

# **eCommerce Storefront Installation and Upgrade Guide**

**Version 1.4.1 for FACTS**

**Infor's Web Storefront Solution**



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# Introduction to This Guide

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Welcome to eCommerce Storefront, Infor's eCommerce software solution for distributors who want to take advantage of business to business and business to consumer Web site sales opportunities.

This guide is designed to lead you through the installation of the eCommerce Storefront product. These instructions assume that you are a system administrator with expertise installing an Enterprise Application Archive (EAR file) to a Web application server and that you are a trained WebSphere Application Server and Microsoft SQL Server administrator. If you have no experience in administering any of these systems, please contact your Infor representative to obtain appropriate assistance.

## Typographical Conventions

In this guide, we use the following conventions:

**Bold** type represents onscreen items where you are required to select a specific tab, function, or option. For example:

Click the **Build Report** tab.

*Courier* font indicates text to be typed exactly as shown. For example:

Run the following script: `upg550.sql`.

*Italic* type indicates emphasis or variables. For example:

To restrict the row to the product category, `type 1100, [CATEGORY]`

In the above example, *CATEGORY* is a variable.

Cascaded menu items are separated by commas. For example:

Choose **File, Save**.

## Contacting Infor

### Mailing Address

Infor

1351 South County Trail

Suite 300  
East Greenwich, RI 02818

**Phone**

Infor Support 1-877-772-4111

**Web Site**

<http://www.infor.com>

## Contacting Infor Support

We provide 24x7, easy-to-use online access to a variety of support services. We encourage you to enter incidents online—a very efficient method that enables our analysts to quickly begin analyzing your issue and researching the resolution. In addition to logging a new incident through online support, you can access other services and capabilities, including:

- Ability to view and update your support incident history and status
- Product knowledge base
- Frequently asked questions (and responses)
- The latest product information about new releases
- Ability to download product upgrades and documentation
- Ability to submit feedback on Infor products and services

You also can contact the support center by placing a call during our scheduled business hours. Infor's support center business hours are generally Monday through Friday, 8:00 a.m. to 5:00 p.m., excluding holidays observed by Infor. Note that extended hours for critical incidents are offered for many of our products. For a complete listing of our support centers with Web addresses and phone numbers, go to <http://www.infor.com/infor/CustomerSupport.htm>.

## Outside of Scope

It is our policy to provide the best commercial effort to support you with all incidents, but product support analysts will spend only 15 minutes on any incident that is outside the scope of Infor Global Support's responsibilities. This applies to the following areas:

- System Setup—Any incident logged that relates to a new implementation system setup or business flow process, or the configuration or installation of new products.
- Application Performance Tuning—Assistance in analyzing, testing, or improving the performance of the Infor solution.
- Modified Objects (Custom Software)—Support provides analysis of Infor's standard code set; however, it does not include analyzing the

code of module customizations. Some of the Infor solutions offer “Customization Maintenance” through Infor PSO. Any incident logged that relates to non-standard versions of the software will be transferred to PSO if it is covered by a separate agreement for modified objects. Incidents that are not covered by a separate agreement may be undertaken by PSO on a time-and-materials basis with e-mail message approval from the customer.

- **Hardware/Operating System**—Any incident regarding assistance with the hardware configuration, operating-system tuning, or database administration tasks.
- **Data Correction**—Incidents related to data corrections or corruptions that are not directly related to the malfunction of Infor licensed products.
- **Training**—Training and education are provided through Infor PSO. If you are unsure whether your issue is a support incident or whether it requires consulting or training services, follow the incident submission process with Infor Global Support. A support analyst will work with you to determine the best plan of action.

## Planning Your Communication

In order for Infor Global Support to resolve your incident in the most time-effective manner, please review the list of pertinent information below and have this information available when you log your incident via the Web or when you place a call. Doing so will help ensure timely response.

- Your Infor customer number (or serial number) and contact details (name, e-mail address, and contact number).
- Product name and version number of the software installed that is in question.
- Details of the incident (e.g., error messages and how to reproduce the error). If you are logging via the Internet, please include screen shots and output examples.
- Description of the problem's frequency and predictability (e.g., intermittently, each time function is used, etc.)
- Description of the problem's impact (e.g., Does it impact all users? Does it occur on all PCs/workstations/root/supervisor?).
- Confirmation of your hardware configuration, operating system, RDBMS (e.g., SQL, Oracle<sup>®</sup>, etc.), middleware, or other integration software.

## Signing Up for Support

If you are not currently on support and would like more information on your support options, please call your Customer Account Representative. If you are not sure who your Account Representative is, contact Infor Customer Service.



# Planning Your Installation

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This section outlines the hardware and software requirements for eCommerce Storefront and describes some of the available deployment options for the application. You must have all of the hardware and software listed in this chapter before you begin your installation. Infor recommends reviewing the deployment guidelines and then consulting with your Infor Professional Services representative to determine the best deployment scenario for your business.

eCommerce Storefront requires a Web application server and provides a browser-based administrator user-interface component. You should perform your installation locally on the server; Infor does not recommend a remote installation.

## Hardware and Software Requirements

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**Note:** The requirements listed in this section are the combined requirements for the eCommerce Catalog and eCommerce Storefront products.

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### Hardware

- At minimum, a two server configuration deployment with at least
  - a single processor per server
  - 4 GB of RAM per server
  - 100G of disk space per server
  - 3.0 GHZ

For best results, Infor recommends using Intel® Xeon® Dual-Core Processors which will provide dual processor performance without the additional licensing cost for two processors.

- A TCP/IP network connection for at least 100 Mbps.
- A T1 Internet connection.

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**Note:** Requirements will vary based on data and activity. To get dual processor power from a single processor, Intel Xeon processors with Hyper-threading capability are recommended. These configuration requirements include having the eCommerce Catalog web application installed as well.

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## Software

- Microsoft® Windows 2000 or 2003 Server (Standard or Advanced/Enterprise Edition, 32 bit)
- IBM® WebSphere® Application Server, either version
  - 6.0 for Windows OS with the latest service pack
  - 6.0 for Windows OS with the latest service pack (WAS Express)
  - 6.1 for Windows OS with the latest service pack
  - 6.1 for Windows OS with the latest service pack (WAS Express)
- Microsoft SQL Server™ 2000 Standard Edition with a processor license and Service Pack 4 or Microsoft SQL Server 2005 Standard Edition with a processor license and Service Pack 2
- Microsoft SQL Server 2000 Driver for JDBC Service Pack 4 or Microsoft SQL Server 2005 Driver for JDBC Service Pack 2
- Microsoft Internet Explorer Version 6.0
- eCommerce Catalog/eCommerce Storefront compatible releases. The point release number for eCommerce Catalog must be the same as the point release number for eCommerce Storefront. For example, Version 2.3 of eCommerce Catalog requires Version 1.3 of eCommerce Storefront.
- IIS 6.0 for Windows Server 2003 or IIS 5.0 for Windows Server 2000 and the IIS plug-in for your version of WebSphere Application Server. This requirement is optional, but recommended for load balancing and ISAPI redirection.
- FACTS Version 7.5.4 or later
- Integration Layer CD

## Deployment Guidelines

The Infor eCommerce Storefront and eCommerce Catalog solution is designed to meet a number of customer needs ranging from catalog presentation to robust online ordering to customer self service. The product suite has tremendous scalability potential to meet your diverse requirements.

This section provides a non-technical overview of the architecture options for the Storefront/Catalog product deployment. This content is provided as information only to assist in the deployment planning for an organization about to deploy eCommerce Storefront. This section describes various deployment scenarios based on options available to the host of the site. This section is not intended to be a comprehensive guide and does not include all possible options, instead a high level overview of common deployment configurations based on the host sites landscape and goals are provided. Please consult with Professional Services for specific information about your deployment.

## Web Usage Profiles

To help determine your deployment needs, it is useful to understand the diverse range of implementations that are used within the industry for this product suite. The following profiles represent certain known usage profiles among sample customers. The purpose of identifying these scenarios is to aid in the configuration for deployments by understanding the hardware, database, and application server considerations necessary for the different configurations. This information is for reference only and intended to be used to initiate conversation about deployment considerations. When further benchmarking is available, this information can augment benchmarking results to further clarify configuration options.

The table below outlines several of the available deployment scenarios and the stressors to consider for each deployment:

Deployment Scenario	Description	Stressors
Catalog Browse only	Typically a B2C deployment using the anonymous login. No customer service transactions and no online ordering. Pricing is limited to Web price.	<ul style="list-style-type: none"> <li>■ Login</li> <li>■ Local SQL access</li> <li>■ Potentially high concurrent users</li> </ul>
B2B Ordering	Common distributor scenario. B2B deployment where each account is assigned to an ERP customer and pricing is important for all items. Scenario involves log in, catalog browsing, add to cart, use of shopping lists, order history inquiries, etc. Login duration is short to moderate.	<ul style="list-style-type: none"> <li>■ High ERP transactional load and/or volume through communication layer</li> <li>■ Moderate SQL usage</li> </ul>

Deployment Scenario	Description	Stressors
Mixed Model: B2B Ordering & Catalog Browse	Combination of two previous scenarios. Site includes a B2C deployment for anonymous catalog browse and a credentialed log in for B2B.	Combination of Catalog Browse Only and B2B Ordering stressors
Dealer Support Application	This is a B2B scenario where dealers log in and get their pricing and account management options. What makes this different from B2B ordering is the duration of the sign on and sometimes the size of the orders. Session timeouts are often set for hours, up to 8 hours in some cases. Dealers use the Web application as an extension of the ERP system and perform item lookups, place orders, and so on throughout the day.	<ul style="list-style-type: none"> <li>■ State is maintained for hours.</li> <li>■ Orders may be very large, hundreds of line items.</li> <li>■ Very high concurrent user counts because no one logs off or times out.</li> </ul>

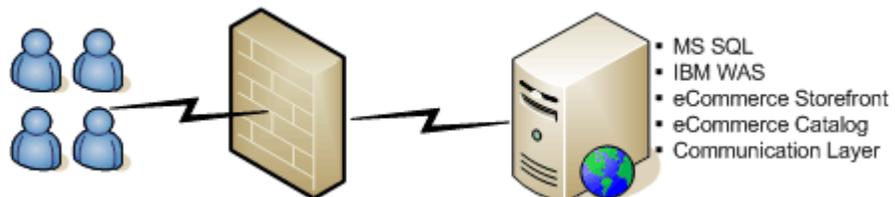
## Deployment Options

This section describes some of the deployment options available when implementing eCommerce Storefront and eCommerce Catalog. Infor recommends that you consult with your Professional Services representative to determine the best deployment strategy for your eCommerce business needs.

### Single Server Deployment (Minimum Configuration)

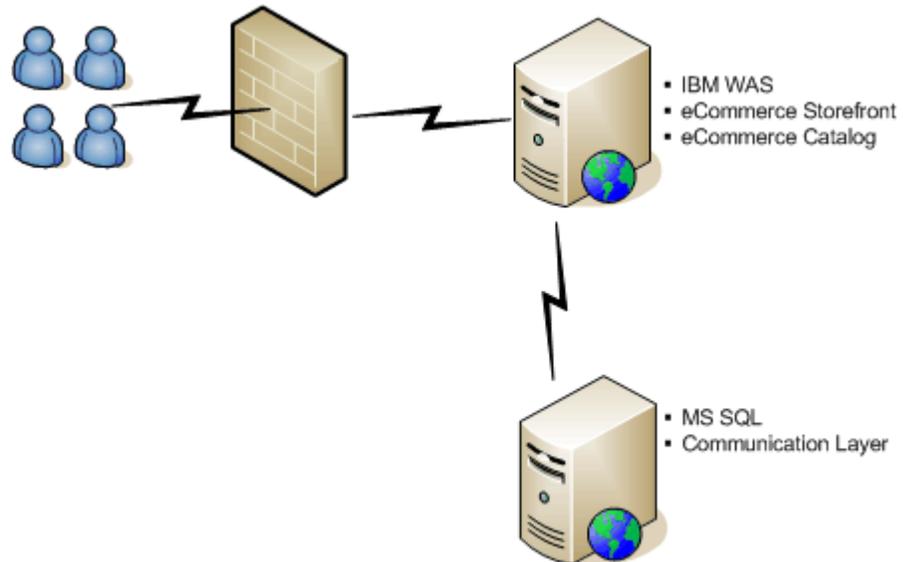
This configuration provides for basic functionality of eCommerce Storefront and eCommerce Catalog applications residing on one server. The machine must have enough memory, disk, and CPU capacity to run the 32-bit Operating System, MS SQL, WebSphere Application Server, the java applications (including eCommerce Storefront and eCommerce Catalog), and the communication tier. This guide provides instructions for the minimum configuration.

This configuration is limited in its ability to scale up to high volumes of concurrent active users. This environment can be used for testing, piloting, or a finite number of users that won't exceed the system capacity. You can optimize this configuration with multiple CPUs and Windows Server Enterprise Edition which can access greater amounts of memory for the requisite components.



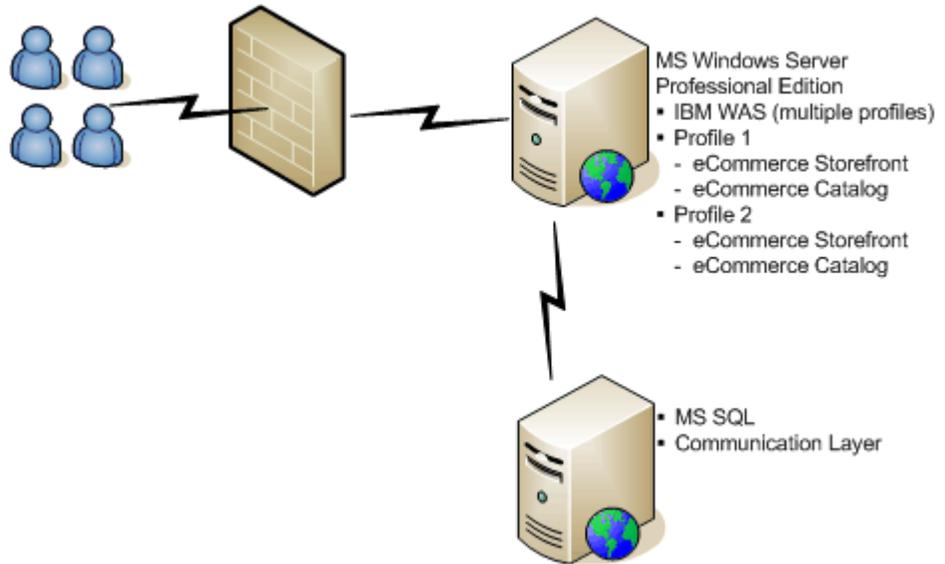
## Distributed Deployment

This configuration provides greater flexibility than the minimum configuration by splitting the database server and the communications layer away from the Web application server. This allows system resources to be more or less dedicated to the tasks at hand: either serving up Web pages and java applications or acting as a database server. This is a common deployment configuration and helps alleviate peak stresses.



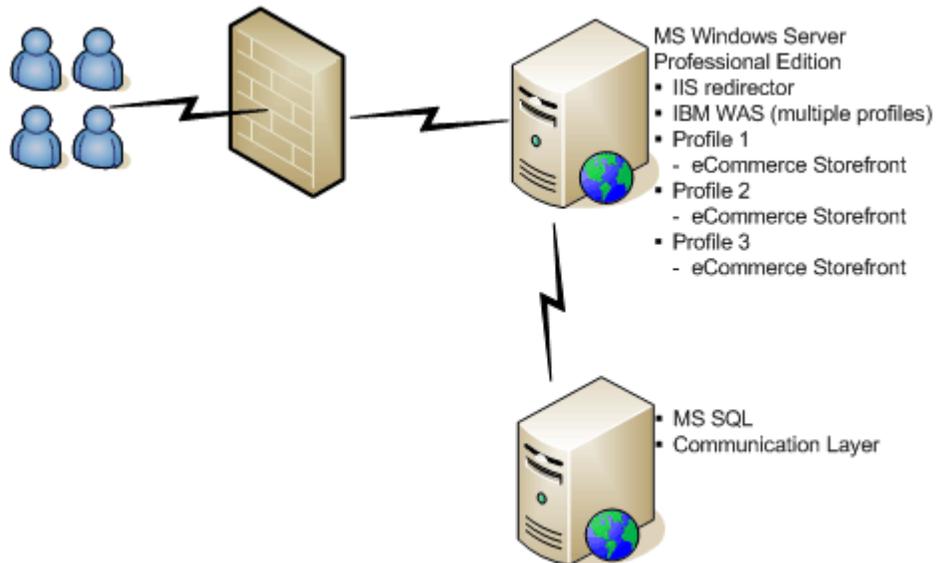
## Distributed Deployment with Multiple Profiles

This deployment is essentially the same architecture as the distributed deployment; however, it uses Windows Server Enterprise Edition which allows for greater memory access on the 32-bit Operating System. In these deployments, more than 4 gigabytes of memory is installed and multiple profiles of WebSphere are configured to allow multiple virtual sites to serve up the pages. No additional WebSphere licensing is required to have multiple profiles configured, as long as they are on the same server hardware. This configuration is useful if the host is maintaining multiple branded or identity sites as each profile may have different cascading style sheets.



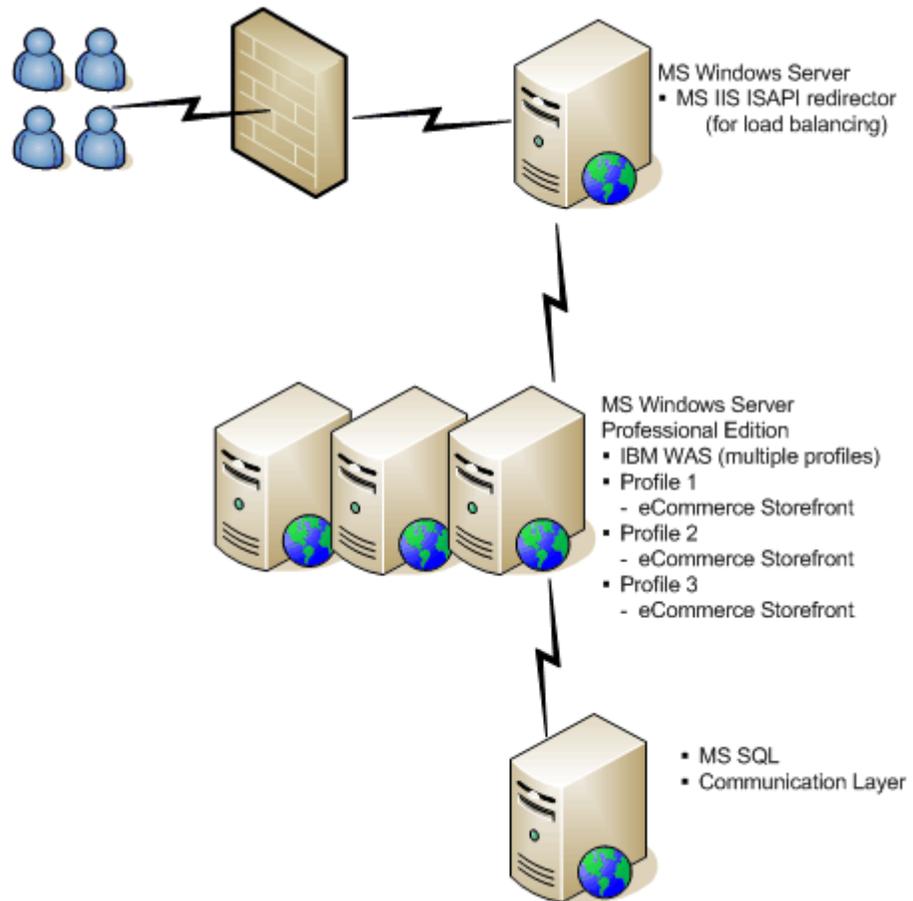
### Distributed Deployment with Multiple Profiles and Load Balancing

This deployment is a variation of the previous one with the addition of Microsoft's ISAPI plug-in for load balancing across multiple profiles. In this scenario, multiple WebSphere profiles are created with the same code and personalization changes. Each profile is configured with its own memory space up to the 1.8 gigabyte limit. The intent is to distribute concurrent active users at log in over several profiles, typically in a round robin fashion, to maximize performance and throughput.



## Distributed Deployment with Multiple Servers and Load Balancing

This configuration provides even greater scalability by using multiple servers, optionally using multiple WebSphere profiles, to handle very large concurrent user counts or spikes. In this configuration, one machine is designated for load balancing. It may be configured to work against multiple servers, each with multiple profiles, if desired, to provide tremendous scalability. WebSphere must be licensed for each CPU in this configuration. This type of high volume configuration may require additional resources for database access such as a SAN or storage area network and scaled communications software for back end integration.



## Installation Checklist Summary

This section provides an outline of your installation tasks. Each of the tasks listed in the checklist is explained in detail in the following chapters. Use this section as a guide to your installation. All of the installation tasks are listed in the order that they must be performed.

---

**Note:** You must install and configure all of the required hardware and software before you begin the eCommerce Storefront installation.

---

- Set up the sfadmin database on the Microsoft SQL Server Database Server. See *Creating and Updating the Storefront Database* on page 19.
- Set up the JDBC provider and data source. See *Setting up the JDBC Providers and Data Sources* on page 23.
- Deploy the application and precompile the JSPs. See *Deploying/Updating the Application Code* on page 29.

## What's Next

Creating the eCommerce Storefront database on the Microsoft SQL Server Database Server. Refer to *Creating and Updating the Storefront Database* on page 19.

# Creating and Updating the Storefront Database

---

This section explains how to set up the eCommerce Storefront database on the Microsoft SQL Server.

## Before You Begin

- Install and verify Microsoft SQL Server with SQL and Windows authentication.
- Install and verify your eCommerce Catalog installation.
- Have the eCommerce Storefront installation CD available.
- Back up your current SQL database if you have a version of eCommerce Storefront installed.

## Creating the Database

This section explains how to create the eCommerce Storefront database (referred to in this document as `sfadmin`) on the Microsoft SQL Server using scripts provided on the installation CD.

---

**Warning:** Before you proceed with these instructions, be sure you know which version of eCommerce Storefront you have installed and the version that you are installing/upgrading to.

Follow these steps carefully and be sure to skip steps that do not apply to your configuration. For example, if this is your first installation of eCommerce Storefront you will likely complete section *Create the Database* and *Apply the Version Changes to the Database* on page 20. If you already have a version of eCommerce Storefront installed, for example, Version 1.0, and you are upgrading to Version 1.3, you would proceed to *Apply Selective Version Release Changes to the Database* on page 20.

It is critical that you run only those scripts required for your installation/upgrade. Running a script that you do not need to

run, (for example, running the `sfadmin_vall.sql` script in *Apply the Version Changes to the Database* on page 20 when you already have a version release installed), can corrupt the data in your database.

---

## Create the Database

- 1 In SQL Enterprise Manager, right-click the Databases folder for the server and select **New Database**.
- 2 On the **General** tab, in the **Name** field type the name of the database, for example `sfadmin`.
- 3 On the **Data Files** tab, specify the directory path for the database. This step is optional. You can accept the default location.
- 4 On the **Transaction Log** tab, specify the directory path for the database transaction log. This step is optional. You can accept the default location.
- 5 Click **OK**.

## Apply the Version Changes to the Database

This step applies all of the version changes to the database to the current version release. If you are only applying certain, but not all, of the version releases, please follow the directions in *Add eCommerce Storefront Transactions to the CMS Database* on page 21.

- 1 Open the Microsoft SQL Server Query Analyzer.
- 2 Using Explorer, browse to the `sfadmin_vall.sql` file in the SQL Scripts folder on your installation CD.
- 3 Open the `sfadmin_vall.sql` file with Notepad.
- 4 Copy the contents of the file into the Query Analyzer.
- 5 Verify that `sfadmin` (or your custom database name) is selected in the drop-down list.
- 6 Run the script.

## Apply Selective Version Release Changes to the Database

If you are upgrading an existing database and only need to apply certain version release updates, first determine what range of updates you will need. Then apply each of the scripts to the database. If a data script exists, it must be run immediately after the associated version release script.

Please note that not all version releases of the eCommerce Storefront project will have a corresponding update to the `sfadmin` database.

- 1 Open the Microsoft SQL Server Query Analyzer.

- 2 Using Explorer, browse to the SQL Scripts folder on your installation CD.
- 3 Open the appropriate files with Notepad.
- 4 Copy the contents of each file into the Query Analyzer. You can copy all of them into one Query Analyzer window making sure that the later changes go underneath the previous ones, or run them one at a time.
- 5 Verify that `sfadmin` (or your customer database name) is selected in the drop-down list.
- 6 Run the script.
- 7 Repeat these steps for version release-specific, platform-specific data script, running them in order from earliest to most recent being careful to run the data script immediately following the version release script.

## Add eCommerce Storefront Transactions to the CMS Database

If you installed eCommerce Catalog before installing eCommerce Storefront and you ran all of the scripts, including the eCommerce Storefront transaction scripts, as part of that product's installation, skip this step and continue with *Set up the Database Security* on page 21.

If you are installing the eCommerce products in a different order or if you skipped those scripts in the other installation, complete this step. Refer to *Adding Storefront Transactions to the CMS Database* on page 47 for instructions.

## Set up the Database Security

- 1 To verify the server security properties, in SQL Enterprise Manager, right-click the server and select **Properties**.
- 2 Select the **Security** tab and verify that **SQL Server and Windows** is selected in the **Authentication** field.
- 3 To configure the cms user as the administrator and owner of the eCommerce Storefront database, in SQL Enterprise Manager, expand the **Security** folder, right-click **Logins**, and select **New Login**.
- 4 On the **General** tab, in the **Name** field, type `cms`, select **SQL Server Authentication**, and type a password for the user.
- 5 On the **Server Roles** tab, select **System Administrators**.
- 6 On the **Database Access** tab, select your database and then, in the **Permit in Database Role** section, select `db_owner`.
- 7 Click **OK**.

At this point your database setup and configuration in SQL Server is complete; however, Infor recommends that you create and implement a backup plan for your eCommerce databases (Catalog and Storefront).

We also recommends that you create a scheduled job in SQL to truncate the transaction log file for your databases. Use the following script as an example when creating your job:

```
BACKUP LOG [databasename] WITH TRUNCATE_ONLY
GO
DBCC SHRINKFILE ('[databasename].log')
GO
BACKUP LOG [databasename] WITH TRUNCATE_ONLY
GO
DBCC SHRINKFILE ('[databasename]_log')
GO
```

## What's Next

Setting up the JDBC provider and data source. Refer to *Setting up the JDBC Providers and Data Sources* on page 23.

# Setting up the JDBC Providers and Data Sources

---

In this section you set up and configure the JDBC provider and data source for WebSphere.

## Before You Begin

- Install and verify WebSphere or WebSphere Express. If you are planning to use SSL, also install the IIS Plug-In for WebSphere.
- Make sure that the IBM WebSphere Application Server V6.0 or V6.1 service is started.
- If you are deploying with multiple profiles, use the WAS Profile Creation Wizard to create your additional profiles. By default, profiles are numbered sequentially (1, 2, 3, etc.), though you may choose to name your profiles. The first profile uses port 9060 for the admin console, 9080 for the application deployment, and 9443 for SSL. Port numbers for profiles are also incremented by one. For example, the second profile uses port 9061, 9081, and 9444. If you are considering a multiple profile configuration, Infor recommends reviewing the deployment options in *Deployment Guidelines* on page 12 and discussing your business needs with an Infor Professional Services representative.
- Install Microsoft SQL Server 2000 Driver for JDBC Service Pack 4 or the Microsoft SQL Server 2005 Driver for JDBC Service Pack 2.
- You must have created and configured your eCommerce Catalog database. Refer to the eCommerce Catalog Installation and Setup Guide for instructions.
- You must have set up the eCommerce Storefront database on the Microsoft SQL Server. For instructions, refer to *Creating and Updating the Storefront Database* on page 19.

# Setting up the JDBC Provider and Data Source

## Access the WebSphere Administrative Console

- 1 Open the WebSphere Administrative Console in your browser, using the following URL:  

```
http://localhost:[profileportnumber]/ibm/console/
```
- 2 On the WebSphere Administrative Console login page, type your login information and click **OK**. The WebSphere Administrative Console home page appears.

## Create a New J2C Authentication Data Entry

In this section, you create a New J2C Authentication Data Entry for the JDBC Data Source.

---

**Note:** If you have installed eCommerce Catalog, this data entry already exists and you can skip this step.

---

- 1 On the WebSphere Administrative Console home page, in the navigation tree on the left, for WebSphere version 6.0, click **Security, Global Security**. For WebSphere version 6.1, click **Security, Secure administration, applications, and infrastructure**.
- 2 In the **Authentication** section, for WebSphere version 6.0, click **JAAS Configuration, J2C Authentication data**. For WebSphere version 6.1, click **Java Authentication and Authorization Service Configuration, J2C Authentication data**.
- 3 Click **New**.
- 4 In the **General Properties** section, in the
  - **Alias** field, type `SQL User`.
  - **User Id** field, type the user ID of the admin user for the eCommerce Storefront database (typically, `cms`).
  - **Password** type the password for above user.
- 5 Click **OK** to create the entry.
- 6 Click **Save** to save the configuration changes to the master repository.

## Create the JDBC provider for MSSQL

You must create a new JDBC provider for MS SQL in WebSphere. In this section you set the provider scope, create the new provider, and configure it. Refer to the section for your version of WebSphere.

---

**Note:** If you have installed eCommerce Catalog, this data entry already exists. Select it from the list and verify that the settings match those described in step 4 and then continue with step 8 in the section for your version of WebSphere.

---

## Using WebSphere Version 6.0

- 1 In the navigation tree, click **Resources, JDBC Providers**.
- 2 Set the JDBC provider scope to **Server** and then click **Apply**.
- 3 Click **New** to add a JDBC provider.
- 4 In the JDBC Provider Configuration form, select the following:
  - **SQL Server** for the database type
  - **WebSphere Embedded ConnectJDBC driver for MS SQL Server** from the list of provider types
  - **Connection pool data source** for the implementation type
- 5 Click **Next**.
- 6 Accept the defaults.
- 7 Click **OK** to create the JDBC provider. The new provider should appear in the JDBC Providers list.
- 8 Click the **WebSphere embedded ConnectJDBC driver for MS SQL Server** provider you just created.
- 9 Click the **Data Sources** link.
- 10 Click **New**.
- 11 For the new data source, set the following:
  - **Name** to `sfadmin DataSource`.
  - **JNDI Name** to `jdbc/sfadmin`.

---

**Note:** In the **Name** and **JNDI Name** fields, you must type `sfadmin`; do *not* replace `sfadmin` with your database name.

---

- Clear the **Use this datasource in container managed persistence** field.
  - **Description** to `eCommerce Storefront SQL data source`.
  - In the **Component-managed Authentication Alias** and the **Container-managed Authentication Alias** fields, select the SQL database user.
  - **Database Name** to `[StorefrontDatabaseName]`.
  - **Server Name** to the SQL server where the eCommerce Storefront database resides.
  - **Port Number** to 1433, the default, unless you need to change it.
- 12 Click **OK**. The new data source appears in the Data Source list.

## Using WebSphere Version 6.1

- 1 In the navigation tree, click **Resources**.
- 2 Expand the **JDBC** menu.
- 3 Click **JDBC Providers**.
- 4 On the Create new JDBC provider page, in the
  - **Database type** field select **SQL Server**.
  - **Provider type** field select **WebSphere Embedded ConnectJDBC driver for MSSQL Server**.
  - **Implementation Type** field select **Implementation type Connection Pool Data Source**.
  - **Name defaults** field select **WebSphere embedded ConnectJDBC driver for MS SQL Server**.

The **Description** field defaults to **IBM WebSphere Connect JDBC driver for MS SQL Server**. Leave the default.
- 5 Click **Next**. A summary page displays the new MSSQL Server JDBC.
- 6 Click **Finish**.
- 7 Click **Save**. You are returned to the JDBC provider page. The WebSphere embedded ConnectJDBC driver for MSSQL appears in the list.
- 8 Click the **WebSphere Embedded ConnectJDBC driver for MS SQL Server (nonXA)** provider in the list.
- 9 In the **Additional Properties** section, click **Data Sources**.
- 10 Click **New**.
- 11 In the Create a data source (step 1) section, in the
  - **Data source name** field type `sfadmin Datasource`.
  - **JNDI name** field type `jdbc/sfadmin`.
  - **Component-managed authentication alias and XA recovery authentication alias** field select the SQL user.
- 12 Click **Next**.
- 13 In the Create a data source (step 2) section
  - In the **Database name** field type `[StorefrontDatabaseName]`.
  - In the **Server name** field type the name of the SQL server.
  - Leave the **Use this data source in container managed persistence** selected.
  - In the **Port Number** field, leave 1433, the default, unless you need to change it.
- 14 Click **Next**.
- 15 On the summary page, click **Finish**.
- 16 Click **Save**.

## Set Up Environment-Specific Data Sources

In this section you create and configure the environment-specific data sources for the WebSphere Embedded ConnectJDBC driver for MS SQL Server provider.

### Using WebSphere 6.0

- 1 On the same window, click **New**.
- 2 For the new data source, set the following:
  - **Name** to `cms Environment xx` where `xx` is the environment ID.

---

**Note:** The environment ID must be entered in lower-case.

---

- **JNDI Name** to `jdbc/cmsxx`.
  - **Description** to `cms environment xx data source`.
  - Clear the **Use this datasource in container managed persistence** field.
  - In the **Component-managed Authentication Alias** and the **Container-managed Authentication Alias** fields, select the SQL database user.
  - **Database Name** to `[CatalogDatabaseName]`.
  - **Server Name** to the SQL server where the eCommerce Catalog database resides.
  - **Port Number** to 1433, the default, unless you need to change it.
- 3 Click **OK**. The new data source appears in the Data Source list.
  - 4 Click **Save**.
  - 5 Repeat this step for each back end environment that you will be using with eCommerce Storefront.
  - 6 When all your data sources are set up, test your connections by clicking the select all icon and then clicking **Test Connections**. The results of the test are listed at the top of the page.

### Using WebSphere 6.1

- 1 On the same window, click **New**.
- 2 In the Create a data source (step 1) section, set the following
  - **Name** to `cms Environment xx` where `xx` is the environment ID.

---

**Note:** The environment ID must be entered in lower-case.

---

- **JNDI Name** to `jdbc/cmsxx`.
- **Description** to `cms environment xx data source`.

- In the **Component-managed Authentication Alias** and the **Container-managed Authentication Alias** fields, select the SQL database user.
- 3 Click **Next**.
  - 4 In the Create a data source (step 2) section, set the following:
    - **Database Name** to `[CatalogDatabaseName]`.
    - **Server Name** to the SQL server where the eCommerce Catalog database resides.
    - Clear the **Use this datasource in container managed persistence** field.
    - **Port Number** to 1433, the default, unless you need to change it.
  - 5 Click **Finish**. The new data source appears in the Data Source list.
  - 6 Click **Save**.
  - 7 Repeat this step for each back end environment that you will be using with eCommerce Storefront.
  - 8 When all your data sources are set up, test your connections by clicking the select all icon and then clicking **Test Connections**. The results of the test are listed at the top of the page.

## What's Next

Deploying the application. Refer to *Deploying/Updating the Application Code* on page 29.

# Deploying/Updating the Application Code

---

This section explains how to deploy and update the eCommerce Storefront application (storefrontEAR.ear).

## Before You Begin

- You must have set up the eCommerce Storefront database on the Microsoft SQL Server 2000 Database Server. For instructions, refer to *Creating and Updating the Storefront Database* on page 19.
- You must have set up the JDBC provider and data source. Refer to *Setting up the JDBC Providers and Data Sources* on page 23.
- You must have the eCommerce Storefront installation CD.

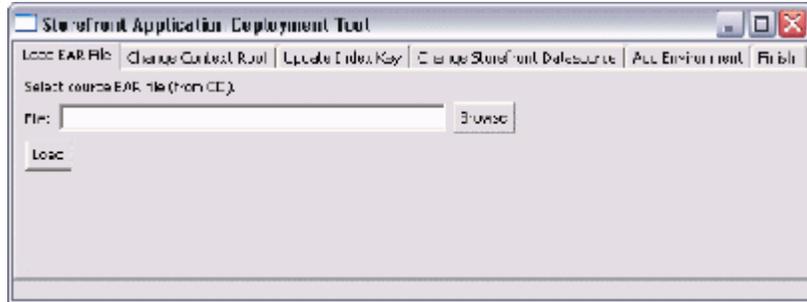
## Deploying/Updating the Application Code

### Remove Read-only Property from storefrontEAR.ear

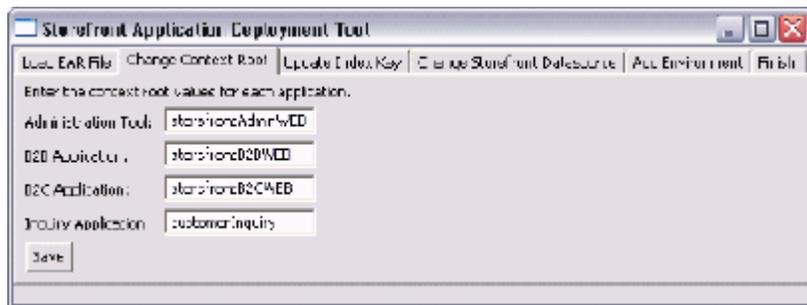
- 1 Copy the storefrontEAR.ear file from the eCommerce Storefront installation CD to [D]:\Program Files\IBM\WebSphere\AppServer\profiles\[profilename]\installableApps\storefrontEAR.ear, where D is the letter of the drive on which the WebSphere application is installed.
- 2 Using Windows Explorer, right-click the storefrontEAR.ear file, and select **Properties**.
- 3 Clear the **Read-only** check box and click **OK**.

### Run the Deployer Tool

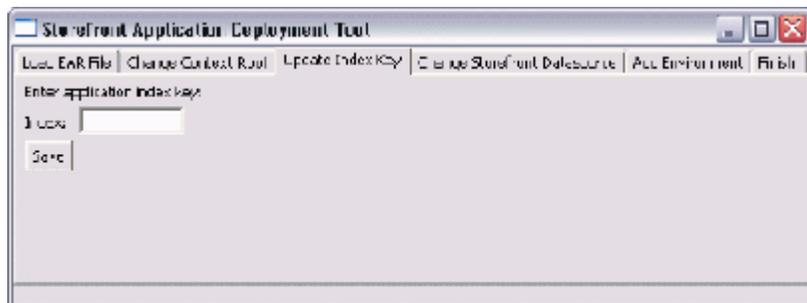
- 1 From the eCommerce Storefront installation CD, browse to the Deployer folder and unzip Deployer.zip to the root of C:\.
- 2 In the Deployer directory, run the deployer.bat file. The Storefront Application Deployment Tool Window appears.



- 3 Click **Browse** to select the location of the storefrontEAR.ear file. When the location is shown in the **File** field, click **Load**.
- 4 When the load of the file is complete, a confirmation message appears. Click **OK** to acknowledge the message.
- 5 Click the **Change Context Root** tab.



- 6 If this is a deployment a single instance of the eCommerce Storefront in a single WebSphere profile, you can leave the default context root or type a new context root. If you are deploying more than one instance of eCommerce Storefront in the same profile, you must provide a different context root for each deployment.
- 7 Click **Save**. A confirmation message appears.
- 8 Click **OK** to acknowledge the message.
- 9 Click the **Update Index Key** tab.



- 10 Type the index key for this deployment. If you are deploying more than one instance of eCommerce Storefront, you must provide a different index key for each deployment, for example, your first instance index key might be 01 and your second instance 02.

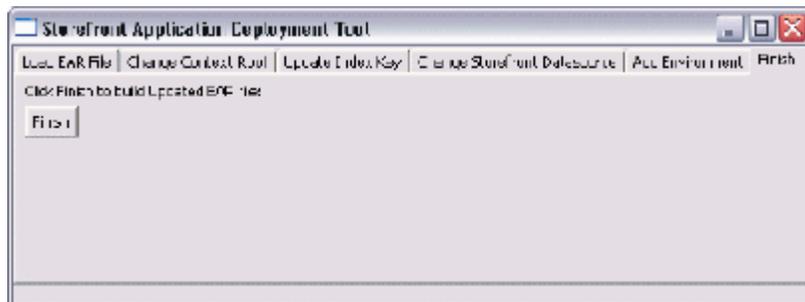
- 11 Click **Save**. A confirmation message appears.
- 12 Click **OK** to acknowledge the message.
- 13 Click the **Change Storefront Datasource** tab.



- 14 Type `sffadmin` and click **Save**. A confirmation message appears.
- 15 Click **OK** to acknowledge the message.
- 16 Click the **Add Environment** tab.



- 17 Type the environment ID in lower case and click **Add**. A confirmation message appears.
- 18 Click **OK** to acknowledge the message.
- 19 Click the **Finish** tab.



- 20 Click **Finish** to complete the deployment. A deployable ear file will be created in `C:/Deployer/temp/deployableEAR/`.
- 21 Infor recommends copying the deployable ear file from `C:/Deployer/temp/deployableEAR/` to `[D]:/Program Files/IBM/WebSphere/AppServer/profiles/[profilename]/`

installableApps/ and that you deploy the application from that directory.

## Install/Update the eCommerce Storefront Application

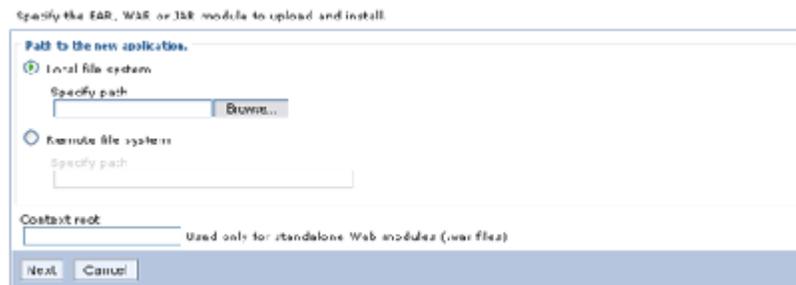
Follow the instructions for the version of WebSphere you have installed.

### Using WebSphere Version 6.0

- 1 Log in to the WebSphere Administrative Console.
- 2 If you are *installing the application for the first time*, click **Applications, Install New Application**. The Preparing for application installation page appears. Go to step 3.

If you are *updating the application*, click **Applications, Enterprise Applications**. The Enterprise Applications page appears, displaying a list of your installed applications. Select the Storefront application and click **Uninstall** at the top of the page. Click **OK** to remove the application. Click **Save the Changes to the Master Configuration**. Select **Applications, Install New Application**.

- 3 In the **Path** field, select the **Local path** and click **Browse** to go to [D]: / Program Files/IBM/WebSphere/AppServer/profiles/[profilename]/installableApps/ and select the deployable storefrontEAR.ear file:



- 4 Click **Next**.
- 5 On the Generate Default Bindings form, select the **Generate Default Bindings** field and leave the default selections in the other fields. You will use the bindings and mappings provided in the EAR file.
- 6 Click **Next**.
- 7 Below the Step 1 form, 8 steps are listed for the storefrontEAR.ear file. Some steps may have red stars. You must correct those steps. To correct the errors, provide the JNDI name for any blank **JNDI Name** fields in the **JNDI Name** column by copying the contents in the corresponding **Reference Binding** field and pasting it in the **JNDI Name** field. When all fields have been filled, click **Next**.

---

**Note:** If you are deploying multiple instances of eCommerce Storefront in a single WAS profile, on the Step 1 form, in the **Application Name** field provide a unique name for each instance.

---

- 8 If there are no red stars, click **Next** until the final step; you do not need to address the warnings. In the Step 8 form, click **Finish** to install the storefrontEAR application.
- 9 On the Installing storefrontEAR page, wait until you get the **Application storefrontEAR installed successfully** message.
- 10 Once the application has installed successfully, click **Save to Master Configuration** to save the configuration changes to the master repository.

### Using WebSphere 6.1

- 1 Log in to the WebSphere Administrative Console.
- 2 If you are *installing the application for the first time*, click **Applications, Install New Application**. The Preparing for application installation page appears. Go to step 3.

If you are *updating the application*, click **Applications, Enterprise Applications**. The Enterprise Applications page appears, displaying a list of your installed applications. Select the Storefront application and click **Uninstall** at the top of the page. Click **OK** to remove the application. Click **Save the Changes to the Master Configuration**. Select **Applications, Install New Application**.

- 3 In the **Path to the new application** field, select the **Local file system** and click **Browse** to go to [D]:/Program Files/IBM/WebSphere/AppServer/profiles/[*profilename*]/installableApps/ and select the deployable storefrontEAR.ear file.
- 4 Select the **Show me all installation options and parameters** field.
- 5 Click **Next**.
- 6 On the Generate Default Bindings form, select the **Generate Default Bindings** field and leave the default selections in the other fields. You will use the bindings and mappings provided in the EAR file.
- 7 Click **Next**.
- 8 Below the Step 1 form, 13 steps are listed for the storefrontEAR.ear file. Some steps may have red stars. You must correct those steps. To correct the errors, provide the JNDI name for any blank **JNDI Name** fields in the **JNDI Name** column by copying the contents in the corresponding **Reference Binding** field and pasting it in the **JNDI Name** field. When all fields have been filled, click **Next**.

---

**Note:** If you are deploying multiple instances of eCommerce Storefront in a single WAS profile, on the Step 1 form, in the

**Application Name** field provide a unique name for each instance.

---

- 9 If there are no red stars, click **Next** until the final step; you do not need to address the warnings. In the Step 13 form, click **Finish** to install the storefrontEAR application.
- 10 On the Installing storefrontEAR page, wait until you get the **Application storefrontEAR installed successfully** message.
- 11 Once the application has installed successfully, click **Save to Master Configuration** to save the configuration changes to the master repository.

## Copy Files from the Integration CD

- 1 Browse to the lib folder on the Integration CD and copy all of the files in the lib folder to the following folder: [D]:\Program Files\IBM\Websphere\AppServer\profiles\[*profilename*]\installedApps\[*servernamenodename*]\storefrontEAR.EAR\storefrontAdminWeb.war\WEB-INF\lib
- 2 Browse to the spring folder on the Integration CD and copy all of the files in the spring folder to the following folder: [D]:\Program Files\IBM\Websphere\AppServer\profiles\[*profilename*]\installedApps\[*servernamenodename*]\storefrontEAR.EAR\storefrontAdminWeb.war\WEB-INF\spring

## Edit the run-config.bat File

- 1 Browse to [D]:\Program Files\IBM\Websphere\AppServer\profiles\[*profilename*]\installedApps\[*servernamenodename*]\storefrontEAR.EAR\storefrontAdminWeb.war\WEB-INF\lib
- 2 Open the run-config.bat file with Notepad and make the following changes:
  - If applicable, change the path to the Java Runtime Environment
  - Replace (CTRL-H) [*your server name*] with the server name that Websphere is installed on.
  - Replace (CTRL-H) [*product environment*] with storefrontEAR.ear\storefrontAdminWEB.war
- 3 Save your changes and close the file.

## Create a Shortcut to run-config.bat File

- 1 Browse to [D]:\Program Files\IBM\Websphere\AppServer\profiles\[*profilename*]\installedApps\

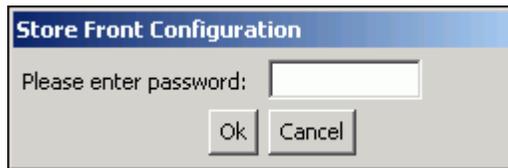
[servernodename]\storefrontEAR.EAR\  
storefrontAdminWeb.war\WEB-INF\lib

- 2 Right-click the run-config.bat file and select **Send to, Desktop (create short cut)**.
- 3 Browse to the desktop and then, rename the shortcut to eStorefront Configuration.

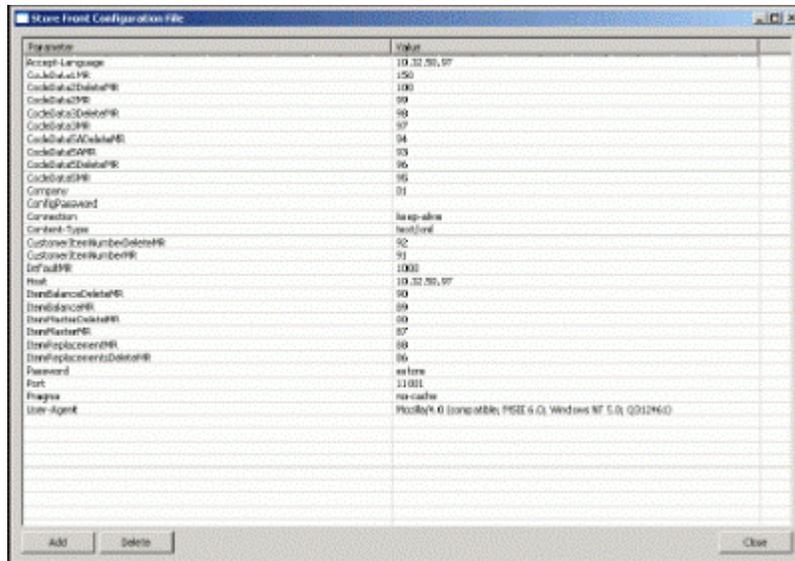
## Setting up the Storefront Configuration File

The Store Front (eCommerce Catalog) configuration file allows you to enter setup information for adding FACTS item information to the eCommerce Catalog Database.

- 1 Double-click the Storefront Configuration shortcut. When you access this program the system displays the password dialog for the Store Front Configuration File program.



- 2 Type your password then click **OK**. The Storefront Configuration File Screen appears.



3 Refer the table below for screen parameters and descriptions.

Parameter Name	Example Value	Description
Host		Where the FACTS API Web Server is running
Port		The Port number on the Host where the FACTS API Web Server is running
Password	*****	To connect to the FACTS API. This will be encrypted/decrypted by the GUI configuration screen.
ConfigPassword	*****	Password for the GUI Configuration Screen. This will be encrypted/decrypted by the GUI configuration screen. This will initially be blank allowing the user to override on first use.
DefaultMR	1000	Default maximum records to be returned. This default will be used if any of the subsequent MR parameters are blank or zero (0).
CarrierCodesDeleteMR	1000	Maximum records to be returned in a batch for the CarrierCodesDeleteResponse
CarrierCodesMR	1000	Maximum records to be returned in a batch for the CarrierCodesResponse
CompaniesDeleteMR	1000	Maximum records to be returned in a batch for the CompaniesDeleteResponse
CompaniesMR	1000	Maximum records to be returned in a batch for the CompaniesResponse
CountriesDeleteMR	1000	Maximum records to be returned in a batch for the CountriesDeleteResponse
CountriesMR	1000	Maximum records to be returned in a batch for the CountriesResponse
GetOrderMR	1000	Maximum records to be returned in a batch for the GetOrderResponse
HoldCodesMR	1000	Maximum records to be returned in a batch for the OpenInvoicesResponse
OpenInvoicesMR	1000	Maximum records to be returned in a batch for the HoldCodesResponse

Parameter Name	Example Value	Description
OpenOrderMR	1000	Maximum records to be returned in a batch for the OpenOrderResponse
OrderHistoryMR	1000	Maximum records to be returned in a batch for the OrderHistoryResponse
PaidInvoicesMR	1000	Maximum records to be returned in a batch for the PaidInvoicesResponse
PaymentCodesDeleteMR	1000	Maximum records to be returned in a batch for the PaymentCodesDeleteResponse
PaymentCodesMR	1000	Maximum records to be returned in a batch for the PaymentCodesResponse
ShipTosMR	1000	Maximum records to be returned in a batch for the ShipTosResponse
ShipTosDeleteMR	1000	Maximum records to be returned in a batch for the ShipTosDeleteResponse
StatesDeleteMR	1000	Maximum records to be returned in a batch for the StatesDeleteResponse
StatesMR	1000	Maximum records to be returned in a batch for the StatesResponse
WarehousesDeleteMR	1000	Maximum records to be returned in a batch for the WarehousesDeleteResponse
WarehousesMR	1000	Maximum records to be returned in a batch for the WarehousesResponse

- 4 Click **Close** to update the file information.

## Create/Update the Shared Libraries

Complete the steps in this section if you are installing eCommerce Storefront for the first time or if you are upgrading from version 1.4 or earlier to the latest version. Skip this section if you are upgrading from version 1.4.1 or later. If this is your first installation, follow the instructions in *To create the shared library* on page 38. If this an upgrade, follow the instructions in *To update the shared library* on page 39.

## To create the shared library

- 1 In the WebSphere Administrative Console, select **Environment, Shared Libraries**.
- 2 On the Shared Libraries page, click **New**.
- 3 On the New Shared Libraries page, in the
  - **Scope** field, make sure the value is `Server : server 1`.
  - **Name** field, type `Storefront`.
  - **Description** field, type `Storefront Shared Library`.
  - **Classpath** field, type the following files, where D is the letter of the drive on which WAS is installed:

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\struts.jar
```

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\
dcFramework.jar
```

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\email.jar
```

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\log4j-1.2.8.jar
```

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\mail.jar
```

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\dom4j-1.5.jar
```

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\itext-1.3.jar
```

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\sfIntegration.jar
```

```
[D]:\Program Files\IBM\WebSphere\AppServer\
profiles\[profilename]\installedApps\
```

```

[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\spring.jar
[D]:\Program Files\IBM\Websphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\
response-batch.jar
[D]:\Program Files\IBM\Websphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\
xbean.jar
[D]:\Program Files\IBM\Websphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\
jsr173_api.jar
[D]:\Program Files\IBM\Websphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\
facts-
integration.jar
[D]:\Program Files\IBM\Websphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\lib\
gatewayAccess.jar
[D]:\Program Files\IBM\Websphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontB2BWEB.war\WEB-INF\lib\sslex.jar
[D]:\Program Files\IBM\Websphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontB2BWeb.war\WEB-INF\lib\lucene-core-1.9.1.jar
[D]:\Program Files\IBM\Websphere\AppServer\
profiles\[profilename]\installedApps\
[servernameodename]\storefrontEAR.ear\
storefrontAdminWeb.war\WEB-INF\spring

```

- 4 Click the **OK** button.
- 5 Click **Save to Master Configuration** to save the configuration changes to the master repository.

### To update the shared library

- 1 In the WebSphere Administrative Console, select **Environment, Shared Libraries**.
- 2 On the Shared Libraries page, click the Storefront library.

- 3 On the Storefront Shared Libraries page, in the **Classpath** field, type the following file, where D is the letter of the drive on which WAS is installed.

**For the 9/19/06 Version of the Integration Layer CD:**

```
[D]:\Program Files\IBM\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernameodename]\  
storefrontEAR.ear\storefrontAdminWeb.war\  
WEB-INF\lib\facts-integration.jar
```

- 4 Click the **OK** button.

## Add the Storefront Library to the Application

Follow the instructions for the version of WebSphere you have installed.

### Using WebSphere 6.0

- 1 In the WebSphere Administrative Console, select **Applications, Enterprise Applications**.
- 2 On the Enterprise Applications page, select the Storefront application.
- 3 In the Additional Properties section, select **Libraries**.
- 4 On the Library Ref page, click **Add**.
- 5 In the **Library Name** field, select the Storefront library (created in *Create/Update the Shared Libraries* on page 37) from the drop-down list and click **Apply**.
- 6 Click **Save to Master Configuration** to save the configuration changes to the master repository, then click **OK**.

### Using WebSphere 6.1

- 1 In the WebSphere Administrative Console, select **Applications, Enterprise Applications**.
- 2 On the Enterprise Applications page, select the Storefront application.
- 3 In the **References** section, select **Shared library references**.
- 4 On the Shared Library References page, select **storefrontEAR** and then click **Reference shared libraries**.
- 5 Move the Storefront library (created in *Create/Update the Shared Libraries* on page 37) to the **Selected** list and click **OK**.
- 6 Click **OK** on the enterprise applications page.
- 7 Click **Save to Master Configuration** to save the configuration changes to the master repository, then click **OK**.

## Precompile the JSPs

- 1 Open a command prompt.
- 2 Through the command prompt, locate the `[D]:\Program Files\IBM\Websphere\AppServer\bin` folder (where *D* is the letter of the drive on which WAS was installed).
- 3 At the command prompt, type:  

```
JspBatchCompiler -enterpriseapp.name <name of enterprise application>
```

  
For example: 

```
JspBatchCompiler -enterpriseapp.name storefrontEAR
```
- 4 When finished, at the command prompt, type `exit`

## Edit the httpPort Value in the struts-config File

---

**Note:** If you are using the default port (9080), you can skip this step.

---

- 1 Using Windows Explorer, browse to and open the `struts-config.xml` file with Notepad. The `struts-config.xml` file is located in the following directory, where *D* is the letter of the drive on which WAS is installed:  

```
[D]:\Program Files\IBM\Websphere\AppServer\profiles\  
[profilename]\installedApps\[servernameodename]\  
storefrontEAR.ear\storefrontB2BWEB.war\WEB-INF
```
- 2 In Notepad, select **Edit, Find**.
- 3 In the **Find what** field, type `httpPort` and click **Find Next**.
- 4 At the `httpPort` line in the file, change the value to the port number of your live port for eCommerce Storefront.
- 5 Save and close the file.

## Edit the Contact E-mail Addresses in the Properties File

- 1 Using Windows Explorer, browse to and open the `application.properties` file with Notepad. The `application.properties` file is located in the following directory, where *D* is the letter of the drive on which WAS is installed:  

```
[D]:\Program Files\IBM\Websphere\AppServer\profiles\  
[profilename]\installedApps\[servernameodename]\  
storefrontEAR.ear\storefrontB2BWEB.war\  
WEB-INF\classes\com\dc\storefront\b2b\resources\
```
- 2 In Notepad, select **Edit, Find**.
- 3 In the **Find what** field, type `b2b.contact.url` and click **Find Next**.

- 4 At the `b2b.contact.url` line in the file, change `someone@someone.com` to the contact e-mail address that you want to use for your business to business Web site.
- 5 Save and close the file.
- 6 Repeat the find for `b2c.contact.url` in the B2C application properties file (`[D]:\Program Files\IBM\Websphere\AppServer\profiles\[profilename]\installedApps\[servernameodename]\storefrontEAR.ear\storefrontB2CWEB.war\WEB-INF\classes\com\dc\storefront\b2c\resources\`) and change `someone@someone.com` to the contact e-mail address that you want to use for your business to consumer Web site.

---

**Note:** You can also make changes to the images, colors, fonts, and text in eCommerce Storefront to change the appearance of your B2B and/or B2C Web sites to match your company branding and look and feel. For more information about making changes to the appearance of your Web site, refer to *Customizing Web Site Appearance* on page 59.

---

## Edit the `validation.properties` and `limits.properties` Files

The `validation.properties` file controls whether transactions are validated for the application when it requests information from the ERP. By default, validation is set to true for every transaction. Before you deploy your live environment, set the validation to false, unless you need to validate a specific transaction. *Validation will add significant overhead to your processing and prevent optimal performance.*

The `limits.properties` file controls the number of records retrieved from the ERP per transaction. By default, all limits are set to 100, meaning that if you have 500 orders, they will be retrieved by multiple transactions in sets of 100 until all 500 are retrieved, rather than one transaction to retrieve all 500. You may need to make adjustments to the limits to prevent out of memory errors. To your end-user, the number of records per transaction is transparent, so you can make changes without affecting how the application appears to work for its users.

### To make changes to these files

- 1 Browse to `[D]:\Program Files\IBM\Websphere\AppServer\profiles\[profilename]\installedApps\[servernameodename]\storefrontEAR.ear\storefrontAdminWeb.war\WEB-INF\spring`
- 2 To change the validation for a transaction, open the `validation.properties` file with Notepad.

- 3 To use validation for a transaction, set the transaction to `true`; otherwise set it to `false`. For example,  

```
validate.getAlternateWarehouses=false  
validate.getCarrierCodes=false  
validate.getCompanies=true
```

In this example, only the `getCompanies` transaction will be validated.
- 4 Save your changes and close the file.
- 5 To change the limits for a transaction, open the `limits.properties` file with Notepad.  

Change the number of records for the transaction.

```
limit.getAlternateWarehouses=150  
limit.getCarrierCodes=200  
limit.getCompanies=100
```

In this example, the `getAlternateWarehouse` transaction will retrieve 150 records per transaction, `getCarrierCodes` 200 per transaction, and `getCompanies` 100 per transaction.
- 6 Save your changes and close the file.
- 7 Stop the WebSphere Application Server and restart it so that your changes take affect.

## Set the Session Inactivity Time Out

- 1 In the WebSphere Administrative Console, select **Application, Enterprise Applications**.
- 2 On the Enterprise Applications page, select the Storefront application.
- 3 On the **Configuration** tab page, in the **Additional Properties** section, select **Session Management**.
- 4 On the Session Management page,
  - select the **Override session management** field.
  - in the **Session timeout** field, select **Set timeout** and type the timeout value.
- 5 Click **OK**.
- 6 Click **Save to Master Configuration** to save the configuration changes to the master repository.

## Start the eCommerce Storefront Application

- 1 In the navigation tree, select **Applications, Enterprise Applications**.
- 2 In the Applications page, check **storefrontEAR**, then click **Start**. After a short delay, the status of storefrontEAR should change to started.

---

**Note:** If the application fails to start, look for errors in the application server log file, `[D]:/Program Files/IBM/WebSphere/AppServer/profiles/[profilename]/logs/SystemOut.log`, where **D** is the letter of the drive on which the WebSphere application is installed.

---

- 3 Click **Logout** in the console task bar to close your Administrative Console session. The eCommerce Storefront (storefrontEAR) is now installed and started.

## Create a Directory for the Application Log Files

On the C drive of the Websphere Application Server, create a directory named `Logs`. Log files for eCommerce Storefront applications (Admin, B2B, and B2C), eCommerce Catalog, and Commerce Gateway are recorded in this directory. If you already installed one of the products listed, this directory may already exist.

## Stop and Start the WebSphere Server

- 1 On the WebSphere Application Server, select **Start, Programs, IBM WebSphere Express, Stop Server** and wait for the Stop window to automatically close.
- 2 On the WebSphere Application Server, select **Start, Programs, IBM WebSphere Express, Start Server** and wait for the Start window to automatically close.

## Test the Login Page

- 1 Open your browser on the Web server.
- 2 Type the following URL: `http://localhost:[portnumber]/storefrontAdminWEB` and press **Enter**. The eCommerce Storefront Administrator Login page appears. Your eCommerce Storefront application is ready for use. You can log in to the application using `admin` for the user ID and password.

## What's Next

Your installation is complete. Refer to the appendices in this document for additional setup options:

- If you are deploying multiple instances, refer to *Deploying Multiple Instances* on page 49.
- To set up Secure Socket Layer (SSL) protection, refer to *Setting up SSL Protection* on page 51.

- To customize the appearance of your Web pages, refer to *Customizing Web Site Appearance* on page 59.
- To optimize your configuration for your concurrent user volume, refer to *Managing Configurations for Concurrent User Volume* on page 65.



# Appendix A: Adding Storefront Transactions to the CMS Database

---

This section describes how to apply the eCommerce Storefront transactions to the Base version of the eCommerce Catalog and Commerce Gateway database (typically, cms). Any Version 5 or Version 6 Cumulative 8 or earlier installation is considered a Base version installation. You only need to complete the instructions in this section if you have installed and been using eCommerce Catalog and Commerce Gateway without eCommerce Storefront (in other words, a Base version installation). Completing this section upgrades your database from the Base version to the Storefront version. Storefront version installations are available for eCommerce Catalog Version 2.0.1 and Commerce Gateway Version 6 cumulative 9.

---

**Warning:** Completing these steps once updates the database for both eCommerce Catalog and Commerce Gateway. Do not perform these steps for each application or you will have duplicate transactions in your database.

---

## Before You Begin

- You must have completed the installation and deployment of eCommerce Storefront.
- You must have the eCommerce Catalog Storefront installation CD or the Commerce Gateway Storefront installation CD. The scripts you need to run are available on both CDs, but only need to be applied once.

## Add the Transactions

- 1 Place either the eCommerce Catalog Storefront installation CD or the Commerce Gateway Storefront installation CD in the CD drive.
- 2 Open the Microsoft SQL Server Query Analyzer.

- 3 Using Explorer, browse to the `cms_gw_trans_[platform].sql` file in the SQL Scripts folder on your installation CD (where platform is the back end application you are using).
- 4 Open the `cms_gw_trans_[platform].sql` file with Wordpad.
- 5 Verify that `cms` (or your custom database name) is selected in the drop-down list.
- 6 Copy the contents of the file into the Query Analyzer.
- 7 Run the script.
- 8 Repeat steps 3-6 for the `cms_gw_trans_sf.sql` file.

## What's Next

Setting up the JDBC provider and data source. Refer to *Setting up the JDBC Providers and Data Sources* on page 23.

## Appendix B: Deploying Multiple Instances

---

This section describes how to deploy more than one instance of eCommerce Storefront in a single WAS profile.

### Before You Begin

You must install and deploy an additional eCommerce Catalog to use with the new instance of eCommerce Storefront.

### Installation Procedure

To install more than one instance of eCommerce Storefront, you follow the same installation procedure as a single deployment.

Complete the steps in the following sections:

- 1 *Creating and Updating the Storefront Database* on page 19.
- 2 *Setting up the JDBC Providers and Data Sources* on page 23.
- 3 *Deploying/Updating the Application Code* on page 29.

---

**Note:** When running the Deployer tool (see *Run the Deployer Tool* on page 29), be sure to provide different context roots and index keys for each deployment.

---

### What's Next

Your additional instance installation is complete.



## Appendix C: Setting up SSL Protection

---

This appendix describes how to implement secure socket layers (SSL) in eCommerce Storefront. Using SSL is highly recommended to protect the security of your users' personal information. For eCommerce Storefront, SSL protection is currently used on the Checkout page. SSL encrypts credit card numbers and other personal data to prevent it from being intercepted as it is passed from the browser to the Web server to the communication layer for processing.

This appendix includes instructions for securing the application in WAS, see *Setting up SSL through WebSphere* on page 51, or using IIS, see *Setting up SSL through IIS* on page 57.

### Setting up SSL through WebSphere

This section guides you through the configuration of SSL within WebSphere. In this section, you will

- Create a key database

---

**Note:** Make sure you have installed the WAS Plug-In so that the Global Security Toolkit (GSKit) is available to create the key.

---

- Request a certificate from a certificate authority
- Receive the certificate you purchased
- Edit the httpsPort Value in the struts-config File
- Enable security on the Web server through Websphere Application Server

#### Create a Key Database

The program used to create the key database resides in the bin directory within the Websphere installation directory, for example, `[D]:\Program Files\IBM\WebSphere\AppServer\bin\`.

- 1 Using Windows Explorer, locate the `iKeyMan.bat` in the bin directory of the Websphere installation directory.

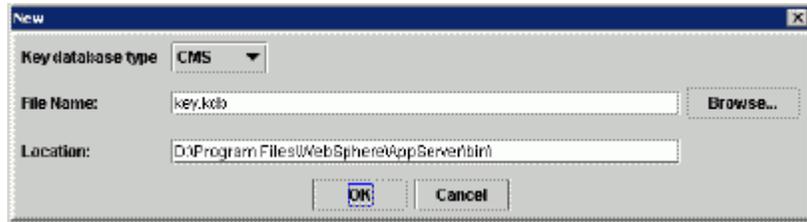
- 2 Double-click `iKeyMan.bat` to launch the application.

---

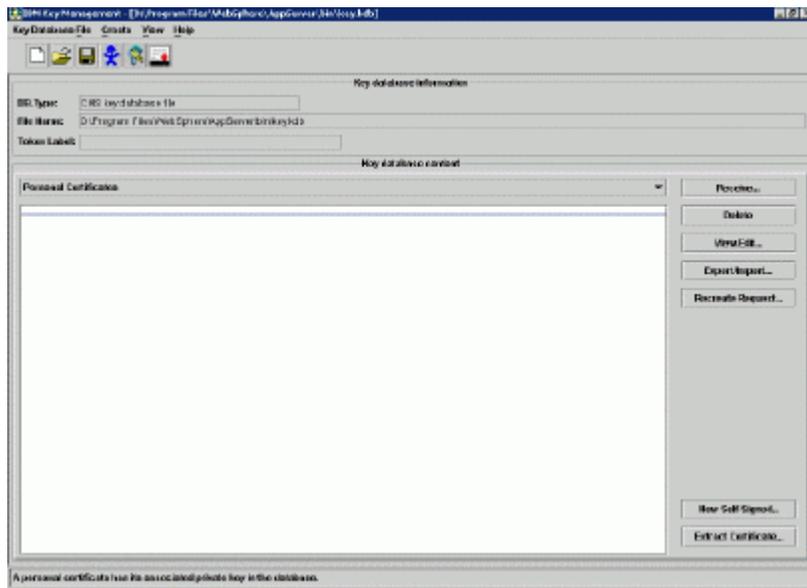
**Note:** If the `iKeyMan.bat` does not run, you may have to edit the `iKeyMan.bat` file to account for spaces in the directory path. For example, change

`%WAS_HOME%\BIN\GETGSKITInstallPath.vbs` to  
`"%WAS_HOME%\BIN\GETGSKITInstallPath.vbs"`

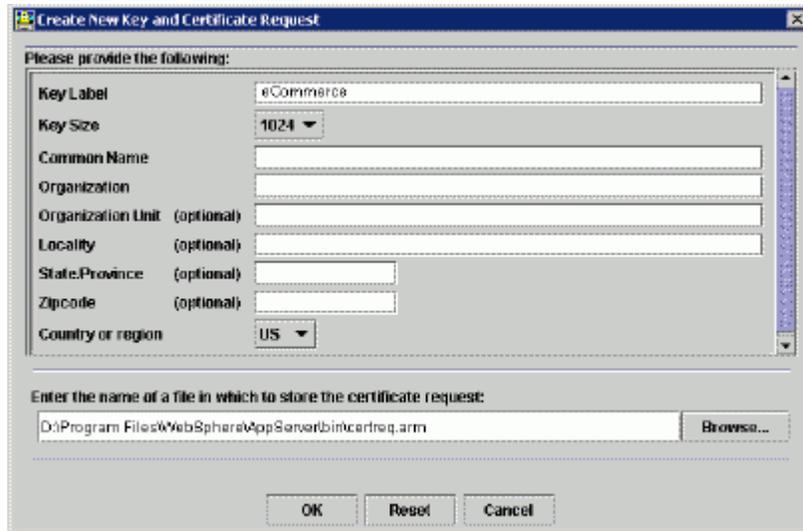
---



- 3 For the keystore you are creating, in the
  - **Key database type** field, leave **CMS** selected.
  - **File Name** field, type the name of the keystore, for example, `Storefront.kdb`
  - **Location** field, specify the directory where you want the keystore to be saved.
- 4 Click **OK**. The Password Prompt Window appears.
- 5 In the **Password** field, type a password to secure the keystore file and then type it again in the **Confirm Password** field.
- 6 Click **OK**. The IBM Key Management Console appears.



- 7 From the **Create** menu, select **New Certificate Request**.



8 On this window, in the

- **Key Label** field, type eCommerce.
- **Common Name** field, type the domain name for your eCommerce Storefront URL. For example, if your URL is `http://www.CompanyName.com/storefrontB2B`, you would type `CompanyName.com` in this field.
- Remaining fields, type the information for your organization.

---

**Note:** If you are requesting a certificate from VeriSign, the organization, locality, state/province, and zip code information are required.

---

9 Click **OK**.

10 A certificate request file is created in `D:/Program Files/IBM/WebSphere/AppServer/bin/certreq.arm`. You need the contents of this file to request the certificate.

## Request the Certificate

This section describes the information and steps for requesting a certificate from a SSL Certificate Provider. VeriSign is the recommended provider and these instructions assume you are using VeriSign.

---

**Note:** The actual application process may differ slightly from the process described here if VeriSign changes their Web site or if you are using an alternate provider.

---

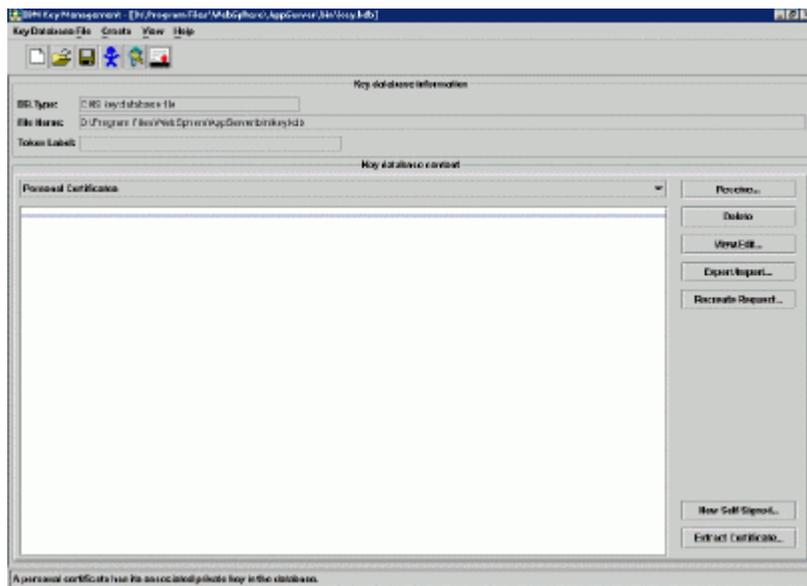
1 Go to the VeriSign Web site page for SSL Services. (<http://www.verisign.com/products-services/security-services/ssl/index.html>)

- 2 You can request a trial certificate for testing or buy a certificate for deployment. For maximum security, it is recommended that you purchase the Secure Site Pro certificate which provides 128-bit encryption. Regardless, provide the following information when you request a certificate:
  - Your company contact information
  - Your technical contact information
  - Your server platform and the contents of the Certificate Signing Request file. Using Windows Explorer, browse to D:\Program Files\IBM\WebSphere\AppServer\bin\certreq.arm and open the certreq.arm file with Notepad and copy the contents.
  - A password for the certificate you are requesting. This password is not the password for the stored key file, but is used to secure the certificate. You need this password when you renew or revoke your certificate.
- 3 A certificate will be sent via e-mail message to the technical contact e-mail address specified when you requested the certificate. Once you receive the certificate from the certificate provider, you can receive it into Websphere via the IBM Key Manager.

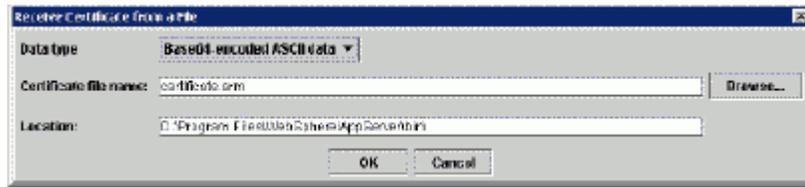
## Receive the Certificate

Once you receive the e-mail message with your SSL Certificate Signing File, you can create a file and receive the certificate into your key database.

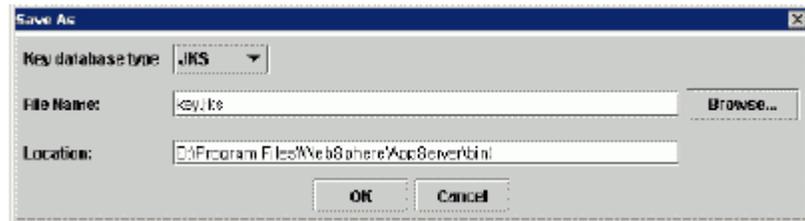
- 1 The e-mail message sent by VeriSign will contain the certificate text. Copy and paste the certificate text into Notepad and save the file as a text file.
- 2 From the IBM Key Management Window, select **Personal Certificates** in the drop-down list.



- 3 Click **Receive**. The Receive Certificate from a File Window appears.



- 4 Click **Browse** to browse to and select the certificate text file.
- 5 Click **OK**.
- 6 On the IBM Key Management Window, from the **Key Database File** menu, select **Save As**. The Save As Window appears.



- 7 In the **Key database type** field, select **JKS** and click **OK** to save the database.

## Edit the httpsPort Value in the struts-config File

---

**Note:** If you are using the default port (9443), you can skip this step.

---

- 1 Using Windows Explorer, browse to and open the `struts-config.xml` file with Notepad. The `struts-config.xml` file is located in the following directory, where D is the letter of the drive on which WAS is installed:  

```
[D]:\Program Files\IBM\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernameodename]\  
storefrontEAR.ear\storefrontB2BWEB.war\WEB-INF
```
- 2 In Notepad, select **Edit, Find**.
- 3 In the **Find what** field, type `httpsPort` and click **Find Next**.
- 4 At the `httpsPort` line in the file, change the value to the port number of your live port for eCommerce Storefront.
- 5 Save and close the file.
- 6 Repeat this step for the B2C `struts-config.xml` file located in the following directory, where D is the letter of the drive on which WAS is installed:

```
[D]:\Program Files\IBM\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernameodename]\  
storefrontEAR.ear\storefrontB2CWEB.war\WEB-INF
```

## Enable SSL on the Web Server

- 1 In the Websphere Application Server Administrative Console, click **Security, SSL**.
- 2 On the SSL Configuration Repertoires page, click the alias for the machine you want to secure.
- 3 On the configuration page for that alias, in the **Key File Name** field, type the full path to the key file that you created during *Create a Key Database* on page 51. The file extension will be . jks. In the **Key File Password** field, type the password specified when the key database was created. If you are using VeriSign, you do not need to specify a trust file name or password.
- 4 Click **OK**.
- 5 Under **Security**, click **Global Security**.

The screenshot shows the 'Global Security' configuration page. The 'General Properties' section contains several options: 'Enable global security' (unchecked), 'Enforce Java 2 security' (unchecked), 'Enforce fine-grained JCA security' (unchecked), and 'Use domain-qualified user IDs' (unchecked). The 'Cache timeout' is set to 600 seconds. 'Issue permission warning' is checked. The 'Active protocol' is set to 'CSI and SAS'. The 'Active authentication mechanism' is set to 'Simple Websphere Authentication Mechanism (SWAM)'. The 'Active user registry' is set to 'Local OS (single, stand-alone server or sysplex and root administrator only)'. There is also an unchecked option for 'Use the Federal Information Processing Standard (FIPS)'. At the bottom are buttons for 'Apply', 'OK', 'Reset', and 'Cancel'.

- 6 On the Global Security page, select the **Enable global security** check box. The **Enforce Java 2 Security** check box will be selected automatically when you select the **Enable global security** check box.
- 7 Clear the **Enforce Java 2 Security** check box.
- 8 Click **OK** to save your settings.
- 9 Secure transactions will now be processed using SSL via https:// URLs.

## Setting up SSL through IIS

You use IIS to secure your Web site. If you choose to use IIS, you must complete the following before you begin the steps in this section:

- Install IIS and the IIS plug-in for WebSphere.
- Request your security certificate and import it into IIS. Refer to documentation provided by Microsoft if you need additional information.

Once these steps are complete, you can make the changes required by WebSphere to activate SSL security for eCommerce Storefront.

### Edit the httpsPort Value in the struts-config File

---

**Note:** If you are using the default port (9443), you can skip this step.

---

- 1 Using Windows Explorer, browse to and open the `struts-config.xml` file with Notepad. The `struts-config.xml` file is located in the following directory, where D is the letter of the drive on which WAS is installed:

```
[D]:\Program Files\IBM\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernamenodename]\  
storefrontEAR.ear\storefrontB2BWEB.war\WEB-INF
```

- 2 In Notepad, select **Edit, Find**.
- 3 In the **Find what** field, type `httpsPort` and click **Find Next**.
- 4 At the `httpsPort` line in the file, change the value to the port number of your live port for eCommerce Storefront.
- 5 Save and close the file.
- 6 Repeat this step for the B2C `struts-config.xml` file located in the following directory, where D is the letter of the drive on which WAS is installed:

```
[D]:\Program Files\IBM\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernamenodename]\  
storefrontEAR.ear\storefrontB2CWEB.war\WEB-INF
```

### Enable SSL on the Web Server

- 1 In the Websphere Application Server Administrative Console, click **Security, SSL**.
- 2 Under **Security**, click **Global Security**.

Configuration

---

**General Properties**

Enable global security

Enforce Java 2 security

Enforce fine-grained JCA security

Use domain-qualified user IDs

\* Cache timeout  
600 seconds

Issue permission warning

Active protocol  
CSI and SAS

Active authentication mechanism  
Simple WebSphere Authentication Mechanism (SWAM)

Active user registry  
Local OS (single, stand-alone server or sysplex and root administrator only)

Use the Federal Information Processing Standard (FIPS)

Apply OK Reset Cancel

- 3 On the Global Security page, select the **Enable global security** check box. The **Enforce Java 2 Security** check box will be selected automatically when you select the **Enable global security** check box.
- 4 Clear the **Enforce Java 2 Security** check box.
- 5 Click **OK** to save your settings.
- 6 Secure transactions will now be processed using SSL via https:// URLs.

## Appendix D: Customizing Web Site Appearance

---

This appendix describes how to make changes to the images, colors, fonts, and text in eCommerce Storefront. You can change the appearance of your B2B and/or B2C Web sites to match your company branding and look and feel. There are three main areas that you can change:

- Images, such as the company logo, shopping cart, arrows, and tab ends
- Cascading style sheet, which controls the appearance of text, including font, color, and attributes
- `application.properties` file which controls the text on the page, including field labels, links, and messages

This section assumes that you are familiar with online image production and optimization, cascading style sheets, and that you have some experience programming HTML. Additional look and feel changes can be made by a java programmer. Changes requiring java coding are not described in this appendix. If you need assistance with any of the customization features, contact your Infor Professional Services representative.

### Before You Begin

Make a backup of the following directories before you begin your customization:

#### For the B2B Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernodename]\  
storefrontEAR.ear\storefrontB2BWEB.war
```

#### For the B2C Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernodename]\  
storefrontEAR.ear\storefrontB2CWEB.war
```

## Images

All of the images used in the Storefront application, including the logo and background images, are stored in the following location:

### For the B2B Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernodename]\  
storefrontEAR.ear\storefrontB2BWEB.war\images
```

### For the B2C Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernodename]\  
storefrontEAR.ear\storefrontB2CWEB.war\images
```

Buttons, the logo in the banner, the shopping cart, arrows and tab ends are all images on the site pages. You can change an image by replacing the image in the images directory. If you replace an image, make sure the file type, file name, and image size are identical, including the case. If the file type, file name, and/or the image size are different (if, for example, you want to displays a larger logo), you must edit the .jsp page that references the image to update the reference and/or the size. jsp pages are in two directories:

### For the B2B Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernodename]\  
storefrontEAR.ear\storefrontB2BWEB.war\includes
```

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernodename]\  
storefrontEAR.ear\storefrontB2BWEB.war\jsp
```

### For the B2C Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernodename]\  
storefrontEAR.ear\storefrontB2CWEB.war\includes
```

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\  
[profilename]\installedApps\[servernodename]\  
storefrontEAR.ear\storefrontB2CWEB.war\jsp
```

JSPs used in multiple locations (such as the navigation.jsp) are stored in the includes directory. Single use JSPs are in the jsp directory.

## Changing the Logo

This section describes how to replace the Infor logo with your company logo. You can use these same basic steps to change other images in the directory.

- 1 Save your company logo as banner.gif.

- 2 Copy your banner.gif file to the images directory.
- 3 If your image is the same size as the Infor logo image, go to step 6. If your image is a different size, open the navigation.jsp file in the includes directory with Notepad. Search for the **Site Banner** section of code:

```
<!-- Site Banner -->
<TD class="banner"><IMG border="0"
src="<%=request.getContextPath()%>/images/banner.gif"
width="718" height="34"></ TD>
```

- 4 Change the name (banner.gif), the width, and height values to match your image (in the code example provided above, the values to modify are highlighted in bold).
- 5 Save and close the file.
- 6 To see the change, log in to your site or, if you are already logged in, refresh the page.

## Cascading Style Sheet

The Master.css file is the cascading style sheet that controls the appearance of text on the site pages. The Master.css file is stored in the following directories:

### For the B2B Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\
[profilename]\installedApps\[servernodename]\
storefrontEAR.ear\storefrontB2BWEB.war\theme
```

### For the B2C Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\
[profilename]\installedApps\[servernodename]\
storefrontEAR.ear\storefrontB2CWEB.war\theme
```

Font styles, colors, and font attributes like bold and italics, are assigned in the style sheet. You can edit the style sheet to change the color, size, font, and attributes of text on the site.

## Editing Styles

- 1 Open the Master.css file with Notepad.
- 2 Locate the style you want to change. For example, if you want to edit the banner style which controls the appearance of the page behind the logo image, you would edit the banner style:

```
.banner {
font-family: Arial, Helvetica, sans-serif;
font-size: 12px;
```

```
font-style: italic;
line-height: normal;
font-weight: bold;
font-variant: normal;
text-transform: none;
color: #FFFFFF;
text-decoration: none;
background-color: #333366
}
```

- 3 Change the style properties. In this example, if you wanted to change the background color behind the logo to black, you would change `background-color: #333366` to `background-color: #000000` (in the code example provided above, the values to modify are highlighted in bold).
- 4 Save and close the file.
- 5 To see the change, log in to your site or, if you are already logged in, refresh the page.

## Application Properties

The `application.properties` file contains all of the text that appears on the page, including messages, field labels, and links. The `application.properties` file is stored in the following directories:

### For the B2B Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\
[profilename]\installedApps\[servernodename]\
storefrontEAR.ear\storefrontB2BWEB.war\WEB-
INF\classes\com\dc\storefront\b2b\resources
```

### For the B2C Web Site

```
[D]:\Program Files\ibm\WebSphere\AppServer\profiles\
[profilename]\installedApps\[servernodename]\
storefrontEAR.ear\storefrontB2CWEB.war\WEB-
INF\classes\com\dc\storefront\b2c\resources
```

You can change any of this information to customize your site functionality. For example, you may prefer the message, “The item was removed from your cart,” to the default message, “Item successfully removed from Shopping Cart.” When you change the `application.properties` file, you must stop and restart the WebSphere server before you can see the changes.

## Changing Text

This section describes how to change text that refers to order history. You can use these same basic steps to change other text in the `application.properties` file.

1 Open the `application.properties` file for the B2B Web site with Notepad.

2 Search for `Order History` to locate the order history section:

```
# Order History
b2b.order.history.label = Order History
b2b.order.history.setting.label = Order History
Settings
b2b.order.history.setting.text = Order History
displays a list of items previously ordered for your
account.
b2b.order.history.text = To review the monthly sales
statistics for an item, click the Item Number link.
b2b.order.history.to.month = To Month
b2b.order.history.to.year = To Year
b2b.order.history.from.month = From Month
b2b.order.history.from.year = From Year
b2b.order.history.empty = There is no History for
this period of time.
b2b.order.history.salesstatistics = Click on the item
number to view Sales Statistics.
```

3 Make your changes to the text to the right of the equal sign. For example, if you want the pages to refer to Item History instead of order history, change `Order` to `Item` (in the code example provided above, the values to modify are highlighted in bold).

4 Save your changes and close the file.

5 Stop and start the WebSphere server.

---

**Note:** This step will temporarily bring down your Web site. It may be best to perform this step at a low traffic time, if possible.

---

6 Log in to your Web site to verify the change.

## What's Next

When you have finished the customization of your Web sites, Infor recommends making another backup of the directory with your changes. If you made changes to a test environment, move your changes to the live environment.



# Appendix E: Managing Configurations for Concurrent User Volume

---

This section describes how to make adjustments to your configuration of eCommerce Storefront to handle the volume of concurrent users you need to support. This section describes how to adjust your settings for

- Heap size
- Log rotation
- Connection pools

This section provides suggestions and guidelines for making adjustments; however, Infor recommends consulting with your Infor Professional Services representative if you need additional assistance managing your user volume.

## Before You Begin

You must have completed the installation and deployment of eCommerce Storefront.

## Heap Size

Heap size is the amount of memory that the WebSphere application can use. You can set the minimum and maximum size of the heap

### Set the Heap Size

- 1 Log in to the WebSphere Administrative Console.
- 2 Select **Servers, Application Server, Server1, Java and Process Management, Process Definition, Java Virtual Machine**.
- 3 Type a value in the **Initial Heap Size** and **Maximum Heap Size** fields.
- 4 Click **OK**.
- 5 Click **Save**.

## Log Rotation

The Log rotation settings controls the maximum number of historical logs. Logs are kept up to the maximum and then the oldest log is overwritten once the maximum number is reached. Infor recommends setting the maximum number of historical logs to five. Log files are stored in this directory:

```
[D]:\Program Files\IBM\WebSphere\Appserver\Profiles\  
'DB'\Server1\logs
```

### Set the Maximum Number of Logs

- 1 Log in to the WebSphere Administrative Console.
- 2 Select **Servers, Application Server, Server1, Java and Process Management, Process Definition, Logging and Tracing, JVM Logs**
- 3 In the **Maximum Number of Historical Logs** field, type 5.
- 4 Click **OK**.
- 5 Click **Save**.

## Connection Pools

The connection pool allows for more initial concurrent connections to the front-end to access the Web site. Increase the value if you have a large volume of concurrent users. The connection setting indicates the number of connections in memory. A ratio of approximately 30 concurrent connections per 100 users is recommended.

### Set the Connection Pool

- 1 Log in to the WebSphere Administrative Console.
- 2 Select **JDBC Providers, WebSphere Embedded Connect JDBC Driver for MSSQL Server, Data Sources, CMS DataSource, Connection pools**.
- 3 In the **Connections** field, change the number of connections based on the number of concurrent users (in a ratio of approximately 30 connections per 100 users).
- 4 Click **OK**.
- 5 Click **Save**.
- 6 Repeat this step for the Storefront and Catalog JDBC data sources.

## What's Next

Configuration changes for managing concurrent user volume is complete.