

Chapter 1

WebSphere Portal Server V6: Overview, Packaging and Sample Scenario

Introduction

WebSphere Portal Server is a J2EE application that runs on top of WebSphere Application Server. The latest release of the WebSphere Portal Server at the time of this writing is version 6 (December, 2006). WebSphere Portal Server V6 (WP V6) runs on top of WebSphere Application Server ND V6.0.2.9 (WAS V6) software. Therefore, you can imagine that WebSphere Portal has a set of programs that run in the WebSphere Application Server JVM (Java Virtual Machine) just like any other J2EE application (yet the way you deploy and manage IBM portlet applications is different from J2EE applications). If you are a WebSphere Portal architect or an administrator having good knowledge of WAS V6, this will help you quickly understand many of the configuration scenarios and help you solve the problems quickly. If you do not have a printed version of the book "WebSphere Application Server: Step by Step" that concentrates on WAS V6, then you should get one from a book store near you or directly from the publisher (<http://www.mc-store.com/5077.html>) or Amazon, Borders or the Barnes and Noble web sites. Refer to Chapters 1 thru 11 and 17 provided in the printed version of the above mentioned book to get a solid background on WAS V6 (specifically related to WP V6).

Packaging

The WebSphere Portal Server V6 product comes in three packages. Following is a brief description of features supported in each package. All the packages are based on WAS V6.0.2.9 ND software and provide clustering capability by default.

- **WebSphere Portal Server V6:** This edition provides the core portal services including the SOA and Business Process functionality through the WebSphere Process Server V6.0.1 product (WPS V6.0.1 is included in this edition). It comes with a Portlet Factory Designer which help you quickly build portlet applications with lower-order development skills. This edition also contains the basic Web content and Document manager features.
- **WebSphere Portal Server Enable:** This edition provides all the features of WebSphere Portal Server V6 plus Advanced Web content, Document and workflow management functions.
- **WebSphere Portal Server Extend:** This edition provides all the features of WebSphere Portal Server V6 Enable plus IBM Workplace forms and collaborative services (instant messaging, team workplaces, people finder etc.).

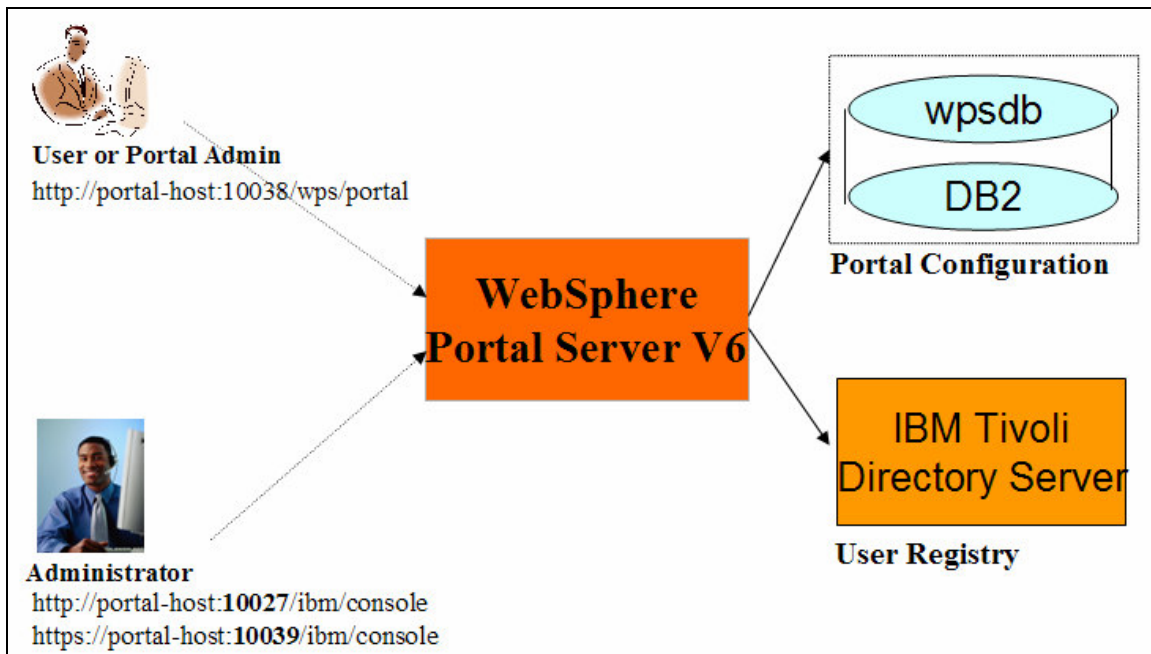
Sample Scenario

In this WP V6 Step by Step series, you are going to build the WebSphere Portal Server V6 configuration as depicted in the illustration below. Following are the various products you will be using in this sample configuration:

- WAS V6.0.2.9
- WP V6
- DB2 V8.2 fixpack 13
- IBM Tivoli Directory Server (ITDS) V6 fixpack 3
- IBM HTTP Server (HIS) V6.0.2.9
- WebSphere plug-in V6.0.2.9

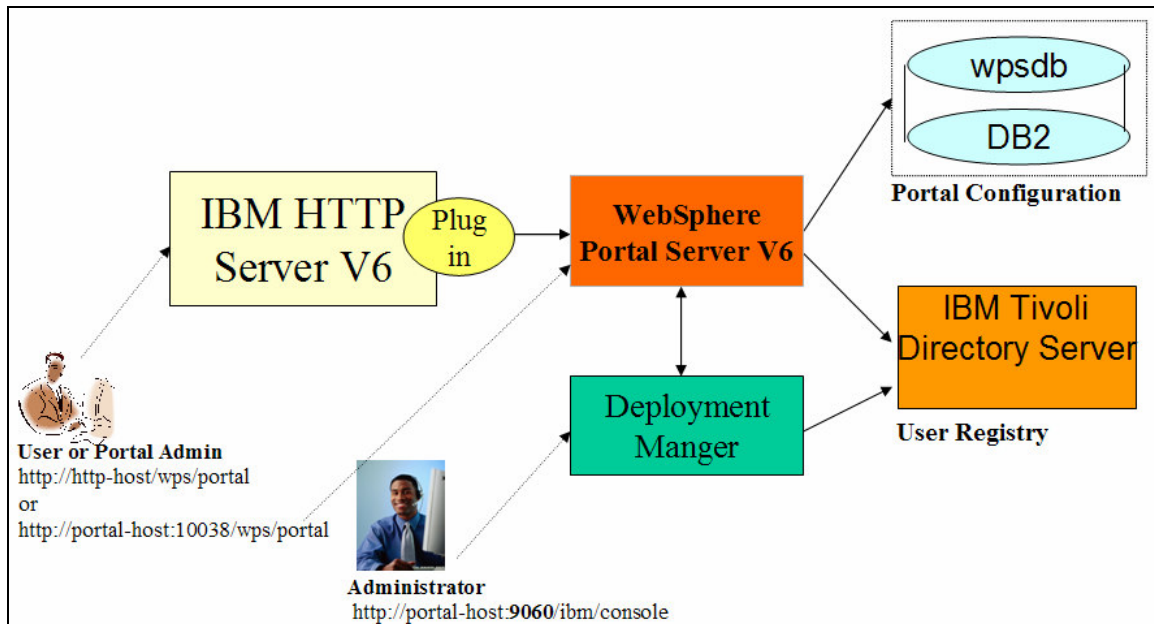
The online documentation is targeted for beginning level portal administrators (with good knowledge of WAS V6 administration) providing good fundamental knowledge on the product. In our sample scenarios, we are assuming that you have installed or are prepared to install all of the mentioned products on the same machine as the portal server. The configuration steps for products installed on remote machines (for example remote database) are different.

Even though we will use the WP V6 Enable edition to configure the sample portal environment, it is possible to use any of the packages mentioned above. We configured the sample configuration on the Windows operating system. This configuration has not been verified on other supported operating systems so some steps may be different (other than just using .sh instead of .bat files on UNIX/Linux machines).

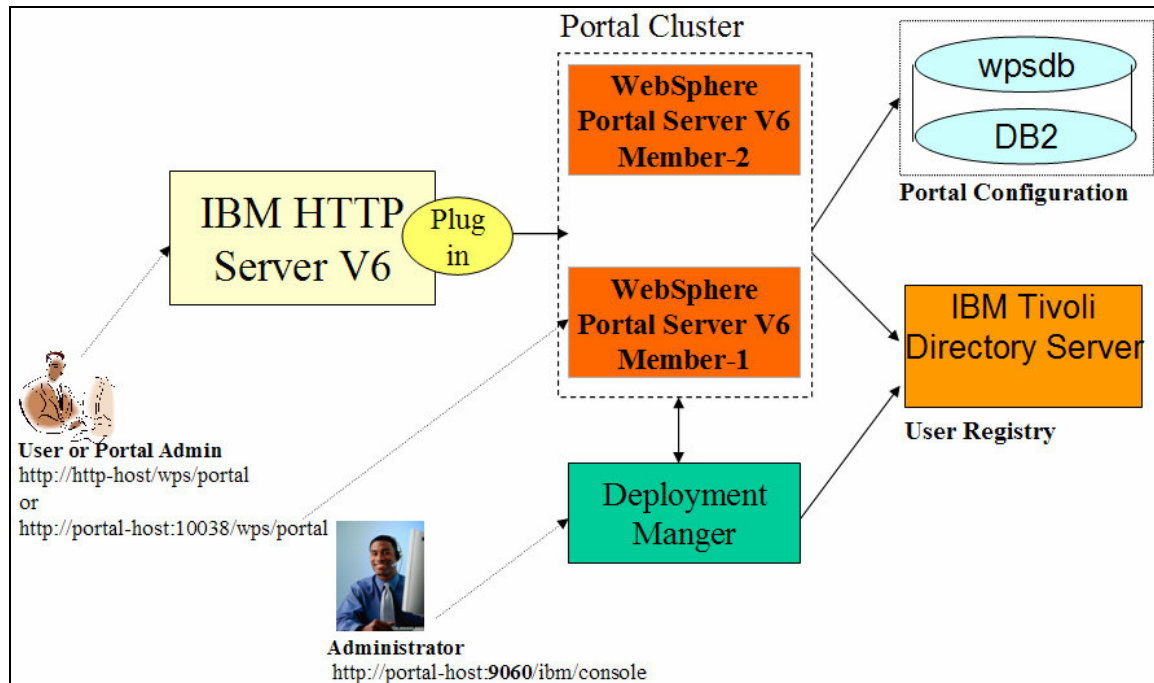


Following are the high-level tasks you will be completing:

- Using the instructions given in Chapter 2 (WP V6: Architecture, Installation, Configuration, Verification and Management on a Stand-alone Node) you will be installing WP V6 on your machine to understand various artifacts that are created during the installation. This chapter will give you fundamental knowledge about what is happening and the various artifacts that will be created during the WP V6 installation that is essential if you want to configure and manage your portal server for the production environment later on.
- Using the instructions given in Chapter 3 (WP V6: Configuration Data Transfer to Database) you will be transferring the portal configuration that was created in the Cloudscape database by default during the installation to the DB2 database. Afterwards, you should have a complete understanding of this task by knowing why, what, how and where to change the parameters and property files to accomplish this task.
- Using the instructions given in Chapter 4 (WP V6: User Registry Transfer to LDAP Server) you will be transferring the user registry that was created in the Cloudscape database by default during the installation to ITDS server. Again, you will know why, what, how and where to change the parameters and property files to accomplish this task.
- Using the instructions given in Chapter 5 (WP V6: Virtual portal and multiple realms) you will configure a portal server with a virtual portal with multiple realms.
- Using the instructions given in Chapter 6 (WP V6: Federate Portal Node and Configure External Web Server) you will prepare a portal server for clustering as shown in the illustration below. You will create a deployment manager profile, federate portal node and verify. You will also configure the portal server with an external HTTP Server (IHS V6) to serve requests thru the HTTP Server.



- Using the instructions given in Chapter 7 (WP V6: Portal Cluster) you will configure a portal server for clustering as shown in the illustration below. Initially you will learn vertical clustering concepts for the portal server without WebSphere Process Server (with an overview of horizontal clustering). Next, you will get an overview of portal server clustering with the WebSphere Process Server support.



- Using the instructions given in Chapter 8 (WP V6: Work with the Portal Server) you will create and customize a portal page. You also will perform some of the frequently performed administrative tasks.
- Using the instructions given in Chapter 9 (WP V6: Work with the Process Portal Server) you will deploy a business process application and a portlet application to demonstrate integration of process server with the portal server.

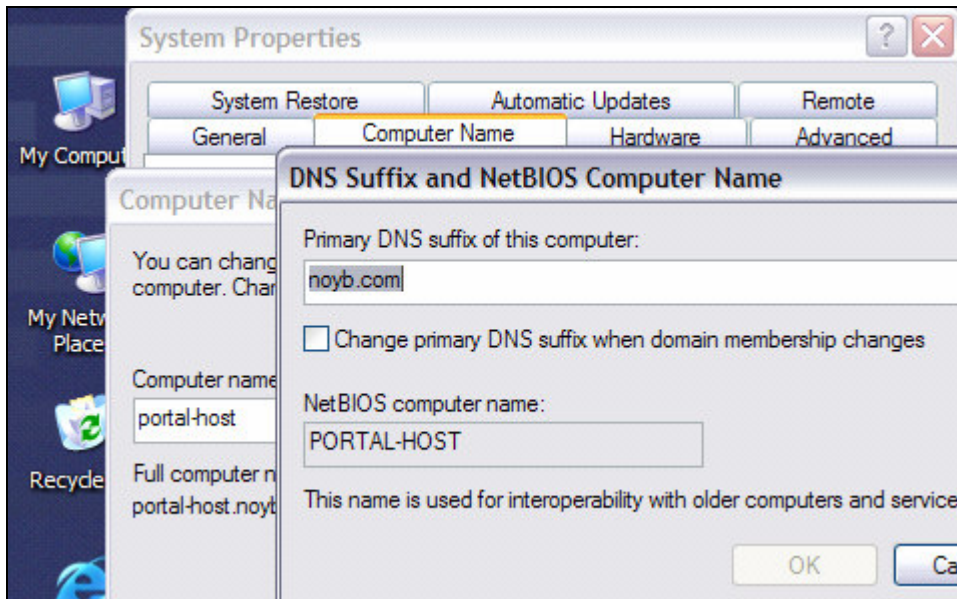
Prepare your system

Even though we will start with installing the WeSphere Portal Server V6 initially, we will extend this configuration to use DB2, Tivoli Directory Server (LDAP), HTTP Server, WebSphere Plug-in in later chapters. We recommend you to have at least a Pentium 4 (1.4 GHZ), 4GB of RAM and 30GB of disk space. If you want to configure vertical clustering on this machine then you need a bigger configuration than the recommended configuration. We assume you have loaded all the products in the local machine and are performing all the steps locally since these documents are targeted for beginning level portal administrators. In the final section, we will talk about architectural variations and clustering. Please refer to

<http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp?topic=/com.ibm.wp.ent.d>

[oc/wpf/inst_req.html](#) and **make sure that your system meets the recommended configuration** and has the supported product versions and fixpack levels.

Step 1: On your Windows desktop, right click on the **My Computer** icon and select **Properties** and then the **Computer Name** tab to review your computer fully qualified hostname (portal-host.noyb.com in our case) as shown in the screenshot below. You can modify the hostname (portal-host) and DNS suffix (noyb.com), if you like (but it is not necessary as you can also change the hosts file as explained in future steps). You need to re-boot your machine if you do change these entries.



Step 2: From the command prompt, ping your hostname and find out your IP address (192.168.1.101 in our case) as shown in the screenshot below.

```
C:\> Command Prompt

C:\>ping portal-host.noyb.com

Pinging portal-host [192.168.1.101] with 32 bytes of data:

Reply from 192.168.1.101: bytes=32 time<1ms TTL=128
Reply from 192.168.1.101: bytes=32 time<1ms TTL=128
Reply from 192.168.1.101: bytes=32 time<1ms TTL=128
Reply from 192.168.1.101: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Step 3: Navigate to the hosts file (usually in directory C:\WINDOWS\system32\drivers\etc) and edit it with the IP address (192.168.1.101 in our case) and desired host aliases (portal-host, db2-host, ldap-host, http-host, dmgr-host). Note that we listing multiple host aliases because although we are installing and

configuring all the products on the same machine, we want it look like they are installed on separate machines (useful if you want to give a demonstration later).

- Every time you login (or reboot) to the machine, make sure that the same IP address is assigned (use the ping command). Otherwise, setup a static IP address if you can (or re-edit the hosts file with the new IP address). Refer to the Load Balancer documentation provided in the printed version of the WAS V6 book for more information on setting up static IP address. If the IP address changes later then you will have a problem starting or working with the portal server unless you update that address in the hosts file.
- If your machine is not connected to the network then assign all the host aliases to IP address 127.0.0.1.
- Now ping each host alias (portal-host, db2-host, ldap-host, http-host, dmgr-host) from the command prompt and verify the hosts configuration changes you made.

