Websphere Commerce Multiple Instance Support on IBM @server iSeries

IBM

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> **Note:**
>
> Before using this information and the product it supports, be sure to read the general information under "Notices" on page 11.

Contents

Chapter 1. Introduction

This document has been written to clarify how multiple WebSphere Commerce instances can be created and utilized on an iSeries server. The ability to run multiple independent instances is a key strength of the iSeries version of WebSphere Commerce. This document presents the information in a comprehensive manner.

This discussion applies equally well to WebSphere Commerce Suite V5.1 and WebSphere Commerce V5.4. Keep in mind that WebSphere Commerce Suite V5.1 works with WebSphere Application Server V3.5.3 and later point releases, and WebSphere Commerce 5.4 works with WebSphere Application Server 4.0.2 and later point releases. Accordingly, differences may exist on how some operations are performed between the two releases of WebSphere Application Server.

Chapter 2. The Makeup of a WebSphere Commerce Instance

A Web site is a set of components integrated together such that one or more virtual store fronts can be delivered to a set of users on the Web (via either the Internet or intranet). The core components making up such a Web site consist of:

- HTTP Web server
- WebSphere Application Server, under which the commerce server runs
- Database Server

There are other important components, such as payment processing, but for this discussion, they are not relevant.

The Configuration Manager simplifies WebSphere Commerce instance creation. The Configuration Manager guides you through a set of choices that must be made to create your instance.

The creation of a WebSphere Commerce instance results in all the necessary pieces being created for you for your instance. The following entities are given the same name as the instance name for ease of use:

- An HTTP server instance. (For WebSphere Commerce V5.4, two HTTP server instances are created; one of the instances will have the name of the instance with a T suffix added.)
- A new IFS folder under the instances tree, under which a number of other folders are created for the operation of the store.
- A database collection library
- An instance user profile (all instance objects created are owned by this profile)
- A WebSphere Application Server application server in the WebSphere Application Server Admin Console. By default this is created under the 'default' WebSphere Application Server instance name.

Creating more than one WebSphere Commerce instance is not that much more difficult to achieve than creating the first one. The Configuration Manager takes care of enforcing a few basic rules to make multiple WebSphere Commerce instance creation fairly simple.

- Unique instance names are enforced. The instance name, in addition to creating an identifier for the instance under Configuration Manager, is also used to create:
  - The instance user profile
  - The database collection library
  - The instance folder name
  - The HTTP server instances
- Unique host name and IP addresses for each instance are enforced.

Because of this uniqueness of names, each WebSphere Commerce instances can be accessed and worked on independently from one another without interfering with the running of any other sites on the system. Each site is accessed by its unique host name. The significance of this deserves mention:

- You can start, stop, and modify each HTTP server instance independent of the others. This allows for extra settings in the HTTP configuration options, debugging, etc.

- You can maintain the instance database independent of other WebSphere Commerce instances.
- You can manipulate the WebSphere Commerce server, or the WebSphere Application Server application server, separately from all others. You can apply service, debugging, and configuration changes independently of all other application servers.

Chapter 3. Adding individual WebSphere Application Server instances

The Websphere port number on the Websphere page of the Configuration Manager and the instance name tie a WebSphere Commerce instance to a WebSphere Application Server instance. By default, the port number of 900 is associated with the 'default' WebSphere Application Server instance. If this value is not changed in the Configuration Manager, then the WebSphere Commerce application server is created under the default Websphere instance. Multiple WebSphere Commerce instances can be created under the default Websphere instance, or any other Websphere instance.

The drawback in creating all, or more than one, WebSphere Commerce instance under the same WebSphere Application Server instance is that, again, if some maintenance is applied to the WebSphere Application Server instance, or the instance is started and stopped, more than one WebSphere Commerce instance is affected. In most cases this is probably not a desired result. For example, if you have a system with a production site and a test site controled by a single WebSphere Application Server instance, and you are making changes to the test environment to see how different options may benefit you, the production system will be impacted if you have to restart WebSphere Application Server every time.

To get around this, create more than one WebSphere Application Server instance. Each WebSphere Application Server instance has its own repository, Java Virtual Machine, and bootstrap port number. The best way to achieve this is to create your WebSphere Application Server instance before starting the WebSphere Commerce Configuration Manager. The unique port number that is specified when the WebSphere Application Server instance is created is then placed in the Websphere port number in the Configuration Manager when the WebSphere Commerce instance is created.

To create the WebSphere Application Server instance, execute the following command from QSH for WebSphere Application Server V4.0.x:

```
/QIBM/ProdData/webasadv4/bin/crtnewinst -instance WAS_instance_name -job
   WAS_instance_name -bootstrap port_number -lsd
   port_number+1 -repository WAS_instance_name -initconfigoff
```

where:

WAS_instance_name
    is the name of the WebSphere Application Server instance

port_number
    is a distinct and unused TCP/IP port number

port_number+1
    is the next sequential TCP/IP port number

To start the above instance, execute the following command from QSH for WebSphere Application Server V4.0.x:

```
/QIBM/ProdData/WebASAdv4/bin/strwasinst -instance WAS_instance_name
```

A collateral benefit of organizing your application servers under separate WebSphere Application Server instances is that you can manage their applications

separately under different client administration consoles. For example, one can bring up two different administrative consoles on the client to administer different application servers separate from each other. One administration console could point to one WebSphere Application Server instance with bootstrap port 900 (for the default WebSphere Application Server instance), and another instance of the administrative console can be started for those applications that run under a different bootstrap port number for a different WebSphere Application Server instance.

Chapter 4. At the LPAR Level

Another level of independence can be achieved with the use of LPARs on iSeries. With this level of independence one can IPL one of the partitions while the other WebSphere Commerce instance and WebSphere Application Server instances are left uninterrupted. The same name space can be utilized.

Chapter 5. References

References for this document include the following two books:

- *WebSphere Commerce Suite Installation Guide V5.1*, (GC09-4914-00)
- *IBM WebSphere Commerce for IBM iSeries Installation Guide Version 5.4*

Also refer to the following URLs:

`www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/docs/as400v35/docs/admmwas.html`

`www.ibm.com/software/webservers/commerce/wcs_pro/lit-tech-os400.html`
Refer to *Hints and Tips*, item 6.

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