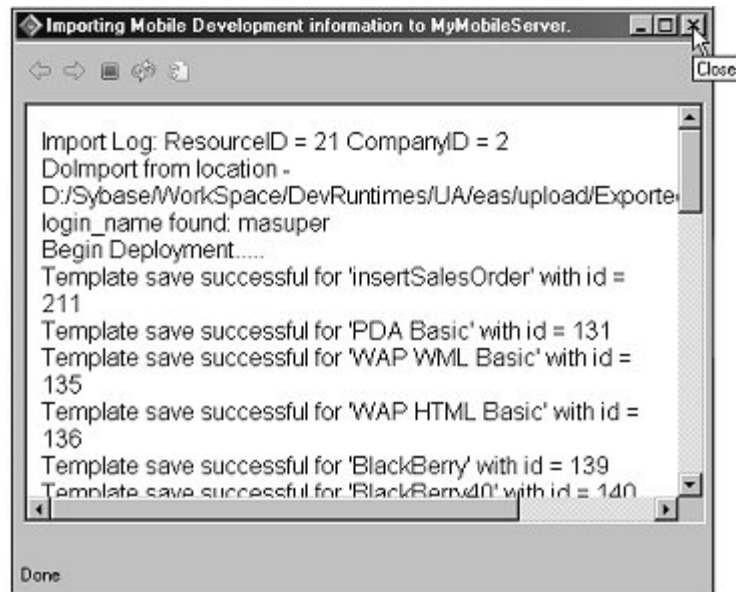
- 4 In the **Import Unwired Accelerator Server Resources** window, select **MyMobileServer** and click **Next**.
- 5 In the **Unwired Accelerator Server Resources** window, click **Browse** to locate the **UA File** to import.
- 6 When the **Open** dialog box displays, navigate to the location of your personal Workspace; for example:

`x:\<user name>\workspace\SybStore_Sample\MobileApplications\`

where “x:\<user name>” is the location of your personal workspace.
Select **ExportedMobileAppls.ua** and click **Open**.



- 7 In the **Unwired Accelerator Server Resources** window, verify that the option **Overwrite Existing Entities** is selected, then click **Finish**.
- 8 When the window opens that displays information about the import, close the window.



- 9 In the **WorkSpace Navigator**, expand the **MyMobileServer/Mobile Applications/Approved** folder. You should see the imported **ListAllItems** (*ListAllItems(0.1).mobapp*) and **InsertSalesOrder** (*InsertSalesOrder(0.1).mobapp*) applications.
- 10 Enable offline Blackberry access.
 - a If the **Mobile Development** perspective is not open, select **Window|Open Perspective|Mobile Development** from the main menu bar to open the Mobile Development perspective.
 - b In the **WorkSpace Navigator**, expand the folder **MyMobileServer/MobileApplications/Approved**, right-click the **ListAllItems** mobile application (*ListAllItems(0.1).mopapp*), and select **Properties** from the context menu.
 - c When the **Properties** dialog box opens, select **Unwired Accelerator Resource** in the tree view on the left.
 - d Verify that the **Offline BlackBerry Status** field is set to **Enabled**.
 - e Click **OK**.
- 11 Repeat step 10 for the *InsertSalesOrder(0.1).mobapp* mobile application.

Importing the *PortalMobileApps.ua* file

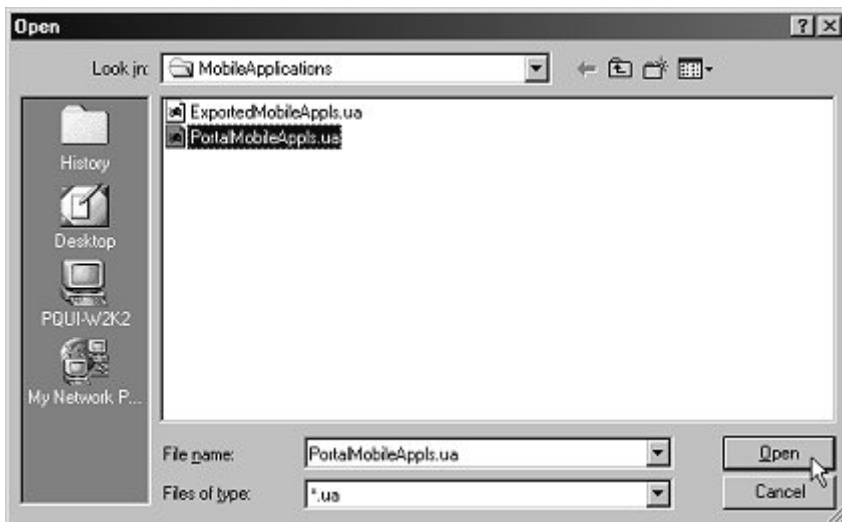
Note Before you import the mobile applications, Unwired Accelerator must be running in WorkSpace. See “Starting the Unwired Accelerator server” on page 7 for instructions.

- 1 In the **WorkSpace Navigator**, right-click the **MyMobileServer/Mobile Applications/Approved** folder, and select **Import** from the context menu.
- 2 In the **Import Select** window, select **Unwired Accelerator Server Resources** and click **Next**.
- 3 In the **Import Unwired Accelerator Resources** window, select **MyMobileServer** and click **Next**.
- 4 In the **Unwired Accelerator Server Resources** window, click **Browse** to locate the mobile application file that you want to import.

- 5 When the **Open** dialog box displays, navigate to the location of your personal Workspace; for example, where “x:\<user name>” is the location of your personal workspace:

x:\<user name>\workspace\SybStore_Sample\MobileApplications

Select **PortalMobileAppls.ua** and click **Open**.



- 6 In the **Unwired Accelerator Server Resources** window, verify that the option **Overwrite Existing Entities** is selected, then click **Finish**.
- 7 When the window opens that displays information about the import, close the window.

You have installed:

- Mobile applications – SybStoreItems and SybStoreItemDetail.
- Mobile page – SybStoreItemsPage, which contains the SybStoreItems and SybStoreItemDetail mobile applications.
- Mobile page group – SybStoreItemsPageGroup, which contains the SybStoreItemsPage mobile page.

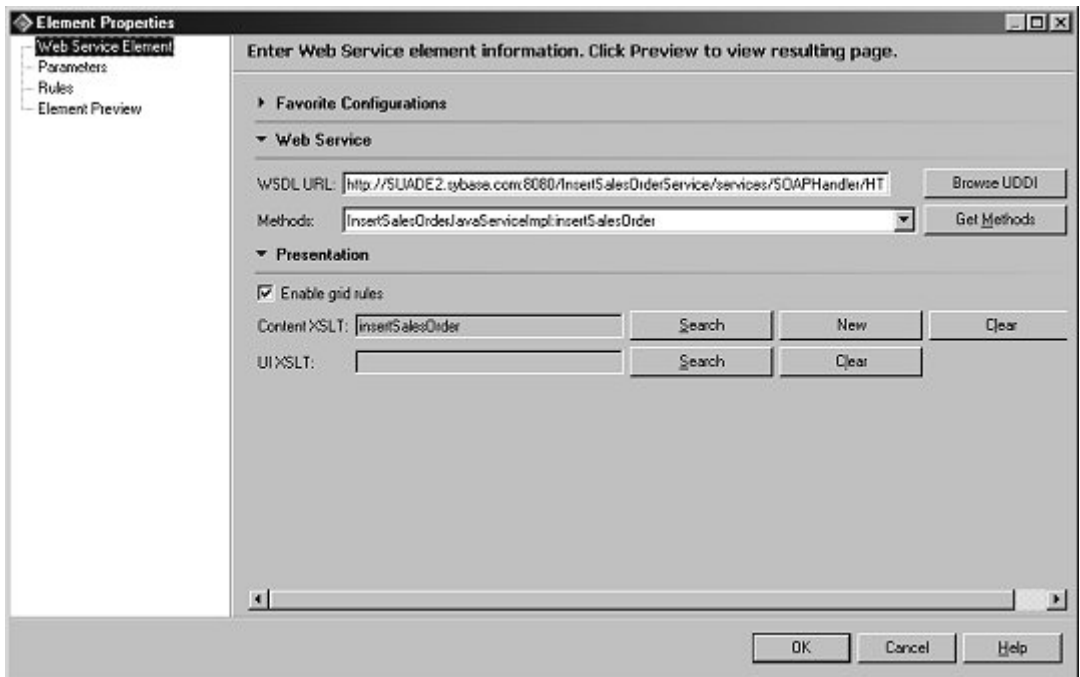
Modifying the mobile applications

This section explains how to modify the InsertSalesOrder mobile application's WSDL URL host and how to modify the ListAllItems mobile application's database connection profile.

Updating the InsertSalesOrder WSDL host

Change the **InsertSalesOrder** WSDL URL host and port number values to represent your installation.

- 1 In the **WorkSpace Navigator**, expand the **MyMobileServer/Mobile Applications/Approved** folder and double-click **InsertSalesOrder(0.1).mobapp**. Minimize other views or maximize the editor.
- 2 When the editor opens, select the **Definition** tab, select the **Sybase Service Element** in the **Elements** section, and click **Edit**.



- 3 In the **Element Properties** dialog box, select **Web Service Element** in the tree view on the left.

- 4 In the **Web Service** section, set the **WSDL URL** to your application server profile (MyAppServer) host, domain, and Web services port number.

For example, if your machine is “SERVER1,” the domain is “DOMAIN1.com,” and the port is “8080,” change the connection portion of the WSDL URL to:

```
http://SERVER1.DOMAIN1.com:8080/InsertSalesOrderService...
```

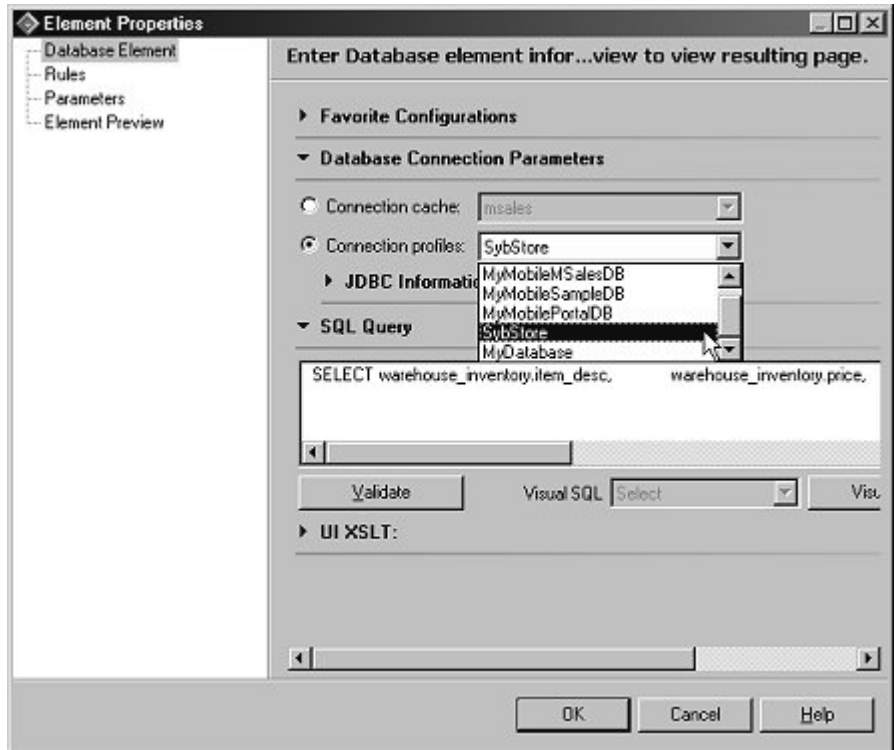
- 5 Set the **Methods** value by clicking **Get Methods**. When a message displays stating that this action will overwrite existing parameters, click **Yes**.
- 6 When the process finishes, click **OK** to close the **Properties** window.

Modifying the mobile applications' database connection profiles

Update the connection profile referenced by the mobile applications to the host and port number you are using for the SybStore database.

- 1 In the **WorkSpace Navigator**, expand the folder **MyMobileServer/Mobile Applications/Approved** and double-click on **ListAllItems** to open the application in the editor.
- 2 When the editor opens, select the **Definition** tab.
- 3 In the **Elements** section, select **Database Element** and click **Edit**.
- 4 When the **Element Properties** wizard opens, select **Database Element** in the tree view.

- 5 In the **Database Connection Parameters** portion of the pane, select the **Connection Profiles** option, then select the **SybStore** connection profile from the drop-down list.



- 6 Click **OK** to save your changes.
- 7 Select **File|Save** on the WorkSpace main menu to close the application.
- 8 Repeat steps 1– 7 for **SybStoreItems** and **SybStoreItemDetail**.
- 9 Select **File|Close All** from the WorkSpace main menu to close all editor views.
- 10 Select **File|Save** from the WorkSpace main menu, then select **File|Close** to close the editor.

Setting up the SybStore_Web_Sample project

To run the SybStore_Web_Sample, complete the procedures in this section.

Creating the SybStore_Web_Sample project

- 1 Select **Window|Open Perspective|Web Application Development** from the WorkSpace main menu bar.

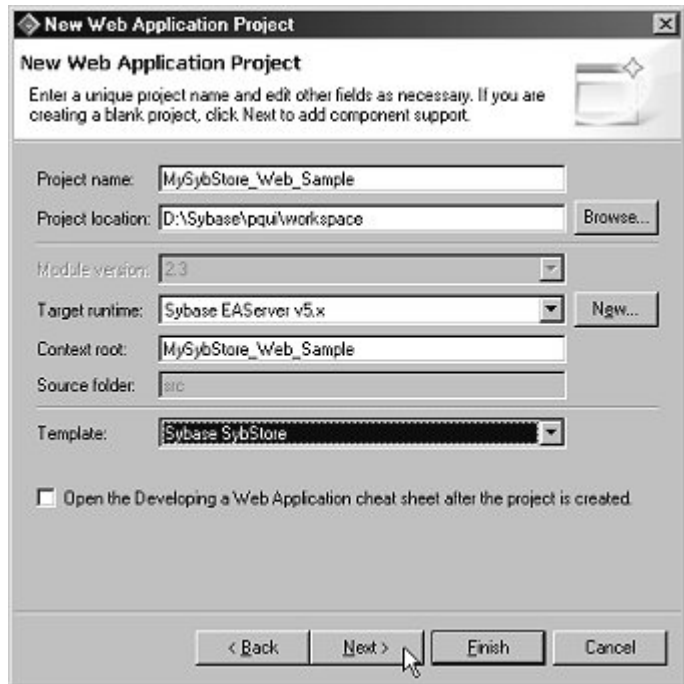
Note If the Web Application Development perspective is not listed the Open Perspective menu, select **Window|Open Perspective|Other**, choose **Web Application Development** from the **Select Perspective** dialog box, and click **OK**.

- 2 Select **File|New|Project** from the WorkSpace main menu bar.
- 3 When the **New Project** dialog box opens, select **Sybase|Web Application Project** and click **Next**.



- 4 When the **New Web Application Project** wizard opens, complete these options:
 - Project Name – enter SybStore_Web_Sample.

- Template – select **Sybase SybStore** from the drop-down list.



Click **Next**.

- 5 When the wizard's summary page displays, click **Finish**.

Importing the SybStore_Web_Sample archive

Import the Web Application Development sample archive into the project you created.

- 1 In the **Workspace Navigator**, right-click the **SybStore_Web_Sample** project and select **Import** from the context menu.

- 2 When the **Import** dialog box opens, select **Archive File** and click **Next**.



- 3 When the **Import Archive File** dialog box opens:
 - a To the right of the **From Archive File** field, click **Browse** to select the archive file to import.
 - b When the **Import From Archive File** dialog box opens, navigate to the location where you saved the Web Application Development sample ZIP file, select *SybStore_Sample_Web_1_5.zip* and click **Open**.
 - c Verify that *SybStore_Web_Sample* is entered in the **Into Folder** field.
 - d Select the option **Overwrite Existing Resources Without Warning**.
 - e Click **Finish**. A progress window displays as the archive is imported.

Running the Samples

This chapter describes how to run the SybStore_Sample, and how to explore Sybase WorkSpace and sample project artifacts.

Topic	Page
Overview	41
Exploring the SybStore sample projects	42
Running the SybStore sample	51
Deploying and executing services	58
Running the SybStore Web Application sample	79
Cleaning up the Sybase WorkSpace environment	82

Overview

WorkSpace provides two sample projects—SybStore_Sample and SybStore_Web_Sample. The instructions in this chapter explain how to explore Sybase WorkSpace, how to run both sample projects, and how to explore sample project services and artifacts.

Note To explore WorkSpace and run the sample applications, you must have completed all of the procedures in Chapter 2, “SybStore Samples Download, Installation, and Setup.”

When you use the SybStore_Sample, you can run the front-end sample applications, some of which are designed to run on a mobile device, or you can explore the back-end services and models that make up the applications.

Alternatively, you can deploy and test the applications’ back-end services individually. This is a quick way to view the services in action that does not require you to run the mobile applications. See “Deploying and executing services” on page 58 for more information on each service.

Running the samples on a mobile device

The SybStore mobile applications are enabled for offline access on BlackBerry devices. If you have a BlackBerry device and want to run the applications on that device, see the online help document *Sybase WorkSpace Server Administration/Unwired Accelerator 7.0/Quick Start Guide* for configuration instructions and steps to install the Research in Motion (RIM) server and client software and synchronize the software with a BlackBerry mobile device.

You can also use a BlackBerry device simulator from Research in Motion (RIM) to emulate running the application on a BlackBerry device.

To run a mobile application on a Blackberry mobile simulator, see the *SybStore Tutorials: Mobile Development* guide for instructions, which is available for download on the Sybase CodeXchange Web site at <https://workspace.codexchange.sybase.com/>.

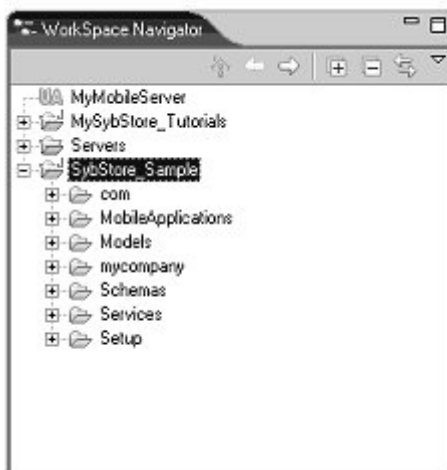
For instructions on how to download tutorial files from CodeXchange, select **Help|Tutorials** from the WorkSpace main menu bar.

Exploring the SybStore sample projects

This section contains a summary of the resources included in each sample project.

SybStore_Sample

All of the SybStore_Sample resources are stored and organized in the SybStore_Sample sample project. To explore the project's contents, expand the project in the WorkSpace Navigator.



Note A project is a symbolic container for a collection of resources that together accomplish a task. See the Sybase WorkSpace online bookshelf for more information about projects.

The following table describes the top-level folders in SybStore_Sample.

Folder	Description
<i>com</i>	Automatically generated based on package names contained in services and schemas.
<i>Deployment</i>	Contains the package definitions for packages that you have deployed in WorkSpace. This folder does not display until you actually deploy a package.
<i>MobileApplications</i>	Contains the mobile applications for the SybStore_Sample. See "Running the SybStore sample" on page 51 for details.
<i>Models</i>	Location of sample models.
<i>mycompany</i>	Location of generated database service proxy files.
<i>Schemas</i>	Contains collections of tables, views, and their associated permissions.
<i>Services</i>	Contains services files for each service type—business process, database, Java, message, and transformation.
<i>Setup</i>	Contains the sample database and related SQL scripts.

SybStore models

The SybStore sample models were created using WorkSpace enterprise modeling tools that use standard techniques and notations to help you analyze, design, build, and maintain your applications.

Note For more information about WorkSpace modeling tools, select **Help|Online Help** in Sybase WorkSpace, then select *Sybase PowerDesigner* from the bookshelf contents list.

To open and explore the SybStore sample models, expand the *SybStore_Sample/Models* folder in the WorkSpace Navigator and double-click the model file name in the Application, DB, or XML folder. The first time you open a model, you may be prompted to update the referenced model file path. If this happens, click Yes to continue, then save the model by selecting File|Save from the WorkSpace main menu bar.

The following table lists all of the models in the SybStore application.

Model type	Model file
Business integration analysis models	<i>Models/Application/SybStoreBPAnalysisModel.bpm</i> <i>Models/Application/SalesProcessingAnalysismodel.bpm</i> <i>Models/Application/RestockProcessingAnalysisModel.bpm</i>
Sybase WorkSpace business integration models	<i>Models/Application/SalesProcessingWorkSpaceBPModel.bpm</i> <i>Models/Application/RestockProcessingWorkSpaceBPModel.bpm</i>
Dataflow model	<i>Models/Application/SybStoreDataflowModel.bpm</i>
Physical data model	<i>Models/DB/SybStoreDB.pdm</i>
XML model	<i>Models/XML/SybStore.XML.xsm</i>

SybStore modeling and development process

The following steps describe the application modeling and development process for the SybStore application:

- 1 SybStore sample application development began with a high-level model diagram of the application,
SybStore_Sample/Models/Application/SybStoreHighLevelDiagram.fem.
- 2 The business process analysis model
SybStore_Sample/Models/Application/SybStoreBPAnalysisModel.bpm was defined for the entire application.

This model identifies business processes, resources, interaction points, and information flow between various parts of the application.

The SybStore business process analysis model defines two specific processes:

- Sales order processing (*SalesProcessingAnalysisModel.bpm*)
- Restock processing (*RestockProcessingAnalysisModel.bpm*)

Business process analysis models were created for each process to specify tasks, sequence of tasks, and business rules that define the flow of the business process.

Business process analysis models are tools you can use to refine, verify, and analyze the business process.

- 3 When the business process analysis models were complete, they were used to generate Sybase WorkSpace business process models (WorkSpace BPMs). The Sybase WorkSpace BPMs are used to generate Sybase WorkSpace business process services, which are then loaded in the service editors to complete implementation:

- The WorkSpace BPM for sales order processing (*SybStore_Sample/Models/Application/SalesProcessingWorkSpaceBPMModel.bpm*) was generated from the analysis model, *SalesProcessingBPAAnalysisModel.bpm*.
- The WorkSpace BPM for restock processing (*SybStore_Sample/Models/Application/RestockProcessingWorkSpaceBPMModel.bpm*) was generated from the analysis model *RestockProcessingBPAAnalysisModel.bpm*.

Each WorkSpace BPM has been checked and modified to generate business process service implementations.

- 4 The SybStore application database schema was defined in the Physical Data Model (PDM) *SybStore_Sample/Models/DB/SybStoreDB.pdm*.

The PDM contains definitions for schema objects (such as tables, indexes, referential constraints, and keys) and stored procedures.

A SQL script (*SybStore_Sample/Setup/Database/SQL/InitDB.sql*) was generated from the PDM, and the script was executed on a data server to create the database objects.

- 5 SybStore application services exchange messages in XML. The message formats were defined in an XML model (*SybStore_Sample/Models/XML/SybStoreXML.xsm*), and then an XML schema (XSD) was generated from the model.

The XSD document (*SybStore_Sample/Schemas/SybStore.xsd*) contains schema definitions for input and output messages used in the business process service and in component services.

SybStore database

The SybStore sample database is located in the *SybStore_Sample/Setup/Database* folder in the WorkSpace Navigator.

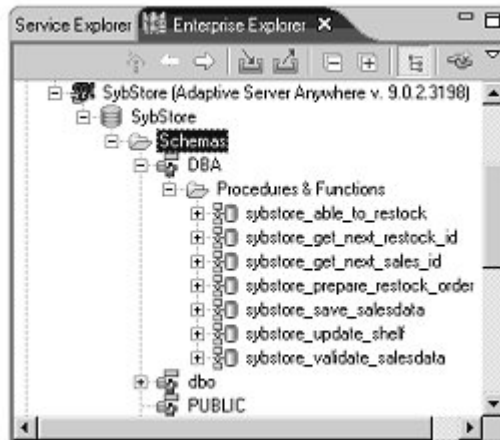
Database scripts, which define schema objects and stored procedures, are located in the *SybStore_Sample/Setup/Database/SQL* folder.

❖ Viewing a script file

- 1 Expand **SybStore_Sample/Setup/Database/SQL** in the **WorkSpace Navigator**.
- 2 Right-click the file name and select **Open With|SQL Editor** from the context menu.

❖ Viewing stored procedures defined in the SybStore_Sample project

- 1 In the WorkSpace **Enterprise Explorer**, expand the **SybStore** database connection profile to reveal the SybStore database icon.
- 2 Below the **SybStore** database icon, expand **Schemas/DBA/Procedures & Functions**.



The following table describes these stored procedures.

Stored procedure	Description
sybstore_able_to_restock	Used in restock checking to obtain current and back-order threshold quantities.
sybstore_get_next_restock_id	Used to obtain a new restock order ID.
sybstore_get_next_sales_id	Used to get an ID for a new sales order.
sybstore_prepare_restock_order	Processes new restock order requests.
sybstore_save_salesdata	Saves incoming sales orders in the database.
sybstore_update_shelf	Creates a record when the item is restocked on the store shelf.
sybstore_validate_salesdata	Used to validate incoming sales data.

SybStore services

The SybStore sample services are located in folders beneath *SybStore_Sample/Services* in the WorkSpace Navigator.

There are two major types of SybStore services:

- Component services (including database, Java, message, and transformation services), which are based on enterprise components, such as stored procedures in the database
- Business process services that enable integration of service execution using business logic and rules

The following table lists the services developed in the SybStore application.

Service file name	Type	Description
DebugJavaService	Java	A Java service that writes trace information to the Unwired Orchestrator log file. Used in a business process service to trace the business process logic.
InsertSalesOrderService	Java	A composite Java service that invokes a database service to obtain a new sales ID, then invokes a business process service for order processing. Used by the sample mobile applications.
SalesBPService	Business process	A business process that manages inventory when a new sales item is processed. Invokes the services that update the inventory database, determines whether shelf restocking is needed, and prepares a work order and e-mail message for the restocking clerk.

Service file name	Type	Description
SalesDBService	Database	Several operations that invoke stored procedures to query and update the SybStore inventory database.
SalesValidate	Java	A composite Java service that invokes a database service to validate the sales item.
SalesEmailXform	Transformation	Constructs an e-mail message for the restocking clerk.
SalesEmailSend	Message	Sends an e-mail message to the restocking clerk.

SybStore mobile applications

The SybStore_Sample project contains two mobile applications that illustrate extending services to mobile devices, making applications and data available for occasionally connected users. Two additional mobile applications are set up for online access. That is, the applications are stored on a mobile server (Unwired Accelerator) and demonstrate how a user accesses the content via a mobile server connection using a mobile device's Web browser.

The Sybstore sample includes four applications—ListAllItems, InsertSalesOrder, SybStoreItems, and SybStoreItemDetail—that perform the actions described in this table.

Application name	Description	Application linking and actions
ListAllItems	Lists all store shelf items that can be ordered.	ListAllItems links to the order-processing InsertSalesOrder mobile application.
InsertSalesOrder	Invokes a composite Java service for order handling.	These two mobile applications are set up for you to download to a mobile device, enabling offline access to the data. You download and view the mobile applications using Unwired Accelerator's client application.
SybStoreItems	Lists all items in the warehouse inventory	SybStoreItems and SybStoreItemDetail are linked and enable you to view the SybStoreItems application, select a single item from a list of all items in the warehouse inventory, and obtain detailed information for the selected item.
SybStoreItemDetail	Provides detailed information for one selected item in the warehouse.	These two mobile applications are set up for you access online. That is, you view the applications by browsing to an Unwired Accelerator portal using a Web browser running on a mobile device.

To run the sample mobile applications, see “Running the SybStore sample” on page 51.

SybStore_Web_Sample

The SybStore_Web_Sample is a simple purchase order application developed using the JavaServer Faces (JSF) framework. The sample demonstrates how:

- The DataWindow[®] is used in a JSF page
- The ManagedBean is used in a JSF page
- The business logic is written to update data in the database using the JavaDatastore APIs
- The action listeners and server-side event handlers are written using the JavaDatastore APIs
- A predefined service is integrated in a JSF page
- Two JSF pages are linked using navigation rules

❖ Viewing SybStore_Web_Sample resources

- 1 Start Sybase WorkSpace. (See “Starting Sybase WorkSpace” on page 6.)
- 2 Start Unwired Orchestrator and establish a connection to the server in WorkSpace. (See “Starting and connecting to the Unwired Accelerator server” on page 7.)
- 3 Select **Window|Open Perspective|Web Application Development** from the WorkSpace main menu.
- 4 In **WorkSpace Navigator**, expand **SybStore_Web_Sample**.

The SybStore_Web_Sample project contains these resources:

- JSF pages
- Managed beans, server event handlers, and action listeners
- Files generated for service invocation
- DataWindow library
- Application configuration file

This section describes each of these resources.

JSF resources

Use the WorkSpace Navigator to view the SybStore_Web_Sample JSF pages, which are located in *SybStore_Web_Sample/webroot*.

Page file name	Description
<i>entrypage.jsp</i>	Main entry page for the sample purchase order Web application. The page contain links to other pages—the inventory page, the view pending order page, and the view pending restock requests page.
<i>Inventory.jsp</i>	Another sample page with master and detail DataWindows.
<i>invpage.jsp</i>	Contains master and detail DataWindows. Both the master DataWindow (Orders) and the detail DataWindow (Existing Orders) use the SALESDATA table. This page is associated with managed beans and server-side event handlers.
<i>Orders.jsp</i>	Contains a DataWindow, based on the SALESDATA table, that lists pending orders.
<i>restock.jsp</i>	Contains a DataWindow, based on the RESTOCK_ORDERS table, that lists all restock requests.
<i>sendmail.jsp</i>	Invokes the e-mail service that is deployed to the Unwired Orchestrator server, and sends a confirmation e-mail message to the customer when an order is placed.

Note In WorkSpace, table names can be either uppercase or lowercase.

Managed beans and server-side event handlers

Use the WorkSpace Navigator to view the resources of managed beans implementation, which are located in *SybStore_Web_Sample/src*.

Resource file	Description
<i>DwManagedBean.java</i>	A managed bean that handles updates to the SALESDATA table.
<i>LoadOrderDWHandler.java</i>	DataWindow OnLoad Handler class. Triggers a server-side event to initialize all DataWindows used in the <i>invpage.jsp</i> and <i>inventory.jsp</i> pages.
<i>LoadOrderDWTabularHandler.java</i>	DataWindow OnLoad Handler class. Triggers a server-side event when the <i>orderdwTabular</i> DataWindow is loaded in the <i>invpage.jsp</i> page.
<i>OrderButtonListener.java</i>	Command button Action Listener class that is triggered when the Order button is clicked on the <i>invpage.jsp</i> page.
<i>UpdateOrderListener.java</i>	Action Listener class that is triggered when the Delete Order button is clicked on the <i>Inventory.jsp</i> page of the <i>orderdwTabular</i> DataWindow.

Service invocation-generated files

Use the WorkSpace Navigator to view files that invoke services, which are located in *SybStore_Web_Sample/generated/mycompany*.

DataWindow libraries

Use the WorkSpace Navigator to view the DataWindow libraries, which are located in *SybStore_Web_Sample/webroot/WEB-INF/pb*.

DataWindow library	Description
<i>tutorial.pbl</i>	Contains these DataWindows: <ul style="list-style-type: none"> • locationdw • orderdw • orderdwtabular • restockdw • storedw • uniqueiddw • warehouseinv
<i>dwlibrary1.pbl</i>	Contains the orders DataWindow.

Application configuration file

The *faces-config.xml* file, which is located in *SybStore_Web_Sample/webroot/WEB-INF* in the WorkSpace Navigator, is the Web Application Development sample configuration file that contains the managed beans and navigation rules used in the application. The navigation rules demonstrate how the *entrypage.jsp* page links to other pages based on which buttons the user clicks on *entrypage.jsp*.

Running the SybStore sample

This section explains how to configure and run the SybStore sample applications and how to deploy and test the sample's services.

Running ListAllItems and InsertSalesOrder

These instructions explain how to run the ListAllItems and InsertSalesOrder sample mobile applications in the WorkSpace test environment.

- 1 In the **WorkSpace Navigator**, expand **MyMobileServer/Mobile Applications/Approved**.

- 2 Double-click **ListAllItems** (*ListAllItems(0.1).mobapp*) to open the application in the editor.
- 3 Select the **Preview** tab to preview the **ListAllItems** mobile application and show the results returned from the sample database. You see all items in the store's inventory.



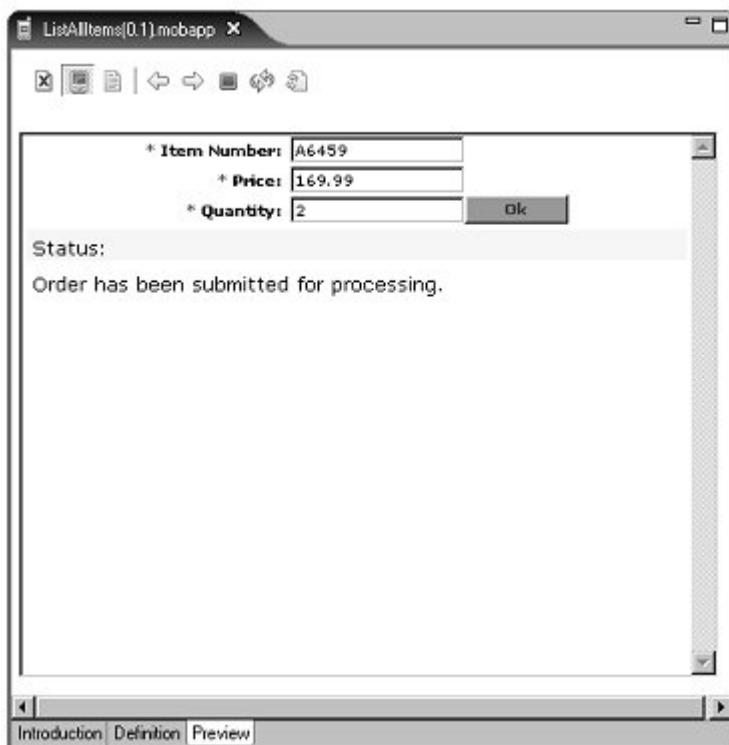
The screenshot shows a mobile application window titled "ListAllItems(0.1).mobapp". The window contains a table with the following data:

Item Number	Description	Price	vendor_id	vendor_name
<u>A6459</u>	Rio Nitrus 1.5 GB MP3 Player	169.99	Vend 1	Electronics, Inc
<u>A6469</u>	Rio Karma 20GB MP3 Player	249.99	Vend 1	Electronics, Inc
<u>A6489</u>	Rio Karma 40GB MP3 Player	349.99	Vend 1	Electronics, Inc
<u>B9854</u>	Apple I-Pod 20GB MP3 Player for Mac and Windows	249.99	Vend 2	Apple, Inc
<u>B9874</u>	Apple I-Pod 40GB MP3 Player for Mac and Windows	449.99	Vend 2	Apple, Inc
<u>C1630</u>	THX 16 Gauge Speaker Cable - 30 feet	21.99	Vend 3	Acme Wire, Ltd

At the bottom of the window, there is a navigation bar with the following tabs: List/Detail, Data Validation, Answers Anywhere, Labels, Parameters, Preview, and Order Processing. The "Preview" tab is currently selected.

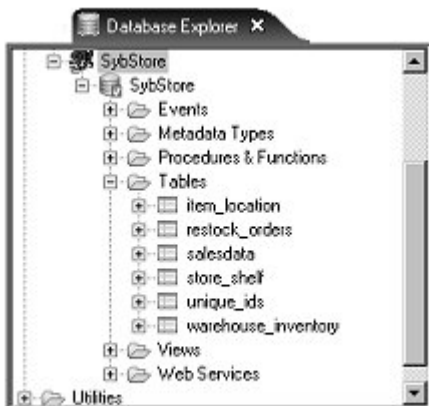
- 4 Click the **Item Number A6459**. You see the selected item's item number and price displayed on an order page because the ListAllItems and InsertSalesOrder mobile applications are linked.

- 5 Enter 2 as the **Quantity** and click **OK**.



- 6 When you submit the order, a message displays stating that the Order has been submitted for processing. Click **OK**.
- 7 To verify that the order has been received:
 - a In the **WorkSpace Navigator**, expand **SybStore_Sample/Setup**.
 - b To start the sample database, right-click **startSybStore.bat** and select **Open With|System Editor**.
 - c In the **Enterprise Explorer**, expand **Databases**, right-click **SybStore** and select **Connect** from the context menu.
 - d Select **Window|Open View|Database Explorer** from the WorkSpace main menu.

- e In the **Database Explorer**, expand **Databases/SybStore/Tables**.



- f Right-click the salesdata table and select **Edit Data|Grid**, then select the **Results** tab in the Results view. You should see the submitted order.
- 8 Click **File|Close** or **Window|Close Perspective** on the WorkSpace main menu.

Running SybStoreItems and SybStoreItemDetail

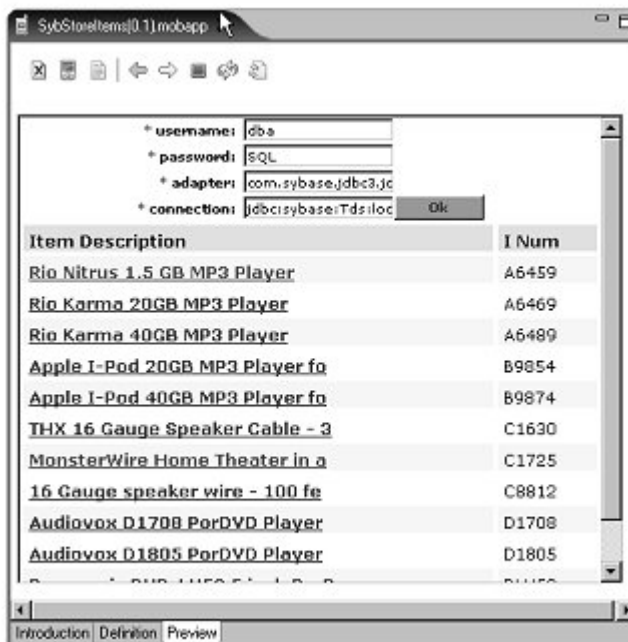
These instructions explain how to run the SybStoreItems and SybStoreItemDetail sample mobile applications in the WorkSpace test environment.

- 1 Select **Window|Open Perspective|Mobile Development**.

Note If the **Mobile Development** perspective is not listed on the **Open Perspective** menu, select **Window|Open Perspective|Other**, choose **Mobile Development** from the **Select Perspective** dialog box, and click **OK**.

- 2 In the **WorkSpace Navigator**, expand **MyMobileServer/Mobile Applications/Approved**.
- 3 Double-click the **SybStoreItems** mobile application (*SybStoreItems(0.1).mobapp*) to open the application in the editor.

- 4 Select the **Preview** tab to preview the application and show the results returned from the sample database.

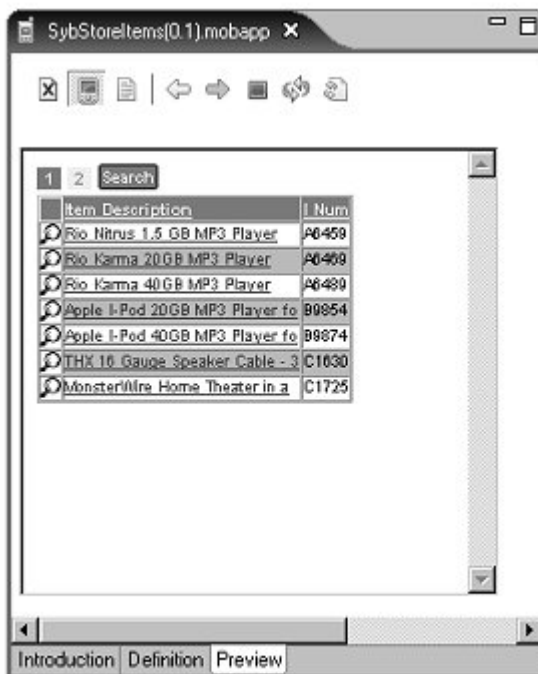


- 5 Select **MonsterWire Home Theater** in the **Item Description** list.

The selected item's detail displays because the SybStoreItems mobile application is linked to the SybStoreItemsDetail mobile application.

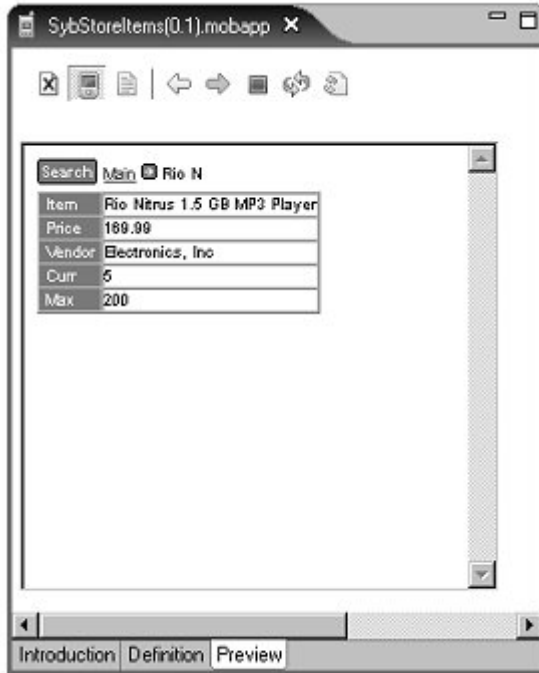


- Click the **PDA** icon to show the SybStoreItems output as it would appear on a mobile device.



- Click the first item in the list—the **Rio Nitrus 1.5 GB MP3 Player**.

You see the details for the selected item as they would display on a PDA.



8 Select **File|Close** from the WorkSpace main menu.

For more information about working with mobile applications, see the online help topic *WorkSpace Development/Mobile Development*.

Deploying and executing services

Use the instructions in this section to deploy and test any of these SybStore_Sample services in any order; that is, you do not have to test the services in the order they are documented.

- SalesBPService
- SalesDBService
- SalesValidate
- SalesEmailXform

- Prerequisites
- SalesEmailSend
- Before you deploy and execute the SybStore_Sample services:
- Complete the procedures in Chapter 2, “SybStore Samples Download, Installation, and Setup,” and verify that the Unwired Orchestrator server is running and started in WorkSpace.
 - Select **Window|Open Perspective|Service Development**.

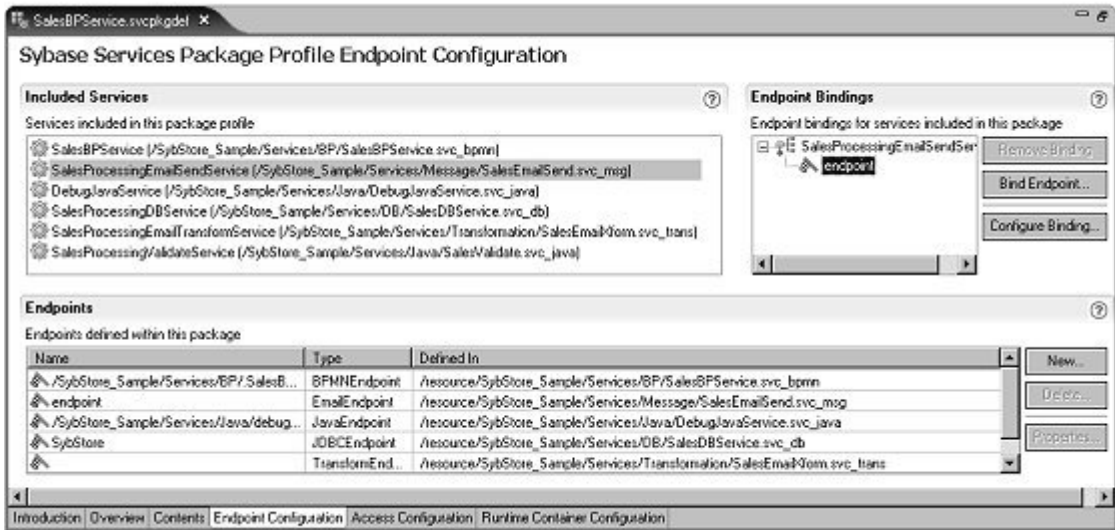
Note If the **Service Development** perspective is not listed on the **Open Perspective** menu, select **Window|Open Perspective|Other**, choose **Service Development** from the **Select Perspective** dialog box, and click **OK**.

SalesBPService

This procedure allows you to test the SalesProcessingValidateService and the SalesProcessingEmailSendService services included in the SalesBPService business process service package.

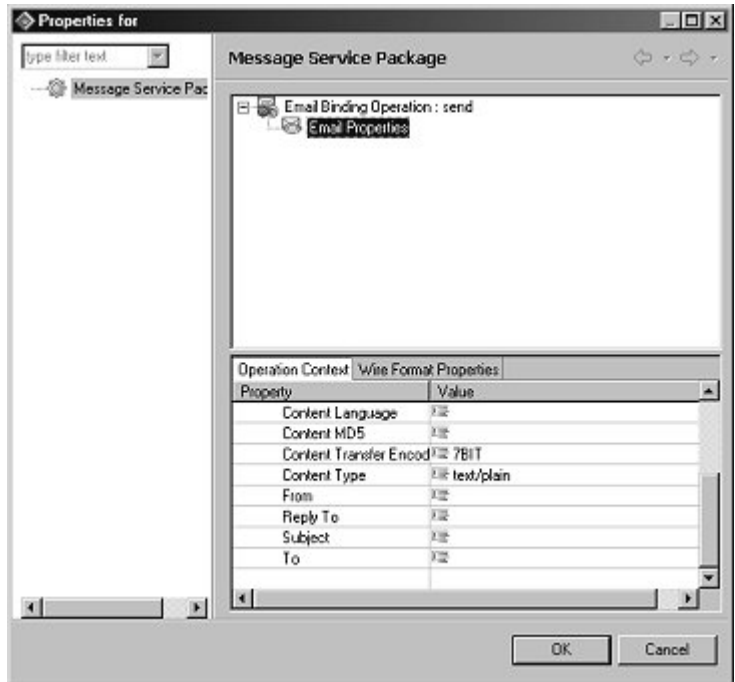
- 1 Modify the services’s e-mail endpoint configuration:
 - a In the **WorkSpace Navigator**, expand **SybStore_Sample/Services/BP/**.
 - b Double-click **SalesBPService.svcpkgdef** to open the package profile in the Sybase Service Package Profile Editor.
 - c Select the **Endpoint Configuration** tab in the editor. Maximize the editor window so you can see the Endpoint Bindings section on the far right.

- d In the **Included Services** section, select **SalesProcessingEmailSendService**. You see this service's endpoint bindings on the right.



- e Select **SalesProcessingEmailSendService/endpoint** in the **Endpoint Bindings** section, and click **Configure Binding**

- f When the **Properties** dialog box opens, select **Email Binding Operation : send/Email Properties** in the top right pane, and select the **Operation Context** tab in the bottom right pane.



- g In the **Operation Context** pane, scroll down and set the **From**, **Reply To**, **Subject**, and **To** properties, as appropriate for your environment, then click **OK**.

Note The From, Reply To, and To values must be in the form of an e-mail address; for example, rob.thomas@sybase.com.

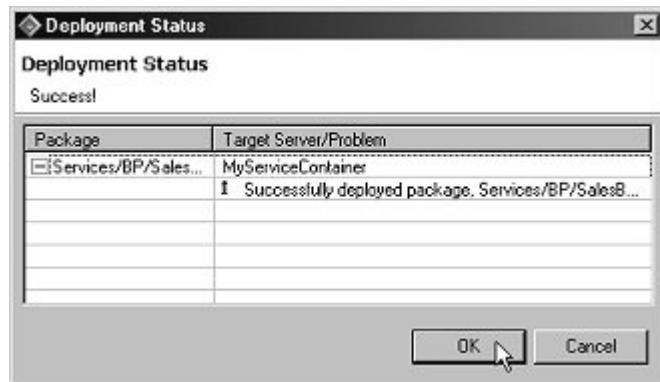
- h Select **File|Save** from the Workspace main menu.
- 2 Deploy the SalesBPService package:
- In the **Workspace Navigator**, expand **SybStore_Sample/Services/BP/**.
 - Right-click **SalesBPService.svcpkgdef** and select **Deploy Package** from the context menu.

- c When the **Select Target Server** dialog box opens, select **MyServiceContainer** and click **OK**.

Note If a **Pre-Deploy Check Status** message asks if you want to continue the deployment, click **OK**.

- d When the process completes, a **Deployment Status** window states that the package was successfully deployed.

Click **OK** to close the window.

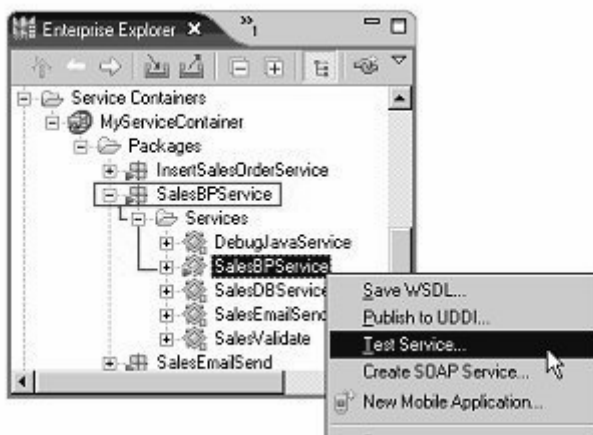


- 3 Close the **Console** view by clicking the “**X**” on the title tab.

This package is deployed with the business process service and its dependent services to Unwired Orchestrator using the **MyServiceContainer** connection profile.

- 4 In the **Enterprise Explorer**, expand **Service Containers/MyServiceContainer/Packages/SalesBPService/Services**.

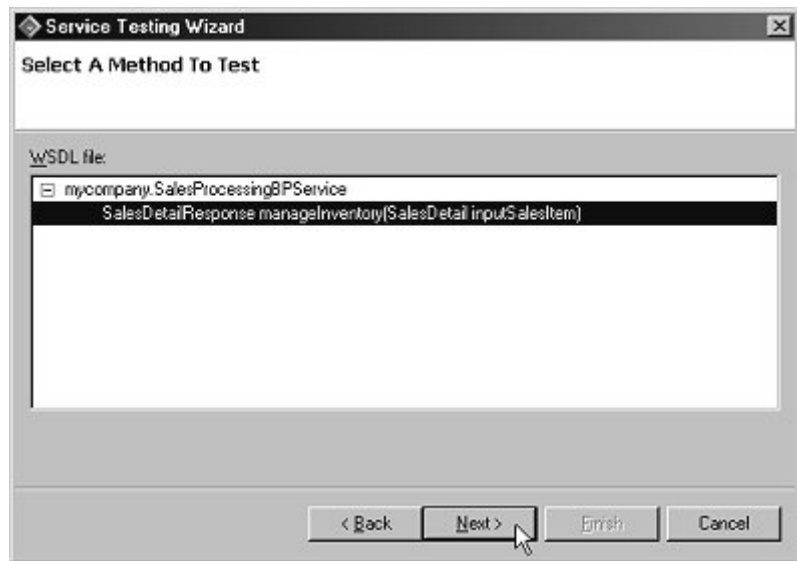
- 5 Right-click **SalesBPService** and select **Test Service** from the context menu.



Note If you have completed any of the SybStore tutorials, additional packages may appear in the Packages folder, and additional services may appear in the Services folder.

- 6 When the **Service Testing Wizard** opens, select the test method **Dialog Service Test Wizard** and click **Next**.
- 7 When the **Options** window opens, click **Next** to accept all defaults.

- 8 In the **Select A Method to Test** window, select `SalesDetailResponse` and click **Next**.



- 9 When the **Parameters for Method** window opens, click **Edit** and enter these values:

- ItemNum – A6459
- Qty – 1
- Price – 199.99
- SalesID – 1

Click **OK**.

- 10 Click **Invoke** to execute the service.

You see a response message in the **Output Parameters** pane:

```
<SalesDetailResponse>
<processingResult><processingResult/>
</SalesDetailResponse>
```

The processing result is empty because the item needs to be restocked. A message below the Output Parameter pane states:

```
Invocation of method manageInventory failed at <date> <time>.
Duration <00.00.00>
```

- 11 Click **Finish** to close the window.

When the test is successful, you also receive an e-mail confirmation message stating that the item needs to be restocked.

```
1 item of product A6459 need to be restocked.
```

Note If you run the test a second time, replace the **SalesID** value in the request message with a new number. Otherwise, the service attempts to store a second sales item with the same ID, and an error occurs.

SalesDBService

This procedure allows you to test the SalesProcessingDBService service included in the SalesDBService database service package.

- 1 Deploy the SalesDBService package:
 - a In the **WorkSpace Navigator**, expand **SybStore_Sample/Services/DB/**.
 - b Right-click the **SalesDBService.svcpkgdef** file and select **Deploy Package** from the context menu.
 - c When the **Select Target Server** dialog box opens, select **MyServiceContainer** and click **OK**.

Note If a **Pre-Deploy Check Status** message asks if you want to continue the deployment, click **OK**.

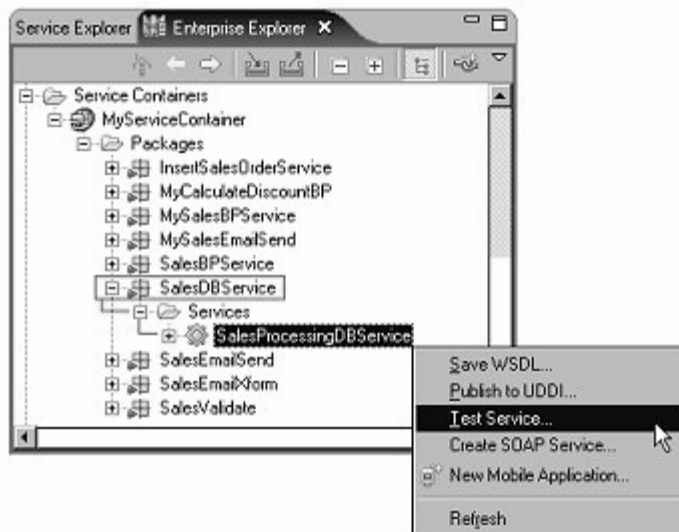
- d When the process completes, a **Deployment Status** window states that the package was successfully deployed.

Click **OK** to close the window.



- 2 Close the **Console** view by clicking the “X” on the title tab.
- 3 In the **Enterprise Explorer**, expand **ServiceContainers/MyServiceContainer/Packages/SalesDBService/Services**.

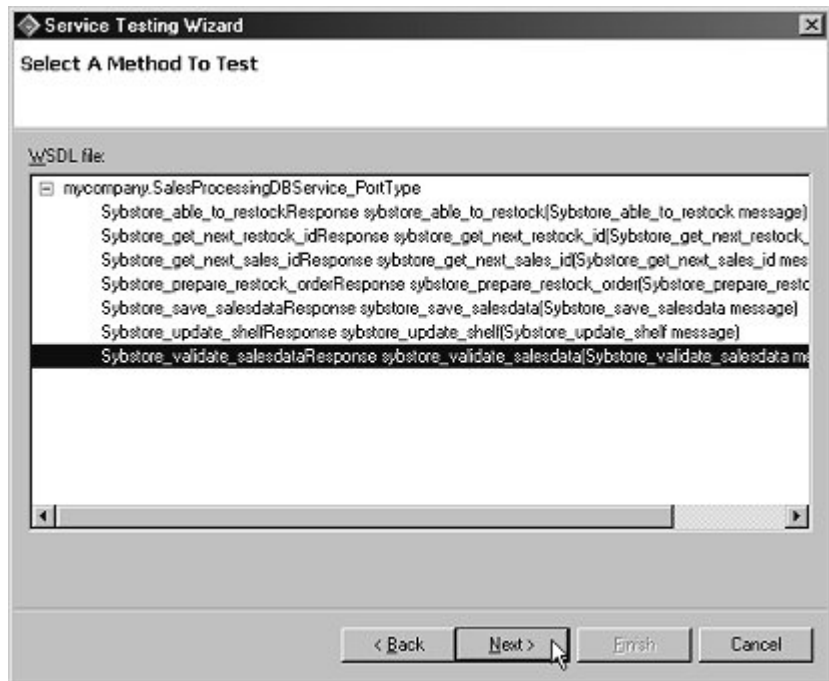
- 4 Right-click **SalesProcessingDBService** (service interface) and select **Test Service** from the context menu.



Note If you have completed any of the SybStore tutorials, additional packages may appear in the Packages folder, and additional services may appear in the Services folder.

- 5 When the **Service Testing Wizard** opens, select the test method **Dialog Service Test Wizard** and click **Next**.
- 6 When the **Options** window opens, click **Next** to accept all defaults.

- 7 In the **Select A Method to Test** window, select the bottom method—`Sybstore_validate_salesdataResponse`—and click **Next**.



- 8 When the **Parameters for Method** window opens, click **Edit** and provide these values:
 - Item Num – A6459
 - Qty – 12
 - Price – 199.99
 - Returnval – 9
 - Reason – Not sent yet.
- 9 Click **OK**.
- 10 Click **Invoke** to invoke the service.

You see this response message with a **returnval** of 1:

```
<sybstore_validate_salesdataResponse>
<RETURN_VALUE>0</RETURN_VALUE>
<returnval>1</returnval>
<reason>Successful</reason>
```

```

<updateCounts>
<updateCount>1</updateCount>
<updateCount>0</updateCount>
</updateCounts>
<warnings></warnings>
</sybstore_validate_salesdataResponse>

```

A message below the Output Parameter pane states:

```

Method sybstore_validate_salesdata successfully invoked
at <date> <time>. Duration <00.00.00>

```

The response indicates that the item number entered is valid.

- 11 Click **Finish**.

SalesValidate

This procedure allows you to test the SalesProcessingValidateService service included in the SalesValidate Java service package.

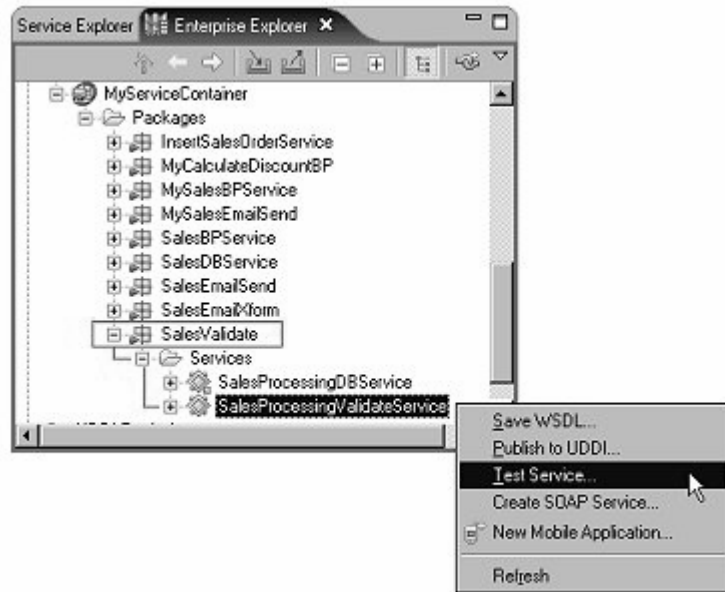
- 1 In the **Workspace Navigator**, expand **SybStore_Sample/Services/Java**.
- 2 Right-click **SalesValidate.svcpkgdef** and select **Deploy Package**.
- 3 When the **Select Target Server** dialog box opens, select **MyServiceContainer**, and click **OK**.

This step deploys the package with the SalesValidate service and its dependent services to the sample service container called MyServiceContainer. After the deployment has finished (this process takes a few minutes), you can test the service.

Note If a **Pre-Deploy Check Status** message asks if you want to continue the deployment, click **OK**.

- 4 When the **Deployment Status** dialog box displays that the deployment was successful, click **OK**.

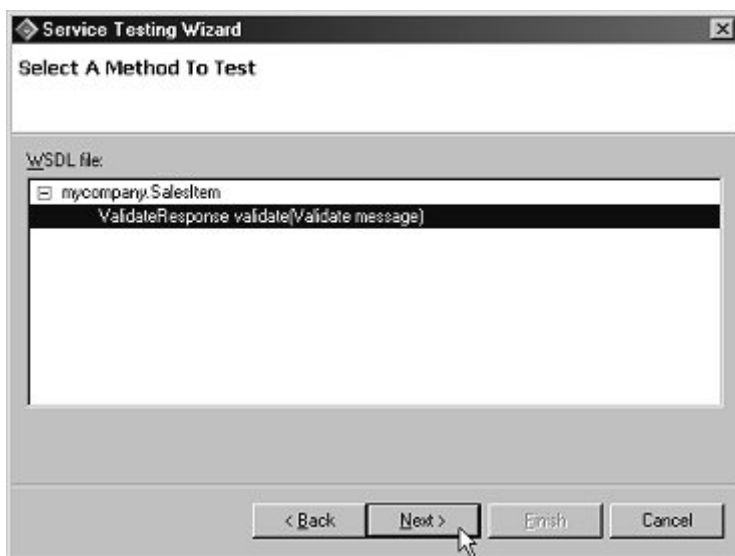
- 5 In the **Enterprise Explorer**, expand **ServiceContainers/MyServiceContainer/Packages/SalesValidate/Services**.



Note If you have completed any of the SybStore tutorials, additional packages may appear in the Packages folder, and additional services may appear in the Services folder.

- 6 Right-click **SalesProcessingValidateService** (service interface) and select **Test Service** from the context menu.
- 7 When the **Service Testing Wizard** opens, select the test method **Dialog Service Test Wizard** and click **Next**.
- 8 When the **Options** window opens, click **Next** to accept all defaults.

- 9 In the **Select A Method to Test** window, select `ValidateResponse` `validate` and click **Next**.



- 10 When the **Parameters for Method** window opens, click **Edit**.
- 11 When a small dialog box opens asking you to **Specify Values of the Complex Type**, click **Edit**, then enter these values:
- Item_num – A6459
 - Qty – 51
 - Price – 199.99
 - SalesID – 15
- 12 Click **OK**, then click **OK** again to close the **Specify Values of the Complex Type** dialog box.
- 13 Click **Invoke**.

You see this response message with an **outputReturnCode** value of 1:

```
<ValidateResponse>
<outputReturnCode>1</outputReturnCode>
</ValidateResponse>
```

A message below the Output Parameter pane states:

```
Method validate successfully invoked at <date> <time>.
Duration <00.00.00>
```

The response indicates that the item number entered is valid.

- 14 Click **Finish**.

SalesEmailXform

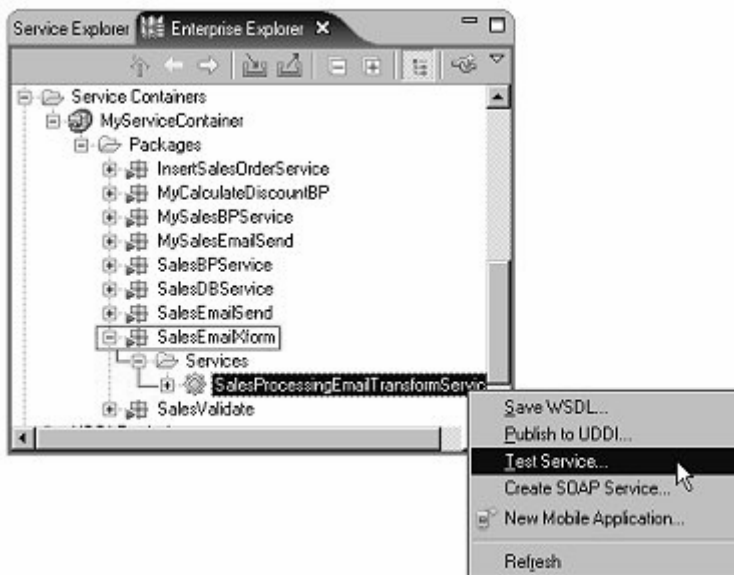
This procedure allows you to test the SalesProcessingEmailTransformService service included in the SalesEmailXform transformation service package.

- 1 In the **WorkSpace Navigator**, expand **SybStore_Sample/Services/Transformation**.
- 2 Right-click **SalesEmailXform.svcpkgdef** and select **Deploy Package** from the context menu.
- 3 When the **Select Target Server** dialog box opens, select **MyServiceContainer**, and click **OK**.

Note If a **Pre-Deploy Check Status** message asks if you want to continue the deployment, click **OK**.

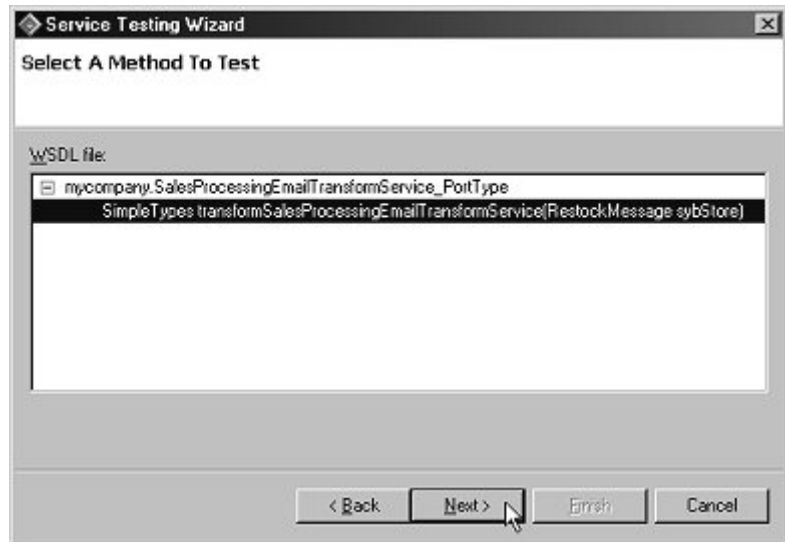
- 4 When the **Deployment Status** dialog box states that the deployment was successful, click **OK**.
- 5 In the **Enterprise Explorer**, expand **ServiceContainers/MyServiceContainer/Packages/SalesEmailXform/Services**.

- Right-click **SalesProcessingEmailTransformService** (the service interface) and select **Test Service**.



- When the **Service Testing Wizard** opens, select the test method called **Dialog Service Test Wizard** and click **Next**.
- When the **Options** window opens, click **Next** to accept all defaults.

- 9 In the **Select A Method To Test** window, select `SimpleTypes transformSalesProcessingEmailTransformService` and click **Next**.



- 10 When the **Parameters for Method** window opens, click **Edit**.
- 11 When a small dialog box opens asking you to **Specify Values of the Complex Type**, enter these values:
 - ItemNum – A6459
 - RestockQty – 2Click **OK**.
- 12 Back in the **Parameters for Method** dialog box, click **Invoke** to invoke the service.

You see this response message in the **Output Parameters** pane:

```
<SimpleTypes>
<stringValue>2 items of product A6459 need to be
restocked.</stringValue>
<floatValue>0.0</floatValue>
<integerValue>0</integerValue>
</SimpleTypes>
```

The restocking message data (stringValue) matches the item number and restocking quantity you entered.

A message below the Output Parameter pane states:

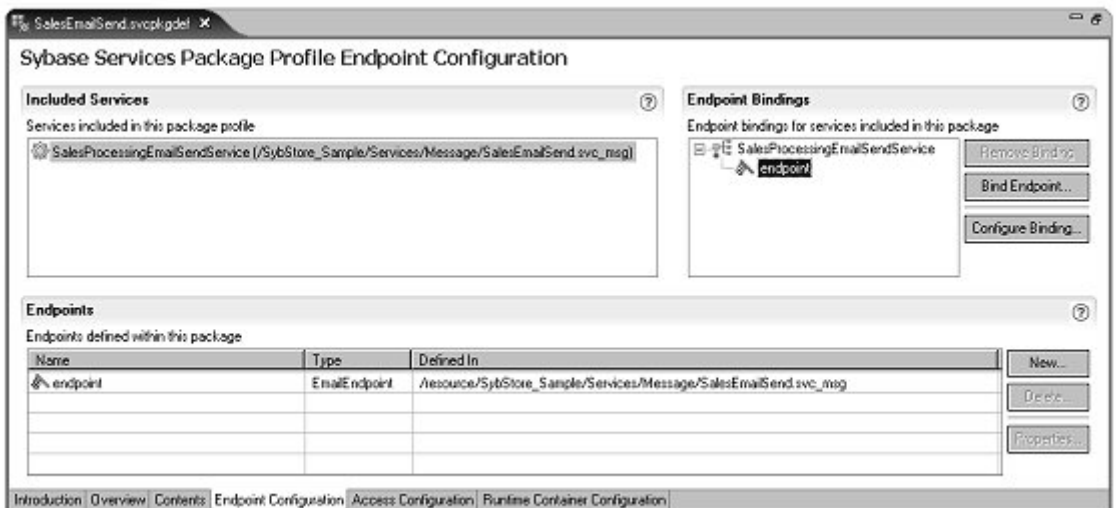
```
Method transformSalesProcessingEmailTransformService successfully
invoked at <date> <time>.
Duration <00.00.00>
```

- 13 Click **Finish** to close the window.

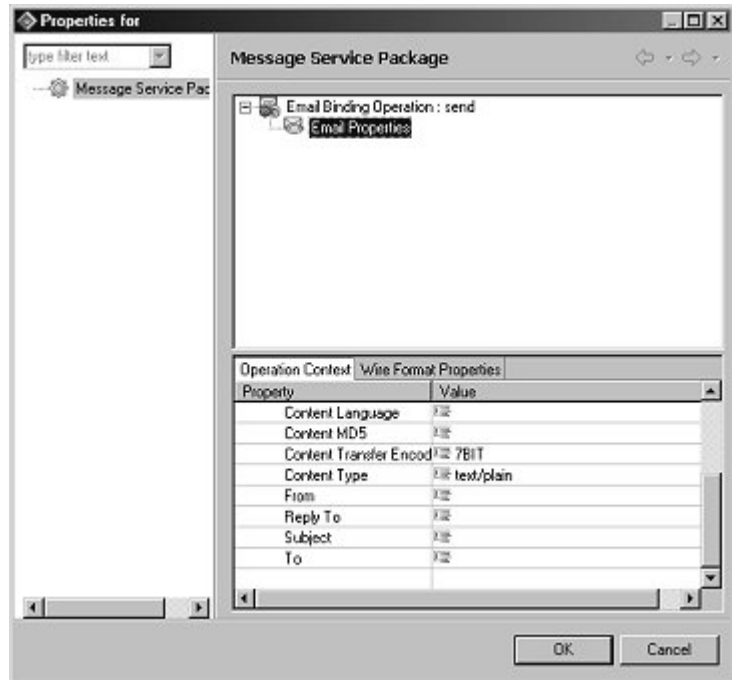
SalesEmailSend

This procedure allows you to test the SalesProcessingEmailSendService service included in the SalesEmailSend message service package.

- 1 Modify the package's e-mail endpoint configuration:
 - a In the **WorkSpace Navigator**, expand **SybStore_Sample/Services/Message/**.
 - b Double-click **SalesEmailSend.svcpkgdef** to open the package profile in the Sybase Service Package Profile Editor.
 - c Select the **Endpoint Configuration** tab in the editor. Maximize the editor window so you can see the **Endpoint Bindings** section on the far right.
 - d In the **Included Services** section, select **SalesProcessingEmailSendService**. You see this service's endpoint bindings on the right.



- e Select **SalesProcessingEmailSendService/endpoint** in the **Endpoint Bindings** section, and click **Configure Binding**
- f When the **Properties** dialog box opens, select **Email Binding Operation : send/Email Properties** in the top right pane, and select the **Operation Context** tab in the bottom right pane.



- g In the **Operation Context** pane, scroll down and set the **From**, **Reply To**, **Subject**, and **To** properties, as appropriate for your environment, then click **OK**.

Note The From, Reply To, and To values must be in the form of an e-mail address; for example, rob.thomas@sybase.com.

- h Select **File|Save** from the Workspace main menu.
- 2 Deploy the SalesEmailSend package:
- a In the **WorkSpace Navigator**, expand **SybStore_Sample/Services/Message**.
 - b Right-click the **SalesEmailSend.svcpkgdef** file and select **Deploy Package** from the context menu.

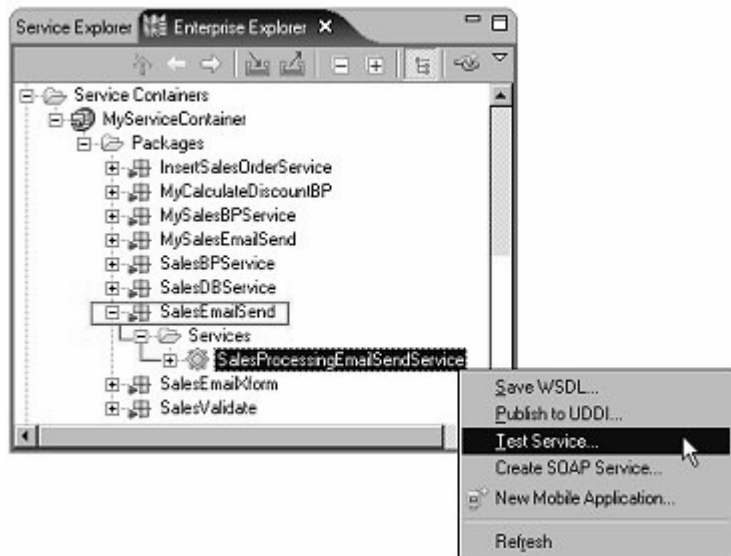
- c When the **Select Target Server** dialog box opens, select **MyServiceContainer** and click **OK**. The **Console** view opens and shows the progress of the deployment.

Note If a **Pre-Deploy Check Status** message asks if you want to continue the deployment, click **OK**.

- d When a **Deployment Status** window states that the package was successfully deployed, click **OK** to close the window.

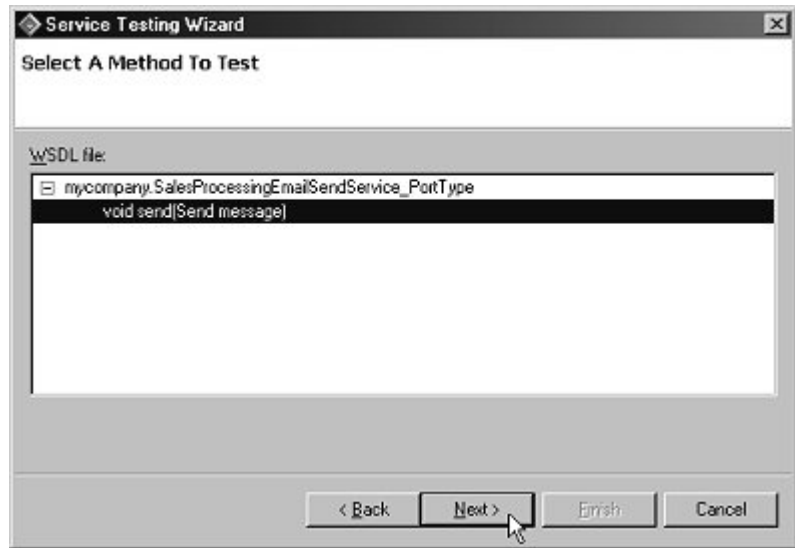
In the **WorkSpace Navigator**, you should see the file **SalesEmailSend.svcpkg** in the folder **SybStore_Sample/Deployment/Services/Message/SalesEmailSend.svcpkgdef/Unwired Orchestrator Integration Server (EAServer)**.

- e Close the **Console** view by clicking the “X” on the title tab.
- 3 In the **Enterprise Explorer**, expand the folders **Service Containers/MyServiceContainer/Packages/SalesEmailSend/Services**.
 - 4 Right-click **SalesProcessingEmailSendService** (the service interface) and select **Test Service** from the context menu.



- 5 When the **Service Testing Wizard** opens, select the test method called **Dialog Service Test Wizard**, and click **Next**.

- 6 When the **Options** window opens, click **Next** to accept all defaults.
- 7 In the **Select A Method to Test** window, select `void send` and click **Next**.



- 8 When the **Parameters for Method** window opens, click **Edit**.
- 9 Click **Edit** and enter "Email message from Sybase WorkSpace" in the **Data** field.
- 10 Click **OK**.
- 11 In the **Parameters for Method** dialog box, click **Invoke** to execute the service.

Although no data appears in the Output Results pane, a message indicating success displays below that pane:

```
Method send successfully invoked at <date> <time>.  
Duration <00.00.00>
```

- 12 Click **Finish**.

When the test is successful, you also receive an e-mail message containing the data string you entered.

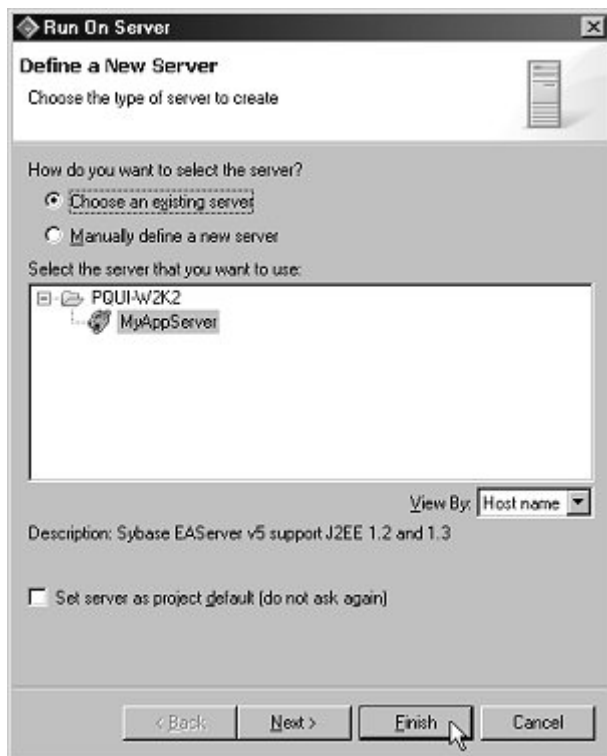
Running the SybStore Web Application sample

This section explains how to run the SybStore Web Application sample.

Note Before you run the sample, download the sample, create the sample project, start and connect to Unwired Orchestrator, start and connect to the SybStore sample database, and complete the Web Application sample setup. See Chapter 2, “SybStore Samples Download, Installation, and Setup.”

- 1 In the **WorkSpace Navigator**, expand **SybStore_Web_Sample/webroot/**, right-click **entrypage.jsp**, and select **Run** from the context menu.

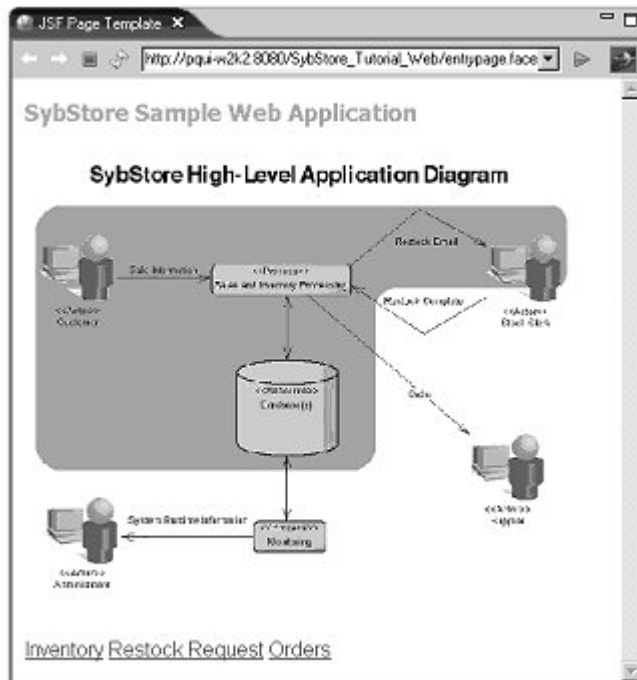
- 2 When the **Run On Server** dialog box opens, select the **Choose an Existing Server** option, select **MyAppServer** in the tree view, and click **Finish**.



Note If `MyAppServer` does not display in the Run On Server dialog box:

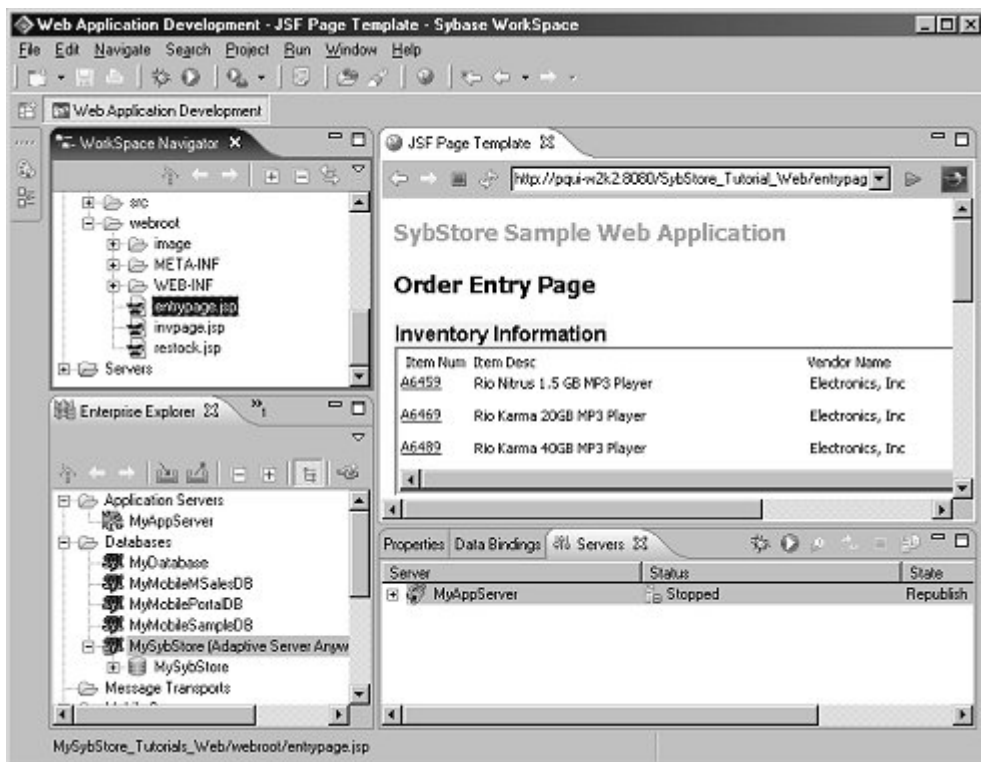
- a Select **Manually Define a New Server**, enter the **Host Name**, select **Apache/Tomcat v5.0 Server** or **EAServer** for the **Server Type**, and click **Next**.
 - b On the **Tomcat Server** page, enter the Tomcat installation directory (`%WORKSPACE_DIR%\DevRunTimes\Tomcat`), and click **Finish**.
-

The first page of the JSF-based Web application displays.



- 3 Click the **Inventory** link at the bottom of the page.

- 4 When you see the **Restock Information Page**, click **Go to Order Page** to view the **Order Entry Page**.



- 5 Select **File|Close**. You have started the Web server and displayed the purchasing Web application order entry page.

Cleaning up the Sybase WorkSpace environment

Use these instructions to disconnect from WorkSpace servers, stop WorkSpace components, remove the sample projects, and clean up the WorkSpace environment.

- ❖ **Closing an active connection to the SybStore sample database**

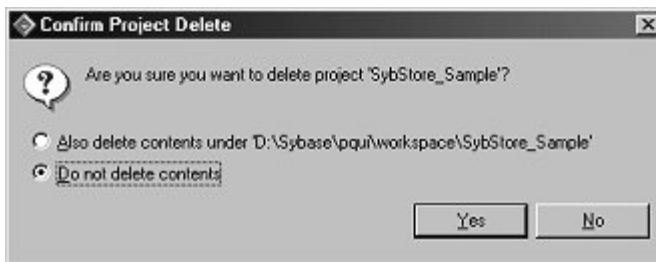
- 1 In the **Enterprise Explorer**, expand the **Databases** folder.

- 2 Right-click the **SybStore** connection profile and select **Disconnect** from the context menu.
- ❖ **Closing an active connection to Unwired Orchestrator and shutting down the server**
 - 1 In the **Enterprise Explorer**, expand the **Service Containers** folder.
 - 2 Right-click the **MyServiceContainer** connection profile and select **Disconnect** from the context menu.
 - 3 Outside of WorkSpace, select **Start|Programs|Sybase|Sybase WorkSpace|UO 5.1|Stop UO**.
 - ❖ **Closing an active connection to Unwired Accelerator and shutting down the server**
 - 1 In the **Enterprise Explorer**, expand the **Mobile Servers** folder.
 - 2 Right-click the **MyMobileServer** connection profile and select **Disconnect** from the context menu.
 - 3 Outside of WorkSpace, select **Start|Programs|Sybase|Sybase WorkSpace|UA 7.0|Stop UA (EAServer)**.
 - ❖ **Deleting the sample projects**
 - 1 In WorkSpace, select **Window|Open Perspective|Service Development**.

Note If the Service Development perspective is not listed on the **Open Perspective** menu, select **Window|Open Perspective|Other**, choose **Service Development** from the **Select Perspective** dialog box, and click **OK**.

 - 2 In the **WorkSpace Navigator**, right-click **SybStore_Sample** (or **SybStore_Web_Sample**) and select **Delete** from the context menu.
 - 3 When asked to confirm the deletion, select:
 - **Also Delete Contents Under** *<your_personal_WorkSpace_path>* – to remove all SybStore_Sample source, generated, and user-created files from WorkSpace and from your computer's hard drive.

- **Do Not Delete Contents** – to remove the project from WorkSpace but to retain all SybStore sample-related files on your computer's hard drive.



- 4 Click **OK**. The project is deleted.
- 5 Select **File|Exit** from the main menu bar to shut down WorkSpace.

❖ **Recreating the sample projects**

Use these instructions to recreate the SybStore sample projects when the projects have been deleted from WorkSpace, but the project files remain on your computer's hard drive.

- 1 In WorkSpace, select **Window|Open Perspective|Service Development**.

Note If the Service Development perspective is not listed on the **Open Perspective** menu, select **Window|Open Perspective|Other**, choose **Service Development** from the **Select Perspective** dialog box, and click **OK**.

- 2 Select **File|New|Project** from the WorkSpace main menu.
- 3 When the **New Project** wizard opens, select **Sybase|Sybase WorkSpace Project** and click **Next**.
- 4 When the **Sybase WorkSpace Project** window complete these options:
 - **Project Name** – enter `SybStore_Sample` or `SybStore_Web_Sample`, depending on which project you are recreating.
 - **Project Contents** – select:
 - **Use Default** – to recreate the project in the default personal WorkSpace directory if that is where you created the project originally.

- **Directory** – if you created the project is a location other than your default personal WorkSpace directory. Unselect **Use Default**, then click **Browse** and navigate to where the project's files are located.
- 5 Click **Finish**. The project is created with all of the source, generated, and user-defined files that existed when you deleted the project.

