

Peregrine

Get-Resources 4.0.1

Installation Guide

For Windows, AIX, Linux, and Solaris

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About this Guide

Get-Resources™, part of the Get-It™ suite of Employee Self-Service products from Peregrine Systems®, provides a way for businesses to make the procurement of resources available to employees through the corporate intranet.

Get-Resources integrates with AssetCenter Procurement or ServiceCenter Request Management to enable employees to create requests for resources and to streamline the approval workflow of those requests throughout the organization.

This book provides step-by-step instructions for installing Get-Resources. This guide enables you to:

- Install the Peregrine OAA Platform and Get-Resources.
- Configure AssetCenter or ServiceCenter for use as a back-end system with Get-Resources.
- Utilize the Peregrine Portal Administration module to connect to the back-end system and configure Get-Resources settings.

Book audience

This guide is for Get-Resources administrators who configure and maintain the application. To use this guide effectively, you need to have knowledge of the following:

- XML and ECMAScript (or JScript/JavaScript)
- Operating guides, reference manuals, and other documentation for your PC hardware and operating system
- AssetCenter administration and functionality
- ServiceCenter administration and functionality

Related documentation

Refer to the following documentation for additional information:

- *Get-Resources Administration Guide* describes the Peregrine OAA platform and Get-Resources administration.
- *Get-Resources Release Notes* covers any late breaking documentation or known issues with Get-Resources. These documents are constantly updated and posted to the Customer Support web site. See [Contacting customer support](#) on page 10 for details on accessing the Customer Support website.

Associated applications

This guide does not contain information about products that may be used with Get-Resources, such as Peregrine OAA, AssetCenter, ServiceCenter, or Password Management. Refer to the appropriate product documentation for information about installing, configuring, and using these associated applications.

Note: A back-end system, either AssetCenter or ServiceCenter, must be installed and configured before you can install and configure Get-Resources. Peregrine OAA installs with Get-Resources, and only the installation of Peregrine OAA for Get-Resources is included in this guide.

Terminology

The terminology used in this guide and in the Get-Resources interface is based on AssetCenter 3.6 and 4.x, and ServiceCenter 4.x and 5.x.

Typographical conventions

This guide uses typeface conventions to indicate special terms and actions. These conventions and their meanings are:

Convention	Meaning
Bold	Information that you must type exactly as shown appears in bold . The names of buttons, menus, and menu options also appear in bold .
<i>Italics</i>	Variables and values that you must provide appear in <i>italics</i> . New terms also appear in <i>italics</i> .
Monospace	Code or script examples, output, and system messages appear in a monospace font. <pre>var msgTicket = new Message("Problem"); ... msgTicket.set("_event", "epmc");</pre> <p>An ellipsis (...) is used to indicate that portions of a script have been omitted because they are not needed for the current topic. Samples of code are not entire files, but they are representative of the information discussed in a particular section.</p>
Sans Serif	Filenames, such as login.asp , appear in a sans serif font.

Special elements

This book uses special elements to help you locate information. These special elements and their uses are in the following table:

Element	Usage
Important:	Information that is required to complete a task
Note:	Information that is of general interest
Tip:	Information that can make a task easier or faster
Warning:	Information that is needed when there is a risk of losing data

Organization of the guide

The following table shows you where in this guide to find the information you need.

This section	Provides information about
<i>Chapter 1, Introduction</i>	Installation requirements and description of different types of installations for Get-Resources.
<i>Chapter 2, Installation for Windows Platforms</i>	Detailed instructions for installing Get-Resources in a Windows environment.
<i>Chapter 3, Installation for Unix Platforms</i>	Detailed instructions for installing Get-Resources in a Unix environment.
<i>Chapter 4, Load Balancing</i>	Information on load balancing Get-Resources for optimum system memory management.
<i>Chapter 5, Back-end System Configuration</i>	Detailed instructions for configuring ServiceCenter or AssetCenter as a back-end system with Get-Resources.
<i>Chapter 6, Get-Resources Configuration</i>	Final configuration settings within the Peregrine Portal Administration module to complete the installation of Get-Resources.
<i>Chapter 7, Troubleshooting</i>	Troubleshooting installation problems with Apache Web server, Tomcat, OAA, and ServiceCenter.

Contacting customer support

For further information and assistance with this release, contact Peregrine Systems' Customer Support.

Peregrine CenterPoint web site

Current details of local support offices are available through the following main contacts or through the Peregrine CenterPoint Web site at:

<http://support.peregrine.com>

You need your current login user name and password to access this Web page.

To contact Peregrine customer support

- 1 Log in to the Web site with your login user name and password.
- 2 Click Go beside the CenterPoint support area.
- 3 From Contents on the left, select **Whom Do I Call?** to display the **Peregrine Worldwide Contact Information**.

Documentation web site

A complete listing of the available documentation is on Peregrine's CenterPoint Web site at:

<http://support.peregrine.com>

Important: Release Notes for this product are continually updated after the release of the product. Visit the Peregrine Customer Support Web site to ensure that you have the most current version of the Release Notes.

1 Introduction

CHAPTER

This chapter covers the following topics for Get-Resources:

- *Installation requirements* on page 14
- *Types of installations* on page 15
- *Back-end systems* on page 16

Installation requirements

This section outlines the recommended minimum configuration for proper installation and configuration of Get-Resources. Before beginning installation, ensure that you have the following.

Requirement	for Windows	for Unix
Java run-time environment	Java 2 SDK Standard Edition v1.3.1_05. <i>Available on the Get-Resources Installation CD.</i>	Java 2 SDK Standard Edition v1.3.1_05. <i>Available on the Get-Resources Installation CD.</i>
Application server	Any one of the following: <ul style="list-style-type: none"> ■ Tomcat 4.1.12 <i>Available on the Get-Resources Installation CD.</i> ■ WebSphere Application Server (WAS) 4.0 Fix Pack 2 or later ■ WebLogic 6.1 SP3 or SP4 ■ JRun 3.1 	Any one of the following: <ul style="list-style-type: none"> ■ Tomcat 4.1.12 <i>Available on the Get-Resources Installation CD.</i> ■ WebSphere 4.0 Fix Pack 2 or later ■ WebLogic 6.1 SP3 or SP4 ■ JRun 3.1
Back-end database(s)	ServiceCenter 4.0.x or 5.0.x AssetCenter 3.6, 4.1 & 4.2	ServiceCenter 4.0.x or 5.0.x AssetCenter 3.6, 4.1 & 4.2
Operating systems	<ul style="list-style-type: none"> ■ Windows 2000 Server SP2 	<ul style="list-style-type: none"> ■ AIX 5.1 ■ Red Hat Linux 7.3 ■ Solaris 2.7 or Solaris 2.8
Web Server	One of the following: <ul style="list-style-type: none"> ■ Apache 2.0.43 <i>Available on the Get-Resources installation CD.</i> ■ Microsoft IIS Server 5.0 ■ IBM HTTP Server 1.3.19 <i>Available on the WebSphere installation CD and from the IBM support Website</i> 	One of the following: <ul style="list-style-type: none"> ■ Apache 2.0.43 <i>Available on the Get-Resources installation CD.</i> ■ IBM HTTP Server 1.3.19 <i>Available on the WebSphere installation CD and from the IBM support Website</i>

Requirement	for Windows	for Unix
System Processor	Pentium, 400 MHz or faster	Linux: Pentium, 400 MHz or faster AIX: POWER 3, 375 MHz or faster Solaris: Ultra SPARC II, 300 MHz or faster
RAM	512 MB or more	512 MB or more
Hard disk space	100 MB for Get-Resources	100 MB for Get-Resources

Note: The AssetCenter API must be installed on the same system as your Web application. However, the AssetCenter database can be on another system. This means that when you install AssetCenter on the Get-Resources server, you must either use a full installation or a custom installation where you select the “AssetCenter API” option.

Types of installations

The Get-Resources installer offers two basic types of installation:

- Typical installation
- Custom installation

A *typical installation* installs a fixed configuration of Get-Resources all on one server. Typical installations are intended to set up development environments (see below).

A *custom installation* allows you to choose the exact components installed on a given server. Custom installations are intended for users who will be using alternate application servers, web servers, or to set up a production environment.

The Get-Resources custom installation can be optimized for two types of environments:

- Development environment
- Production environment

A *development environment* installation places all needed software and data on one server. It is intended for Get-Resources implementers to review application functionality and test customizations before deploying to a production environment. By default, the Get-Resources installer uses the development environment installation.

A *production environment* installation is optimized for performance and scalability. Each software function, such as an application server and Web server, are installed on different servers. In addition, there may be multiple instances of any one part of the basic Get-Resources environment. Given the amount of flexibility involved in such an installation, users must manually set up a production environment.

Back-end systems

In order to use Get-Resources, you must have a properly configured back-end system. Get-Resources uses the back-end system to:

- Authenticate users and define access rights
- Process application workflows and store data
- Store personalization settings for the web application

Refer to *Installation requirements* on page 14 for a complete list of the versions compatible with Get-Resources.

2 Installation for Windows Platforms

CHAPTER

This chapter covers the following topics:

- *Choosing an installation environment* on page 18
- *Migrating Get-Resources from previous versions* on page 21
- *Configuring alternate application servers* on page 25
- *Typical installation option* on page 69
- *Custom installation option* on page 76
- *Uninstalling Get-Resources* on page 84
- *Testing your installation* on page 84

Choosing an installation environment

You can install Get-Resources in one of two installation environments:

- Development environment
- Production environment

The Get-Resources development environment is intended for you to evaluate product features and customize your installation prior to deployment in a production environment. In a development environment, you install all software required for Get-Resources on one computer system.

You have two choices of development environment:

- Typical installation
 - Apache 2.0 Web server
 - Get-Resources deployed on Tomcat 4.1.12 application server
- Custom installation
 - Choice of Web server
 - Choice of application server where you deploy Get-Resources

The Get-Resources production environment is intended to maximize server performance and scalability, and to deploy any customizations you have made. In a production environment, you install the various components of Get-Resources on different servers to maximize performance.

You have two choices of production environment:

- Typical installation
 - Apache 2.0 Web server
 - Get-Resources deployed on multiple instances of Tomcat 4.1.12 application server
- Custom installation
 - Choice of Web server
 - Choice of application server where you deploy Get-Resources

Development Environment

The following procedures describe how to install Get-Resources in a development environment.

To install Get-Resources in a typical development environment:

- Step 1** Acquire all necessary hardware and software.
- Step 2** Install the back-end database required for Get-Resources.
- Step 3** Run the Get-Resources installer and select the Typical installation option. See *Typical installation option* on page 69.
- Step 4** Configure the back-end databases and create Get-Resources users.

To install Get-Resources in a custom development environment:

- Step 1** Acquire all necessary hardware and software.
- Step 2** Install the back-end database required for Get-Resources.
- Step 3** Install alternate application and Web servers.
- Step 4** Configure the alternate application server for Get-Resources. See *Configuring alternate application servers* on page 25.
- Step 5** Run the Get-Resources installer and select the Custom installation option. See *Custom installation option* on page 76.
- Step 6** Configure the back-end databases and create Get-Resources users.

Production Environment

The following procedures describe how to install Get-Resources in a production environment.

To install Get-Resources in a typical production environment:

- Step 1** Acquire all necessary hardware and software.
- Step 2** Install the back-end database required for Get-Resources on a separate server.
- Step 3** Run the Get-Resources installer and select the Typical installation option. See *Typical installation option* on page 69.
- Step 4** Configure multiple instances of Tomcat for load balancing on the Apache Web server.
- Step 5** Configure the back-end databases and create Get-Resources users.

To install Get-Resources in a custom development environment:

- Step 1** Acquire all necessary hardware and software.
- Step 2** Install the back-end database required for Get-Resources.
- Step 3** Install the alternate application server and Web server on separate servers.
- Step 4** Configure the alternate application server for Get-Resources. See *Configuring alternate application servers* on page 25.
- Step 5** Run the Get-Resources installer and select the Custom installation option. See *Custom installation option* on page 76.
- Step 6** Configure the Web servers and application servers for load balancing.
- Step 7** Configure the back-end databases and create Get-Resources users.

Migrating Get-Resources from previous versions

To migrate older versions of Get-It or Get-Resources to Get-Resources 4.0.1 requires both a manual data migration process and the recreation of any interface customizations you have made. The following steps describe the migration process.

Important: You should backup all Get-Resources and back-end system data prior to performing any steps for migration.

To migrate previous versions to Get-Resources 4.0.1:

- Step 1** Review the customizations of previous version and determine which customizations need to be recreated in Get-Resources 4.0.1. See *Recreating customizations in Get-Resources 4.0.1* on page 21.
- Step 2** Install Get-Resources 4.0.1 on a new system. See *Choosing an installation environment* on page 18.
- Step 3** Apply any required configuration changes to the back-end database you want to migrate to Get-Resources 4.0.1. See *Chapter 5, Back-end System Configuration*

Recreating customizations in Get-Resources 4.0.1

You cannot directly migrate customizations implemented in previous versions to Get-Resources 4.0.1. Instead, you must recreate your changes using the new features and methods available in Get-Resources 4.0.1.

The following sections describe how to recreate your customizations from previous versions.

No customizations

If you have made no customizations to Get-Resources, you can simply install Get-Resources 4.0.1 on a new system and migrate your data from your existing back-end database.

Customized JSP files

In previous versions, customers had to directly modify JSP files in order to add or remove certain functionality. The following table describes how to recreate some of the more common JSP file modifications.

JSP file modification	New method to use
Remove the user self-registration option from login page	Enable or disable the user registration option from the Administration Settings page
Remove the change password option from the login page	Enable or disable the change password option from the Administration Settings page

Personalized pages

Get-Resources 4.0.1 offers many more pages that you can personalize directly from the Web interface. If you personalized pages in a previous version, you must recreate your personalized pages in Get-Resources 4.0.1 using DocExplorer.

You can use personalization to:

- Add or remove fields from a page
- Save a personalized search results or details on your portal page

Customized skins, stylesheets, and themes

Get-Resources 4.0.1 has combined all interface images and stylesheets into themes. Users can no longer select separate skins and stylesheets. The new themes consist of skins (which themselves are composed of image files, frame definitions, and layer files), cascading stylesheet definitions, and XSL templates.

Although you may copy over older custom themes to Get-Resources 4.0.1, you may experience rendering errors due to the new images, CSS definitions, frame definitions, and layers. It is recommended that you recreate any custom themes using the Get-Resources 4.0.1 version of the classic theme as your template.

Alternate login pages and authentication methods

If you used a custom login page or an alternate authentication method in a previous version, you can re-use or recreate these customizations using the updated instruction. You can find information about alternate security methods in the *Get-Resources Administration Guide*.

Customizations made with a previous tailoring kit

Many customizations that required a tailoring kit in previous versions can now be done directly from the Get-Resources Web interface. The following table describes how to recreate some of the more common tailoring kit changes.

Tailoring kit modification	New method to use
Added or removed fields from a form	Add or remove fields from Personalization
Added a new language or locale to the Get-Resources interface	Create and edit language strings files directly. You may also purchase officially supported language packs from Peregrine Systems
Made changes to the common, portal, or Peregrine Studio packages	These packages are no longer available for tailoring, however most common interface settings can now be customized from the Administration Settings page.
Made changes to schemas or ECMA server-side scripts	Review new functionality and determine if you still need the customized scripts and schemas. If you do need the customizations, you will to recreate them in the current version of the Get-Resources tailoring kit.

Configuring an existing back-end database for Get-Resources 4.0.1

The following table lists the options available for data migration.

Get-Resources 2.5 to Get-Resources 4.0.1

Back-end version	Migration required
AssetCenter 3.6	Apply Get-Resources 4.0.1 scripts to existing AssetCenter 3.6
AssetCenter 4.x	Apply Get-Resources 4.0.1 scripts to existing AssetCenter 4.x
ServiceCenter 3.0	Upgrade to ServiceCenter 4.x or 5.0.x
ServiceCenter 4.x	Apply Get-Resources 4.0.1 unloads to existing ServiceCenter 4.x
ServiceCenter 5.0.x	Apply Get-Resources 4.0.1 unload files to existing ServiceCenter 5.0.x

Configuring alternate application servers

You must install a Java-enabled application server to support your Peregrine Web applications. Peregrine OAA supports the following alternate application servers:

- *Existing Tomcat and Apache servers*
- *Tomcat 4.1.12 connecting to IIS 5.0*
- *WebSphere 4.0.2*
- *WebLogic 6.1 SP3 or SP4*
- *JRun 3.1*

The Get-Resources typical installation option installs Tomcat 4.1.12 and connects it to an Apache 2.0 web server. You can also install Tomcat 4.1.12 using the custom installation option.

Important: If you want to use an application server other than Tomcat 4.1.12, then you must configure your application and Web servers *prior* to running the Get-Resources installer.

See the following sections for instructions configuring alternate application servers for Get-Resources.

Existing Tomcat and Apache servers

If you use the typical installation option, the Get-Resources installer configures Tomcat for the Apache Web server. You can configure your existing Tomcat and Apache servers to connect, even those that are NOT installed by the installer.

To configure an existing Tomcat server to connect to an Apache server:

- 1 Copy the following files to the directories indicated below.

Note: You can get these files from a machine that has Tomcat and Apache installed through the installer using the **Typical** installation.

Copy this file	from another machine that has a typical installation
■ <code>mod_jk.conf</code>	to your machine in the <code>\conf</code> directory of your Tomcat installation. The default file path is: <code>C:\Program Files\Apache Group\Tomcat 4.1\conf</code>
■ <code>workers.properties</code>	to your machine in the <code>\conf</code> directory of your Tomcat installation. The default file path is: <code>C:\Program Files\Apache Group\Tomcat 4.1\conf</code>
■ <code>mod_jk.dll</code>	to your machine in the <code>\modules</code> directory of your Apache installation. The default file path is: <code>C:\Program Files\Apache Group\Apache2\modules</code>

- 2 Using a text editor, open files `mod_jk.conf` and `workers.properties` located in the `\conf` directory under your Tomcat installation.

The default file path is:

`C:\Program Files\Apache Group\Tomcat 4.1\conf`

- a Find all instances where the path to Tomcat appears and edit these to reflect your current Tomcat 4.1 installation path.
- b Find all instances where the path to JDK appears and edit these to reflect your current JDK installation path.

- 3 Using a text editor, open the `http.conf` file located in `C:\Program Files\Apache Group\Apache2\conf`.

- a Add the following lines to the bottom of this file:

```
### Tomcat4.1 Connector ###
include "<your Tomcat installation>/conf/mod_jk.conf"

# PRGNDIRECT #
RewriteEngine on
```

```
RewriteRule ^/$ http://%{SERVER_NAME}%{SERVER_PORT}/oaa/login.jsp
[R=permanent]
RewriteRule ^/oaa/$ http://%{SERVER_NAME}%{SERVER_PORT}/oaa/login.jsp
[R=permanent]
```

- b** Go to the **modules** section in this file and verify that the following line is in the file and is NOT commented:

```
LoadModule rewrite_module modules/mod_rewrite.so
```

- 4** Using a text editor, open the `server.xml` file in the `\conf` folder under your Tomcat installation.

The default file path is: `C:\Program Files\Apache Group\Tomcat 4.1\conf`.

- a** Add the following lines under the Services section:

```
<Connector className="org.apache.jsp.tomcat4.Ajp13Connector"
port="8009" minProcessors="5" maxProcessors="75"
acceptCount="10" debug="0"/>
```

- b** Save the file.

- 5** Make sure that you stop both Tomcat and Apache.
- 6** Use the installer to install Get-Resources using the **Custom** option. See *Custom installation option* on page 76.
- 7** Start Tomcat.
- 8** Start Apache.
- 9** Start your Get-Resources application.

Tomcat 4.1.12 connecting to IIS 5.0

You can use the Get-Resources installer to install the Tomcat application server. If you use the typical installation option, the Get-Resources installer configures Tomcat for the Apache Web server. In order to configure the Tomcat for the IIS Web server, you must perform a custom installation and configure IIS using the following instructions.

Note: These instructions are for setting up Tomcat to use a single Java Virtual Machine (JVM). See the *Installation Guide* chapter on *Load Balancing* for installing multiple JVMs.

To configure Tomcat to connect to an IIS 5.0 Web server:

- Step 1** Run the Get-Resources installer. See *Running the installer* on page 28.
- Step 2** Configure the ISAPI Plugin for IIS. See *Configuring the ISAPI Plugin for IIS* on page 29.
- Step 3** Configure IIS to use `isapi_redirector2.dll` as an ISAPI Filter. See *Configuring the isapi_redirector2.dll as an ISAPI filter* on page 29.
- Step 4** Create and configure a `jakarta` virtual directory in IIS. See *Configuring a jakarta virtual directory in IIS* on page 30.
- Step 5** Create and configure an `oaa` virtual directory in IIS. See *Configuring an oaa virtual directory in IIS* on page 31.
- Step 6** Edit the `server.xml` file to add performance settings and configure alternate communications ports (Optional). See *Editing the server.xml file for IIS* on page 32.
- Step 7** Install Tomcat as a service using `installservice.bat` (Optional). This file can be found in the `Tomcat\bin` directory. See *Installing Tomcat as a service* on page 33.
- Step 8** Pre-compile JSP files for your production environment. See *Precompiling JSP files for a Tomcat production environment* on page 34.

Running the installer

Run the Get-Resources installer and select the Custom installation option. See *Custom installation option* on page 76.

Configuring the ISAPI Plugin for IIS

The ISAPI plugin for IIS establishes a connection between Tomcat and the IIS Web server. Before configuring IIS to use this connector, you must update the registry file entry for the connector to ensure that it has the proper paths listed for the Tomcat application server.

The Get-Resources installer automatically places a copy of the ISAPI plugin for IIS in the following folder:

`c:\Program Files\Peregrine\Common\Tomcat4\bin`

Use the following procedures to configure the plugin for your intranet environment.

To configure the ISAPI plugin for IIS:

- 1 Open the file `jk2.reg` in a text editor. The default file path is:
`C:\Program Files\Peregrine\Common\Tomcat4\conf`
- 2 Verify that the “serverRoot” and “workersFile” values list the proper installation path to Tomcat. By default, these values are:

```
“ServerRoot”=“C:\Program Files\Peregrine\Common\Tomcat4”
“workersFile”=“C:\Program Files\Peregrine\Common\Tomcat4\conf\workers2.properties”
```

Tip: You do not need to make any changes if you installed this file to the default location.

- 3 Save and close the `jk2.reg` file.
- 4 Double-click on the `jk2.reg` file from Windows Explorer.
Windows adds the registry settings to the Windows registry.

Configuring the `isapi_redirector2.dll` as an ISAPI filter

To establish a connection between Tomcat and IIS, you will need to install `isapi_redirector2.dll` as an ISAPI filter.

To install `isapi_redirect2.dll` as an ISAPI filter:

- 1 From Windows Control Panel > Administrative Tools, open the Internet Services management console.
- 2 Right-click the **Default Web Site** node and then click **Properties**.
- 3 Click the **ISAPI Filters** tab.

- 4 Click **Add**.
- 5 Enter the following information:
 - a **Filter Name:** jakarta. The filter name must match the name you defined the `jk2.reg` registry file. By default, the filter name is jakarta.
 - b **Executable:** `isapi_redirector2.dll`. The default file path is:
`C:\Program Files\Peregrine\Common\Tomcat4\bin\isapi_redirector2.dll`
- 6 Click **OK**.

Note: You must stop and then start the IIS service for changes to take effect. You must also restart Peregrine Tomcat.
- 7 From the Internet Services management console, right-click the **Default Web Site** node, then select **Properties>Isapi Filters** again.
 The ISAPI filter in IIS displays a green status arrow to indicate that it is running.
- 8 Close the Internet Services management console.

Configuring a jakarta virtual directory in IIS

The ISAPI plugin for IIS requires a specific virtual directory in order to run. Use the following guidelines to create the virtual directory on the Default Web Site. For specific instructions about configuring IIS, refer to your Windows Help.

To configure a jakarta virtual directory in IIS:

- 1 Use the following guidelines to create the virtual directory on the Default Web Site.

Requirements for a jakarta virtual directory

Requirement	Setting
Create virtual directory	jakarta
Map to physical path	<Tomcat>\bin
Directory access rights	Read, Run scripts, Execute

- 2 For <Tomcat>, enter the path to your Tomcat installation. The default file path is:
`C:\Program Files\Peregrine\Common\Tomcat4`

Configuring an oaa virtual directory in IIS

To run Get-Resources from IIS, you need to create a virtual directory that maps to your Tomcat deployment folder. For specific instructions about configuring IIS, refer to your Windows Help.

To configure an oaa virtual directory in IIS:

- 1 Use the following guidelines to create the virtual directory.

Requirements for an oaa virtual directory

Requirement	Setting
Create virtual directory	< <i>oaa</i> >
Map to physical path	< <i>Tomcat</i> >\webapps\< <i>oaa</i> >
Directory access rights	Read, Run scripts

- 2 For <*oaa*>, enter the name of the virtual directory you want to use for Get-Resources. The recommended virtual directory name is **oaa**. If you choose to use another virtual directory name, you must enter the new name in the following places:
 - Rename the folder <*Tomcat*>\webapps\oaa to <*Tomcat*>\webapps\<new name>
 - Rename the [uri] mappings in `workers2.properties` from `oaa` to the new virtual directory name.
 - Rename all the `oaa` context entries in `mod_jk2.conf` from `oaa` to the new virtual directory name.
 - Rename the <Context> path and `docBase` attributes in `server.xml` from `oaa` to the new virtual directory name.

Important: The virtual directory name you choose will become part of the URL users enter to connect to Get-Resources. For example:
`http://server_name/<new name>/login.jsp`

- 3 For <*Tomcat*>, enter the path to your Tomcat installation. The default file path is:
 C:\Program Files\Peregrine\Common\Tomcat4

Editing the server.xml file for IIS

A default Tomcat installation is sufficient for most Get-Resources installations. However, if you are experiencing performance problems or communications port conflicts, you may need to edit the Tomcat **server.xml** file to correct these problems.

Performance settings

The Tomcat **server.xml** file allows you to determine how Tomcat processes Get-Resources files. If you are experiencing performance problems, you can change the `<Context>` setting for Get-Resources to disable page reloading.

Tip: Make a back up copy of the **server.xml** file before editing.

To edit the server.xml performance settings:

- 1 Open the file **server.xml** in any text editor. The default file path is:
C:\Program Files\Peregrine\Common\Tomcat4\conf
- 2 Create a `<Context>` element entry from Tomcat to the Get-Resources deployment directory to establish a point of reference for `docBase`.

Add the entry just above the “examples” Context entry.

Example:

```
<Context path="/oaa"
docBase="<Tomcat>/webapps/oaa"
crossContext="false"
debug="0"
reloadable="false" >
</Context>
```

Setting the `reloadable` attribute to `false` results in faster JSP page processing. For the `docBase` attribute, set `<Tomcat>` to the absolute path of the first or master Tomcat instance.

Communications port settings

If your Get-Resources server already uses communications ports 8005 and 8009, you will have a port conflict if you install Tomcat with the default settings. To avoid a port conflict, you must edit the **server.xml** file to change the communications ports used by Tomcat.

Important: You do not need to perform these optional steps if Tomcat’s default communication ports are available on your server.

Tip: Make a back up copy of the `server.xml` file before editing.

To edit the `server.xml` communications port settings:

- 1 Open the file `server.xml` in any text editor. The default file path is:
`C:\Program Files\Peregrine\Common\Tomcat4\conf`
- 2 Update the port number attribute of the `<Server>` element to a free communications port.

Note: By default, Tomcat uses port 8005 for shutdown requests.

Example:

```
<Server port="8005" shutdown="SHUTDOWN" debug="0">
```

- 3 Update the port attribute of the Coyote Connector `<Connector>` element to a free communications port.

Note: By default, Tomcat uses port 8009 for the Coyote connector.

Example:

```
<Connector className="org.apache.coyote.tomcat4.CoyoteConnector" port="8009"
minProcessors="5" maxProcessors="75" enableLookups="true" redirectPort="8443"
acceptCount="10" debug="0" connectionTimeout="20000"
useURValidationHack="false"
protocolHandlerClassName="org.apache.jk.server.JkCoyoteHandler" />
```

- 4 Save the `server.xml` file.
- 5 Restart Tomcat for your new settings to take effect.

Installing Tomcat as a service

After you have edited the Tomcat files, you can install Tomcat as Windows services using `installservice.bat`.

To install Tomcat as a service:

- 1 Open a DOS command prompt and change directories to your Tomcat bin directory.
- 2 Enter the following command to create each Tomcat instance:

```
installservice <service name> <tomcat_home> <jvm_dll_path>
```

Where `<service name>` is the name you wish to give the Tomcat service, `<tomcat_home>` is the Tomcat install directory of the instance for which you are creating the service, and `<jvm_dll_path>` is the Java SDK install directory.

The second and third parameters are optional if you have already set the CATALINA_HOME and JAVA_HOME environment variables.

Example:

```
installservice Tomcat8009 C:\Program Files\Peregrine\Common\Tomcat4
C:\Program Files\Peregrine\Common\jdk1.3.1_05
```

- 3 Repeat step 1 through step 2 for each Tomcat service you wish to create.

Precompiling JSP files for a Tomcat production environment

If you plan to use Tomcat 4.1.12 in a production environment or on a system with multiple processors, you will need to pre-compile the JSP files deployed for Get-Resources. This extra configuration step is the result of a known issue with Tomcat. See the following URL for more details about this issue:

http://nagoya.apache.org/bugzilla/show_bug.cgi?id=14077

To pre-compile JSP files for Tomcat 4.1.12:

- 1 Stop the Tomcat application server.
- 2 Clear Tomcat cache. The default path is:
C:\Program Files\Peregrine\Common\Tomcat4\work\Standalone\localhost\oaa
- 3 Open a command prompt.
- 4 Enter one of the following commands based upon your operating system:

Operating system	Command required
Windows	set JASPER_HOME=<Tomcat directory>

For <Tomcat directory> enter the absolute path to your Tomcat installation.

- 5 Change directories to the Tomcat bin folder.

Operating system	Command required
Windows	<code>cd %jasper_home%\bin</code>

- 6 Run the precompile batch file.

Operating system	Command required
Windows	<code>precompile <Web app name> <Tomcat instance name></code>

For *<Web app name>* enter the name of the Get-Resources deployment folder. You may omit this name if you are using the default folder named `oaa`.

For *<Tomcat instance name>* enter the name of the Tomcat instance you have installed. You may omit this name if you are using the default instance named `Standalone`.

The batch file displays the progress of the conversion. When it is complete, the command prompt returns.

Start the Tomcat application server.

WebSphere 4.0.2

Use the following procedures to configure WebSphere to run Get-Resources on Windows.

To configure WebSphere 4.02:

- Step 1** Install WebSphere 4.02. Your version of WebSphere 4.0.2 includes the IBM HTTP Server.
- Step 2** Deploy the Portal WAR file to WebSphere to create the necessary folder structure for Get-Resources. See *Deploying the Portal WAR file to WebSphere* on page 36.
- Step 3** Set the JVM Java heap size for each WebSphere instance running Get-Resources. See *Setting the Java heap size* on page 38.
- Step 4** Create the virtual directory you want to use for Get-Resources in your Web server. See *Configuring a virtual directory for IBM HTTP Server* on page 40.
- Step 5** Run the Get-Resources installer. See *Running the installer* on page 40.

If you plan on setting up a WebSphere Portal Server or a WebSphere Translation Server, see *Installing WebSphere Portal Server* on page 41 or *Configuring WebSphere Translation Server for Get-Resources* on page 50.

Deploying the Portal WAR file to WebSphere

The Portal WAR file creates the folder structure necessary to deploy Get-Resources in your application server. After you have deployed this file to WebSphere you will be ready to run the Get-Resources installer.

To deploy the Portal WAR file to WebSphere:

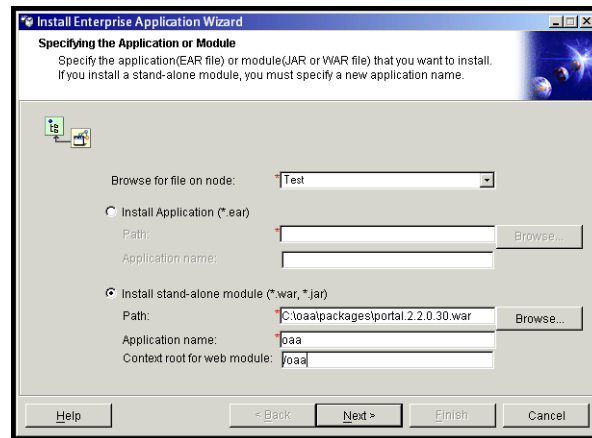
- 1 Verify that the WebSphere Admin Server has been started.
- 2 Open the WebSphere Advanced Administrator's Console (**Start > Programs > IBM WebSphere > Application Server > Administrator's Console**).
- 3 On the menu at the left side of the console, right-click on **Enterprise Applications** and select **Install Enterprise Application**.
- 4 On the screen displayed, do the following:
 - a Select **Install stand-alone module**.
 - b In the **Path** field, browse to the path to the portal<version #>.war file. The default file path is: <CD Rom Drive>:\portal<version #>.war.

For <version #>, select the most recent version available (4.0.0.44 or greater).

- c In the **Application Name** field, type oaa.
- d In the **Context Root** field, type the name of Get-Resources virtual Web server directory you wish to use. Example: /oaa.

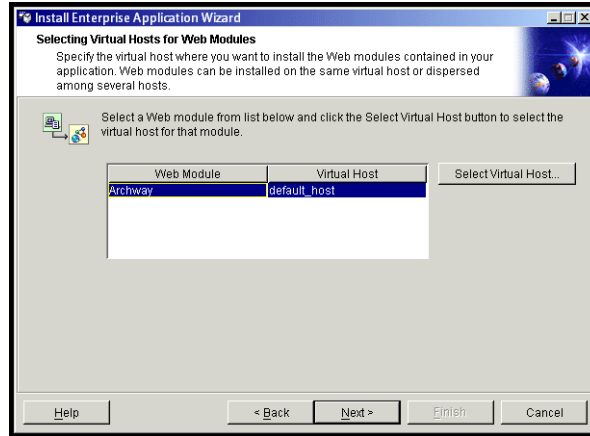
Important: You must create a Web server virtual directory matching the context root you enter here.

The following screen shows the completed form.

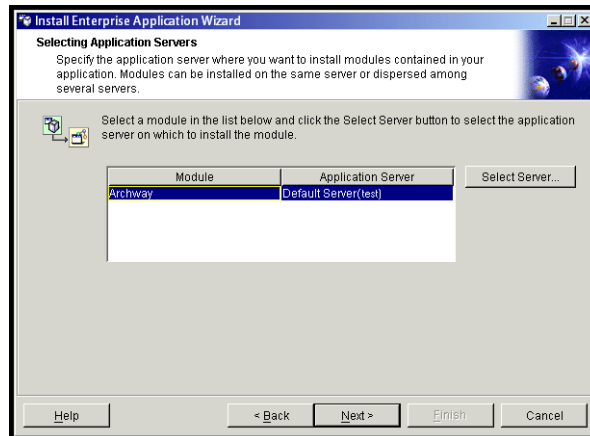


- 5 Click **Next**.
- 6 Click **Next** on the following dialog boxes. These screens will not be used.
 - Mapping Users to Roles
 - Mapping EJB Run As Roles to Users
 - Binding Enterprise Beans to JNDI Names
 - Mapping EJB References to Enterprise Beans
 - Mapping Resource References to Resources
 - Specifying the Default Datasource
 - Specifying Data Sources for Individual CMP Beans

- 7 In the Selecting Virtual Hosts for Web Modules, select the WebSphere server instance you want to use, and then click **Next**.



- 8 In the Selecting Application Servers dialog box, select the WebSphere server instance you want to use, and then click **Next**.



- 9 On the dialog box displayed, click **Finish**.

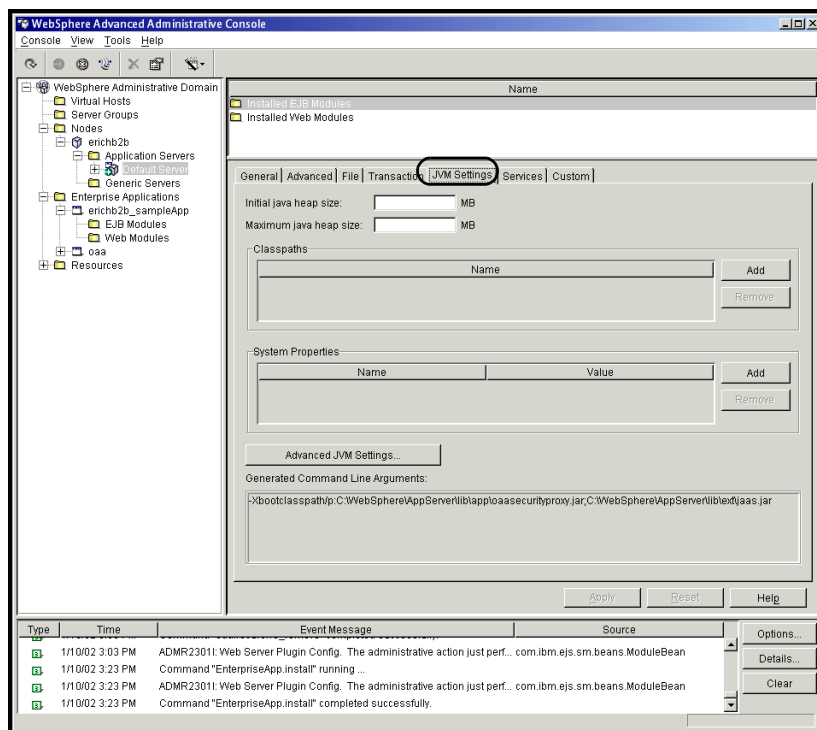
Setting the Java heap size

You can configure how much memory is available for your application server instances. The following instructions assume you are only using one WebSphere instance. You will need to adjust the heap size accordingly if you are load balancing across several WebSphere instances.

To set the Java heap size:

- 1 Verify that the WebSphere Admin Server has been started.
- 2 Open the WebSphere Advanced Administrator's Console (Start > Programs > IBM WebSphere > Application Server > Administrator's Console).
- 3 Click Nodes > <System Name> > Application Servers > <Application server name>.

The server settings page opens.



- 4 Click the JVM Settings tab.
- 5 Set the following JVM settings:
 - a Initial java heap size. Type 60.
 - b Maximum java heap size. Type the value you want for heap memory. This setting should be at least 225 MB, but not more than 512 MB.

Note: Make sure that the setting for maximum heap size is less than the free RAM available to the application server(s). Exceeding the amount of available RAM causes the JVM processes to swap to disk, reducing overall performance. A setting of 256 MB should be sufficient for most systems.

Configuring a virtual directory for IBM HTTP Server

You must configure a virtual directory for Get-Resources in your Web server. The following instructions assume that you are using WebSphere's built-in Web server – IBM HTTP Server. See your Web server documentation to determine how to create a virtual directory if you are using another Web server.

To configure a virtual directory for IBM HTTP Server:

- 1 Stop the IBM HTTP Server.
- 2 Open the file `httpd.conf` in any text editor. The default file path is:

`C:\IBM HTTP Server\conf`

- 3 Add the following line to the end of the file:

```
Alias /oaa/ "C:/WebSphere/AppServer/installedApps/oaa.ear/portal.  
<version>.war/"
```

For `<version>`, enter the version number of the WAR file you installed.

Important: The name you define for the virtual directory here must match the context root you defined in WebSphere.

- 4 Save the file.
- 5 Start the IBM HTTP Server.

Running the installer

Run the Get-Resources installer and select the Custom installation option. See *Custom installation option* on page 76.

Installing WebSphere Portal Server

You can configure Get-Resources to display in a WebSphere Portal Server in one of two configurations:

- All Get-Resources and WebSphere components running on a single system. See *Recommended WebSphere Portal Server configuration* on page 41.
- Get-Resources components running on one system and WebSphere components running on another. See *Alternate WebSphere Portal Server configuration* on page 43.

Important: In either configuration, you must first install WebSphere Portal Server. See your WebSphere Portal Server documentation for details.

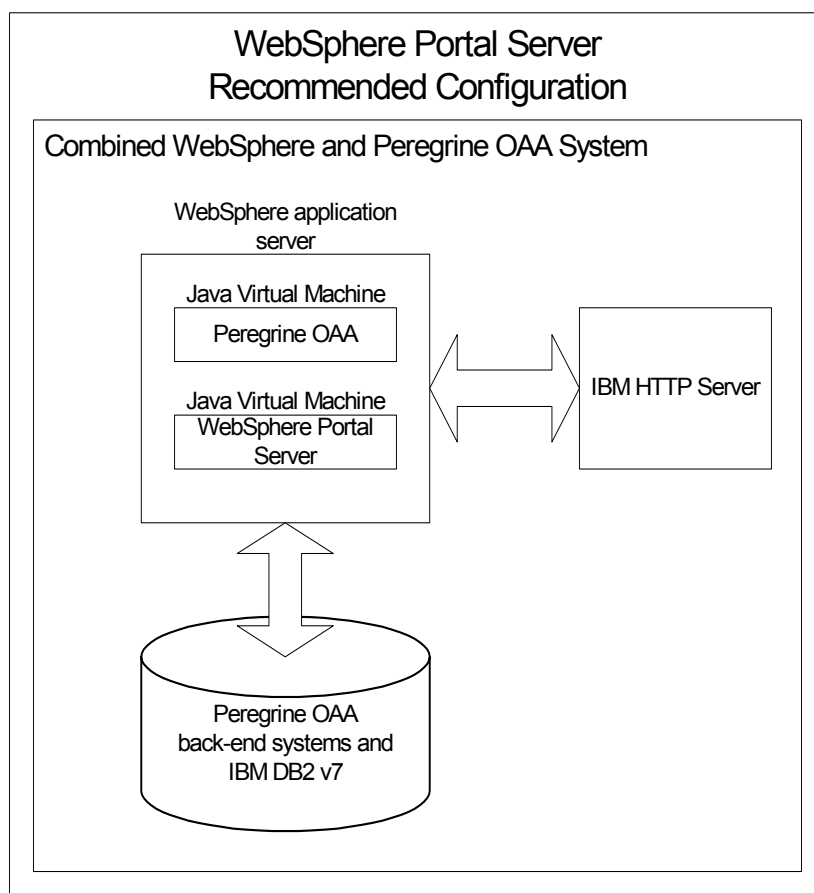
Recommended WebSphere Portal Server configuration

Use the following steps to configure Get-Resources for the recommended WebSphere Portal Server configuration:

- Step 1** Review the WebSphere Portal Server installation requirements. See *WebSphere Portal Server installation requirements* on page 44.
- Step 2** Generate a Get-Resources WAR file containing the portal components WebSphere Portal Server can display. See *Generating a Get-Resources WAR file* on page 45.
- Step 3** Login to the Get-Resources server and stop the WebSphere application server.
- Step 4** Modify the *archway.xml* to change the HTTP authentication method used from Basic to Alternate. See *Modifying the archway.xml file* on page 46.
- Step 5** Modify the *web.xml* to enable the AuthController servlet. See *Modifying the web.xml file* on page 46.
- Step 6** Modify the *ibm-web-ext.xmi* file to set the *fileServingEnabled* parameter. See *Modifying the ibm-web-ext.xmi file* on page 47.
- Step 7** Start the WebSphere application server. See *Starting the WebSphere application server* on page 48.

- Step 8** Deploy the Get-Resources WAR file to WebSphere Portal Server. See *Deploying the Get-Resources WAR file to WebSphere Portal Server* on page 48.
- Step 9** Create places and pages in WebSphere Portal Server to display Get-Resources portlets. See *Configuring WebSphere Portal Server places and pages* on page 48.
- Step 10** Enable edit rights for Get-Resources portlets. See *Enabling edit rights for Get-Resources portlets* on page 49.

When complete, your installation will have the following configuration:

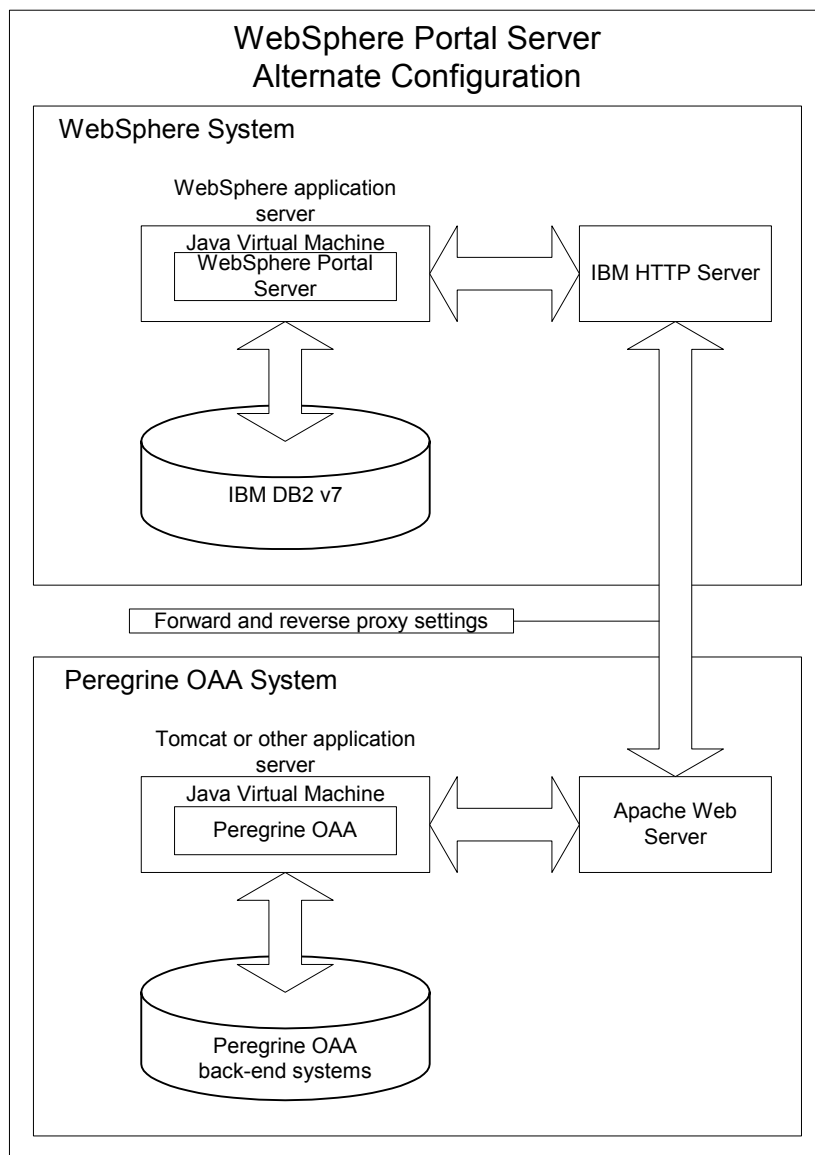


Alternate WebSphere Portal Server configuration

Use the following steps to configure Get-Resources for the alternate WebSphere Portal Server configuration:

- Step 1** Review the WebSphere Portal Server installation requirements. See *WebSphere Portal Server installation requirements* on page 44.
- Step 2** Generate a Get-Resources WAR file containing the portal components WebSphere Portal Server can display. See *Generating a Get-Resources WAR file* on page 45.
- Step 3** Login to the Get-Resources server and stop the WebSphere application server. See *Stopping the WebSphere application server* on page 46.
- Step 4** Modify `archway.xml` to change the HTTP authentication method used from Basic to Alternate. See *Modifying the archway.xml file* on page 46.
- Step 5** Modify `web.xml` to enable the AuthController servlet. See *Modifying the web.xml file* on page 46.
- Step 6** Modify the `ibm-web-ext.xmi` file to set the `fileServingEnabled` parameter. See *Modifying the ibm-web-ext.xmi file* on page 47.
- Step 7** Modify `setDomain.js` to call the `SetDomain` function. See *Modifying the setDomain.js file* on page 47.
- Step 8** Start the WebSphere application server. See *Starting the WebSphere application server* on page 48.
- Step 9** Deploy the Get-Resources WAR file to WebSphere Portal Server. See *Deploying the Get-Resources WAR file to WebSphere Portal Server* on page 48.
- Step 10** Create places and pages in WebSphere Portal Server to display Get-Resources portlets. See *Configuring WebSphere Portal Server places and pages* on page 48.
- Step 11** Enable edit rights for Get-Resources portlets. See *Enabling edit rights for Get-Resources portlets* on page 49.
- Step 12** Modify IBM HTTP Server's `httpd.conf` file to add forward and reverse proxy URLs. See *Modifying httpd.conf for IBM HTTP Server* on page 50.

When complete, your installation will have the following configuration:



WebSphere Portal Server installation requirements

The recommended configuration of the WebSphere Portal Server requires the following items to be installed on the same server:

- WebSphere application server 4.0.2

- IBM HTTP Server 1.3.19
- IBM DB2 v7 database server
- WebSphere Portal Server
- A custom installation of Get-Resources with WebSphere selected as the application server

The alternate configuration of the WebSphere Portal Server requires the following items be installed on a minimum of two servers:

- Server 1
 - WebSphere application server 4.0.2
 - IBM HTTP Server 1.3.19
 - IBM DB2 v7 database server
 - WebSphere Portal Server
- Server 2
 - Get-Resources compatible application server
 - Web server
 - Back-end database for Get-Resources
 - An installation of Get-Resources

Generating a Get-Resources WAR file

In order to display Get-Resources in WebSphere Portal Server, you must first export the Get-Resources portal components as a WAR file. You can then import this WAR file into WebSphere Portal Server, and choose the portal components you want to display as WebSphere Portal Server portlets.

To generate a Get-Resources WAR file:

- 1 Login to the Get-Resources administration page (`admin.jsp`).
- 2 Click **IBM WebSphere Portal Integration**.
- 3 Enter the following configuration information:
 - a **Source Path**. Enter the full path to the `WebSphere.war` in the Get-Resources **package** folder. By default, this folder is:
`<WebSphere>/oaa/packages`
 - b **Destination Path**. Enter the full path and file name you want to use for the generated Get-Resources WAR file.

- c **Base URL.** Enter the full URL to the Get-Resources deployment directory.
By default, this URL is:

`http://<server>:<port>/oaa/servlet/basicauth`

- 4 Click **Generate WAR file**.

Get-Resources generates a new WAR file with the name and path specified in the Destination Path of step 3.

Stopping the WebSphere application server

Login to the Get-Resources server and stop the WebSphere application server before modifying the configuration.

Modifying the archway.xml file

In order to login via WebSphere Portal Server, you configure Get-Resources to use an alternate HTTP authentication method.

To modify the archway.xml file:

- 1 Using a text editor, open the `archway.xml` file located at:
`<application server>\webapps\oaa\WEB-INF\default.`
- 2 Edit the line containing:
`<httpauthclass ...>HttpBasicAuthenticationManager</httpauthclass>`
- 3 Change the value `HttpBasicAuthenticationManager` to `HttpAlternateAuthenticationManager`.
- 4 Save the file.

Modifying the web.xml file

You will need to enable the `AuthController` servlet to establish a proxy for HTTP basic authentication.

To modify the web.xml file:

- 1 Using a text editor, open the `web.xml` file located at:
`<application server>\webapps\oaa\WEB-INF.`
- 2 Add the following lines at the end of the last `<servlet>` definition:

```
<servlet>
  <servlet-name>AuthController</servlet-name>
  <display-name>AuthController</display-name>
  <description>A controller (decorator) servlet that can be used to
enable configurable auth protection of any resource.</description>
```

```

    <servlet-class>com.peregrine.oaa.archway.AuthControllerServlet
    </servlet-class>
    <load-on-startup>2</load-on-startup>
</servlet>

<servlet-mapping>
  <servlet-name>AuthController</servlet-name>
  <url-pattern>/servlet/basicauth/*</url-pattern>
</servlet-mapping>
<servlet-mapping>
  <servlet-name>AuthController</servlet-name>
  <url-pattern>/servlet/auth/*</url-pattern>
</servlet-mapping>

```

- 3 Save the file.

Modifying the `ibm-web-ext.xmi` file

You need to set the `fileServingEnabled` parameter to `true` to handle static content.

To modify the `ibm-web-ext.xmi` file:

- 1 Using a text editor, open the `ibm-web-ext.xmi` file. The default file path is:
`c:\WebSphere\AppServer\installedApps\getit.ear\getit.war\WEB-INF`
- 2 Find the `fileServingEnabled` parameter and set it to `true`.
`fileServingEnabled="true"`
- 3 Save the file.

Modifying the `setDomain.js` file

To use the alternate configuration of WebSphere Portal Server, you must enable the `setDomain` function.

Note: If you are setting up WebSphere Portal Server in the recommended configuration, you may skip these instructions.

To modify the `setDomain.js` file:

- 1 Login to the Get-Resources server.
- 2 Stop your application server.
- 3 Using a text editor, open the `setDomain.js` file located at:
`<application server>\webapps\oaa\js.`

- 4 Add the following line to the end of the file:

```
setDomain();
```

- 5 Save the file.

Starting the WebSphere application server

Start the WebSphere application server for changes to take effect.

Deploying the Get-Resources WAR file to WebSphere Portal Server

After you deploy the Get-Resources WAR file to WebSphere Portal Server, you can then configure the portlets you want to display, the display settings, and the access rights to each portlet.

See your WebSphere Portal Server documentation for detailed instructions.

To deploy the Get-Resources WAR file:

- 1 Login to the WebSphere Portal as `wpsadmin` or another user with administrative rights.
- 2 Select **Portal Administration** from the Places menu.
- 3 Click **Portlets > Install Portlets**.
- 4 Click **Browse** and navigate to the Destination path you entered when you created the Get-Resources WAR file.
- 5 Click **Next** to load the Get-Resources WAR file.

WebSphere Portal Server displays a list of portlets to be installed.

- 6 Click **Install**.

WebSphere Portal Server installs the portlets and displays the message “Portlets successfully installed.”

Configuring WebSphere Portal Server places and pages

Note: Refer to your WebSphere Portal documentation for details on places and pages.

You can deploy Get-Resources portlets in any place or page that meet the following requirements.

Places

Your WebSphere Portal Server places must have the following characteristics:

- Supported markups must include HTML

Pages

Your WebSphere Portal Server pages must have the following characteristics:

- Supported markups must include HTML
- The page must be set to “allow all portlets that a user can access”
- All Get-Resources portlets that you display in a page must grant “all authenticated users” the minimum edit permission.

Enabling edit rights for Get-Resources portlets

WebSphere Portal Server users will need edit rights to the Get-Resources portlets in order to add and customize them to their portal page.

To enable edit rights for Get-Resources portlets:

- 1 Login to the WebSphere Portal as **wpsadmin** or another user with administrative rights.
- 2 Select **Portal Administration** from the Places menu.
- 3 Click **Security > Access Control List**.
- 4 Select the **Special groups** option and select **All authenticated users** from the select box.
- 5 From the Select the objects for the permissions select box, select **portlet applications**.
- 6 Select the **Search on** option, and then enter **Peregrine** in the Name contains field.
- 7 Click **Go**.

WebSphere Portal Server displays a list of portlets with Peregrine in the name.

- 8 In the Edit column, click **Select All** at the bottom of the table.
- 9 Click **Save**.

Users can now view and customize Get-Resources portlets from the WebSphere Portal Server interface.

Modifying httpd.conf for IBM HTTP Server

In order to use the alternate configuration of WebSphere Portal Server, you will need to modify the `httpd.conf` file used by the IBM HTTP Server to add the forward and reverse proxy URLs to your remote instance of Get-Resources.

Note: If you are setting up WebSphere Portal Server in the recommended configuration, you may skip these instructions.

To modify httpd.conf for IBM HTTP Server:

- 1 Login to the Get-Resources server.
- 2 Stop your IBM HTTP Server.
- 3 Using a text editor, open the `httpd.conf` file located at:
C:\IBM HTTP Server\conf
- 4 Add the following lines to the end of the file:


```
ProxyPass /<oaa root>/ http://<server>:<port>/
<oaa root>/servlet/basicauth/
ProxyPassReverse /<oaa root>/ http://<server>:<port>/
<oaa root>/servlet/basicauth/
```

For `<oaa root>`, enter the name of the oaa virtual directory used by IBM HTTP Server. By default, this virtual directory is `oaa`.

For `<server>:<port>`, enter the server name and communications port number where Get-Resources is installed.

- 5 Save the file.

Configuring WebSphere Translation Server for Get-Resources

You can configure Get-Resources to use a WebSphere Translation Server to provide real-time translations of on-screen data.

To configure WebSphere Translation Server for Get-Resources:

- Step 1** Copy the file `wt.jar` to the Get-Resources deployment folder. See *Copying wt.jar to the Get-Resources deployment folder* on page 51.
- Step 2** Configure Get-Resources to use the WebSphere Translation Server. See *Configuring Get-Resources to use the WebSphere Translation Server* on page 51.

Copying wts.jar to the Get-Resources deployment folder

The following instructions describe where to find and copy the file wts.jar.

To copy wts.jar to the Get-Resources deployment folder:

- 1 Stop your application server.
- 2 Browse to the location of your WebSphere Translation Server installation.
- 3 Copy the file wts.jar from this folder.
- 4 Paste the file wts.jar into the Get-Resources deployment folder located at:
<Application server install>\WEB-INF\lib
- 5 Restart your application server.

Configuring Get-Resources to use the WebSphere Translation Server

The following instructions describe how to configure Get-Resources to use the WebSphere Translation Server.

To configure Get-Resources to use the WebSphere Translation Server:

- 1 Login to the Get-Resources admin page (admin.jsp).
- 2 Click Settings > Common tab.

The Admin Settings page opens.

Portal	Common	Portal DB	Themes	Web Application	Logging	XSL
Notification Services NotificationDB rome E-mail						
Common Backend: portalDB List of target aliases: weblocation;mail Admin name: Admin Admin password: 						
Language Translation						
Translation Server Factory Class: com.peregrine.util.WTSLanguageTranslatorFactory Language from which to translate: English Translation Server IP Address: 10.3.128.181:1097 Application path: /WEB-INF/apps/ Event queue: portalDB						
Adapter target name used to support common user operations. Specifies a list of semicolon delimited target aliases used by web applications in this package. The admin login name. This login provides access to administrative functionality without authenticating against backend adapters. The admin login password. The Java factory class which generates the proper class associated with the Translation Server. The language from which to translate or the base language in which all text is currently displayed as. The IP address of the Translation Server. This address may or may not contain a port number depending on the Translation Server requirements. Click for default. Directory location of the Peregrine Portal Web Applications. Enter the name of the adapter that should be used by the Peregrine Portal event queue engine. For example: <ul style="list-style-type: none"> • To use ServiceCenter's repository, enter "sc" • To use AsseCenter's repository, enter "ac" 						

- 3 Enter the following configuration settings:
 - a **Translation Server Factory Class:** Enter the Java factory class for the Translation server. The default Java factory class is:
`com.peregrine.util.WTSLanguageTranslatorFactory`
 - b **Language from which to translate:** Enter the source language that you want translated. The default value is English.
 - c **Translation Server IP Address:** Enter the IP address and communications port to the Translation Server. For example: 10.3.128.181:1097.
 - d **Application path:** Enter the relative path to the application serverapplications directory. The default value is:
`WEB-INF/apps/`
 - e **Event queue:** Enter the adapter name to you want to use for the event queue engine. The default value is: **PortalDB**
- 4 Click **Save**.
The Control Panel opens.
- 5 Click **Reset Server**.

Translating on-screen data with a Translation Server

If you plan to store Get-Resources data in a mixture of languages, you can configure Get-Resources to send data to a Translation Server for real time translation. This interface will only translate data retrieved from the back-end database or manually typed into form inputs. If you need a translated user interface, you can purchase a Get-Resources language pack directly from Peregrine Systems.

To translate on-screen data with a Translation Server:

- 1 Enable the translation server from the **Administration > Settings** page as described in *Configuring Get-Resources to use the WebSphere Translation Server* on page 51.

The translate button appears in the upper right tool bar.

The Translation
button:



- 2 Click on the source data or form input you want to translate.

Click on the text you want to translate.

- 3 Click the translate button.

The Translation window opens.

Select the target language from the select box.

- 4 Select the target language to which you want to translate from the drop down select box.

The translation of your selection displays in the Translation box.

WebLogic 6.1 SP3 or SP4

The following procedures configure WebLogic to run Get-Resources on Windows.

To configure WebLogic 6.3 SP3 or SP4 with IIS:

- Step 1** Stop both WebLogic and your Web server. See *Stopping the servers* on page 54.
- Step 2** Edit the `startWebLogic.cmd` file to set the system password, memory settings, and start mode. See *Editing startWebLogic.cmd* on page 54.
- Step 3** Edit the `Server.Policy` file to set the debug to true. See *Editing Server.Policy* on page 55.
- Step 4** Run the Get-Resources installer. See *Running the installer* on page 55.
- Step 5** Move `.jar` files to the Java development kit `ext` folder. See *Moving .jar files to the Java development kit ext folder* on page 55.

- Step 6** Configure IIS to use `iisforward.dll` as an ISAPI filter and create an extension. See *Configuring the `iisforward.dll` as an ISAPI filter and an extension* on page 56.
- Step 7** Configure IIS to use `iisproxy.dll` as an extension. See *Configuring the `iisproxy.dll` as an extension* on page 57.
- Step 8** Create a virtual directory for Get-Resources in your Web server. See *Creating a virtual directory for Get-Resources* on page 58.
- Step 9** Restart WebLogic and your Web server. See *Restarting the Servers* on page 59.

Stopping the servers

Before you begin configuring WebLogic, you must close your WebLogic server and Web server.

To begin configuring WebLogic:

- 1 Stop the WebLogic application server.
- 2 Stop the Web server.

Editing startWebLogic.cmd

To edit startWebLogic.cmd:

- 1 Open the file `startWebLogic.cmd` file in any text editor. The default file path is:

```
c:\bea\wlserver6.1\config\<mydomain>\
```

- 2 Scroll to the following section of the script:

```
echo *****
echo * To start WebLogic Server, use the password *
echo * assigned to the system user. The system *
echo * username and password must also be used to *
echo * access the WebLogic Server console from a web *
echo * browser. *
echo *****
@rem Set WLS_PW equal to your system password for no password prompt
server startup.
set WLS_PW=password
```

- 3 In the last line, change the word “password” to your WebLogic system password.
- 4 Search for the `-mx` parameter setting in the file. Change this setting to at least 225 MB, but not more than 512 MB.

Note: Make sure that the setting for maximum heap size is less than the free RAM available to the application server(s). Exceeding the amount of available RAM causes the JVM processes to swap to disk, reducing overall performance. A setting of 256 MB should be sufficient for most systems.

- 5 Set the STARTMODE variable to STARTMODE=false.

The first time you start WebLogic after the installation, you will need to start it in development mode for it to find the Web applications that have been deployed.

- 6 Add the following line before the end of the “goto finish” entry:

```
“-Djava.security.auth.login.config==<Weblogic>\lib\server.policy”
weblogic.server
```

For <Weblogic>, enter the installation path for Weblogic. By default this is:

c:\bea\wlserver6.1

- 7 Save the file.

Editing Server.Policy

To edit Server.Policy:

- 1 Open the file Server.Policy file in any text editor. The default file path is:
c:\bea\wlserver6.1\lib\
- 2 Add the following lines to the end of the file:

```
ServerLoginModule
{
    weblogic.security.internal.ServerLoginModule required debug=true;
};
```

- 3 Save the file.

Running the installer

Run the ProductCoreShort installer using the Custom install option. See *Custom installation procedures* on page 77.

Moving .jar files to the Java development kit ext folder

To move .jar files:

- 1 Verify that the following directory exists. If it does not exist, create it:
c:\bea\jdk131\jre\lib\ext

- 2 Go to the Peregrine OAA Platform lib folder (typically `bea\wlserver6.1\config\<my domain>\applications\oaa\WEB-INF\lib`), where *<my domain>* is the WebLogic domain of the system on which WebLogic is installed. Move the following file to the `\bea\jdk131\jre\lib\ext` folder:

`log4j-1.2.6.jar`

- 3 Verify that `oaasecurityproxy.jar` is in the `\bea\jdk131\jre\lib\ext` folder.
- 4 Go the Peregrine OAA Platform external folder (typically `Peregrine\oaa\external`) and copy the following files to the `\bea\jdk131\jre\lib\ext` folder:

`jaas.jar`
`jai_codec.jar`
`jai_core.jar`
`jce1_2_1.jar`
`jcrt.jar`
`jnet.jar`
`jsse.jar`
`local_policy.jar`
`mllibwrapper_jai.jar`
`sunjce_provider.jar`
`US_export_policy.jar`

Configuring the `issforward.dll` as an ISAPI filter and an extension

To establish a connection between WebLogic and IIS, you will need to install the file `iisforward.dll` as an ISAPI filter.

To install `issforward.dll` as an ISAPI filter and an extension:

- 1 Open Internet Services management console.
- 2 Right-click the *<Machine name>* and then click **Properties**.
Note: This is not one of the web sites; it is the parent node in the tree for the web sites.

A dialog box opens.

- 3 Click **Edit** from the Master Properties pane.
- 4 Click the **ISAPI Filters** tab.
- 5 Click **Add**.

- 6 Enter the following information:
 - a **Filter Name:** iisforward.
 - b **Executable:** issforward.dll. The default file path is:
c:\bea\wlserver6.1\bin\issforward.dll
- 7 Click **OK**.
- 8 Click the **Home Directory** tab.
- 9 Click **Configuration**.
The Application Configuration page opens on the App Mappings tab.
- 10 Verify that there is a mapping for the .wlforward extension. If it does not exist, click **Add** to map the .wlforward extension.
- 11 Enter the following information:
 - a **Executable:** issforward.dll. The default file path is:
c:\bea\wlserver6.1\bin\issforward.dll
 - b **Extension:** .wlforward.
- 12 Close the Internet Services management console.

Configuring the iisproxy.dll as an extension

To establish a connection between WebLogic and IIS, you will need to install the file iisproxy.dll as an extension.

To install iisproxy.dll as an extension:

- 1 Open Internet Services management console.
- 2 Right-click the **Default Web Site** node and then click **Properties**.
- 3 Click the **Home Directory** tab.
 - a Select the **Read** check box to enable it.
 - b From the **Execute Permissions** drop-down list, select **Scripts and Executables**.
- 4 Click **Configuration**.
The Application Configuration page opens on the App Mappings tab.
- 5 Verify that there is a mapping for the .jsp extension and that it is mapped to c:\bea\wlserver6.1\bin\iisproxy.dll.
 - a If the .jsp extension mapping is not there, do the following:
 - b Click **Add**.

- c Enter the following information:
 - Executable: iisproxy.dll. The default file path is:
c:\bea\wlserver6.1\bin\iisproxy.dll
 - Extension: .jsp.

Note: Ensure that the iisproxy.dll is located in the same directory as the iisforward.dll.

- 6 Close the Internet Services management console.

Creating a virtual directory for Get-Resources

To run Get-Resources, you need to create a virtual directory in your Web server that maps to your WebLogic deployment folder. The typical installation creates a virtual directory called **oaa**, but you can specify a different virtual directory name.

To configure a virtual directory:

- 1 Use the following guidelines to create the virtual directory on the Default Web Site.

Requirement	Setting
Create virtual directory	<oaa>
Access Permissions	Read, Run scripts
Map to physical path	<Weblogic>\applications\oaa
Set Execute Permissions to	Scripts and Executables

- a For <oaa>, enter the name of the virtual directory you want to use for Get-Resources. Whatever name you enter here you will need to replicate in your application server configuration.
- b For <WebLogic>, enter the path to your WebLogic installation. The default file path is:
c:\bea\wlserver6.1\config\<mydomain>\applications\oaa
- 2 Right-click the newly created virtual directory under Default Web Site.
 - a Select **Properties**.
 - b Verify that the permission is **Scripts and Executables**.
- 3 Click **Configuration** on the Home Directory tab.

The Application Configuration page opens on the App Mappings tab.

- 4 Verify that there is a mapping for the .jsp extension and that it is mapped to `c:\bea\wlserver6.1\bin\iisproxy.dll`.

Restarting the Servers

You must restart the servers to activate the new WebLogic configurations.

To activate the WebLogic configurations:

- 1 Restart your Web server.
- 2 Restart the WebLogic server.
- 3 Start Get-Resources.

JRun 3.1

The following procedures configure JRun to run Get-Resources on Windows.

To configure JRun 3.1:

- Step 1** Install a Java run-time environment. See *Installing a Java run-time environment* on page 60.
- Step 2** Install JRun from the Macromedia Web site to the root of your hard drive (for example, C:\). See *Installing JRun* on page 60.
- Step 3** Apply the latest JRun update. See *Applying the latest JRun update* on page 61.
- Step 4** Deploy the Portal WAR file to JRun to create the necessary folder structure for Get-Resources. See *Deploying the Portal WAR file to JRun* on page 61.
- Step 5** Run the Get-Resources installer. See *Running the installer* on page 63.
- Step 6** Move js.jar to the Java development kit ext folder. See *Moving js.jar to the Java development kit* on page 63.
- Step 7** Run the JRun Connector Wizard to establish a connection between JRun and your Web server. See *Running the JRun Connector Wizard* on page 63.
- Step 8** Configure your JRun Java settings. See *Configuring Java settings* on page 64.
- Step 9** Configure JRun for IIS and create a virtual directory for Get-Resources in your Web server. See *Configuring JRun for IIS* on page 67.
- Step 10** Restart JRun and your Web server. See *Restarting the Servers* on page 68.

Installing a Java run-time environment

The Get-Resources installer includes the Java 2 SDK Standard Edition v1.3.1_05. However, you can also use JRE 1.3.1 if you already have it installed. See *Custom installation components* on page 76.

Installing JRun

Before you install Get-Resources, you must install JRun to your root directory.

To install JRun:

- 1 Browse to the following URL:

<http://www.macromedia.com/software/jrun/>

- 2 Click the link **JRun 3.1 Available for Purchase**.
- 3 Follow the installation instructions provided.

Applying the latest JRun update

Before you install Get-Resources, you must apply the latest Jrun 3.1 update.

To install the latest JRun update:

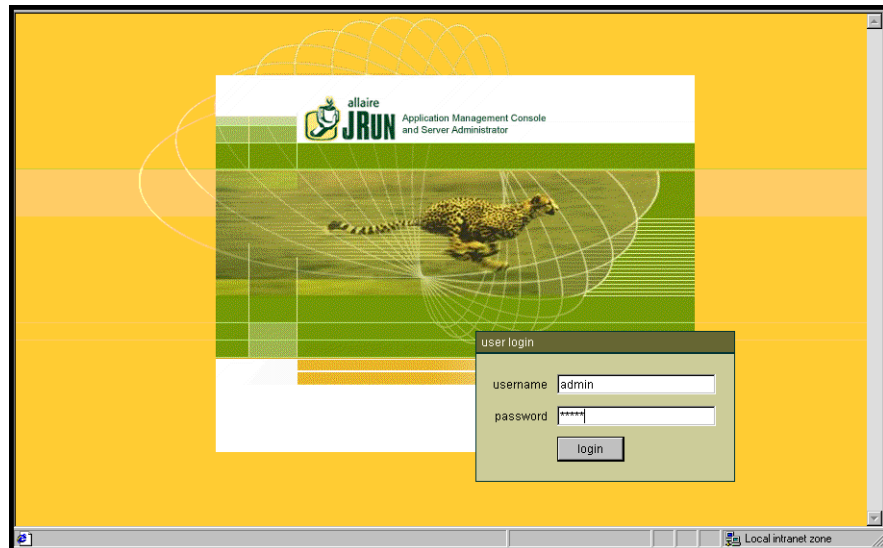
- 1 Browse to the following URL:
http://www.macromedia.com/support/jrun/updates/3/updates_31.html
- 2 Click the link for the **JRun edition (Enterprise, Advanced, or Professional)** and operating system of your server.
- 3 Follow the installation instructions provided.

Deploying the Portal WAR file to JRun

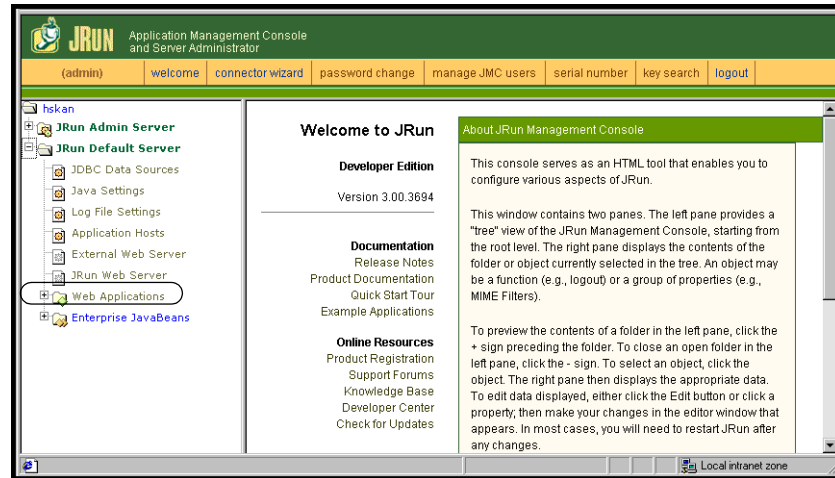
The Portal WAR file creates the folder structure necessary to deploy Get-Resources in your application server. After you have deployed this file to JRun you will be ready to run the Get-Resources installer.

To deploy the Get-Resources Portal WAR file to JRun:

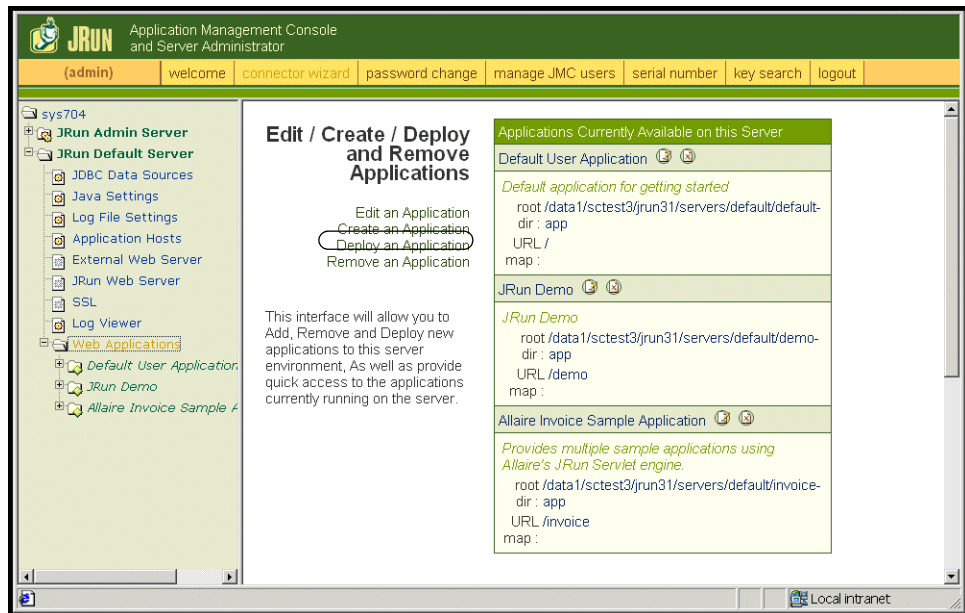
- 1 Open the JRun Management Console and log in.



2 Select JRun Default Server > Web Applications.



The Edit / Create / Deploy and Remove Applications page opens.



3 Click the Deploy an Application link.

4 In the page that opens, fill out the fields as follows:

- Servlet War File or Directory:

Browse to <CD Rom Drive>:\oaa\packages\portal<version #>.war.

For <version>, select the most current version.

Select this file, and then click **Accept**.

- JRun Server Name:

Select **JRun Default Server**.

- Application Name:

Type oaa.

- Application URL:

Type /oaa.

- Application Deploy Directory:

JRun generates this directory. Make a note of this path. You will need this information later in the procedure. Example:

c:\JRun\servers\default\oaa

5 Click Deploy.

A message that OAA has been successfully deployed appears.

Running the installer

Run the ProductCoreShort installer using the Custom install option. See *Custom installation procedures* on page 77.

Moving js.jar to the Java development kit

JRun requires an updated version of js.jar in the Java development kit.

To move the js.jar to the Java development kit:

1 Stop any running JRun services.

2 Locate js.jar. The default file path is:

<JRun installation>\servers\default\oaa\WEB-INF\lib

3 Cut and paste the file to your Java Development Kit ext folder. For example:

C:\Program Files\Peregrine\Common\jdk1.3.1_05\jre\lib\ext

4 Restart JRun.

Running the JRun Connector Wizard

The JRun Connector Wizard establishes a connection between JRun and your Web server.

To run the JRun Connector Wizard:

- 1 Login to the JRun Management Console.
- 2 Click Connector Wizard.
- 3 Select the JRun Default Server as the JRun Server Name.
- 4 Select your Web server from the drop down list box.
- 5 If your Web server uses a different IP address than your JRun server, enter the IP address of your JRun server in JRun Server IP Address.
- 6 Confirm that the JRun Server Connector Port is not in conflict with another communications port used on this server.
- 7 Enter the path to the Scripts Directory. For IIS 5.0 this value is:
C:\Inetpub\Scripts
- 8 Click Done.

You will get a message that JRun is successfully connected to your Web server.

Configuring Java settings

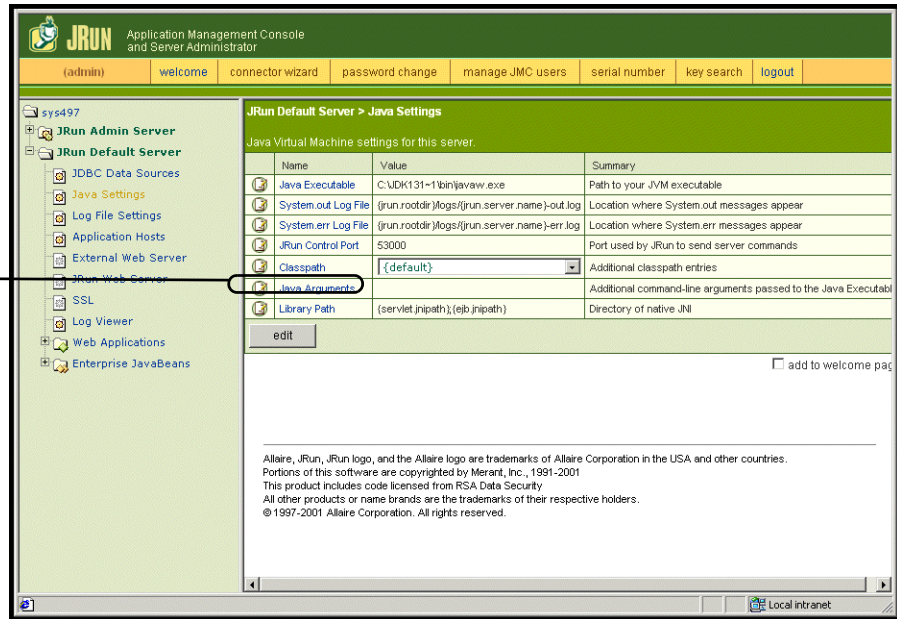
After you have installed Get-Resources, you must configure the Java settings that JRun will use to run the Web application.

To configure Java settings:

- 1 Login to the JRun Management Console.
- 2 Click JRun Default Server > Java Settings.
The Java Settings page opens.

3 Click Java Arguments.

Click **Java Arguments**.



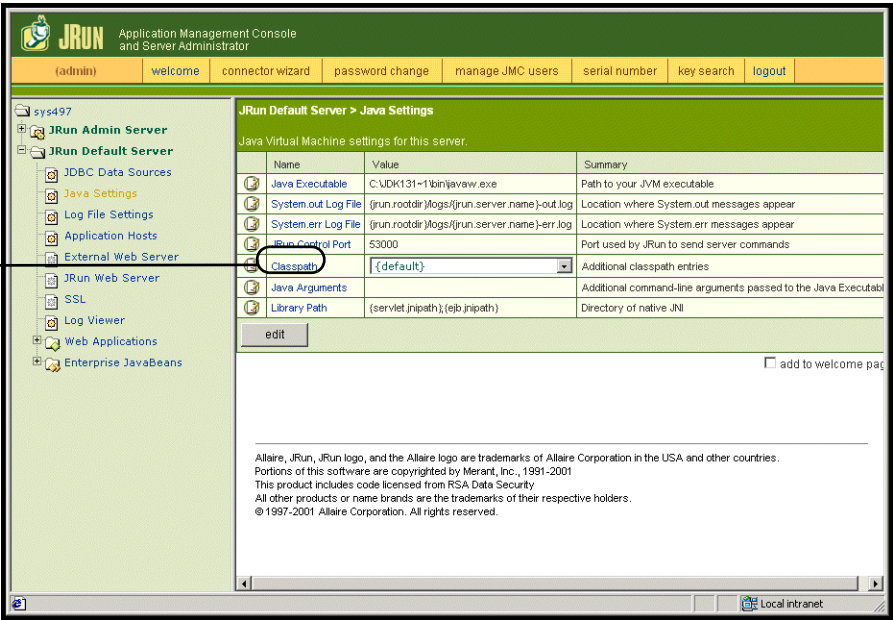
The Edit Window opens.

- 4 Enter an -Xmx value to define the maximum amount of heap memory allocated for your system. It is recommended that you set this value to at least 225 MB, but not more than 512 MB.

Note: Make sure that the setting for maximum heap size is less than the free RAM available to the application server(s). Exceeding the amount of available RAM causes the JVM processes to swap to disk, reducing overall performance. A setting of 256 MB should be sufficient for most systems. Applications using Persistence may require a higher setting.

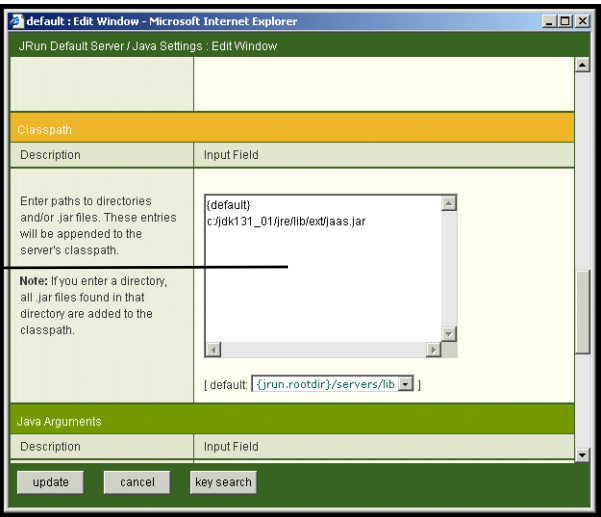
5 On the Java Settings page, click **Classpath**.

Click **ClassPath**.



The Edit Window opens.

Type the path to the JAR files here.



- 6 Enter the following classpaths:
- Java Development Kit ext folder. For example:

C:\Program Files\Peregrine\Common\jdk1.3.1_05\jre\lib\ext

- 7 On the Java Settings page, click **Java Executable**.
- 8 Verify that path to your Java Development kit matches the path listed in the Classpath setting. For example:
C:\Program Files\Peregrine\Common\jdk1.3.1_05\bin\javaw.exe
- 9 Click **update**.
- 10 Log out of the JRun Management Console.

Configuring JRun for IIS

To establish a connection between JRun and IIS, you must first verify the connection.

To configure JRun for IIS:

- 1 Open the IIS Management console.
- 2 Right-click the <*Machine name*> and then click **Properties**.
Note: This is not one of the web sites; it is the parent node in the tree for the web sites.

A dialog box with an **Edit** button opens.

- 3 Click **Edit>ISAPI Filters**.
- 4 Verify that the JRun entry is correct and that the value contains the full path to the scripts/jrun.dll.

Filter Name: JRun Connector Filter Executable: /jrun.dll

- 5 Verify the following:
 - A SCRIPTS virtual directory is defined in IIS.
 - It points to your Inetpub/Scripts directory.
 - It has **Scripts and Executables** permission.

You then need to create a virtual directory in your Web server that maps to your JRun deployment folder. The typical installation creates a virtual directory called oaa, but you can specify a different virtual directory name.

To configure a virtual directory:

- 1 Use the following guidelines to create a virtual directory for `oaa` under Default Web Site.

Requirements for Get-Resources virtual directory

Requirement	Setting
Create virtual directory	<code><oaa></code>
Map to physical path	<code><JRun>\oaa</code>
Set Execute Permissions to	Scripts and Executables

- 2 For `<oaa>`, enter the name of the virtual directory you want to use for Get-Resources. Whatever name you enter here you will need to replicate in your application server configuration.
- 3 For `<JRun>`, enter the path to your JRun installation. The recommended installation path is:
C:\JRun\servers\default\oaa
- 4 After creating the `oaa` virtual directory, right-click on it and select **Properties**.
- 5 Verify that the permission is **Scripts and Executables**.

Restarting the Servers

You must restart the servers for the new JRun configurations to take effect.

To activate the Jrun configurations:

- 1 Restart your Web server.
- 2 Restart the JRun Default server.
- 3 Start Get-Resources.

Typical installation option

A typical installation of Get-Resources installs the most commonly used components of the product and saves application files and data in default destination directories. Most users choose Typical installation.

Typical installation components

Following is a brief description of the components that are automatically installed with a Typical installation of Get-Resources:

Applications and File Locations

Get-Resources Component	Default Installation Directory
Apache Web Server	C:\Program Files\Peregrine\Common\Apache2
Tomcat Application Server	C:\Program Files\Peregrine\Common\Tomcat4
Java Development Kit	C:\Program Files\Peregrine\Common\jdk1.3.1_05
OAA Platform and Get-Resources	C:\Program Files\Peregrine\oaa

Services

The installation program will also create and start the following services on your Windows server:

- Apache Web Service
- Peregrine Tomcat Service

Important: If you are already running another web or application server on the target Windows system, you will need to stop the service(s) for the application(s) before beginning the Get-Resources setup program. If you do not stop these services before beginning the install process, the setup program will complete successfully, however, it may not create the Apache and Peregrine Tomcat services needed to run Get-Resources.

Communications ports

Get-Resources uses the following communications ports in a typical installation. After installation, you can configure Get-Resources to use one or more of the alternate communications ports if your local network already uses these communications ports.

Default port	Component used by	Alternate port
80	Apache Web Server	8081
8005	Tomcat application server administration	8015
8009	Tomcat application server worker file	8019
8011	Tomcat application server worker file for load balancing (optional).	8021
8013	Tomcat application server worker file for load balancing (optional).	8023
8015	Tomcat application server worker file for load balancing (optional).	8025

Note: To change settings for these components or to use or install different components, use the Custom installation option for Get-Resources.

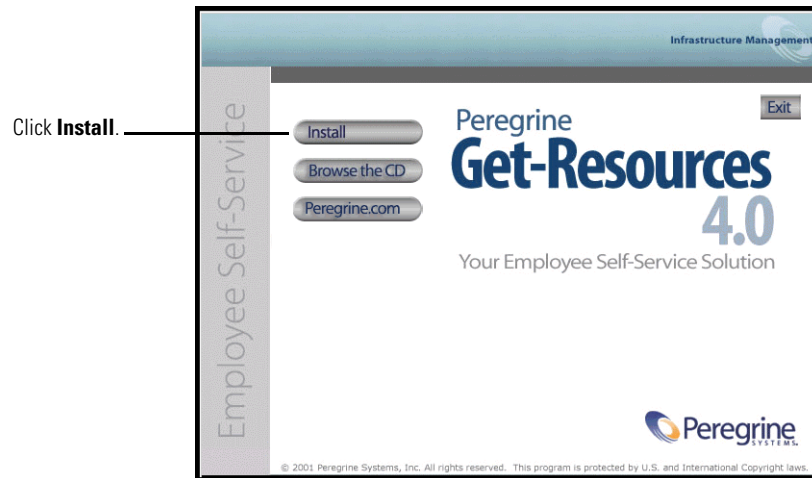
Typical installation procedures

This section explains how to install Get-Resources with a Tomcat application server and an Apache web server on a Windows operating system.

To perform a typical installation of Get-Resources on Windows:

- 1 Insert the Get-Resources installation CD into your computer's CD ROM drive. Your computer should automatically launch the installation program. If the installation program does not automatically start, using the Windows **Start > Run** command, browse to the CD ROM drive and open **Setup.exe**.

- 2 In the main installation program screen, click **Install**.

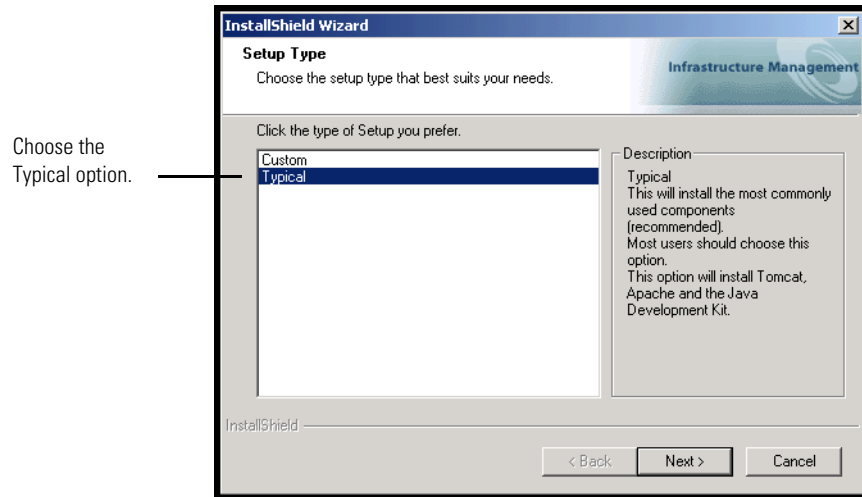


Status messages indicate that the Setup program is preparing the InstallShield Wizard.

Note: Setup stops Apache and Peregrine Tomcat services. Follow the prompts to continue.

- 3 In the Setup Type screen, select **Typical**, and then click **Next**.

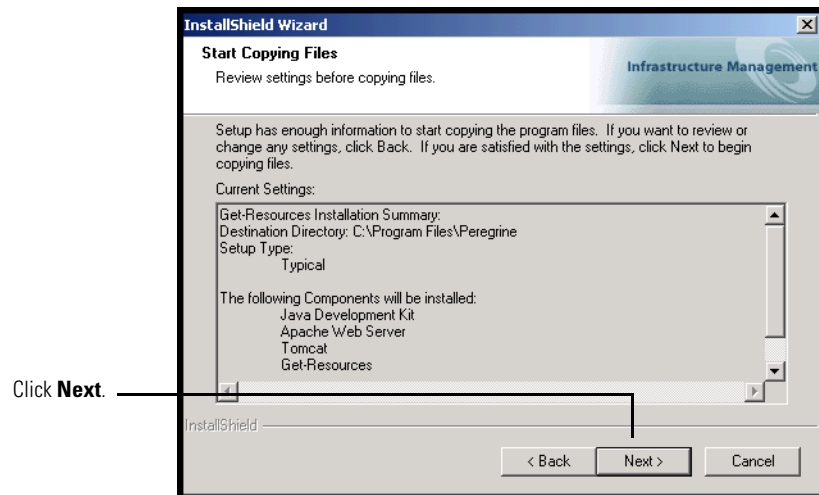
Note: This screen does not display during a maintenance or upgrade installation.



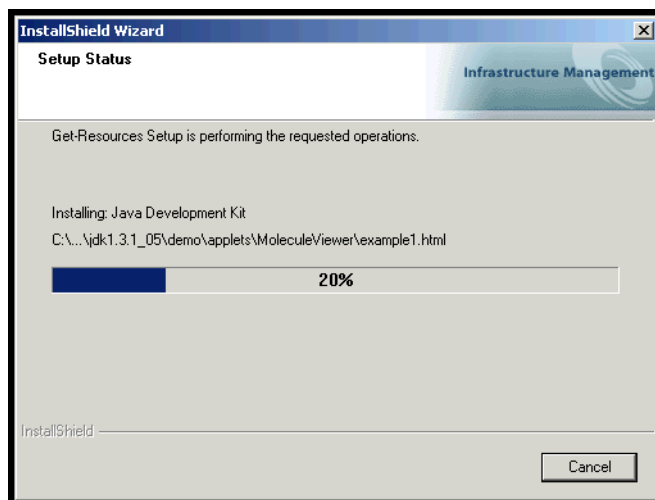
The installer displays status messages to validate the location of the Host system name.

- 4 In the Start Copying Files screen, click **Next**.

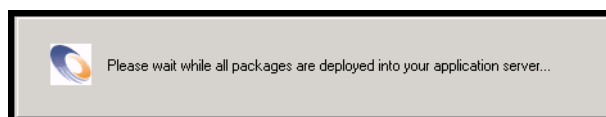
Note: This screen does not display during a maintenance or upgrade installation.



The Setup Status screen that appears shows that Get-Resources is installing the files to your system.



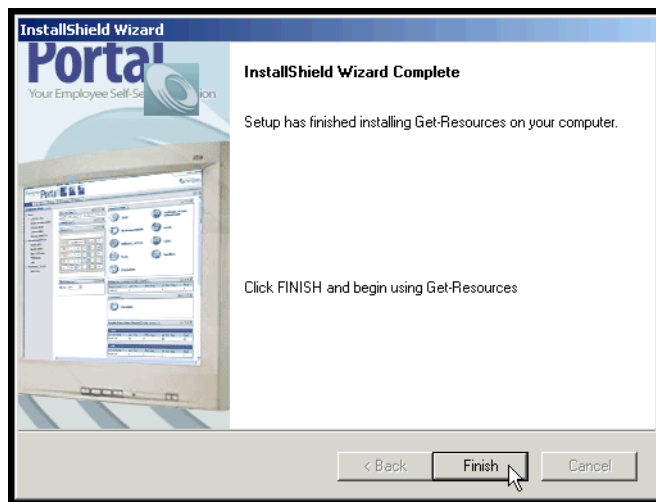
A status message indicates that the Get-Resources packages are being deployed to your server. This phase can take several minutes.



While this status message is displayed, the setup program is performing the following:

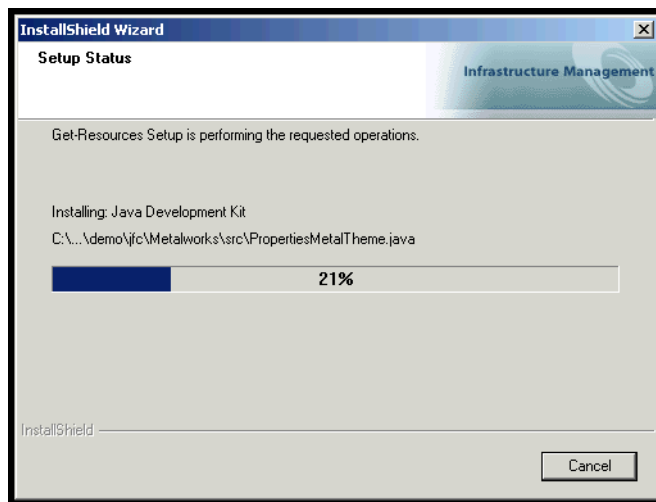
- Copying the documents
- Creating and starting the “Apache” and “PeregrineTomcat” services

- 5 In the InstallShield Wizard Complete screen, click Finish.



Note: The text in the dialog box reads, “Maintenance Complete” during a maintenance or upgrade installation.

The setup program completes the final steps of the installation.



- 6 After the InstallShield Wizard screen closes, access Windows Services to verify that the “Apache” and “Peregrine Tomcat” services were created. Status for both services should display **Started**.

If one or both of these services did not startup, refer to *Troubleshooting* to troubleshoot possible install issues.

This completes the procedures required for a Typical installation of Get-Resources on a Windows operating system server.

Custom installation option

The following section describes how to perform a custom installation of Get-Resources on a Windows operating system server.

Custom installation components

Following is a brief description of the components that are available for a custom installation of Get-Resources:

Application options

Get-Resources Component	Options
Web Server	<ul style="list-style-type: none">■ Apache 2.0.43■ IBM HTTP Server 1.3.19■ Microsoft IIS 5.0
Application Server	<ul style="list-style-type: none">■ Tomcat 4.1.12■ WebSphere 4.02■ WebLogic 6.1 SP3■ JRun 3.1
Java Development Kit	Java 2 SDK

Communications ports

The communications ports that a Get-Resources custom installation uses depends on the application components that you select. Refer to your Web and application server documentation to determine what communications ports they require. After installation, you can configure Get-Resources to use alternate communications ports if your local network already uses particular communications ports.

Default port	Component used by	Alternate port
8005	Tomcat application server administration	8015
8009	Tomcat application server worker file	8019
80	IIS Web server	8081

Get-Resources on servers running Oracle 9.2.0.1

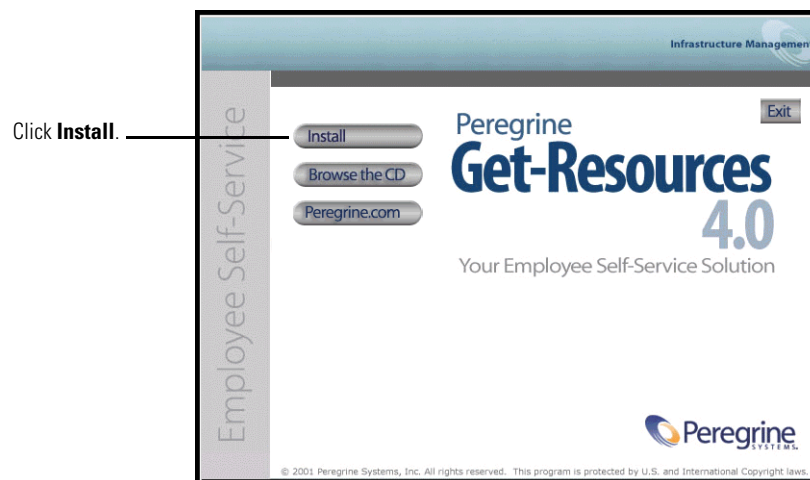
If you are running Get-Resources on a server using Oracle 9.2.0.1 you may experience a port conflict over communications ports 8009 and 8080. Consult your Web and application server documentation to see if they use either of these two ports.

If you are using Tomcat as your application server, then by default, there will be a port conflict over port 8009. It is recommended that you change Tomcat to use a different communications port on servers running Oracle 9.2.0.1.

Custom installation procedures

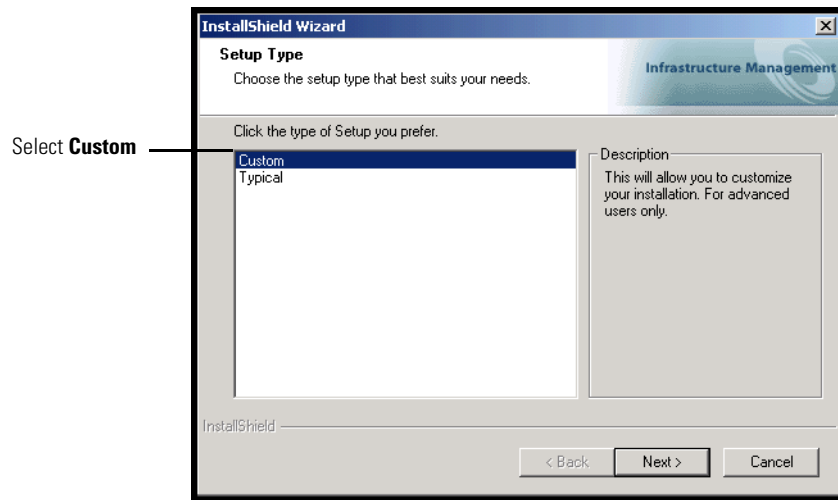
To perform a custom installation of Get-Resources on Windows:

- 1 Insert the Get-Resources installation CD into your computer's CD ROM drive. Your computer should automatically launch the installation program. If the installation program does not automatically start, using the Windows **Start > Run** command, browse to the CD ROM drive and open **Setup.exe**.
- 2 In the main installation program screen, click **Install**.



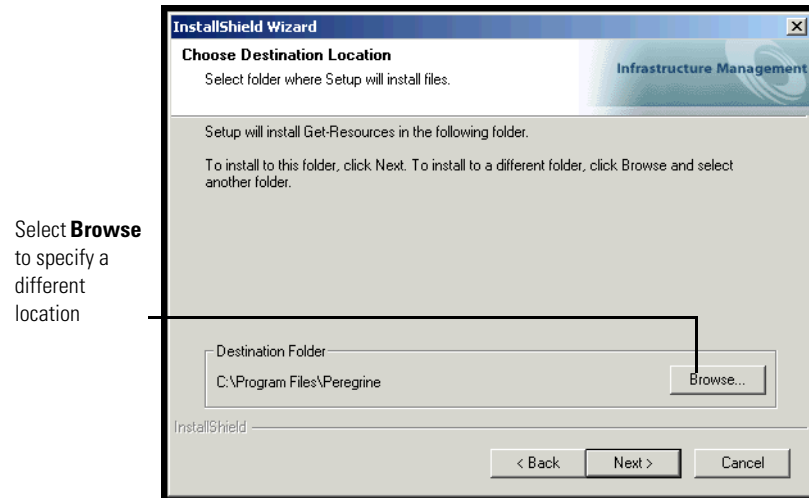
Status messages indicate that the Setup program is preparing the InstallShield Wizard.

- 3 In the Setup Type screen, select **Custom**, and then click **Next**.



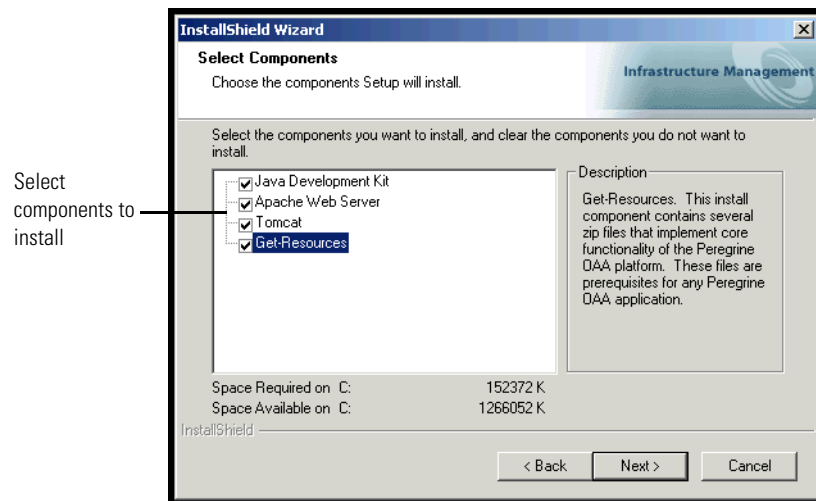
- 4 In the Choose Destination Location screen, browse to the location where you want Get-Resources installed. Click **Next** to continue.

The default location is C:\Program Files\Peregrine.



- 5 In the Select Components screen, choose the components that you want installed on this machine and click **Next**.

Important: Clear the check box next to components that you do not want to install.



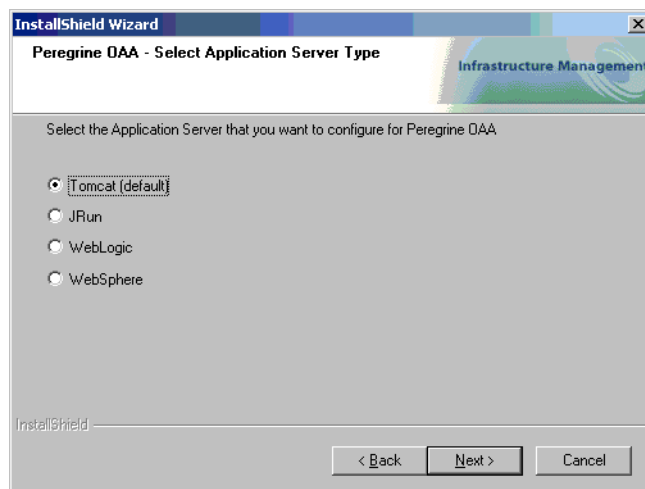
For a development environment, select or clear the components that you will install manually or for which you have alternate software. For example, clear the Apache Web Server option to use an alternate Web server.

For a production environment, select the components you want to run from this machine.

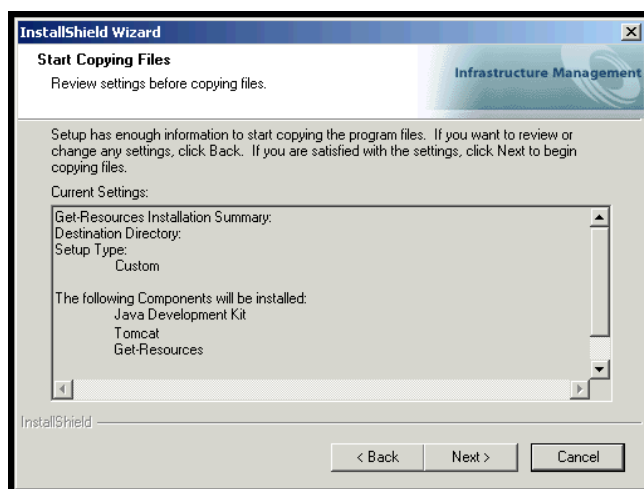
- **Get-Resources.** Installs the programs files necessary for Get-Resources. You must install the Get-Resources files on the same machine as the primary application server.
- **Apache Web Server.** Get-Resources requires a Web server in order to serve pages. Clear the check box in this option so that the installation procedure does not install the Apache Web server.
- **Java Development Kit.** Installs the Sun Microsystems Java Development Kit (Java 2 SDK). You must install this component on every machine running an application server.
- **Tomcat.** Installs the Tomcat application server. Get-Resources requires at least one application server to process Java applications. You may also install multiple instances of your application server for load balancing. You must install this component on the same machine as the Get-Resources files.

Status messages indicate the validation and location of the Host system name.

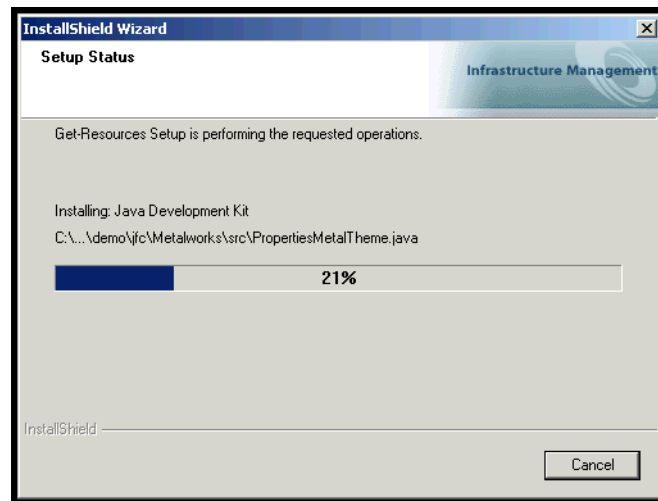
- 6 In the Select Application Server Type dialog box that opens, select the application servers you want Peregrine Portal to configure, and click Next.



- 7 In the Start Copying Files screen, verify the Custom installation components. To review or change settings, click Back. To continue with the installation, click Next.

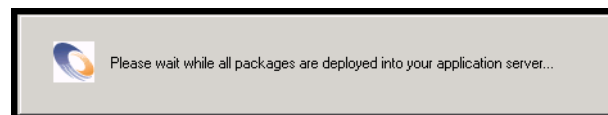


The Setup Status screen is displayed while the installation program performs the requested operations.



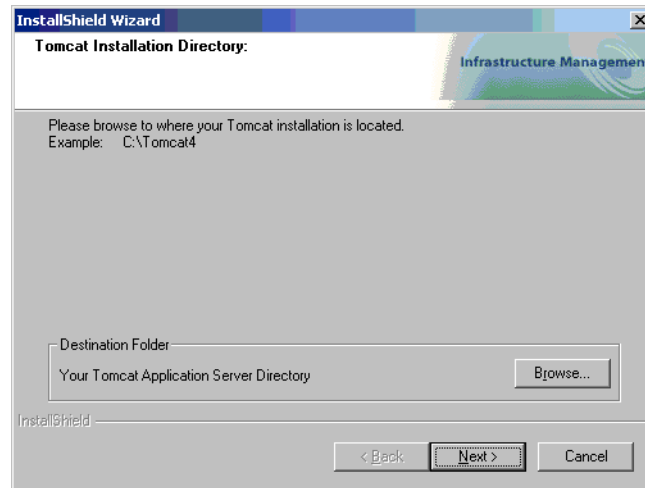
- 8 In the Setting CATALINA_OPTS screen, select Yes if you want to configure this parameter for Tomcat memory settings, then click Next.

A status message indicates that the Get-Resources packages are being deployed to your server.



This phase may take several minutes.

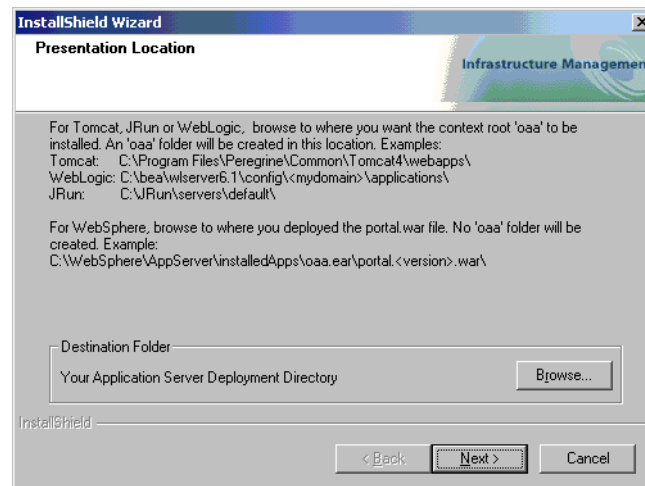
If you are using Tomcat, the Tomcat Installation Directory window appears.



- 9 Choose your installation directory, and click Next.

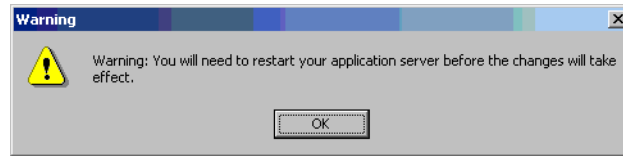
Note: If you are not using Tomcat, you will not see this window. Go to step 10.

- 10 In the Presentation Location dialog box that opens, choose a location, and then click Next.

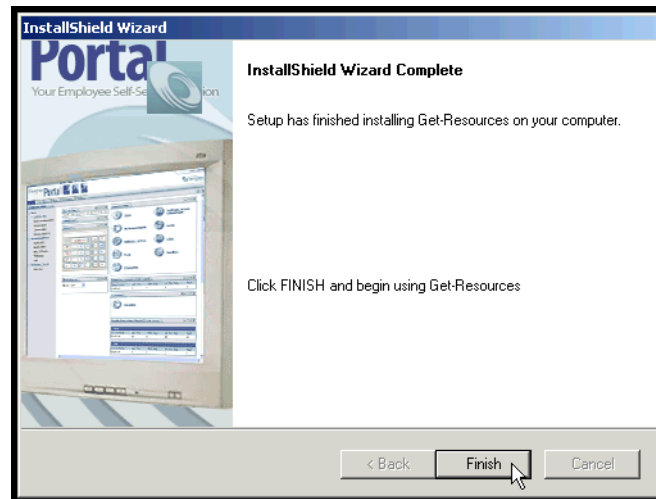


A Setup Status dialog box opens as the installation is completed. At this point, the installation is copying the documents.

The following warning message appears:



- 11 Click **OK**.
- 12 In the InstallShield Wizard Complete screen, click **Finish** to end the Get-Resources installation program.



- 13 After the InstallShield Wizard screen closes, access Windows Services to verify startup of your web server and application server services.

If one or both of these services did not startup, refer to [Troubleshooting](#) to troubleshoot possible installation issues.

This completes the procedures required for a Custom installation of Get-Resources on a Windows operating system server.

Uninstalling Get-Resources

Follow these procedures to uninstall Get-Resources from your Windows system:

- 1 Access the Windows Add/Remove Programs utility.
- 2 Select **Peregrine Portal 4.0** and click **Change/Remove**.
A status message indicates that the setup program is preparing the InstallShield wizard to guide you through the process.
- 3 The Close Programs screen opens if any Get-Resources services or applications are running. Click **Next** to continue.
- 4 The verification message box opens, “Are you sure you want to stop shared applications and/or services?” Click **Yes** to continue.
Status messages indicate the termination of the services for Apache and Tomcat.
- 5 The Confirm Uninstall dialog box opens. Click **Yes** to remove Get-Resources.

Important: Back up any data you want to save before continuing.

- 6 The Shared Files screen opens if there are any shared files to be removed during setup.
If WebSphere is installed on this computer, setup will prompt you confirm the removal of six JAR files. Click **No** or **No to All** to retain these JAR files.

Warning: Do not remove the shared JAR files as the WebSphere Advanced Administrative Console requires these files to function.

If there are no shared files to remove, then a status message indicates that the uninstall program is removing files from your computer.

- 7 The Maintenance Complete screen opens. Click **Finish** to complete the uninstall of Get-Resources.

Testing your installation

Use the following steps to confirm that you have properly installed Get-Resources on Windows.

To test your Get-Resources installation:

- 1 Verify that your application and Web servers are started.
- 2 Open a Web browser and type the following in the Address field:

`http://<server name>:<port>/oaa/admin.jsp`

For *<server name>*, enter the server name where the Get-Resources Web server resides.

For *<port>*, enter one of the following communications port numbers:

Application Server used	Port Number
WebSphere	9080
WebLogic	7001
JRun	80, can be omitted from URL
Tomcat	80, can be omitted from URL

If everything is configured properly, the Administrator login page opens.

If the Get-Resources administration login page does not open, see [Troubleshooting](#) for more information.

3 Installation for Unix Platforms

CHAPTER

This chapter covers the following topics:

- *Choosing an installation environment* on page 88
- *Migrating Get-Resources from previous versions* on page 91
- *Configuring alternate application servers* on page 95
- *Typical Installation Option* on page 130
- *Custom Installation Option* on page 138
- *Uninstall—AIX, Linux, or Solaris* on page 150

Choosing an installation environment

You can install Get-Resources in one of two installation environments:

- Development environment
- Production environment

The Get-Resources development environment is intended for you to evaluate product features and customize your installation prior to deployment in a production environment. In a development environment, you install all software required for Get-Resources on one computer system.

You have two choices of development environment:

- Typical installation
 - Apache 2.0 Web server
 - Get-Resources deployed on Tomcat 4.1.12 application server
- Custom installation
 - Choice of Web server
 - Choice of application server where you deploy Get-Resources

The Get-Resources production environment is intended to maximize server performance and scalability, and to deploy any customizations you have made. In a production environment, you install the various components of Get-Resources on different servers to maximize performance.

You have two choices of production environment:

- Typical installation
 - Apache 2.0 Web server
 - Get-Resources deployed on multiple instances of Tomcat 4.1.12 application server
- Custom installation
 - Choice of Web server
 - Choice of application server where you deploy Get-Resources

Development Environment

The following procedures describe how to install Get-Resources in a development environment.

To install Get-Resources in a typical development environment:

- Step 1** Acquire all necessary hardware and software.
- Step 2** Install the back-end database required for Get-Resources.
- Step 3** Run the Get-Resources installer and select the Typical installation option. See *Typical Installation Option* on page 130.
- Step 4** Configure the back-end databases and create Get-Resources users. See the *ServiceCenter and AssetCenter Administration* chapter of this guide.

To install Get-Resources in a custom development environment:

- Step 1** Acquire all necessary hardware and software.
- Step 2** Install the back-end database required for Get-Resources.
- Step 3** Install alternate application and Web servers.
- Step 4** Configure the alternate application server for Get-Resources. See *Configuring alternate application servers* on page 95.
- Step 5** Run the Get-Resources installer and select the Custom installation option. See *Custom Installation Option* on page 138.
- Step 6** Configure the back-end databases and create Get-Resources users. See the *ServiceCenter and AssetCenter Administration* chapter of this guide.

Production Environment

The following procedures describe how to install Get-Resources in a production environment.

To install Get-Resources in a typical production environment:

- Step 1** Acquire all necessary hardware and software.
- Step 2** Install the back-end database required for Get-Resources on a separate server.
- Step 3** Run the Get-Resources installer and select the Typical installation option. See *Typical Installation Option* on page 130.
- Step 4** Configure multiple instances of Tomcat for load balancing on the Apache Web server. See the *Load Balancing* chapter of this guide.
- Step 5** Configure the back-end databases and create Get-Resources users. See the *ServiceCenter and AssetCenter Administration* chapter of this guide.

To install Get-Resources in a custom development environment:

- Step 1** Acquire all necessary hardware and software.
- Step 2** Install the back-end database required for Get-Resources.
- Step 3** Install the alternate application server and Web server on separate servers.
- Step 4** Configure the alternate application server for Get-Resources. See *Configuring alternate application servers* on page 95.
- Step 5** Run the Get-Resources installer and select the Custom installation option. See *Custom Installation Option* on page 138.
- Step 6** Configure the Web servers and application servers for load balancing. See the *Load Balancing* chapter of this guide.
- Step 7** Configure the back-end databases and create Get-Resources users. See the *ServiceCenter and AssetCenter Administration* chapter of this guide.

Migrating Get-Resources from previous versions

To migrate older versions of Get-It or Get-Resources to Get-Resources 4.0.1 requires both a manual data migration process and the recreation of any interface customizations you have made. The following steps describe the migration process.

To migrate previous versions to Get-Resources 4.0.1:

- Step 1** Review the customizations of previous version and determine which customizations need to be recreated in Get-Resources 4.0.1. See *Recreating customizations in Get-Resources 4.0.1* on page 91.
- Step 2** Install Get-Resources 4.0.1 on a new system. See *Choosing an installation environment* on page 88.
- Step 3** Apply any required configuration changes to the back-end database you want to migrate to Get-Resources 4.0.1. See *Configuring an existing back-end database for Get-Resources 4.0.1* on page 94.

Recreating customizations in Get-Resources 4.0.1

You cannot directly migrate customizations implemented in previous versions to Get-Resources 4.0.1. Instead, you must recreate your changes using the new features and methods available in Get-Resources 4.0.1.

The following sections describe how to recreate your customizations from previous versions.

No customizations

If you have made no customizations to Get-Resources, you can simply install Get-Resources 4.0.1 on a new system and migrate your data from your existing back-end database.

Customized JSP files

In previous versions, customers had to directly modify JSP files in order to add or remove certain functionality. The following table describes how to recreate some of the more common JSP file modifications.

JSP file modification	New method to use
Remove the user self-registration option from login page	Enable or disable the user registration option from the Administration Settings page
Remove the change password option from the login page	Enable or disable the change password option from the Administration Settings page

Personalized pages

Get-Resources 4.0.1 offers many more pages that you can personalize directly from the Web interface. If you personalized pages in a previous version, you must recreate your personalized pages in Get-Resources 4.0.1 using DocExplorer.

You can use personalization to:

- Add or remove fields from a page
- Save a personalized search results or details on your portal page

Customized skins, stylesheets, and themes

Get-Resources 4.0.1 has combined all interface images and stylesheets into themes. Users can no longer select separate skins and stylesheets. The new themes consist of skins (which themselves are composed of image files, frame definitions, and layer files), cascading stylesheet definitions, and XSL templates.

Although you may copy over older custom themes to Get-Resources 4.0.1, you may experience rendering errors due to the new images, CSS definitions, frame definitions, and layers. It is recommended that you recreate any custom themes using the Get-Resources 4.0.1 version of the classic theme as your template.

Alternate login pages and authentication methods

If you used a custom login page or an alternate authentication method in a previous version, you can re-use or recreate these customizations using the updated instruction. You can find information about alternate security methods in the *Get-Resources Administration Guide*.

Customizations made with a previous tailoring kit

Many customizations that required a tailoring kit in previous versions can now be done directly from the Get-Resources Web interface. The following table describes how to recreate some of the more common tailoring kit changes.

Tailoring kit modification	New method to use
Added or removed fields form a form	Add or remove fields from Personalization
Added a new language or locale to the Get-Resources interface	Create and edit language strings files directly. You may also purchase officially supported language packs from Peregrine Systems
Made changes to the common, portal, or Peregrine Studio packages	These packages are no longer available for tailoring, however most common interface settings can now be customized from the Administration Settings page.
Made changes to schemas or ECMA server-side scripts	Review new functionality and determine if you still need the customized scripts and schemas. If you do need the customizations, you will to recreate them in the current version of the Get-Resources tailoring kit.

Configuring an existing back-end database for Get-Resources 4.0.1

The following table lists the options available for data migration.

Get-Resources 2.5 to Get-Resources 4.0.1

Back-end version	Migration required
AssetCenter 3.6	Apply Get-Resources 4.0.1 scripts to existing AssetCenter 3.6
AssetCenter 4.x	Apply Get-Resources 4.0.1 scripts to existing AssetCenter 4.x
ServiceCenter 3.0	Upgrade to ServiceCenter 4.x or 5.0.x
ServiceCenter 4.x	Apply Get-Resources 4.0.1 unloads to existing ServiceCenter 4.x
ServiceCenter 5.0.x	Apply Get-Resources 4.0.1 unload files to existing ServiceCenter 5.0.x

Configuring alternate application servers

You must install a Java-enabled application server to support your Peregrine Web applications. Peregrine OAA supports the following alternate application servers:

- *Tomcat 4.1.12*
- *WebSphere 4.0.2*
- *WebLogic 6.1 SP3 or SP4*
- *JRun 3.1*

The Get-Resources typical installation option installs Tomcat 4.1.12 and connects it to an Apache 2.0 web server. You can also install Tomcat 4.1.12 using the custom installation option.

Important: If you want to use an application server other than Tomcat 4.1.12, then you must configure your application and Web servers *prior* to running the Get-Resources installer.

See the following sections for instructions configuring alternate application servers for Get-Resources.

Tomcat 4.1.12

If you use select both the Apache Web server and the Tomcat application server for your installation of Get-Resources, then the Get-Resources installer will automatically configure a connection between Apache and Tomcat. In addition, if you select a typical installation, then the installer will automatically pre-compile the Get-Resources JSP files. If you are running a custom installation, you can manually pre-compile the Get-Resources JSP files when you are ready to deploy into a production environment.

Precompiling JSP files for a Tomcat production environment

If you plan to use Tomcat 4.1.12 in a production environment or on a system with multiple processors, you will need to pre-compile the JSP files deployed for Get-Resources. This extra configuration step is the result of a known issue with Tomcat. See the following URL for more details about this issue:

http://nagoya.apache.org/bugzilla/show_bug.cgi?id=14077

To pre-compile JSP files for Tomcat 4.1.12:

- 1 Stop the Tomcat application server.
- 2 Open a command prompt.
- 3 Change directories to `usr/local/peregrine/samples`.
- 4 Copy the following files to the locations specified:

Copy this file	to this location
<code>excludes.txt</code>	<code><Tomcat>/webapps</code>
<code>builds.xml</code>	<code><Tomcat>/webapps</code>
<code>precompile.sh</code>	<code><Tomcat>/bin</code>

For `<Tomcat>`, enter the path to your Tomcat installation. For example:
`/usr/local/peregrine/common/Tomcat4`

- 5 Enter one of the following commands based on your operating system:

Operating system	Command required
UNIX ksh	<code>export JASPER_HOME=<Tomcat directory></code>
UNIX csh	<code>setenv JASPER_HOME <Tomcat directory></code>

For `<Tomcat directory>` enter the absolute path to your Tomcat installation.

- 6 Change directories to the Tomcat bin folder.

Operating system	Command required
UNIX, Solaris, AIX	<code>cd \$JASPER_HOME/bin/samples/</code>

- 7 Run the precompile batch file.

Operating system	Command required
UNIX, Solaris, AIX	<code>./precompile.sh <Web app name> <Tomcat instance name></code>

For `<Web app name>` enter the name of the Get-Resources deployment folder. You can omit this name if you are using the default folder named `oaa`.

For <Tomcat instance name> enter the name of the Tomcat instance you have installed. You may omit this name if you are using the default instance named **Standalone**.

The batch file displays the progress of the conversion. When it is complete, the command prompt returns.

- 8 Start the Tomcat application server.

WebSphere 4.0.2

Use the following procedures to configure WebSphere to run Get-Resources on AIX, Linux, and Solaris.

To configure WebSphere 4.0.2:

- Step 1** Install WebSphere 4.0.2. Your version of WebSphere 4.0.2 includes the IBM HTTP Server. *Installing WebSphere 4.0.2* on page 98.
- Step 2** Deploy the Portal WAR file to WebSphere to create the necessary folder structure for Get-Resources. See *Deploying the Portal WAR file to WebSphere* on page 98.
- Step 3** Set the JVM Java heap size for each WebSphere instance running Get-Resources. See *Setting the Java heap size* on page 100.
- Step 4** Create the virtual directory you want to use for Get-Resources in your Web server. See *Configuring a virtual directory for IBM HTTP Server* on page 102.
- Step 5** Run the Get-Resources installer.

If you plan on setting up a WebSphere Portal Server or a WebSphere Translation Server, see *Installing WebSphere Portal Server* on page 103 or *Configuring WebSphere Translation Server for Get-Resources* on page 112.

Installing WebSphere 4.0.2

Purchase and install IBM WebSphere 4.0.2. Your version of WebSphere 4.0.2 includes the IBM HTTP Server.

Deploying the Portal WAR file to WebSphere

The Portal WAR file creates the folder structure necessary to deploy Get-Resources in your application server. After you have deployed this file to WebSphere you will be ready to run the Get-Resources installer.

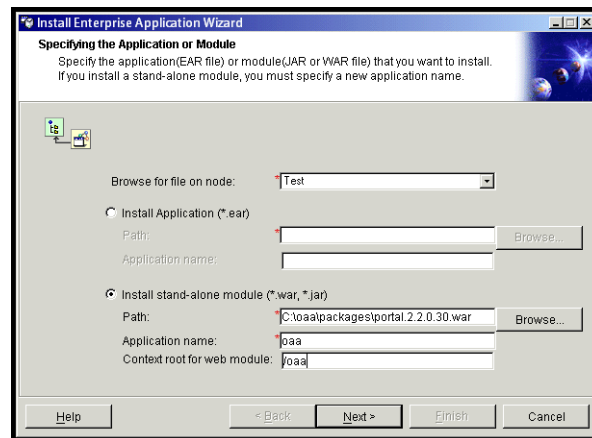
To deploy the Portal WAR file to WebSphere:

- 1 Verify that the WebSphere Admin Server has been started.
- 2 Open the WebSphere Advanced Administrator's Console (/WebSphere/AppServer/bin/adminclient.sh).
- 3 On the menu at the left side of the console, right-click on **Enterprise Applications** and select **Install Enterprise Application**.
- 4 On the screen displayed, do the following:

- a Select **Install stand-alone module**.
- b In the **Path** field, browse to the path to the portal<version #>.war file. The default is <CD Rom Drive>/portal<version #>.war.
For <version #>, Select the most recent version available (4.0.0.44 or greater).
- c In the **Application Name** field, type oaa.
- d In the **Context Root** field, type the name of Get-Resources virtual Web server directory you wish to use. Example: /oaa.

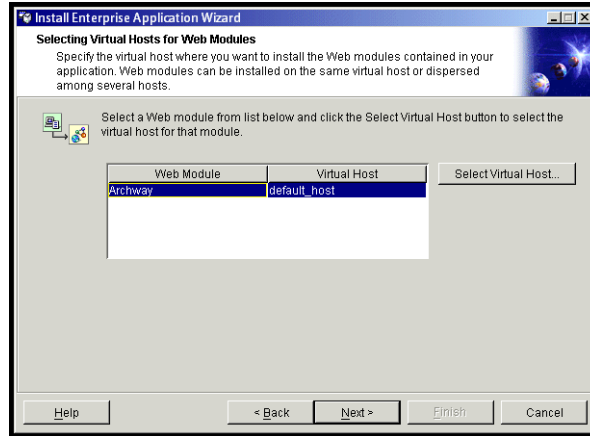
Important: You must create a Web server virtual directory matching the context root you enter here.

The following screen shows the completed form.

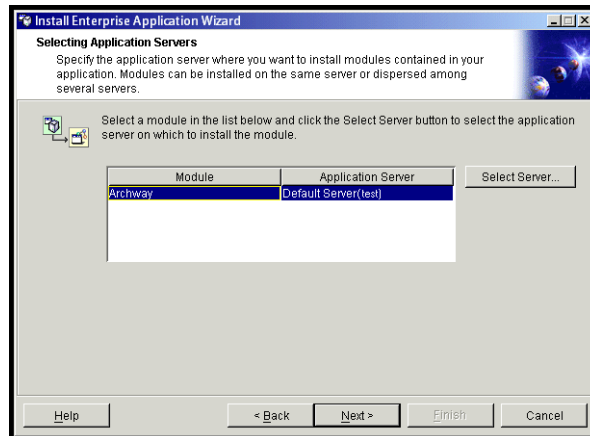


- 5 Click **Next**.
- 6 Click **Next** on the following dialog boxes. These screens will not be used.
 - Mapping Users to Roles
 - Mapping EJB Run As Roles to Users
 - Binding Enterprise Beans to JNDI Names
 - Mapping EJB References to Enterprise Beans
 - Mapping Resource References to Resources
 - Specifying the Default Datasource
 - Specifying Data Sources for Individual CMP Beans

- 7 In the Selecting Virtual Hosts for Web Modules, select the WebSphere server instance you want to use, and then click **Next**.



- 8 In the Selecting Application Servers dialog box, select the WebSphere server instance you want to use, and then click **Next**.



- 9 On the dialog box displayed, click **Finish**.

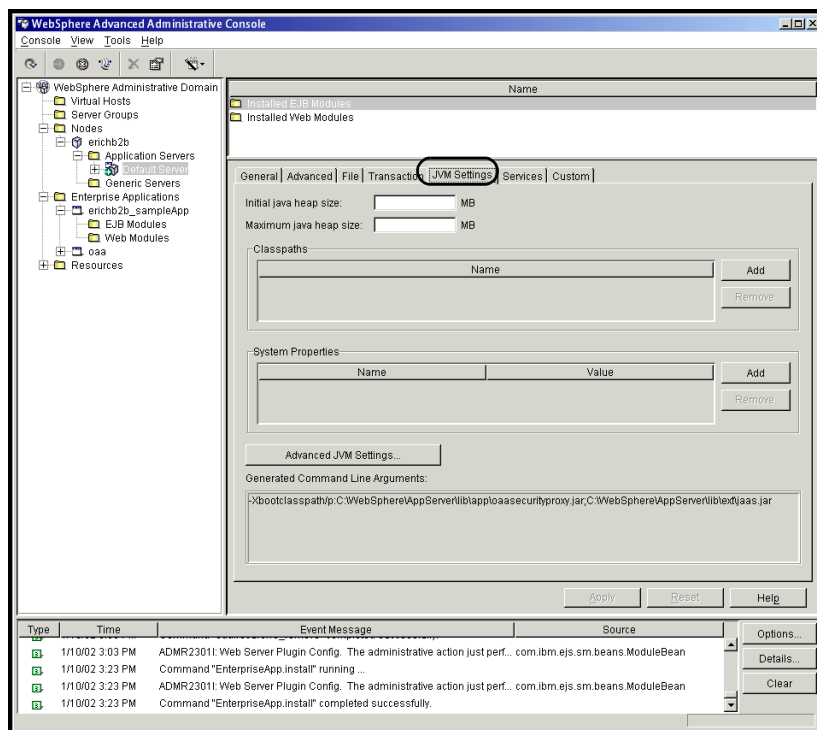
Setting the Java heap size

You can configure how much memory is available for your application server instances. The following instructions assume you are only using one WebSphere instance. You will need to adjust the heap size accordingly if you are load balancing across several WebSphere instances.

To set the Java heap size:

- 1 Verify that the WebSphere Admin Server has been started.
- 2 Open the WebSphere Advanced Administrator's Console (Start > Programs > IBM WebSphere > Application Server > Administrator's Console).
- 3 Click Nodes > <System Name> > Application Servers > <Application server name>.

The server settings page opens.



- 4 Click the JVM Settings tab.
- 5 Set the following JVM settings:
 - a Initial java heap size. Type 60.
 - b Maximum java heap size. Type the value you want for heap memory. This setting should be at least 225 MB, but not more than 512 MB.

Note: Make sure that the setting for maximum heap size is less than the free RAM available to the application server(s). Exceeding the amount of available RAM causes the JVM processes to swap to disk, reducing overall performance. A setting of 256 MB should be sufficient for most systems.

Configuring a virtual directory for IBM HTTP Server

You must configure a virtual directory for Get-Resources in your Web server. The following instructions assume that you are using WebSphere's built-in Web server – IBM HTTP Server. See your Web server documentation to determine how to create a virtual directory if you are using another Web server.

To configure IBM HTTP Server for Get-Resources:

- 1 Stop the IBM HTTP Server.
- 2 Open the file `httpd.conf` in any text editor. By default this file is located at:
`<root>/usr/HTTPServer/conf`
- 3 Add the following line to the end of the file:

```
Alias /oaa/ "<root>/WebSphere/AppServer/installedApps/oaa.ear/portal.<version>.war/"
```

For `<root>`, enter the root directory of the system.

For `<version>`, enter the version number of the WAR file you installed.

Important: The name you define for the virtual directory here must match the context root you defined in WebSphere.

- 4 Save the file.
- 5 Start the IBM HTTP Server.

Running the Get-Resources installer

Run the Get-Resources installer and select the Custom installation option. See *Custom Installation Option* on page 138.

If you plan on setting up a WebSphere Portal Server or a WebSphere Translation Server, see *Installing WebSphere Portal Server* on page 103 or *Configuring WebSphere Translation Server for Get-Resources* on page 112.

Installing WebSphere Portal Server

You can configure Get-Resources to display in a WebSphere Portal Server in one of two configurations:

- All Get-Resources and WebSphere components running on a single system. See *Recommended WebSphere Portal Server configuration* on page 103.
- Get-Resources components running on one system and WebSphere components running on another. See *Alternate WebSphere Portal Server configuration* on page 105.

Important: In either configuration, you must first install WebSphere Portal Server. See your WebSphere Portal Server documentation for details.

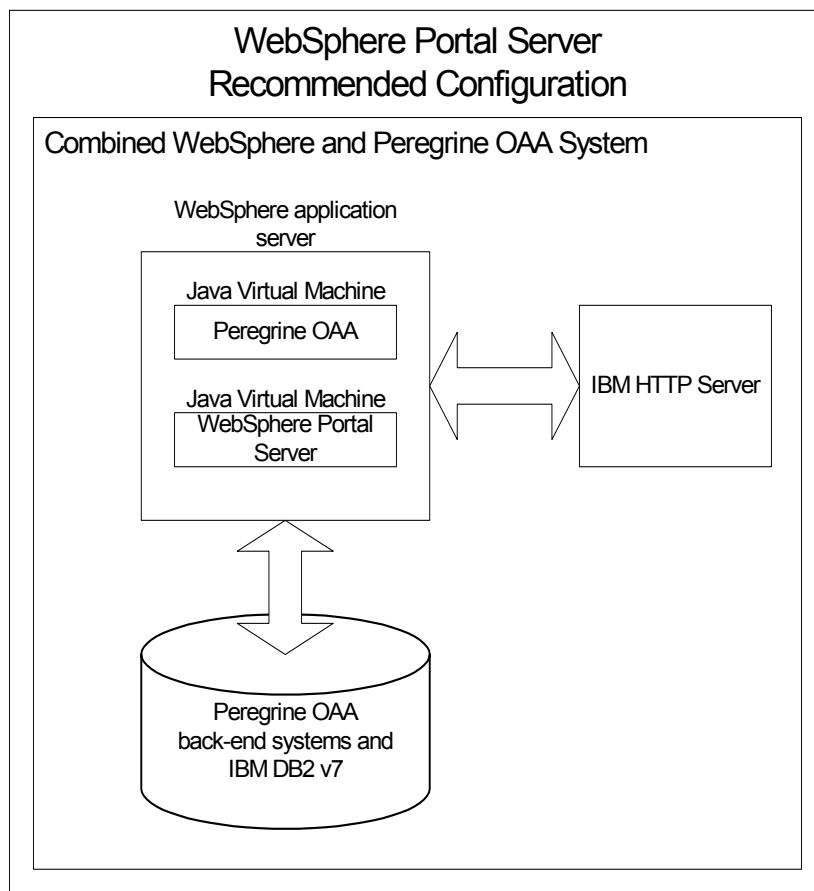
Recommended WebSphere Portal Server configuration

Use the following steps to configure Get-Resources for the recommended WebSphere Portal Server configuration:

- Step 1** Review the WebSphere Portal Server installation requirements. See *WebSphere Portal Server installation requirements* on page 106.
- Step 2** Generate a Get-Resources WAR file containing the portal components WebSphere Portal Server can display. See *Generating a Get-Resources WAR file* on page 107.
- Step 3** Login to the Get-Resources server and stop the WebSphere application server. See *Stopping the WebSphere application server* on page 108.
- Step 4** Modify the `archway.xml` to change the HTTP authentication method used from Basic to Alternate. See *Modifying the archway.xml file* on page 108.
- Step 5** Modify the `web.xml` to enable the AuthController servlet. See *Modifying the web.xml file* on page 108.
- Step 6** Modify the `ibm-web-ext.xmi` file to set the `fileServingEnabled` parameter. See *Modifying the ibm-web-ext.xmi file* on page 109.
- Step 7** Start the WebSphere application server. See *Starting the WebSphere application server* on page 110.

- Step 8** Deploy the Get-Resources WAR file to WebSphere Portal Server. See *Deploying the Get-Resources WAR file to WebSphere Portal Server* on page 110.
- Step 9** Create places and pages in WebSphere Portal Server to display Get-Resources portlets. See *Configuring WebSphere Portal Server places and pages* on page 111.
- Step 10** Enable edit rights for Get-Resources portlets. See *Enabling edit rights for Get-Resources portlets* on page 111.

When complete, your installation will have the following configuration:

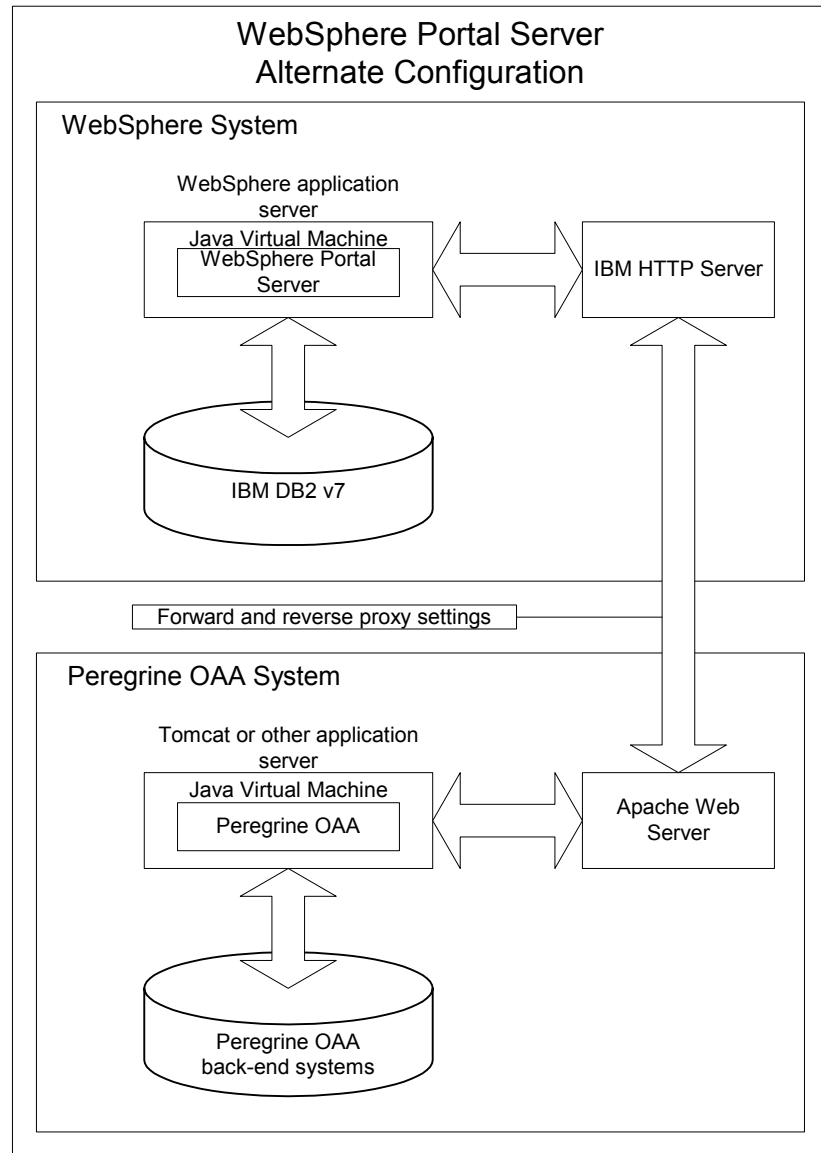


Alternate WebSphere Portal Server configuration

Use the following steps to configure Get-Resources for the alternate WebSphere Portal Server configuration:

- Step 1** Review the WebSphere Portal Server installation requirements. See *WebSphere Portal Server installation requirements* on page 106.
- Step 2** Generate a Get-Resources WAR file containing the portal components WebSphere Portal Server can display. See *Generating a Get-Resources WAR file* on page 107.
- Step 3** Login to the Get-Resources server and stop the WebSphere application server. See *Stopping the WebSphere application server* on page 108.
- Step 4** Modify `archway.xml` to change the HTTP authentication method used from Basic to Alternate. See *Modifying the archway.xml file* on page 108.
- Step 5** Modify `web.xml` to enable the AuthController servlet. See *Modifying the web.xml file* on page 108.
- Step 6** Modify the `ibm-web-ext.xmi` file to set the `fileServingEnabled` parameter. See *Modifying the ibm-web-ext.xmi file* on page 109.
- Step 7** Modify `setDomain.js` to call the `SetDomain` function. See *Modifying the setDomain.js file* on page 109.
- Step 8** Start the WebSphere application server. See *Starting the WebSphere application server* on page 110.
- Step 9** Deploy the Get-Resources WAR file to WebSphere Portal Server. See *Deploying the Get-Resources WAR file to WebSphere Portal Server* on page 110.
- Step 10** Create places and pages in WebSphere Portal Server to display Get-Resources portlets. See *Configuring WebSphere Portal Server places and pages* on page 111.
- Step 11** Enable edit rights for Get-Resources portlets. See *Enabling edit rights for Get-Resources portlets* on page 111.
- Step 12** Modify IBM HTTP Server's `httpd.conf` file to add forward and reverse proxy URLs. See *Modifying httpd.conf for IBM HTTP Server* on page 112.

When complete, your installation will have the following configuration:



WebSphere Portal Server installation requirements

The recommended configuration of the WebSphere Portal Server requires the following items to be installed on the same server:

- WebSphere application server 4.0.2

- IBM HTTP Server 1.3.19
- IBM DB2 v7 database server
- WebSphere Portal Server
- A custom installation of Get-Resources with WebSphere selected as the application server

The alternate configuration of the WebSphere Portal Server requires the following items be installed on a minimum of two servers:

- Server 1
 - WebSphere application server 4.0.2
 - IBM HTTP Server 1.3.19
 - IBM DB2 v7 database server
 - WebSphere Portal Server
- Server 2
 - Get-Resources compatible application server
 - Web server
 - Back-end database for Get-Resources
 - An installation of Get-Resources

Generating a Get-Resources WAR file

In order to display Get-Resources in WebSphere Portal Server, you must first export the Get-Resources portal components as a WAR file. You can then import this WAR file into WebSphere Portal Server, and choose the portal components you want to display as WebSphere Portal Server portlets.

To generate a Get-Resources WAR file:

- 1 Login to the Get-Resources administration page (`admin.jsp`).
- 2 Click **IBM WebSphere Portal Integration**.
- 3 Enter the following configuration information:
 - a **Source Path**. Enter the full path to the `WebSphere.war` in the Get-Resources **package** folder. By default this folder is:
`<WebSphere>/oaa/packages`
 - b **Destination Path**. Enter the full path and file name you want to use for the generated Get-Resources WAR file.

- c **Base URL.** Enter the full URL to the Get-Resources deployment directory.
By default this URL is:

`http://<server>:<port>/oaa/servlet/basicauth`

- 4 Click **Generate WAR file**.

Get-Resources generates a new WAR file with the name and path specified in the Destination Path of step 3.

Stopping the WebSphere application server

To continue configuring, you must log in to the Get-Resources server and stop the WebSphere application server.

To stop the WebSphere application server:

- 1 Login to the Get-Resources server.
- 2 Stop your WebSphere application server.

Modifying the archway.xml file

In order to login via WebSphere Portal Server, you configure Get-Resources to use an alternate HTTP authentication method.

To modify the archway.xml file:

- 1 Using a text editor, open the `archway.xml` file located at:
`<application server>/webapps/oaa/WEB-INF/default.`
- 2 Edit the line containing:
`<httpauthclass ...>HttpBasicAuthenticationManager</httpauthclass>`
- 3 Change the value `HttpBasicAuthenticationManager` to
`HttpAlternateAuthenticationManager.`
- 4 Save the file.

Modifying the web.xml file

You will need to enable the `AuthController` servlet to establish a proxy for HTTP basic authentication.

To modify the web.xml file:

- 1 Using a text editor, open the `web.xml` file located at:
`<application server>\webapps\oaa\WEB-INF.`
- 2 Search for the line containing:

```
<!-- Uncomment to add support for http basic authentication proxy
```

- 3 Move the ending comment tag `-->` from the end of the servlet definition to the comment at the beginning of the servlet definition.

The new servlet definition should appear as follows:

```
<!-- Uncomment to add support for http basic authentication proxy-->
<servlet>
  <servlet-name>AuthController</servlet-name>
  <display-name>AuthController</display-name>
  <description>A controller (decorator) servlet that can be used to
enable configurable auth protection of any resource.</description>

<servlet-class>com.peregrine.oaa.archway.AuthControllerServlet</servl
et-class>
  <load-on-startup>2</load-on-startup>
</servlet>

<servlet-mapping>
  <servlet-name>AuthController</servlet-name>
  <url-pattern>/servlet/basicauth/*</url-pattern>
</servlet-mapping>
<servlet-mapping>
  <servlet-name>AuthController</servlet-name>
  <url-pattern>/servlet/auth/*</url-pattern>
</servlet-mapping>
```

- 4 Save the file.

Modifying the `ibm-web-ext.xmi` file

You need to set the `fileServingEnabled` parameter to true to handle static content.

To modify the `ibm-web-ext.xmi` file:

- 1 Using a text editor, open the `ibm-web-ext.xmi` file. The default file path is:

```
c:\WebSphere\AppServer\installedApps\getit.ear\getit.war\WEB-INF
```

- 2 Find the `fileServingEnabled` parameter and set it to true.

```
fileServingEnabled="true"
```

- 3 Save the file.

Modifying the `setDomain.js` file

To use the alternate configuration of WebSphere Portal Server, you must enable the `setDomain` function.

Note: If you are setting up WebSphere Portal Server in the recommended configuration, you may skip these instructions.

To modify the `setDomain.js` file:

- 1 Login to the Get-Resources server.
- 2 Stop your application server.
- 3 Using a text editor, open the `setDomain.js` file located at:
`<application server>/webapps/oaaj/js.`
- 4 Add the following line to the end of the file:

```
setDomain();
```
- 5 Save the file.

Starting the WebSphere application server

To continue configuring, you must restart the WebSphere application server.

Deploying the Get-Resources WAR file to WebSphere Portal Server

After you deploy the Get-Resources WAR file to WebSphere Portal Server, you can then configure the portlets you want to display, the display settings, and the access rights to each portlet.

See your WebSphere Portal Server documentation for detailed instructions.

To deploy the Get-Resources WAR file:

- 1 Login to the WebSphere Portal as `wpsadmin` or another user with administrative rights.
- 2 Select **Portal Administration** from the Places menu.
- 3 Click **Portlets > Install Portlets**.
- 4 Click **Browse** and navigate to the Destination path you entered when you created the Get-Resources WAR file.
- 5 Click **Next** to load the Get-Resources WAR file.
 WebSphere Portal Server displays a list of portlets to be installed.
- 6 Click **Install**.
 WebSphere Portal Server installs the portlets and displays the message “Portlets successfully installed.”

Configuring WebSphere Portal Server places and pages

Note: Refer to your WebSphere Portal documentation for details on the following.

You can deploy Get-Resources portlets in any place or page that meet the following requirements.

Places

Your WebSphere Portal Server places must have the following characteristics:

- Supported markups must include HTML

Pages

Your WebSphere Portal Server pages must have the following characteristics:

- Supported markups must include HTML
- The page must be set to “allow all portlets that a user can access”
- All Get-Resources portlets that you display in a page must grant “all authenticated users” the minimum edit permission.

Enabling edit rights for Get-Resources portlets

WebSphere Portal Server users will need edit rights to the Get-Resources portlets in order to add and customize them to their portal page.

To enable edit rights for Get-Resources portlets:

- 1 Login to the WebSphere Portal as **wpsadmin** or another user with administrative rights.
- 2 Select **Portal Administration** from the Places menu.
- 3 Click **Security > Access Control List**.
- 4 Select the **Special groups** option and select **All authenticated users** from the select box.
- 5 From the Select the objects for the permissions select box, select **portlet applications**.
- 6 Select the **Search on** option, and then enter **Peregrine** in the Name contains field.
- 7 Click **Go**.

WebSphere Portal Server displays a list of portlets with Peregrine in the name.

- 8 In the Edit column, click **Select All** at the bottom of the table.

9 Click Save.

Users can now view and customize Get-Resources portlets from the WebSphere Portal Server interface.

Modifying httpd.conf for IBM HTTP Server

In order to use the alternate configuration of WebSphere Portal Server, you will need to modify the `httpd.conf` file used by the IBM HTTP Server to add the forward and reverse proxy URLs to your remote instance of Get-Resources.

Note: If you are setting up WebSphere Portal Server in the recommended configuration, you may skip these instructions.

To modify httpd.conf for IBM HTTP Server:

- 1 Login to the Get-Resources server.
- 2 Stop your IBM HTTP Server.
- 3 Using a text editor, open the `httpd.conf` file located at:
`<root>/usr/HTTPServer/conf`
- 4 Add the following lines to the end of the file:

```
ProxyPass /<oaa root>/ http://<server>:<port>/
<oaa root>/servlet/basicauth/
ProxyPassReverse /<oaa root>/ http://<server>:<port>/
<oaa root>/servlet/basicauth/
```

For `<oaa root>`, enter the name of the oaa virtual directory used by IBM HTTP Server. By default, this virtual directory is `oaa`.

For `<server>:<port>`, enter the server name and communications port number where Get-Resources is installed.

- 5 Save the file.

Configuring WebSphere Translation Server for Get-Resources

You can configure Get-Resources to use a WebSphere Translation Server to provide real-time translations of on-screen data.

To configure WebSphere Translation Server for Get-Resources:

- Step 1** Copy the file `wts.jar` to the Get-Resources deployment folder. See *Copying wts.jar to the Get-Resources deployment folder* on page 113.

Step 2 Configure Get-Resources to use the WebSphere Translation Server. See *Configuring WebSphere Translation Server for Get-Resources* on page 112.

Copying wts.jar to the Get-Resources deployment folder

The following instructions describe where to find and copy the file wts.jar.

To copy wts.jar to the Get-Resources deployment folder:

- 1 Stop your application server.
- 2 Browse to the location of your WebSphere Translation Server installation.
- 3 Copy the file wts.jar from this folder.
- 4 Paste the file wts.jar into the Get-Resources deployment folder located at:
<Application server install>/WEB-INF/lib
- 5 Restart your application server.

Configuring Get-Resources to use the WebSphere Translation Server

The following instructions describe how to configure Get-Resources to use the WebSphere Translation Server.

To configure Get-Resources to use the WebSphere Translation Server:

- 1 Login to the Get-Resources admin page (admin.jsp).
- 2 Click **Settings > Common** tab.

The Admin Settings page opens.

The screenshot shows the Admin Settings page with the following sections:

- Common Backend:**
 - portalDB:** Adapter target name used to support common user operations.
 - List of target aliases:** Specifies a list of semicolon delimited target aliases used by web applications in this package. (Value: webication;mail)
 - Admin name:** The admin login name. This login provides access to administrative functionality without authenticating against backend adapters. (Value: Admin)
 - Admin password:** The admin login password.
- Language Translation:**
 - Translation Server Factory Class:** The Java factory class which generates the proper class associated with the Translation Server. (Value: com.peregrine.util.WTSLanguageTranslatorFactory)
 - Language from which to translate:** The language from which to translate or the base language in which all text is currently displayed as. (Value: English)
 - Translation Server IP Address:** The IP address of the Translation Server. This address may or may not contain a port number depending on the Translation Server requirements. (Value: 10.3.128.181:1097)
 - Application path:** Directory location of the Peregrine Portal Web Applications. (Value: WEB-INF/apps/)
 - Event queue:** Enter the name of the adapter that should be used by the Peregrine Portal event queue engine. For example:
 - To use ServiceCenter's repository, enter "sc"
 - To use AssetCenter's repository, enter "ac"

- 3 Enter the following configuration settings:
 - a **Translation Server Factory Class:** Enter the Java factory class for the Translation server. The default Java factory class is:
`com.peregrine.util.WTSLanguageTranslatorFactory`
 - b **Language from which to translate:** Enter the source language that you want translated. The default value is English.
 - c **Translation Server IP Address:** Enter the IP address and communications port to the Translation Server. For example: 10.3.128.181:1097.
 - d **Application path:** Enter the relative path to the application server applications directory. The default value is:
`WEB-INF/apps/`
 - e **Event queue:** Enter the adapter name to you want to use for the event queue engine. The default value is: **PortalDB**
- 4 Click **Save**.
The Control Panel opens.
- 5 Click **Reset Server**.

Translating on-screen data with a Translation Server

If you plan to store Get-Resources data in a mixture of languages, you can configure Get-Resources to send data to a Translation Server for real time translation. This interface will only translate data retrieved from the back-end database or manually typed into form inputs. If you need a translated user interface, you can purchase a Get-Resources language pack directly from Peregrine Systems.

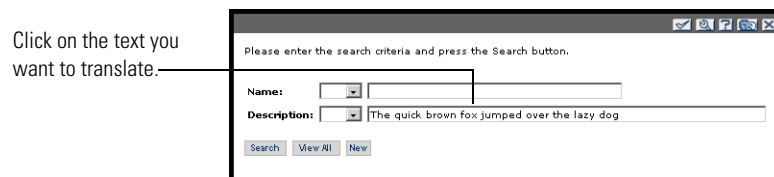
To translate on-screen data with a Translation Server:

- 1 Enable the translation server from the **Administration > Settings** page as described in *Configuring WebSphere Translation Server for Get-Resources* on page 112.

The translate button appears in the upper right tool bar.

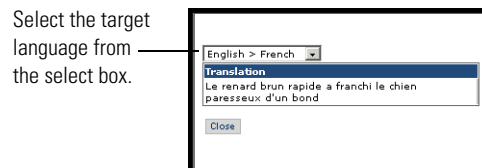


- 2 Click on the source data or form input you want to translate.



- 3 Click the translate button.

The Translation window opens.



- 4 Select the target language to which you want to translate from the drop down select box.

The translation of your selection displays in the Translation box.

WebLogic 6.1 SP3 or SP4

The following procedures configure WebLogic to run Get-Resources on UNIX.

To configure WebLogic 6.1 SP3 or SP4:

- Step 1** Stop both WebLogic and your Web server. See *Stopping WebLogic* on page 116.
- Step 2** Edit the `startWebLogic.cmd` file to set the system password, memory settings, and start mode. See *Editing startWebLogic.cmd* on page 116.
- Step 3** Run the Get-Resources installer. See *Custom Installation Option* on page 138
- Step 4** Create a virtual directory for Get-Resources in your Web server. See *Creating a virtual directory for Get-Resources* on page 117.
- Step 5** Restart WebLogic and your Web server. See *Restarting the servers* on page 118.

Stopping WebLogic

Before you begin to configure WebLogic, you must stop both Weblogic and your Web server.

Editing startWebLogic.cmd

To edit startWebLogic.cmd:

- 1** Open the file `startWebLogic.cmd` file in any text editor. By default the file is located at:

```
/bea/wlserver6.1/config/<mydomain>/
```

- 2** Scroll to the following section of the script:

```
echo *****
echo * To start WebLogic Server, use the password      *
echo * assigned to the system user. The system        *
echo * username and password must also be used to    *
echo * access the WebLogic Server console from a web  *
echo * browser.                                       *
echo *****
@rem Set WLS_PW equal to your system password for no password prompt
server startup.
set WLS_PW=password
```

- 3** In the last line, change the word “password” to your WebLogic system password.

- 4 Search for the -mx parameter setting in the file. Change this setting to at least 225 MB, but not more than 512 MB.

Note: Make sure that the setting for maximum heap size is less than the free RAM available to the application server(s). Exceeding the amount of available RAM causes the JVM processes to swap to disk, reducing overall performance. A setting of 256 MB should be sufficient for most systems.

- 5 Set the STARTMODE variable to STARTMODE=false.

The first time you start WebLogic after the installation, you will need to start it in development mode for it to find the Web applications that have been deployed.

- 6 Save the file.

Running the Get-Resources installer

Run the Get-Resources installer and select the Custom installation option. See *Custom Installation Option* on page 138.

Creating a virtual directory for Get-Resources

To run Get-Resources, you need to create a virtual directory in your Web server that maps to your WebLogic deployment folder. The typical installation creates a virtual directory called `oaa`, but you may specify a different virtual directory name.

Requirements for Get-Resources virtual directory

Requirement	Setting
Create virtual directory	<oaa>
Map to physical path	<WebLogic>/applications/oaa
Directory access rights	Read, Run scripts, Execute

For <oaa>, enter the name of the virtual directory you want to use for Get-Resources. Whatever name you enter here you will need to replicate in your application server configuration.

For <WebLogic>, enter the path to your WebLogic installation. The default file path is:

`/bea/wlserver6.1/config/<mydomain>`

Restarting the servers

Restart WebLogic and your Web server for your new settings to take effect.

JRun 3.1

The following procedures configure JRun to run Get-Resources on UNIX.

To configure JRun 3.1:

- Step 1** Install a Java run-time environment. See *Installing a Java run-time environment* on page 119.
- Step 2** Install JRun from the Macromedia Web site to the root of your hard drive. See *Installing JRun* on page 119.
- Step 3** Apply the latest JRun update. See *Applying the latest JRun update* on page 120.
- Step 4** Deploy the Portal WAR file to JRun to create the necessary folder structure for Get-Resources. See *Deploying the Portal WAR file to JRun* on page 120.
- Step 5** Run the Get-Resources installer. *Running the installer* on page 123.
- Step 6** Move js.jar to the Java development kit ext folder. See *Moving js.jar to the Java development kit* on page 123.
- Step 7** Run the JRun Connector Wizard to establish a connection between JRun and your Web server. See *Running the JRun Connector Wizard* on page 124.
- Step 8** Configure your JRun Java settings. See *Configuring Java settings* on page 124.
- Step 9** Define any library path environmental variables to your back-end databases. See *Defining library path environment variables* on page 127.
- Step 10** Create a virtual directory for Get-Resources in your Web server. See *Creating a virtual directory for Get-Resources* on page 128.
- Step 11** Restart JRun and your Web server. See *Restarting JRun* on page 129.

Installing a Java run-time environment

The Get-Resources installer includes the Java 2 SDK Standard Edition v1.3.1_05. However, you can also use JRE 1.3.1 if you already have it installed. See *Custom Installation Components* on page 138.

Installing JRun

Before you install Get-Resources, you must install JRun to your root directory.

To install JRun:

- 1 Browse to the following URL:
<http://www.macromedia.com/software/jrun/>
- 2 Click the link **JRun 3.1 Available for Purchase**.
- 3 Follow the installation instructions provided.

Applying the latest JRun update

Before you install Get-Resources, you must apply the latest Jrun 3.1 update.

To install the latest JRun update:

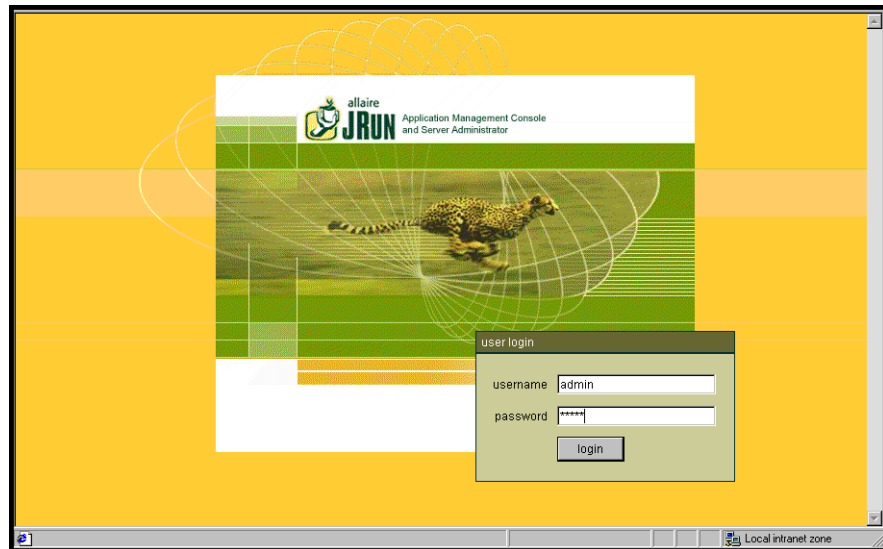
- 1 Browse to the following URL:
http://www.macromedia.com/support/jrun/updates/3/updates_31.html
- 2 Click the link for the **JRun edition (Enterprise, Advanced, or Professional) and operating system of your server**.
- 3 Follow the installation instructions provided.

Deploying the Portal WAR file to JRun

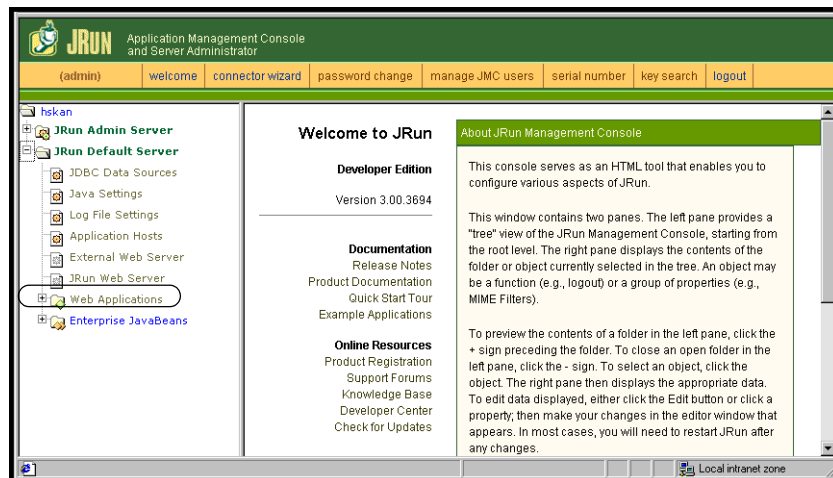
The Portal WAR file creates the folder structure necessary to deploy Get-Resources in your application server. After you have deployed this file to WebLogic you will be ready to run the Get-Resources installer.

To deploy the Get-Resources Portal WAR file to JRun:

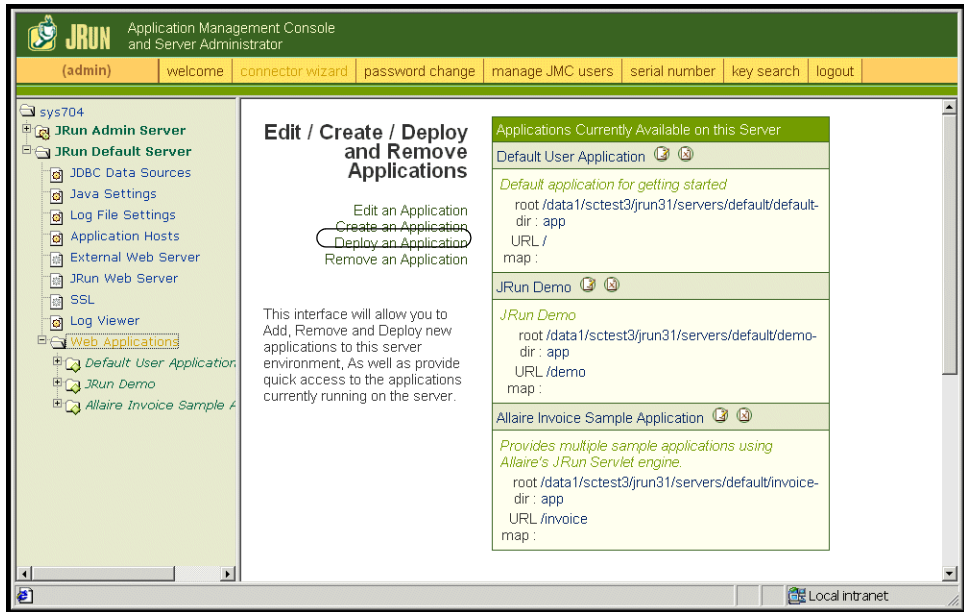
- 1 Open the JRun Management Console and log in.



- 2 Select JRun Default Server > Web Applications.



The Edit / Create / Deploy and Remove Applications page opens.

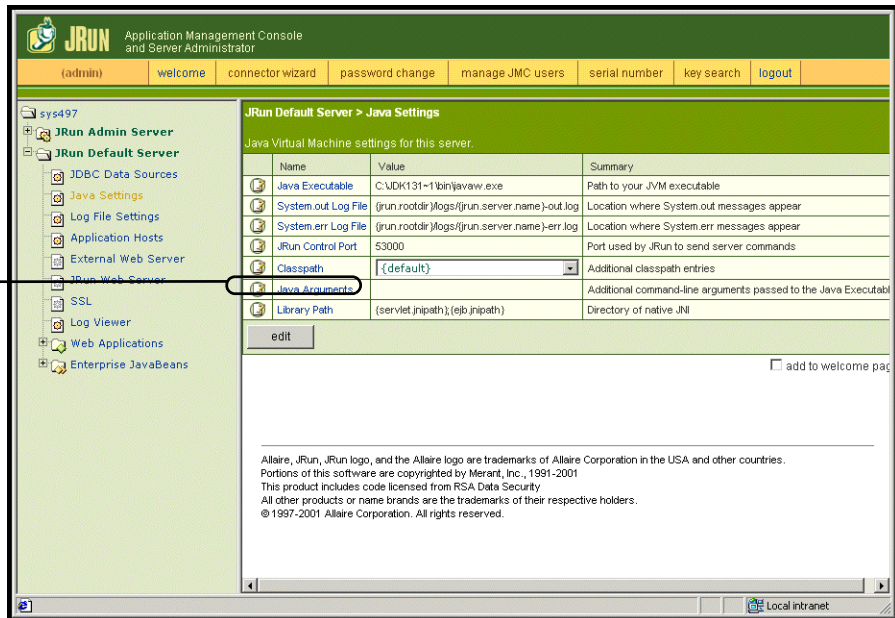


- 3 Click the **Deploy an Application** link.
- 4 In the page that opens, fill out the fields as follows:
 - **Servlet War File or Directory:**
Browse to <CD Rom Drive>/portal<version #>.war.
For <version>, select the most current version.
Select this file, and then click **Accept**.
 - **JRun Server Name:**
Select **JRun Default Server**.
 - **Application Name:**
Type oaa.
 - **Application URL:**
Type /oaa.
 - **Application Deploy Directory:**
JRun generates this directory. Make a note of this path. You will need this information later in the procedure.
- 5 Click **deploy**.

A message that OAA has been successfully deployed appears.

6 On the Java Settings page, click **Java Arguments**.

Click **Java Arguments**.



7 In the edit window that opens, use the format example to enter an -Xmx value. This defines the maximum amount of heap memory allocated for your system. It is recommended that you set this value to at least 225 MB, but not more than 512 MB.

Note: Make sure that the setting for maximum heap size is less than the free RAM available to the application server(s). Exceeding the amount of available RAM causes the JVM processes to swap to disk, reducing overall performance. A setting of 256 MB should be sufficient for most systems. Applications using Persistence may require a higher setting.

Running the installer

Run the Get-Resources installer using the Custom install option. See [Custom Installation Option](#) on page 138.

Moving js.jar to the Java development kit

JRun requires an updated version of js.jar in the Java development kit.

To move the js.jar to the Java development kit:

- 1 Stop JRun.
- 2 Locate js.jar. By default this file is installed at:
`<JRun>/servers/default/aaa/WEB-INF/lib`
- 3 Cut and paste the file to the following path:
`/usr/local/peregrine/common/jdk1.3/jre/lib/ext`
- 4 Restart JRun.

Running the JRun Connector Wizard

The JRun Connector Wizard establishes a connection between JRun and your Web server.

To run the JRun Connector Wizard:

- 1 Login to the JRun Management Console.
- 2 Click Connector Wizard.
- 3 Select the JRun Default Server as the JRun Server Name.
- 4 Select your Web server from the drop down list box.
- 5 If your Web server uses a different IP address than your JRun server, enter the IP address of your JRun server in JRun Server IP Address.
- 6 Confirm that the JRun Server Connector Port is not in conflict with another communications port used on this server.
- 7 Enter the path to the Scripts Directory.
- 8 Click Done.

Configuring Java settings

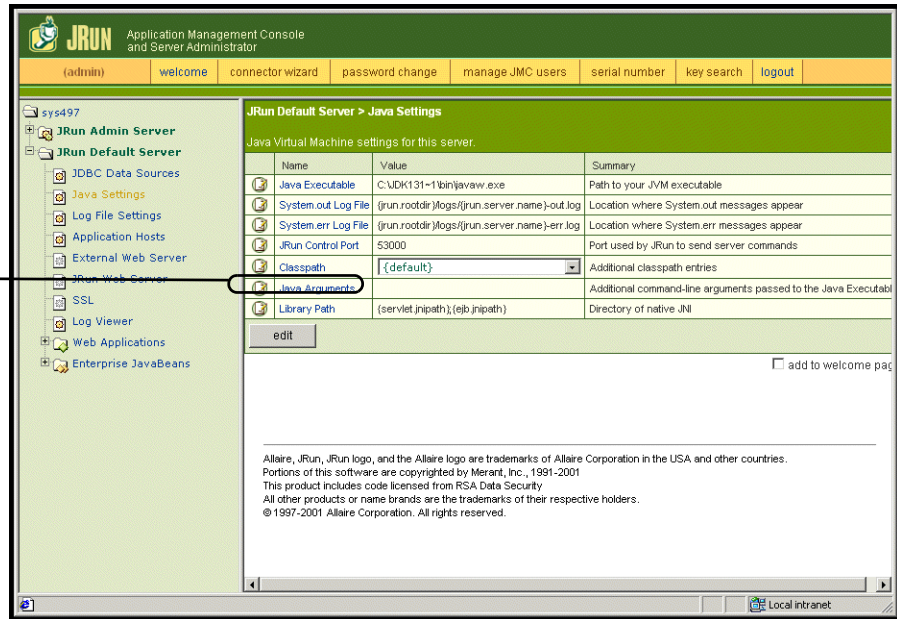
After you have installed Get-Resources, you must configure the Java settings that JRun will use to run the Web application.

To configure Java settings:

- 1 Login to the JRun Management Console.
- 2 Click JRun Default Server > Java Settings.
 The Java Settings page opens.

3 Click Java Arguments.

Click **Java Arguments**.



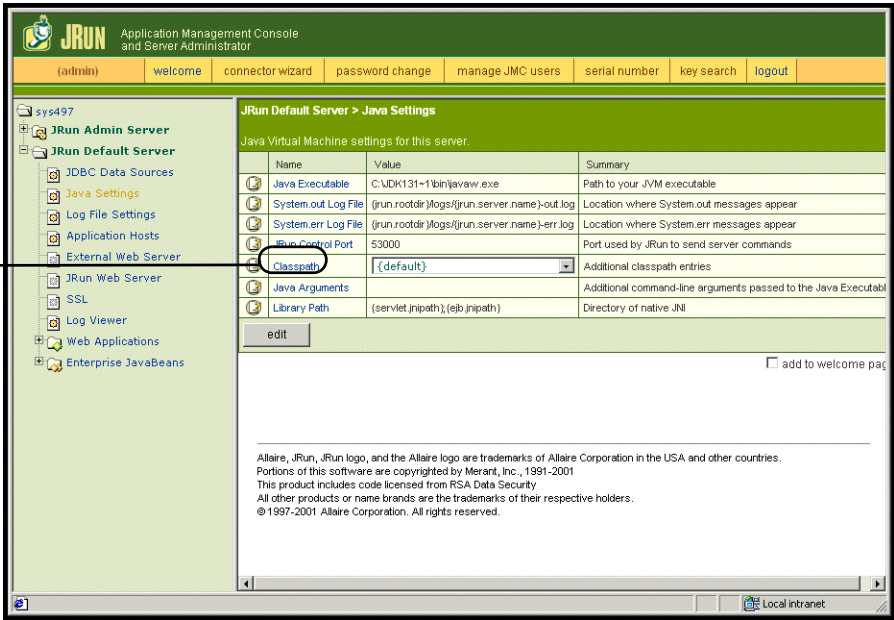
The Edit Window opens.

- 4 Enter an -Xmx value to define the maximum amount of heap memory allocated for your system. It is recommended that you set this value to at least 225 MB, but not more than 512 MB.

Note: Make sure that the setting for maximum heap size is less than the free RAM available to the application server(s). Exceeding the amount of available RAM causes the JVM processes to swap to disk, reducing overall performance. A setting of 256 MB should be sufficient for most systems. Applications using Persistence may require a higher setting.

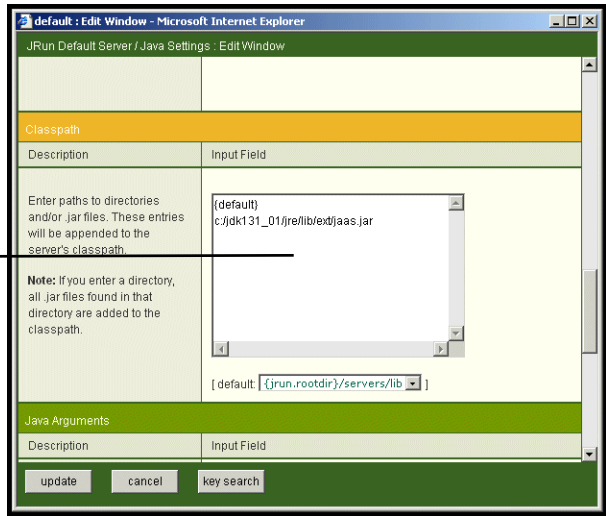
5 On the Java Settings page, click **Classpath**.

Click
ClassPath.



The Edit Window opens.

Type the path to
the JAR files here.



6 Enter the following classpaths:

- Java Development Kit ext folder. For example:

`/usr/peregrine/Common/jdk1.3.1_05/jre/lib/ext`

- 7 On the Java Settings page, click **Java Executable**.
- 8 Verify that path to your Java Development kit matches the path listed in the Classpath setting. For example:

`/usr/peregrine/Common/jdk1.3.1_05/bin/javaw.exe`

- 9 Click **update**.

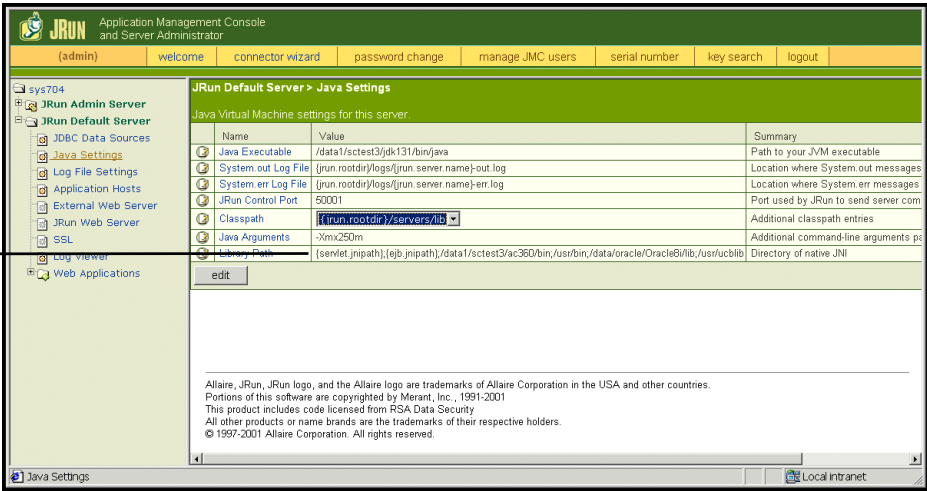
Defining library path environment variables

On UNIX-based systems, you must define the library paths to your back-end databases.

- 1 Open the JRun Management Console and log in.
- 2 On the menu at the left, select **JRun Default Server > Java Settings**.
- 3 Click **Library Path**.
- 4 Add the following library paths if needed:
 - If you are using AssetCenter, add:
 - AssetCenter `/bin` directory
 - Oracle `/lib` directory to the path.
 - If you are running Get-Resources on Solaris, add:
 - `/usr/bin`
 - `/usr/ucblib`
- 5 Click **update**.

JRun displays the updated library paths.

The updated path appears here.



6 Logout of the Management Console.

Creating a virtual directory for Get-Resources

To run Get-Resources, you need to create a virtual directory in your Web server that maps to your JRun deployment folder. The typical installation creates a virtual directory called oaa, but you may specify a different virtual directory name.

Requirements for Get-Resources virtual directory

Requirement	Setting
Create virtual directory	<oaa>
Map to physical path	<JRun>/oaa
Directory access rights	Read, Run scripts, Execute

For <oaa>, enter the name of the virtual directory you want to use for Get-Resources. Whatever name you enter here you will need to replicate in your application server configuration.

For <JRun>, enter the path to your JRun installation. The recommended installation path is:

/JRun/servers/default

Restarting JRun

Restart JRun and your Web server for your new settings to take effect.

Typical Installation Option

A typical installation of Get-Resources installs the most commonly used components of the product and saves application files and data in default destination directories. Most users choose Typical installation.

Typical Installation Components

Following is a brief description of the components that are automatically installed with a Typical installation of Get-Resources:

Applications and File Locations

Get-Resources Component	Default Installation Directory
Apache Web Server	/usr/local/peregrine/common/apache2
Tomcat Application Server	/usr/local/peregrine/common/tomcat4
Java Development Kit	/usr/local/peregrine/common/jdk1.3.1
OAA Platform and Get-Resources	/usr/local/peregrine/oaa

Communications Ports

Get-Resources uses the following communications ports in a typical installation. After installation, you can configure Get-Resources to use one or more of the alternate communications ports if your local network already uses these communications ports.

Default Port	Component used by	Alternate Port
80	Apache Web Server	8081
8005	Tomcat application server administration	8015
8009	Tomcat application server worker file	8019
8011	Tomcat application server worker file for load balancing (optional)	8021
8013	Tomcat application server worker file for load balancing (optional)	8023
8015	Tomcat application server worker file for load balancing (optional)	8025

Note: To change settings for these components or to use or install different components, use the Custom installation option for Get-Resources.

This completes the installation. If you have not already done so, you will now need to configure your system to connect to the back-end database you are using. This is done on the Settings page of the Admin module.

Typical Installation Procedures

This section explains how to install Get-Resources with a Tomcat application server and an Apache web server on an AIX, Linux, or Solaris operating system.

To perform a typical installation of Get-Resources on UNIX:

- 1 Login to your server.

Important: You must login with an account that has root privileges.

- 2 Insert the Get-Resources installation CD into your computer's CD ROM drive. Your computer should automatically launch the installation program. Exit the automatic launch and mount your CD ROM drive. For example:

```
mount /cdrom
```

Change directories to your CD ROM. For example:

```
cd /cdrom
```

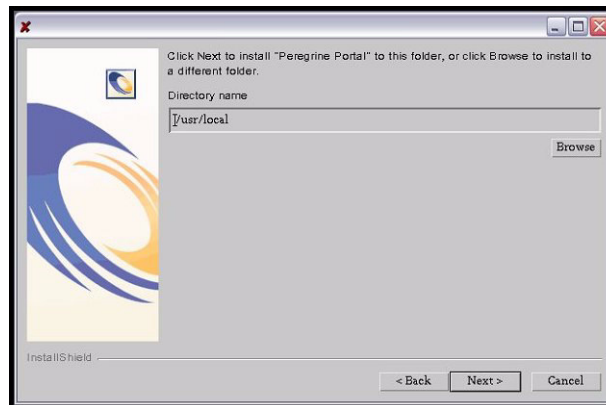
Enter the installer script specific for your operating system:

Operating system	Shell script to run
AIX 5.1	./setupaix
Red Hat Linux 7.3	./setuplinux
Solaris 2.7	./setupsolaris
Solaris 2.8	./setupsolaris

The installer welcome page opens.



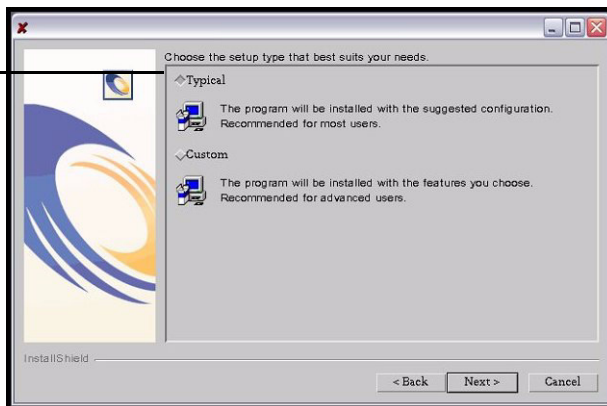
- 3 Click **Next** to continue to the next page of the wizard.
The installation location page opens.



- 4 Click **Browse** to change the default installation location of /usr/local.
- 5 Click **Next** to continue to the next page of the wizard.

The setup type page opens.

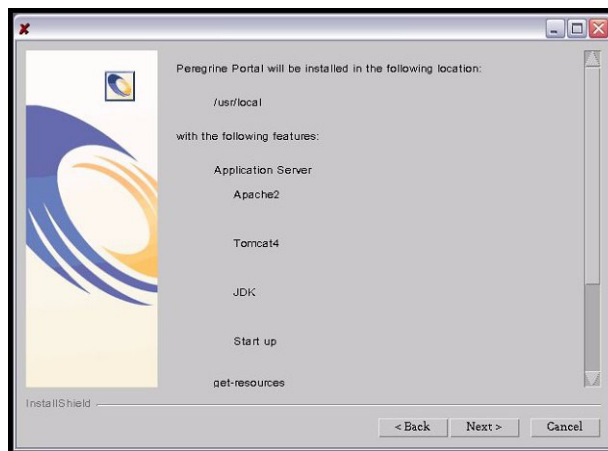
Click **Typical**.



6 Select **Typical**.

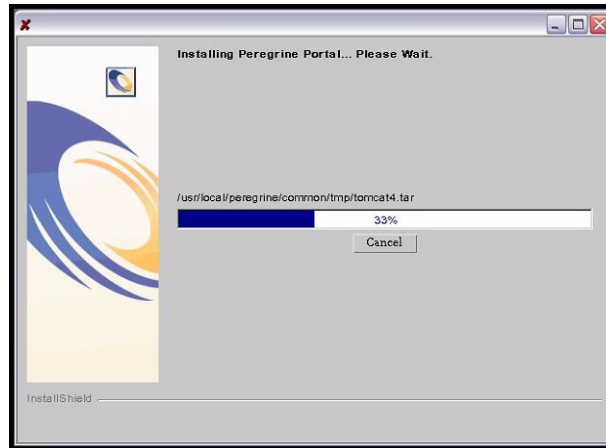
7 Click **Next** to continue to the next page of the wizard.

The review components page opens.

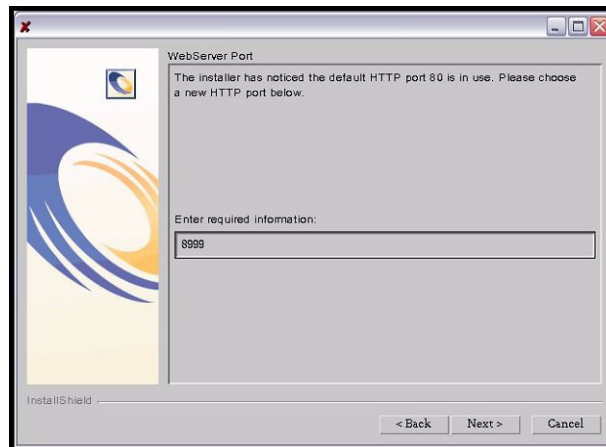


8 Click **Next** to continue to start installing Get-Resources components.

The installation progress page opens.

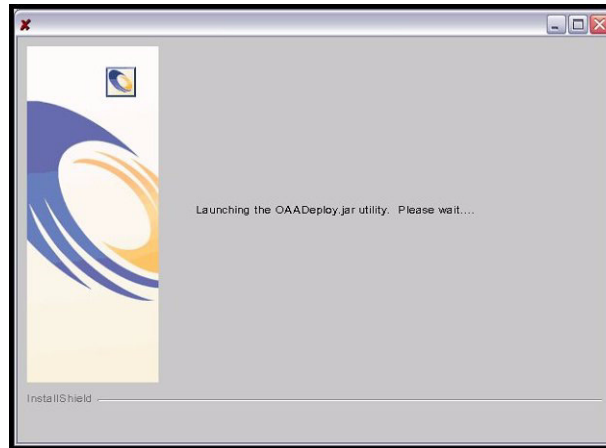


After installation is complete, the installer verifies the availability of port 80 for the Apache Web server. If the installer finds a port conflict on port 80 the Web server port page opens.

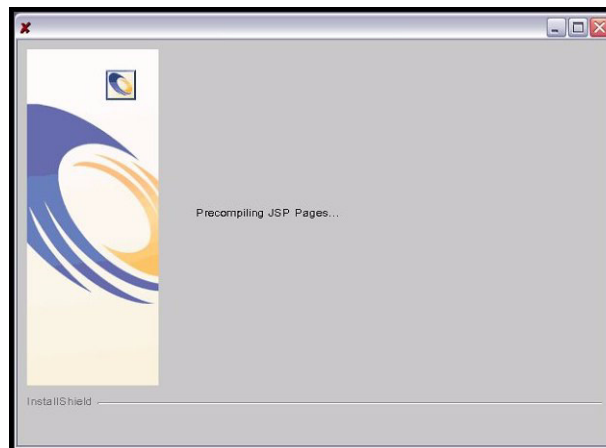


- 9 If required, enter the new Web server communications port.
- 10 Click Next to start deploying Get-Resources components.

The Get-Resources deployment utility page opens.

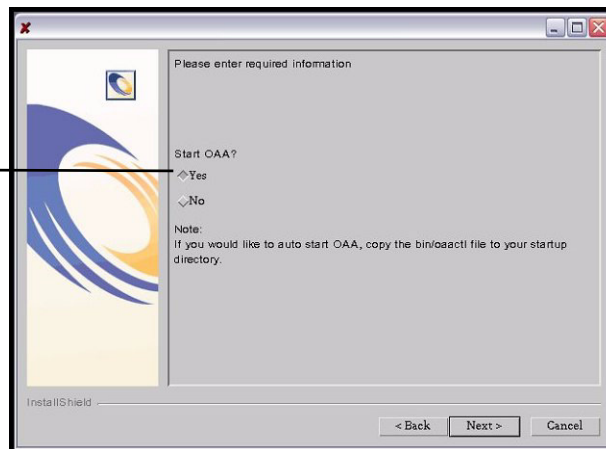


During deployment, the installer precompiles the Java server pages for use by Tomcat.



After the installer has successfully deployed Get-Resources, the start OAA page opens.

Select **Yes**
to start
Get-Resources
immediately.



- 11 Click **Yes** to start Get-Resources immediately or select **No** to manually start Get-Resources after installation is complete.

If you want Get-Resources to start every time the server is started, then copy the file `oaactl` into your startup directory. By default this file is located at:

`/usr/local/peregrine/bin/`

You have now completed installing Get-Resources.

Custom Installation Option

The following section describes how to perform a custom installation of Get-Resources on a Unix operating system server, including overview steps for a Development and Production environment.

Custom Installation Components

Following is a brief description of the components that are available for a custom installation of Get-Resources:

Application options

Get-Resources Component	Options
Web Server	<ul style="list-style-type: none">■ Apache 2.0.43■ IBM HTTP Server 1.3.19■ Microsoft IIS 5.0
Application Server	<ul style="list-style-type: none">■ Tomcat 4.1.12■ WebSphere 4.02■ WebLogic 6.1 SP3■ JRun 3.1
Java Development Kit	Java 2 SDK

Communications Ports

The communications ports used by a custom installation of Get-Resources depend upon the application components that you select. Refer to your Web and application server documentation to determine what communications port they require. After installation, you can configure Get-Resources to use alternate communications ports if your local network already uses particular communications ports.

Get-Resources on servers running Oracle 9.2.0.1

If you are running Get-Resources on a server using Oracle 9.2.0.1 you may experience a port conflict over communications ports 8009 and 8080. Consult your Web and application server documentation to see if they use either of these two ports.

If you are using Tomcat as your application server, then by default, there will be a port conflict over port 8009. It is recommended that you change Tomcat to use a different communications port on servers running Oracle 9.2.0.1.

Custom Installation Procedures

To perform a custom installation of Get-Resources on UNIX:

- 1 Login to your server.

Important: You must login with an account that has root privileges.

- 2 Insert the Get-Resources installation CD into your computer’s CD ROM drive. Your computer should automatically launch the installation program. If the installation program does not automatically start, mount your CD ROM drive. For example:

```
mount /cdrom
```

Change directories to your CD ROM. For example:

```
cd /cdrom
```

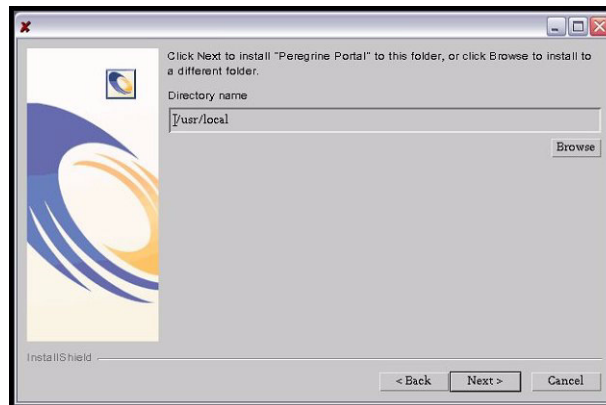
Enter the installer script specific for your operating system:

Operating system	Shell script to run
AIX 5.1	./setupaix
Red Hat Linux 7.3	./setuplinux
Solaris 2.7	./setupsolaris
Solaris 2.8	./setupsolaris

The installer welcome page opens.

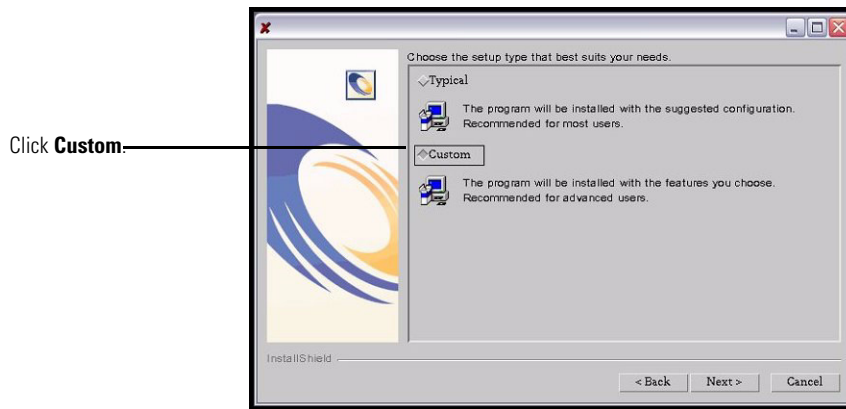


- 3 Click **Next** to continue to the next page of the wizard.
The installation location page opens.

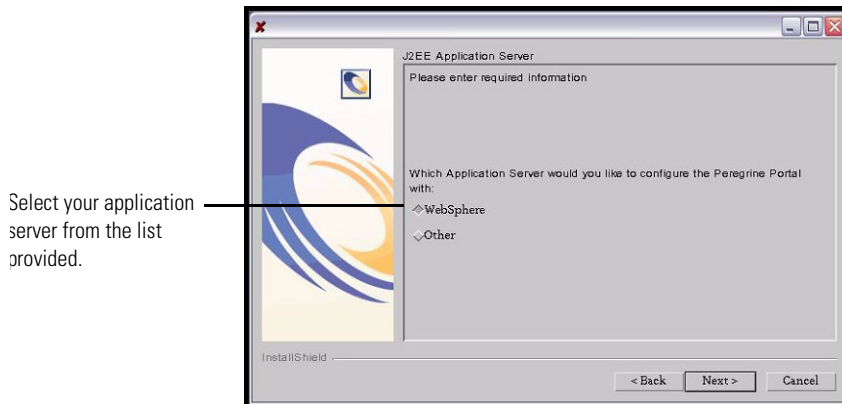


- 4 Click **Browse** to change the default installation location of /usr/local.
- 5 Click **Next** to continue to the next page of the wizard.

The setup type page opens.

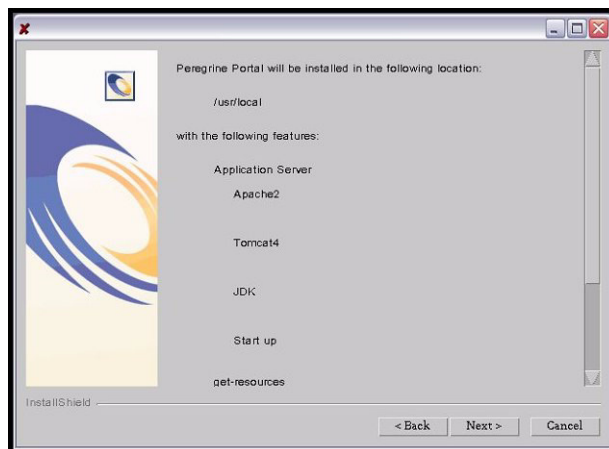


- 6 Select **Custom**.
- 7 Click **Next** to continue to the next page of the wizard.
The select J2EE application server page opens.

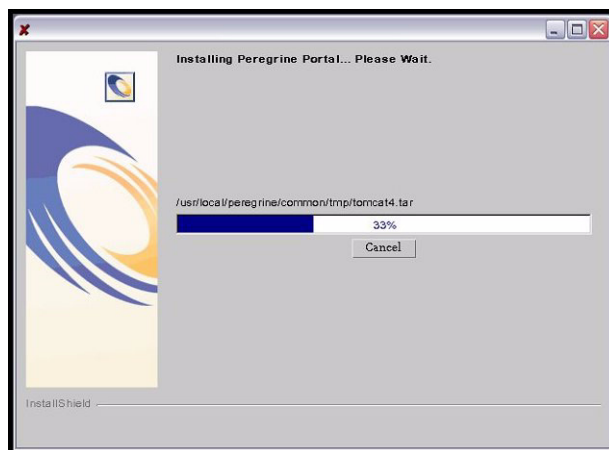


- 8 Click **WebSphere** to configure a WebSphere application server, or click **Other** to configure any other application server. Click **Next** to continue to the next page of the wizard.

The review components page opens.

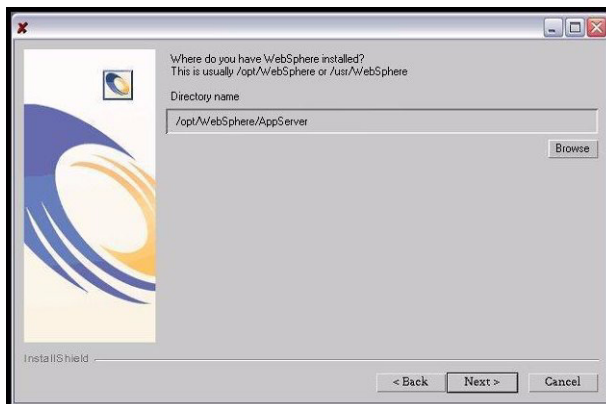


- 9 Click **Next** to continue to start installing Get-Resources components. The installation progress page opens.



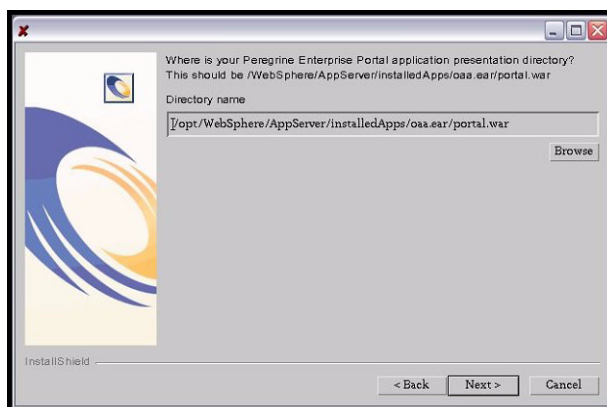
If you have selected to configure a WebSphere application server, you will see the screens in step a through step e.

The WebSphere AppServer installation location page opens.



- a Click **Browse** to locate the directory where you installed the WebSphere AppServer. Click **Next** to continue.

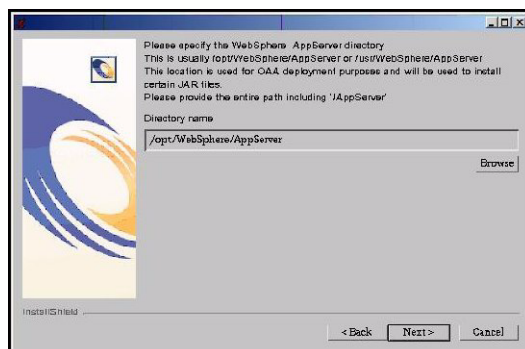
The presentation directory location page opens.



- b Click **Browse** to locate the directory where you deployed the `portal.war` file. Click **Next** to continue.

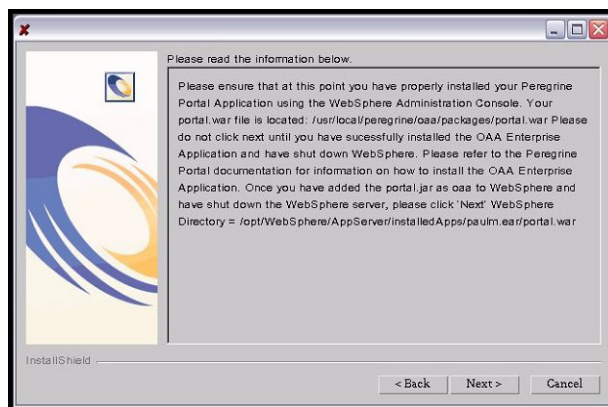
WebSphere automatically created this directory when you deployed the Get-Resources `portal.war` as an enterprise application. See [WebSphere 4.0.2](#) on page 98 for more information on deploying a WAR file.

The WebSphere JDK installation location page opens.



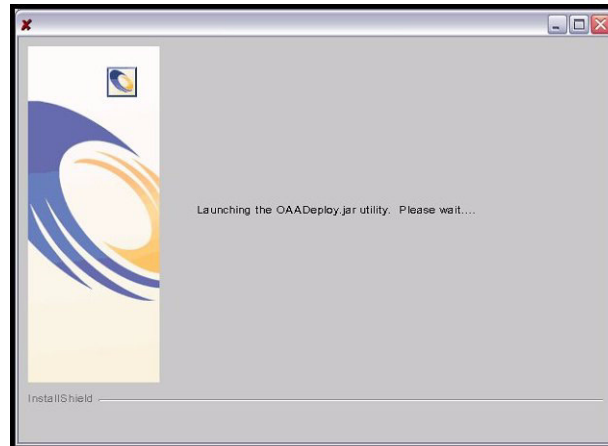
- c Click **Browse** to locate the directory where you installed the Java development kit used by WebSphere. Click **Next** to continue.

The deployment confirmation page opens.

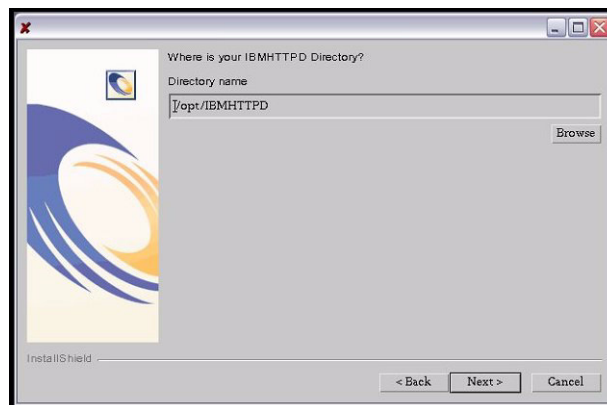


- d After you have successfully deployed **portal.war** in WebSphere, click **Next** to continue.

The Get-Resources deployment utility page opens.



The IBM HTTP Server location page opens.

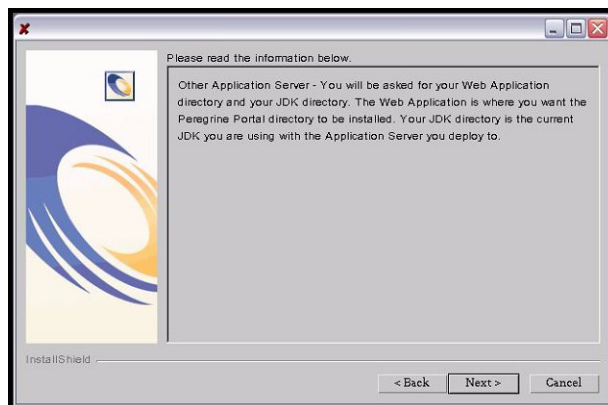


- e Click Browse to locate where you installed the IBM HTTP Server. Click Next to continue.

The Get-Resources installer will automatically configure a Web server virtual directory called `oaa`. If you want to define a different Web server virtual directory, see [WebSphere 4.0.2](#) on page 98 for a list requirements.

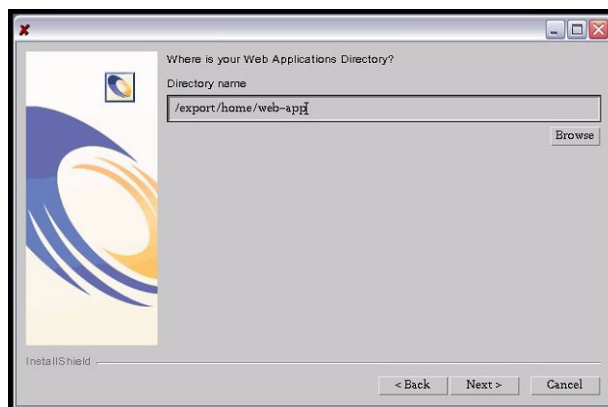
If you have selected to configure another application server, you will see the screens in step f through step h.

The other application server information page opens.



- f Click **Next** to configure your application server.

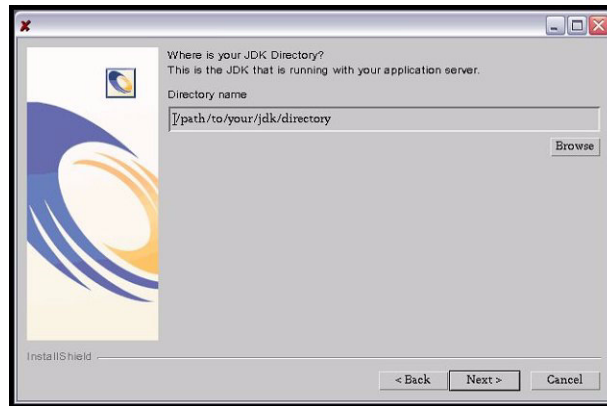
The Web applications directory page opens.



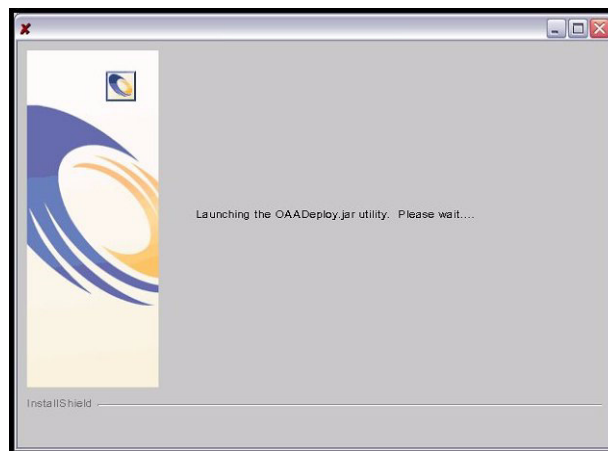
- g Click **Browse** to locate the directory where you deployed the `portal.war` file. Click **Next** to continue.

For more information on deploying a WAR to application servers, see *Configuring alternate application servers* on page 95.

The application server JDK installation location page opens.



- h Click **Browse** to locate the directory where you installed the Java development kit used by your application server. Click **Next** to continue. The Get-Resources deployment utility page opens.



- 10 Click **Finish** to close the installer.

- 11 Enter the library path environment variables required by your operating system and application server.

Operating system	Environment variable	Add these path values
AIX	LIBPATH	<ul style="list-style-type: none"> ■ /<App server>/WEB-INF/lib/AIX ■ /<App server>/WEB-INF/lib/AIX/ServiceCenter4
Red Hat Linux 7.3	LD_LIBRARY_PATH	<ul style="list-style-type: none"> ■ /<App server>/WEB-INF/lib/Linux ■ /<App server>/WEB-INF/lib/Linux/ServiceCenter4
Solaris 2.7 Solaris 2.8	LD_LIBRARY_PATH	<ul style="list-style-type: none"> ■ /<App server>/WEB-INF/lib/SunOS ■ /<App server>/WEB-INF/lib/SunOS/ServiceCenter4 ■ /usr/ucblib

For <App server>, enter the path to your application server's context root including where you installed the oaa application. Use the following table to determine your application server's context root.

Application server	Context root
WebSphere	/WebSphere/AppServer/installedApps/<application>.ear/portal.4.0.0.<x>/oaa
WebLogic	/bea/wlserver6.1/config/<mydomain>/applications/oaa
JRun	/JRun/servers/default/oaa

For <application>, enter the folder created for Get-Resources.

For <x>, enter the version number of your portal WAR file.

For <my domain>, enter the WebLogic domain you created.

Configuring the WebSphere environment on Linux and Solaris

If you are running on a Linux or Solaris server, you can configure your WebSphere environment using the WebSphere Advanced Management Console.

To configure the WebSphere environment on Linux or Solaris:

- 1 Verify that the WebSphere Admin Server has been started.
- 2 Open the WebSphere Advanced Administrator's Console:
/WebSphere/AppServer/bin/adminclient.sh
- 3 On the left side of the console, click **Nodes** > <Server Name> > **Application Servers**.
- 4 Click on the application server where you installed Get-Resources.
- 5 Click the **General** tab.
- 6 Click **Environment**.
- 7 Click **Add**.
- 8 Enter the following environment details:
 - a **Name**. Type in LD_LIBRARY_PATH.
 - b **Value**. Type in the paths values for your operating system. This value consists of the context root and the relative path to your LIB directories.
- 9 Click **OK**.
- 10 Click **Apply**.
- 11 Close the WebSphere Advanced Administrator's Console.

Configuring the WebSphere startupServer.sh on AIX

If you are running on an AIX server, you must configure your WebSphere environment by editing the `startupServer.sh` script.

To configure the WebSphere environment on AIX:

- 1 Open `startupServer.sh` in any text editor.
- 2 Add an entry for LIBPATH and set it to the path values for AIX.

Example:

```
#!/bin/sh
LIBPATH=/usr/lib:/WebSphere/AppServer/installedApps/0aa.ear/porta1.4.0.0.55.war/WEB-INF/lib/AIX:/WebSphere/AppServer/installedApps/answer.ear/porta1.4.0.0.55.war/WEB-INF/lib/AIX/ServiceCenter4
export LIBPATH
```

- 3 Save the file.

See the *Get-Resources Configuration* chapter in this guide for installing and configuring the ACAdapter on UNIX.

Uninstall—AIX, Linux, or Solaris

Use the following instructions to uninstall Get-Resources.

To uninstall Get-Resources from AIX, Linux, or Solaris:

- 1 Open a command prompt.
- 2 Change directories to:
`<root>/usr/peregrine/_uninst`
- 3 Enter the following command to uninstall Get-Resources:
`./uninstall.bin`
- 4 Follow the on-screen instructions to complete the uninstall.

4 Load Balancing

CHAPTER

This chapter covers the following topics:

- *Load balancing application servers* on page 152
- *Creating multiple instances of Tomcat for Apache* on page 154
- *Creating multiple instances of Tomcat for IIS* on page 162

Load balancing application servers

A server running a Web application such as Peregrine's Get-Services or Get-Resources consumes approximately 256 MB of memory per application server instance. You should not set the maximum heap size of the JVM in excess of the free RAM available to the application server(s). Exceeding the amount of available RAM causes the JVM processes to swap to disk, reducing overall performance.

Unlike other Adapters, the AssetCenter and ServiceCenter Adapters each create a single connection to the respective back end. Therefore, the memory consumed on the AssetCenter database server is the same as that consumed by a single client connection. The memory consumed on the ServiceCenter server is also the same as that of a single ServiceCenter client process.

Note that memory usage does not increase significantly per session, because the architecture is based on the sharing of a set of resources and database connections among all sessions handled by the same application server instance. The small amount of memory consumed for session-specific information is released as the users log off or as their sessions expire. Note that server sessions do not expire unless the browser is closed or the user navigates to a different domain.

Because ServiceCenter and AssetCenter adapters maintain a single connection to the back end, adding extra application server instances brings the added benefit of concurrent access to the back-end data store.

The need for extra application server instances and therefore JVMs is directly related to three variables:

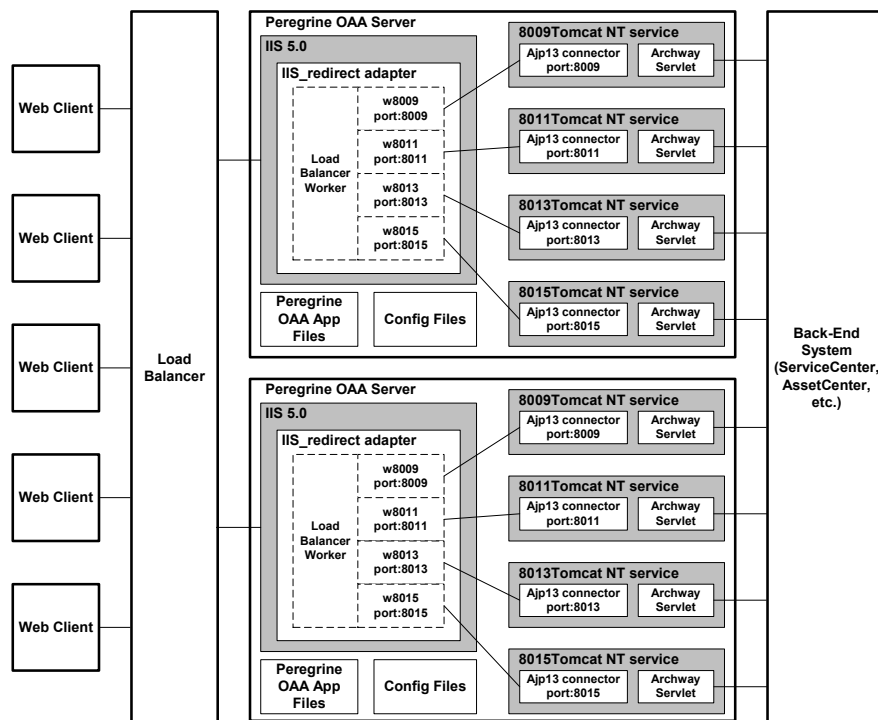
- The number of concurrent users.
- The processing power of the machine hosting the Get-Resources Web server.
- The number of processors on the machine.

Each deployment may make different demands of the software and hardware, but, in any case, optimal back-end throughput for ServiceCenter and AssetCenter is achieved with the maximum number of application server instances that the server can handle without degraded performance due to lack of CPU headroom, file system swapping, and context switching.

Cache synchronization with Symmetric MultiProcessing (SMP) servers can, in most cases, be ignored as a performance tuning factor except in the case of the extremely large-scale systems.

To serve as a control guideline, low-end processors, such as a Pentium 450, should be capable of producing acceptable load handling for around 100 concurrent sessions on a single application server process. A dual Pentium 1000 with 2 gigabytes of RAM (a common data center configuration) should be capable of handling 400+ concurrent sessions using multiple application server instances. When using adapters capable of pooling, for example, the JDBCAdapter or BizDocAdapter, performance beyond the 400-concurrent-user benchmark can be achieved.

The following diagram illustrates the architecture of multiple JVMs:



Creating multiple instances of Tomcat for Apache

Multiple instances of Tomcat are installed as services. Although this is not required, it improves performance, makes the instances easier to manage, and provides extra functionality, including restarting the service if it fails or if the machine on which the instances are installed needs to be restarted.

For systems using IIS, see *Creating multiple instances of Tomcat for IIS* on page 162.

To creating multiple Tomcat instance for Apache:

- Step 1** Create copies of the Tomcat directory. See *Copying the Tomcat directory* on page 155.
- Step 2** Delete the `\webapps\oaa` directory from the newly copied instances of Tomcat. See *Copying the Tomcat directory* on page 155.
- Step 3** Edit the `workers.properties` file of the first or master Tomcat instance to set the values for each additional Tomcat instance. See *Editing the workers.properties file* on page 155.
- Step 4** Edit the `mod_jk.conf-auto` file of the first or master Tomcat instance to establish a connection between Tomcat and Apache. See *Editing the mod_jk.conf-auto file* on page 157.
- Step 5** Edit the `httpd.conf` file to define the Tomcat workers available for Apache. See *Editing the httpd.conf file* on page 157.
- Step 6** Edit the `server.xml` files for each Tomcat instance. See *Editing the server.xml files for Apache* on page 158.
- Step 7** Edit the `jk2.properties` files for each Tomcat instance. See *Editing the jk2.properties files for Apache* on page 160.
- Step 8** Install multiple instances of Tomcat as a service using `installservice.bat`. This file can be found in the `Tomcat\bin` directory. See *Installing Tomcat instances as services for Apache* on page 160.
- Step 9** Testing the configuration. See *Testing load balancing on Apache* on page 161.

Copying the Tomcat directory

You must create a separate folder for each instance of Tomcat you want to use for load balancing.

To copy the Tomcat directory:

- 1 Open Windows Explorer and copy the Tomcat install folder. The default file path is:

`C:\Program Files\Peregrine\Common\Tomcat4`

- 2 Paste a copy into the same root path. The default file path is:

`C:\Program Files\Peregrine\Common`

- 3 Rename the new folder to a unique name.

Tip: Include the port number to be used by the Tomcat instance in the folder name. For example, if you are going to use 4 instances of Tomcat listening on ports 8009, 8011, 8013, and 8015, then you could create 4 copies of the Tomcat folder called `\Tomcat4_8009`, `\Tomcat4_8011`, `\Tomcat4_8013`, and `\Tomcat4_8015`.

- 4 Delete the `\webapps\oaa` subdirectory from the newly copied instance of Tomcat.

The additional instances will use the same document root as the first or primary Tomcat instance.

- 5 Repeat step 1 through step 4 for each instance of Tomcat you want to use.

Editing the `workers.properties` file

For each server on which Tomcat instances are installed, there is only one `workers.properties` file. Tomcat installs the `workers.properties` file in the `conf` directory of your primary Tomcat instance. This file will be shared by all other Tomcat instances on that particular server.

The `workers.properties` file specifies the worker threads that the Web server connector will create in order to communicate with the Tomcat instances. Each Tomcat instance must communicate on a different port. The host should be set to the name of the server running the Tomcat instances or `localhost` if they are running on the same server as Apache.

Cache size is the maximum number of user sessions that Apache should direct to the Tomcat instance at one time.

Lbfactor is a number greater than or equal to 1 that Apache uses to load balance the workers. If all the workers are running on servers that have equal performance strengths, the *lbfactor* numbers should be equal. Workers with a lower *lbfactor* will be assigned fewer user sessions by the load balancer worker in Apache.

To edit the `workers.properties` file:

- 1 Open the `workers.properties` file in any text editor.
This file is located in the `/conf` directory of your Tomcat installation.
- 2 Edit the following lines as shown. The paths for `workers.tomcat_home` and `workers.java.home` are the locations of your Tomcat installation and Java SDK installations.

Example:

```
workers.tomcat_home="c:\Program Files\Peregrine\common\Tomcat4"
workers.java.home="c:\Program Files\Peregrine\common\jdk1.3.1_05"
ps=\
worker.list=loadbalancer, w8009, w8011, w8013, w8015
worker.loadbalancer.type=lb
worker.loadbalancer.balanced_workers=w8009, w8011, w8013, w8015
```

Note: You can define the worker names any way you want as long as you continue the same naming convention throughout the procedure.

- 3 Add the following lines for each Tomcat instance you have installed, incrementing the port number for the values shown in step 2:

```
worker.w8009.port=8009
worker.w8009.host=localhost
worker.w8009.type=ajp13
worker.w8009.cachesize=40
worker.w8009.lbfactor=10
```

- 4 Comment out the following lines. These default workers will not be used.

```
worker.ajp12.port=8007
worker.ajp12.host=localhost
worker.ajp12.type=ajp12
worker.ajp12.lbfactor=1

worker.ajp13.port=8009
worker.ajp13.host=localhost
worker.ajp13.type=ajp13
worker.ajp13.lbfactor=1
worker.ajp13.cachesize=10
```

- 5 Save the file.

Editing the mod_jk.conf-auto file

The `mod_jk.conf-auto` file defines where the Worker files are available in Apache. This file is shared by all Tomcat instances on the server. It is important that you do this procedure after you have successfully deployed the necessary Get-Resources files, otherwise the Get-Resources mount points, file locations, and directories will not be included in the `mod_jk.conf-auto` file, and you will have to manually add them.

To edit the `mod_jk.conf-auto` file:

- 1 Make a copy of the `mod_jk.conf-auto` file and rename the copy to `mod_jk.conf-local`.

The `mod_jk.conf-auto` file is located in the Tomcat `conf` directory.

- 2 Open the `mod_jk.conf-local` file in any text editor.
- 3 Change `JKWorkersFile` to point to the `worker.properties` file of the primary Tomcat instance.

Example:

```
JKWorkersFile "C:\Apache\Tomcat\conf\worker.properties"
```

- 4 Change all `JkMounts` to use *loadbalancer* instead of *default worker ajp12*.

Usage: `JkMount<file(s) or directory> <worker name>`

Example:

```
JkMount/aaa/servlet/* loadbalancer
JkMount/aaa/*.jsp loadbalancer
```

- 5 Save the file.

Editing the httpd.conf file

The `httpd.conf` file must include `mod_jk.conf-local`.

To edit the `httpd.conf` file:

- 1 Open the `httpd.conf` file in any text editor.
- 2 Add the following line:

```
include "<Tomcat>/conf/mod_jk.conf-local"
```

For `<Tomcat>`, enter the path to your tomcat installation. The default file path is:

`C:\Program Files\Peregrine\Common\Tomcat4`

- 3 Save the file.

Editing the server.xml files for Apache

The `server.xml` file contains the information Tomcat needs to connect to the Web server as well as to find the Peregrine OAA Platform Web application files.

To edit the server.xml files:

- 1 Each Tomcat instance has a `server.xml` file located in the `\conf` directory. Open this file in any text editor.
- 2 Update the port number attribute of the `<Server>` element to a unique value that will not conflict with other port numbers used by Tomcat. It is recommended that the port numbers 8005-8008 be used when configuring four Tomcat instances.

Example:

```
<Server port="8005" shutdown="SHUTDOWN" debug="0">
```

- 3 Update the port number used by the Coyote Connector to a unique, non-conflicting value. If you are configuring four Tomcat instance, the values 8009, 8011, 8013, and 8015 are recommended.

Example:

```
<Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8009" minProcessors="5" maxProcessors="75" enableLookups="true"
redirectPort="8443" acceptCount="10" debug="0"
connectionTimeout="20000" useURValidationHack="false"
protocolHandlerClassName="org.apache.jk.server.JkCoyoteHandler" />
```

- 4 Update the `jvmRoute` attribute of the `<Engine>` element with the server name and communications port used by each Tomcat instance.

Example:

```
<Engine jvmRoute="localhost:8009" name="Standalone"
defaultHost="localhost" debug="0">
```

The port number should follow the convention used elsewhere in the configuration (8009, 8011, etc.). These entries must be the same as the Tomcat ID entries you added to the `workers2.properties` file.

- 5 Update the `appBase` attribute of the `<Host>` element with the absolute path to the `webapps` directory of the primary Tomcat instance.

Example:

```
<Host name="localhost" debug="0"
appBase="C:\Apache\Tomcat_w8009\webapps" unpackWARs="true"
autoDeploy="true">
```

- 6 Comment out a `<Connector>` tag with the `className="org.apache.coyote.tomcat4.CoyoteConnector"` using port 8080.

Tomcat uses this port to communicate with a browser for direct HTTP requests. Since Apache will be serving the static data, Tomcat does not need to listen on this connector. It will also prevent a user from directly accessing Tomcat instances.

Example:

```
<!--
<Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8080" minProcessors="5" maxProcessors="75" enableLookups="true"
redirectPort="8443" acceptCount="10" debug="0"
connectionTimeout="20000" useURISValidationHack="false" />
-->
```

- 7 Change the OAA context so that it is not reloadable.

This prevents Tomcat from reloading the servlet without restarting the service. This improves performance and helps keep the JSP code that the Tomcat instances are serving in sync during an update. All other contexts should be set to `reload=false`.

Example:

```
<Context path="/oaa"
docBase="oaa"
crossContext="false"
debug="0"
reloadable="false" >
</Context>
```

- 8 Save the file.
- 9 Repeat step 2 through step 7 for each copy of the `server.xml` file you made.

Editing the `jk2.properties` files for Apache

You will need to modify each Tomcat instance's `jk2.properties`. This file sets the `jk2` communication port.

To edit the `jk2.properties` files:

- 1 Open the `jk2.properties` file for a Tomcat instance in a text editor.
This file is located in the Tomcat `conf` directory.
- 2 Insert a line for the `channelSocket` port. The port number must match the port number defined in `workers.properties` file for this Tomcat instance.

Example:

```
channelSocket.port=8009
```

- 3 Save the file.
- 4 Repeat step 1 through step 3 for each Tomcat instance.

Installing Tomcat instances as services for Apache

After you have edited the Tomcat files, you can install each instances of Tomcat as Windows services using `installservice.bat`.

To install Tomcat instances as services on Apache:

- 1 Open a DOS command prompt and change directories to your Tomcat `bin` directory.
- 2 Enter the following command to create each Tomcat instance:

```
installservice <service name> <tomcat_home> <jvm_dll_path>
```

Where `<service name>` is the name you wish to give the Tomcat service, `<tomcat_home>` is the Tomcat install directory of the instance for which you are creating the service, and `<jvm_dll_path>` is the Java SDK install directory.

The second and third parameters are optional if you have already set the `CATALINA_HOME` and `JAVA_HOME` environment variables.

Example:

```
installservice Tomcat8009 C:\Apache\Tomcat8009 C:\jdk130_05
```

- 3 Repeat step 1 through step 2 for each Tomcat service you wish to create.

Testing load balancing on Apache

After you have created additional Tomcat instances, you can test if load balancing is occurring using the following steps.

To test load balancing:

- 1 Start all Tomcat instance services.
If you installed Tomcat as a service you can open the Windows Control Panel and start each instance from the Services dialog box.
- 2 Open a browser and log in to Get-Resources.
- 3 Perform an action in Get-Resources. For example, perform a search.
- 4 Logout of Get-Resources.
- 5 Close your browser to clear the connection cache.
- 6 Repeat step 1 through step 5 one time for each Tomcat instance installed. For example, if you have 4 Tomcat instances, then you will need to login and logout a total of 4 times.

The load balancing mechanism uses a Round-Robin algorithm. If load balancing is working successfully, each login attempt should use a different Tomcat instance.

- 7 Download the `archway.log` file.
You can download the `archway.log` file from the **Administration > Server Log** page.
- 8 Open the `archway.log` file in a text editor.
- 9 Verify that connection details list a different Tomcat instance for each connection.

If each connection uses a different Tomcat instance, then the system is load balancing properly.

If each connection uses the same Tomcat instance, the system is not load balancing and needs troubleshooting.

Creating multiple instances of Tomcat for IIS

Multiple instances of Tomcat are installed as services. Although this is not required, it improves performance, makes the instances easier to manage, and provides extra functionality, including restarting the service if it fails or if the machine on which the instances are installed needs to be restarted.

To creating multiple Tomcat instance for IIS:

- Step 1** Create copies of the Tomcat directory. See *Copying the Tomcat directory* on page 163.
- Step 2** Delete the `\webapps\oaa` directory from the newly copied instances of Tomcat. See *Copying the Tomcat directory* on page 155.
- Step 3** Configure the ISAPI Plugin for IIS. See *Configuring the ISAPI Plugin for IIS* on page 163.
- Step 4** Create and configure a `jakarta` virtual directory in IIS. See *Creating and configuring a jakarta virtual directory in IIS* on page 164.
- Step 5** Configure IIS to use `isapi_redirector2.dll` as an ISAPI Filter. See *Configuring the isapi_redirector2.dll as an ISAPI filter* on page 164.
- Step 6** Create and configure an `oaa` virtual directory in IIS. See *Creating and configuring an oaa virtual directory in IIS* on page 165.
- Step 7** Edit the `workers2.properties` file of the first or master Tomcat instance to set the values for each additional Tomcat instance. See *Editing the workers2.properties file for IIS* on page 166.
- Step 8** Edit the `server.xml` files for each Tomcat instance. See *Editing the server.xml files for IIS* on page 167.
- Step 9** Edit the `jk2.properties` files for each Tomcat instance. See *Editing the jk2.properties files for IIS* on page 169.
- Step 10** Install multiple instances of Tomcat as a service using `installservice.bat`. This file is in the `Tomcat\bin` directory. See *Installing Tomcat instances as services for IIS* on page 170.
- Step 11** Testing the configuration. See *Testing load balancing on IIS* on page 170.

Copying the Tomcat directory

You must create a separate folder for each instance of Tomcat you want to use for load balancing.

To copy the Tomcat directory:

- 1 Open Windows Explorer and copy the Tomcat install folder. The default file path is:
C:\Program Files\Peregrine\Common\Tomcat4
- 2 Paste a copy into the same root path. The default file path is:
C:\Program Files\Peregrine\Common
- 3 Rename the new folder to a unique name.
Tip: Include the port number to be used by the Tomcat instance in the folder name. For example, if you are going to use 4 instances of Tomcat listening on ports 8009, 8011, 8013, and 8015, then you could create 4 copies of the Tomcat folder called \Tomcat4_8009, \Tomcat4_8011, \Tomcat4_8013, and \Tomcat4_8015.
- 4 Delete the \webapps\oaa subdirectory from the newly copied instance of Tomcat.
The additional instances will use the same document root as the first or primary Tomcat instance.
- 5 Repeat step 1 through step 4 for each instance of Tomcat you want to use.

Configuring the ISAPI Plugin for IIS

The Get-Resources installer automatically places a copy of the ISAPI plugin for IIS in the following folder:

c:\Program Files\Peregrine\Common\Tomcat4\bin

Use the following procedures to configure the plugin for your intranet environment.

To configure the ISAPI plugin for IIS:

- 1 Open the file jk2.reg in a text editor. The file path is:
C:\Program Files\Peregrine\Common\Tomcat4\conf
- 2 Verify that the “serverRoot” and “workersFile” values list the proper installation path to Tomcat. By default, these values are:

```
"ServerRoot"="C:\\Program Files\\Peregrine\\Common\\Tomcat4"
"workersFile"="C:\\Program Files\\Peregrine\\Common\\Tomcat4\\conf\\
workers2.properties"
```

- 3 Save and close the `jk2.reg` file.
- 4 Double-click on the `jk2.reg` file from Windows Explorer.
Windows adds the registry settings to the Windows registry.

Creating and configuring a jakarta virtual directory in IIS

The ISAPI plugin for IIS requires a specific IIS virtual directory in order to run. Use the following guidelines to create the IIS virtual directory. For specific instructions about IIS, refer to Windows Help.

Requirements for jakarta virtual directory

Requirement	Setting
Create virtual directory	jakarta
Map to physical path	<Tomcat>\bin\isapi_redirector2.dll
Directory access rights	Read, Run scripts, Execute

For <Tomcat>, enter the path to your Tomcat installation. The default file path is:

C:\Program Files\Peregrine\Common\Tomcat4

Configuring the isapi_redirector2.dll as an ISAPI filter

To establish a connection between Tomcat and IIS, you will need to install the file `isapi_redirector2.dll` as an ISAPI filter.

To install isapi_redirect2.dll as an ISAPI filter:

- 1 From Windows Control Panel > Administrative Tools, open the Internet Services management console.
- 2 Right-click the **Default Web Site** node and then click **Properties**.
- 3 Click the **ISAPI Filters** tab.
- 4 Click **Add**.
- 5 Enter the following information:

- a **Filter Name:** jakarta. The filter name must match the name you defined the `jk2.reg` registry file. By default, the filter name is jakarta.
 - b **Executable:** `isapi_redirector2.dll`. The default file path is:
`C:\Program Files\Peregrine\Common\Tomcat4\bin\isapi_redirector2.dll`
- 6 Click OK.
 - 7 From the Internet Services management console, right-click the **Default Web Site** node, then select **Properties>Isapi Filters** again.
 The ISAPI filter in IIS displays a green status arrow to indicate that it is running.
 - 8 Close the Internet Services management console.
- Note:** You must stop and then start the IIS service for changes to take effect. You must also restart Tomcat.

Creating and configuring an oaa virtual directory in IIS

To run Get-Resources from IIS, you need to create a virtual directory that maps to your Tomcat deployment folder.

Requirements for oaa virtual directory

Requirement	Setting
Create virtual directory	<oaa>
Map to physical path	<Tomcat>\webapps\oaa
Directory access rights	Read, Run scripts

For <oaa>, enter the name of the virtual directory you want to use for Get-Resources. The recommended virtual directory name is **oaa**. If you choose to use another virtual directory name, you must enter the new name in the following places:

- Rename the folder <Tomcat>\webapps\oaa to
 <Tomcat>\webapps\<new name>
- Rename the [uri] mappings in `workers2.properties` from oaa to the new virtual directory name.

- Rename all the oaa context entries in `mod_jk2.conf` from oaa to the new virtual directory name.
- Rename the `<Context>` path and `docBase` attributes in `server.xml` from oaa to the new virtual directory name.

Important: The virtual directory name you choose will become part of the URL users enter to connect to Get-Resources. For example:
`http://server_name/<new name>/login.jsp`

For `<Tomcat>`, enter the path to your tomcat installation. The default file path is:

`C:\Program Files\Peregrine\Common\Tomcat4`

Editing the `workers2.properties` file for IIS

For each server on which Tomcat instances are installed, there is only one `workers2.properties` file. Tomcat installs the `workers.properties` file in the `conf` directory of your primary Tomcat instance. This file is shared by all other Tomcat instances on that particular server.

The `workers2.properties` file specifies the worker threads that the Web server connector creates in order to communicate with the Tomcat instances. Each Tomcat instance must communicate on a different port. The host should be set to the name of the server running the Tomcat instances or `localhost` if they are running on the same server as Apache.

To edit the `worker2.properties` file:

- 1 Open the `workers2.properties` file (located in the `conf` directory of your Tomcat installation) in any text editor.
- 2 Create a `channel.socket` entry for each Tomcat instance (also known as a worker).

Example:

```
[channel.socket:<server>:<port>]
info=Description of Tomcat instance
debug=0
tomcatId=<server>:<port>
lb_factor=1
disabled=0
```

For `<server>`, enter the server name of where the Tomcat instance is located.

For `<port>`, enter the communications port on which the Tomcat instance is listening.

`lb_factor` is a number greater than or equal to 1 that IIS uses to load balance the workers. If all the workers are running on servers that have equal performance strengths, you should set the `lb_factor` numbers to equal values (typically 1). If you want to assign fewer user sessions to a given Worker, then assign it a lower `lb_factor` number relative to the other Workers.

- 3 Verify that the `uri` settings lists the proper IIS virtual directory. By default, the virtual directory is `oaa`.

If you have defined a different virtual directory other than `oaa` to run Get-Resources, you will need to change the `uri` values here.

Example:

```
[uri:/oaa/servlet/*]
info=Prefix mapping

[uri:/oaa/*.jsp]
info=Extension mapping
```

- 4 Save the file.

Editing the `server.xml` files for IIS

You will need a separate `server.xml` file for each Tomcat instance that will be running concurrently. This file contains the information Tomcat needs to connect to the Web server as well as to find the Peregrine OAA Platform Web application files.

Tip: Make a back up copy of the `server.xml` file before editing.

To edit the `server.xml` files:

- 1 Each Tomcat instance has a `server.xml` file. Open it in any text editor.
- 2 Update the port number attribute of the `<Server>` element to a unique value that will not conflict with other port numbers used by Tomcat.

It is recommended that the port numbers 8005-8008 be used when configuring four Tomcat instances.

Example:

```
<Server port="8005" shutdown="SHUTDOWN" debug="0">
```

- 3 Update the port number attribute of the Coyote Connector <Connector> element to a unique value that will not conflict with other port numbers used by Tomcat.

It is recommended that the port numbers 8009, 8011, 8013, and 8015 be used when configuring the Coyote Connector.

Example:

```
<Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8009" minProcessors="5" maxProcessors="75" enableLookups="true"
redirectPort="8443" acceptCount="10" debug="0"
connectionTimeout="20000" useURValidationHack="false"
protocolHandlerClassName="org.apache.jk.server.JkCoyoteHandler" />
```

- 4 Create a <Context> element entry from the first or master Tomcat instance to the Get-Resources deployment directory.

Add the entry just above the “examples” Context entry.

Example:

```
<Context path="/oaa"
docBase="<First Tomcat install>/webapps/oaa"
crossContext="false"
debug="0"
reloadable="false" >
</Context>
```

For the docBase attribute, set <First Tomcat install> to the absolute path of the first or master Tomcat instance.

- 5 Update the <Engine> element with the server name and communications port used by each Tomcat instance.

List the server information in the jvmRoute attribute.

Example:

```
<Engine jvmRoute="localhost:8009" name="Standalone"
defaultHost="localhost" debug="0">
```

- 6 Update the <Host> element with the webapps directory used by the first or master Tomcat instance.

List the server information in the appBase attribute.

Example:

```
<Host name="localhost" debug="0" appBase="<First Tomcat
install>/webapps" unpackWARs="true" autoDeploy="true">
```

For the appBase attribute, set <First Tomcat install> to the absolute path of the first or master Tomcat instance.

- 7 Save the file `server.xml`.
- 8 Repeat step 2 through step 7 for each copy of the `server.xml` file you made.

Editing the `jk2.properties` files for IIS

You will need to modify each Tomcat instance's `jk2.properties`. This file sets the `jk2` communication port.

To edit the `jk2.properties` files:

- 1 Open the `jk2.properties` file for a Tomcat instance in a text editor.
- 2 Insert a line for the `channelSocket` port. The port number must match the port number defined in `workers2.properties` file for this Tomcat instance.

Example:

```
channelSocket.port=8009
```

- 3 Save the file.
- 4 Repeat step 1 through step 3 for each Tomcat instance.

Installing Tomcat instances as services for IIS

After you have edited the Tomcat files, you can install each instances of Tomcat as Windows services using `installservice.bat`.

To install Tomcat instances as services on IIS:

- 1 Open a DOS command prompt and change directories to your Tomcat bin directory.
- 2 Enter the following command to create each Tomcat instance:
`installservice <service name> <tomcat_home> <jvm_dll_path>`

Where *<service name>* is the name you wish to give the Tomcat service, *<tomcat_home>* is the Tomcat install directory of the instance for which you are creating the service, and *<jvm_dll_path>* is the Java SDK install directory.

The second and third parameters are optional if you have already set the CATALINA_HOME and JAVA_HOME environment variables.

Example:

```
installservice Tomcat8009 C:\Program Files\Peregrine\Common\Tomcat4
C:\Program Files\Peregrine\Common\jdk1.3.1_05\jre\bin\server\jvm.dll
```

- 3 Repeat step 1 through step 2 for each Tomcat service you wish to create.

Testing load balancing on IIS

After you have created additional Tomcat instances, you can test if load balancing is occurring using the following steps.

To test load balancing:

- 1 Start all Tomcat instance services.
 If you installed Tomcat as a service you can open the Windows Control Panel and start each instance from the Services dialog box.
- 2 Open a browser and log in to Get-Resources.
- 3 Perform an action in Get-Resources. For example, perform a search.
- 4 Logout of Get-Resources.
- 5 Close your browser to clear the connection cache.
- 6 Repeat step 1 through step 5 one time for each Tomcat instance installed. For example, if you have 4 Tomcat instances, then you will need to login and logout a total of 4 times.

The load balancing mechanism uses a Round-Robin algorithm. If load balancing is working successfully, each login attempt should use a different Tomcat instance.

- 7 Download the `archway.log` file.

You can download the `archway.log` file from the **Administration > Server Log** page.

- 8 Open the `archway.log` file in a text editor.

- 9 Verify that connection details list a different Tomcat instance for each connection.

If each connection uses a different Tomcat instance, then the system is load balancing properly.

If each connection uses the same Tomcat instance, the system is not load balancing and needs troubleshooting.

5 Back-end System Configuration

CHAPTER

Get-Resources can be configured for use with AssetCenter or ServiceCenter. The backend authenticates user access rights and stores personalization changes.

- With AssetCenter as the back-end, Get-Resources accesses the AssetCenter Procurement module. A sample AssetCenter database is included with the installation of Get-Resources.
- With ServiceCenter as the back-end, Get-Resources accesses ServiceCenter Request Management. .

Important: To continue the installation for Get-Resources, an administrator must perform the procedures in this chapter within the back-end system. For detailed information on how to perform any of the steps listed in the following sections, refer to the *ServiceCenter System Administrator's Guide* or the *AssetCenter Administration Guide*.

This chapter includes the following sections:

- *Configuring AssetCenter for Get-Resources* on page 174
- *Configuring ServiceCenter* on page 181

Configuring AssetCenter for Get-Resources

Overview of AssetCenter as a back-end system

As requests are opened and processed through Get-Resources, data is stored and updated in the AssetCenter database.

Users are authenticated using AssetCenter profiles, with special user rights provided for use with Get-Resources.

Using the Get-Resources AssetCenter demo database

The AssetCenter Demo database included with the installation already contains the necessary updated tables, workflows and user rights that will enable AssetCenter to perform as a back-end system for Get-Resources.

Important: Although the Get-Resources installation includes an AssetCenter demo database, AssetCenter must be installed separately. If not already installed, during either a full or custom AssetCenter installation, select the AssetCenter API option. Refer to your AssetCenter documentation for more detailed instructions for this procedure.

Follow these steps to configure the AssetCenter Demo database installed with Get-Resources as a back-end system:

- Step 1** Create a new connection (User DSN only) to the demo database installed with Get-Resources for the version of AssetCenter that you are running.

The default path to the demo database is:

C:\Program Files\Peregrine\Common\<appsrv>\webapps\oaa\WEB-INF\etc\en
where <appsrv> is the name of the application server you are using with Get-Resources (i.e. Tomcat 4.1).

Back-end System	Default Folder	Database Filename
AssetCenter 3.60	ac3	am360.db
AssetCenter 4.10	ac4	am410.db

Back-end System	Default Folder	Database Filename
AssetCenter 4.11	ac4	am411.db
AssetCenter 4.2x ¹	ac4	am411.db

¹When using the **am411.db** demo database with AssetCenter 4.2x you may receive a warning message stating that the database version is compatible with the software version, but the database is not quite up to date. Refer to the *AssetCenter Migration Guide* for instructions on updating the database.

- Step 2** If your application server is configured to run as a service, set up a System DSN.
- Step 3** Test the connection by logging in to the database from AssetCenter.
- Step 4** Refer to the chapter on *Back-End System Configuration* for instructions on how to configure settings within Get-Resources for connectivity to the AssetCenter back-end system.

Using an existing AssetCenter database

If you intend to use an existing AssetCenter database as a back-end system, you will need to import scripts which will update the necessary tables, workflows and user rights that AssetCenter needs to work with Get-Resources.

The type of scripts that you need to import will vary depending on whether or not your existing AssetCenter database has been configured to work with a previous version of Get-Resources.

This section includes instructions on how to import the scripts necessary for your version of AssetCenter in addition to a list of script locations and a description of script functions.

Configuring an AssetCenter database that has never been used with Get-Resources

Follow these steps to import the scripts appropriate for your version of AssetCenter:

- Step 1** Login to AssetCenter and connect to the existing database.
- Step 2** Import the scripts provided with the Get-Resources installation.

By default, these files are located in:

C:\Program Files\Peregrine\Common\<appsrv>\webapps\oaa\WEB-INF\etc\<lang>

...ac3 folder for AssetCenter 3.6

...ac4 folder for AssetCenter 4.x

where <appsrv> is the name of the application server you are using with Get-Resources (i.e. Tomcat 4.1) and <lang> is the ID for the localized script (i.e. en for English).

Important: The scripts must be imported in the order outlined here, according to the version of AssetCenter that you are running.

AssetCenter 3.x:

- From the **getit import** folder, import the following in the order listed:
 - feat.scr
 - calcflds.scr
- From the **getit b2b import** folder, import the following in the order listed. These must be imported even if you are not using B2B functionality:
 - calcflds.scr
 - feat.scr
- From the **getit import** folder, import the following scripts in the order listed:
 - profile.scr
 - workflow.scr
 - empldept.scr

AssetCenter 4.x:

- From the **essential** folder, import the following:
 - essential.scr
- From the **sample** folder, import the following:
 - profile.scr
 - workflow.scr
- From the **b2b** sub-folder, import the following:
 - profile.scr

- workflow.scr
- From the **demo** folder, import the following:
 - empldept.scr

Configuring an AssetCenter database that has been used with a previous version of Get-Resources

Login to AssetCenter and import the scripts necessary for your AssetCenter version from the following path:

C:\Program Files\Peregrine\Common\<appsrv>\webapps\oaa\WEB-INF\etc\<lang>\

where <appsrv> is the name of the application server you are using with Get-Resources (i.e. Tomcat 4.1) and <lang> is the ID for the localized script (i.e. en for English).

Version	Configured for	Path and script filename
AssetCenter 3.6	Get-Resources 2.0.1 or 2.5	ac3/getit import/profile.scr
AssetCenter 4.x	Get-Resources 2.5	ac4/sample/profile.scr

Script Locations

The following table lists the default folder and filename for each script:

Back-end System	Default Folder	Script
AssetCenter 3.6	<i>getit import</i>	feat.scr
		calcflds.scr
		profile.scr
		workflow.scr
		empldept.scr
	<i>getit b2b import</i>	feat.scr
		calcflds.scr
		profile.scr
		workflow.scr

Back-end System	Default Folder	Script
AssetCenter 4.x	<i>essential</i>	essential.scr (includes calcflds.scr, feat.scr, and the same scripts for B2B). This file also imports the itemized list values used by Get-Resources for the request status.
	<i>sample</i>	profile.scr workflow.scr
	<i>b2b</i>	profile.scr workflow.scr
	<i>demo</i>	empldept.scr

Script Descriptions

The following table lists the contents and functions of each script:

Script	Description
feat.scr	Features for table amEmployee; contains DelegatedApproverId and DelegatedApprExpiration scripts. These features delegate request approvals to a person given by DelegatedApproverId, until the date specified by DelegatedApprExpiration. Features for table amProduct include ManufacturerURL, a text-based feature containing the manufacturer's URL. Others include Architecture, Processor, ProcSpeed, RAM, and HDCapacity, used by the Description calculated field to enhance the product description, none of which are used directly by Get-Resources
calcflds.scr	Calculated field Description for the Product table. Gives a technical description for the product.

Script	Description
profile.scr	<p>Imports user rights which correspond to Get-Resources capability words to control access to the screens.</p> <p>These include:</p> <ul style="list-style-type: none"> getit.requester (access to the request) getit.advancedrequester getit.approver getit.receiver getit.pcardmanager getit.pcarduser getit.pcardbuyer getit.reserve <p>The final user right, getit.receiver, imports three predefined user profiles.</p> <p>The user profiles and their user rights are:</p> <p>getit.admin = getit.admin + getit.requester + getit.advancedrequester + getit.approver + getit.receiver + getit.pcardmanager + getit.pcarduser + getit.buyer + getit.b2badmin + getit.shopdirect + getit.reserve</p> <p>getit.default = getit.requester</p> <p>getit.full = getit.requester + getit.advancedrequester + getit.approver + getit.receiver + getit.pcardmanager + getit.pcarduser + getit.buyer + getit.b2badmin + getit.shopdirect + getit.reserve</p> <p>This script is provided as an example of how profiles can be defined. You can modify this as needed.</p>

Script	Description
workflow.scr	<p>Imports necessary workflows to make Get-Resources work out-of-the-box. Listed in order of Reference, Name, and Description.</p> <p>BUNDLPO; Bundle Ordering; Workflow necessary to work with the bundles</p> <p>REQROUTE; Routing Request; Sample workflow that manages the full qualification of an off catalog request before it enters the approval cycle</p> <p>REQAPPR_GR; RequestApproval; Sample approval workflow. It is important to note that only the workflow with the REQAPPR_GR reference will be displayed in Get-Resources.</p> <p>REQSTATUS; Request Status; Workflow that, on fulfillment of the request, changes its status to "Received" for better Get-Resources visibility.</p> <p>The REQSTATUS script also imports three employee workgroups. These include:</p> <p>IT: Technical approvers group (any employee in this group can give a technical approval for a request, provided one has the getit.approver user right).</p> <p>Finance: Financial approvers group (any employee in this group can give a financial approval for a request, provided one has the getit.approver user right).</p> <p>Getit: Employees group that will qualify the off catalog request.</p> <p>Note: The off catalog request qualification must be performed in AssetCenter. There is no module for this task in Get-Resources.</p> <p>This script is provided as an example of how workflows can be defined. You can modify the workflows as needed. Refer to the Get-Resources Administration Guide for more information about the AssetCenter workflows provided with Get-Resources.</p>
empldept.scr	<p>This script is optional and is considered demonstration data. It imports one employee per profile, as defined in the following.</p> <p>Valentine: Michael Valentine is a getit.admin.</p> <p>Hartke: Richard Hartke is a getit.full.</p> <p>Tossi: Michaela Tossi is a getit.default.</p>

Refer to the chapter on *Back-end System Configuration* for instructions on how to configure settings within Get-Resources for connectivity to the AssetCenter back-end system.

Configuring ServiceCenter

Overview of ServiceCenter as a back-end system

Get-Resources accesses the catalog in the Request Management module of ServiceCenter. Requests opened in Get-Resources are stored as quotes in the ServiceCenter database.

Users are authenticated using ServiceCenter Operator records, with special capability words provided for use with Get-Resources. Refer to the Security chapter in the *Get-Resources Administration Guide* for more information about user authentication.

Using ServiceCenter 4.x with Get-Resources

In order to perform as a back-end system for Get-Resources, ServiceCenter 4.x requires a file load (**201patch6.unl**, provided with this installation) that will update tables and security records necessary for the back-end system.

Warning: If you are using a ServiceCenter system which has already been configured for use with a previous version of Get-Resources, follow the instructions below to find out if the **201patch6.unl** file has already been loaded. Reloading this file may cause data and functionality issues with your ServiceCenter system.

To verify whether the 201patch6.unl file has already been loaded in your ServiceCenter system:

- 1 Login to ServiceCenter with administrative rights.
- 2 Use the command prompt to access the GetResRM input event map and verify if **employee.id** is mapped in position (Pos) 83. Refer to the *ServiceCenter Administration Guide* for detailed instructions on how to perform this function.

If this value exists, you do not need to load the **201patch6.unl** file. Refer to the chapter on *Back-end System Configuration* for instructions on how to configure settings within Get-Resources for connectivity to the ServiceCenter back-end system.

If this value does not exist, follow the instructions below to load the **201patch6.unl** file.

To load the 201patch6.unl file into ServiceCenter:

Step 1 Log into ServiceCenter and load the **201patch6.unl** file located in the following directory:

C:\Program Files\Peregrine\Common\<appsrv>\webapps\oaa\WEB-INF\etc\sc4
where <appsrv> is the name of the application server you are using with Get-Resources (i.e. Tomcat 4.1).

Step 2 Stop and restart the ServiceCenter service.

Step 3 Refer to the chapter on *Back-end System Configuration* for instructions on how to configure settings within Get-Resources for connectivity to the ServiceCenter back-end system.

Using ServiceCenter 5.x with Get-Resources

ServiceCenter 5.x includes all components necessary for use as a back-end system with Get-Resources.

Refer to the chapter on *Back-end System Configuration* for instructions on how to configure settings within Get-Resources for connectivity to the ServiceCenter back-end system.

6 Get-Resources Configuration

CHAPTER

Final configuration settings necessary to complete the installation of Get-Resources are performed in the Peregrine Portal Administration module. This includes parameter configuration and login information for the back-end system, as well as verification of adapter connectivity for Get-Resources.

A more detailed description of additional features necessary for administration and maintenance using the Peregrine Portal Administration utility is available in the *Get-Resources Administration Guide*.

This chapter covers the following topics:

- *Accessing the Peregrine Portal Admin module* on page 184
- *Configuring connections to the back-end system* on page 187.

Accessing the Peregrine Portal Admin module

The Peregrine Portal administrator login page accesses the Peregrine Portal Admin module. You use the Admin module to define the settings for your Peregrine system.

Note: After installing and building Get-Resources, an Admin must log in as a ServiceCenter user with **getit.admin** rights to access the Admin module and administer the Get-Resources integration with ServiceCenter. The list of access capability words is in the *Get-Resources Administration Guide*.

A default administrator, Admin, gives you access to the Admin module without being connected to a back-end system. After you configure your user name on the Common tab, you can also access the Admin module from the Navigation menu.

Important: When you change parameters using the Admin module, a **local.xml** file is created in the `<application server>\webapps\oaa\WEB-INF` directory to store these parameters. If you reinstall Get-Resources, make a copy of this file and store it outside your Get-Resources installation. Failure to do this will result in your parameter values being lost during the new installation.

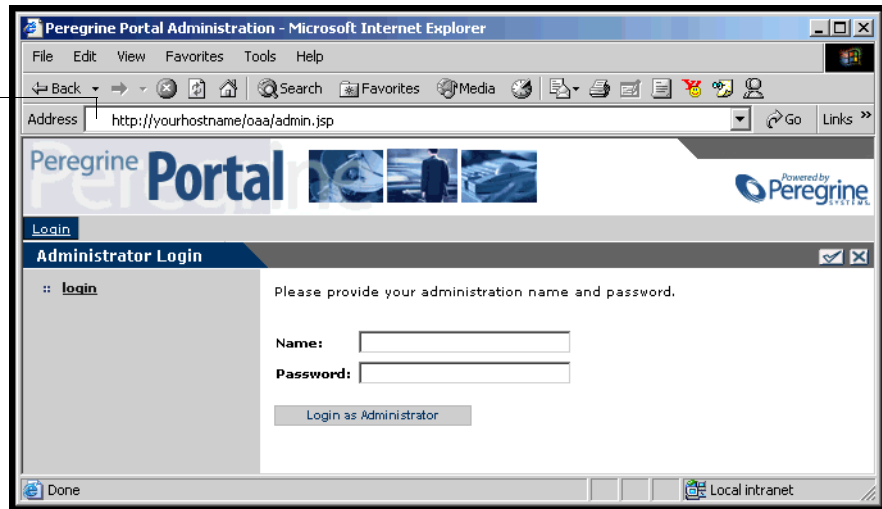
To access the Peregrine Portal administrator login page:

- 1 Verify that your application server (for example, Tomcat) is running.
- 2 In your Web browser Address field, type:
`<hostname>/oaa/admin.jsp`

3 Press Enter to open the Portal administrator login page.

Type your
hostname to
connect to
your local
server.

Admin is the default
administrator name.



4 In the Name field, type Admin.

No password is required on initial login. Refer to the ProductCoreShort Administration Guide for detailed instructions on how to change the Administrator login name and password.

5 Click Login as Administrator to open the Control Panel page.

Use the Admin
module to define
settings to
Get-Resources.

Target	Adapter	Status
weblication	com.peregrine.oaa.adapter.ac.ACAAdapter	connected
mail	com.peregrine.oaa.adapter.mail.MailAdapter	disconnected
portalDB	com.peregrine.oaa.adapter.ac.ACAAdapter	connected
ac	com.peregrine.oaa.adapter.ac.ACAAdapter	connected

Active User Sessions				
Server Name	Last Min.	5 Min. Avg.	20 Min. Avg.	Peak
localhost	1	0	0	1

Page Hits per Minute				
Server Name	Last Min.	5 Min. Avg.	20 Min. Avg.	Peak
localhost	0	1	0	6

Reset Server

Activity menu

The left pane Activity menu provides access to a number of different administrative utilities for Get-Resources. You need to access some of these during this installation process. The utilities and their functions are described in detail in the *Get-Resources Administration Guide*.

Using the Control Panel

Use the Control Panel page to check the status of the connections to the databases you are accessing with Get-Resources and your Web applications. You can also reset the connection between the Archway servlet and the adapters to the back-end systems.

Note: When you first access the Control Panel page, the status for all targets is *disconnected*. This will change when you define the targets later on in this section.

After making any configuration changes in the Peregrine Portal Administration module, the system returns to the Admin Control Panel and the following informational message appears at the top of the page.

The settings have been saved. To ensure all changes take effect, you must reset the Peregrine Portal server.

The following instructions explain how to reset the server and apply your configuration changes to Get-Resources.

To reset the connection between the Archway servlet and back-end system:

- 1 From Control Panel, click **Reset Server**.
When the operation is complete, the following message indicates that the connections are reset.
The Archway servlet and its Adapter connections have been reset successfully.
- 2 Verify your changes in the Connection Status table.
Changes include the addition, removal, or connectivity of the target adapters.

Configuring connections to the back-end system

Installing and configuring ACAdapter on UNIX

By default Get-Resources is installed with all of the connectivity required to interface with AssetCenter through a special adapter, the ACAdapter. Use the following procedures to install and configure the ACAdapter on UNIX.

To install and configure ACAdapter on UNIX:

- 1 If necessary, follow the AC documentation to install AssetCenter on the AIX, Linux, or Solaris system where OAA will be running.

Note: AssetCenter 4.2 on AIX requires the OpenSSL package from <http://www-1.ibm.com/servers/aix/products/aixos/linux/download.html>

Click the [AIX Toolbox Cryptographic Content](#) link.

- 2 Copy `amdb.ini` from a Windows AssetCenter installation that is configured to use the same AssetCenter database.

Depending on your AC and Windows versions, this file may be in the **WINDOWS** or **WINNT** directory or your user's home directory under **Documents and Settings**.

- 3 Set the `LD_LIBRARY_PATH` environment variable (`LIBPATH` on AIX) for the user running your application server to include the **AssetCenter/bin** directory and the directory containing the shared libraries for the database client that AssetCenter is using.

For example:

```
/usr/local/ac421/bin:/usr/local/oracle/product/8.1.6/lib
```

- 4 Set the `WPPCFGDIR` environment variable for the user running your application server to the directory where you copied `amdb.ini` in step 2.

Note: For WebSphere Application Server 4.0.x on Linux and Solaris, you can set these environment variables on the General tab for the JVM running OAA.

For WebSphere Application Server 4.0.x on AIX, you must set the `LIBPATH` environment variable for the user running the WAS Admin Server before starting the Admin Server. You may want to edit a copy of `startupServer.sh` in `WebSphere/AppServer/bin` to set these variables.

- 5 Log in to `admin.jsp`, then click **Settings** and the **AssetCenter** tab.
- 6 Set the AssetCenter database name to match the database name defined in `amdb.ini`.
- 7 Set the AssetCenter library to match the version in your `AssetCenter/bin` directory.
For example, "aamapi42" for `libaamapi42.so`
Java will add the prefix and suffix back on when it looks for the file.
- 8 Optionally, set the AssetCenter library path to your `AssetCenter/bin` directory, including a trailing slash.
- 9 Click **Save**.

Instructions for AssetCenter

This section describes how to configure and verify back-end system settings and connect to the AssetCenter database.

Connection settings

To verify settings for AssetCenter as a back-end system:

- 1 From the Peregrine Portal Admin module, click **Settings**.

This displays the Settings page which provides access to the various tabs used to configure settings for Get-Resources.

The Common settings page is displayed by default.

The screenshot shows the 'Common' tab selected in the 'Settings' page. The page has a top navigation bar with tabs: Portal, AssetCenter, Common (selected), Portal DB, Themes, and Web Application. Below this is a sub-navigation bar with tabs: Logging, Get-Resources, XSL, and E-mail. The main content area is titled 'Common Backend:' and contains four configuration sections, each with a text input field and a descriptive tooltip:

- Common Backend:** The input field contains 'portalDB'. The tooltip says: 'Adapter target name used to support common user operations.'
- List of target aliases:** The input field contains 'weblication;mail'. The tooltip says: 'Specifies a list of semicolon delimited target aliases used by web applications in this package.'
- Admin name:** The input field contains 'Admin'. The tooltip says: 'The admin login name. This login provides access to administrative functionality without authenticating against backend adapters.'
- Admin password:** The input field is empty. The tooltip says: 'The admin login password.'

- 2 At the top of the page, click the **Get-Resources** tab.

This displays the **Connections Settings** page for Get-Resources:

Get-Resources Connection Settings

Get-Resources Target:

The backend for Get-Resources web applications. This should be either AC if AssetCenter is installed or SC if ServiceCenter is installed.

Request Backend:

Backend used to manage requests. (for example, **sc**, or **ac**.) The default is **ac**.

- 3 Verify that the value is **ac** for the following fields:

Field Name	Default Value	Description
Get-Resources Target	ac	Back-end for Get-Resources web applications.
Request Backend	ac	Back-end used to manage requests.

If the values are not set to **ac**, update the fields and click **Save**.

If you made any changes, click the **Save** button to return to the Admin Control Panel page.

AssetCenter database settings

To connect to the AssetCenter database:

- 1 From the Peregrine Portal Admin module, click **Settings**, then click the **AssetCenter** tab at the top of the page.

This displays the AssetCenter settings page.

Date Format: The default date format for data sent to AssetCenter.
yyyy-MM-dd

Database: Name of the AssetCenter database.
ACDemo42en
[Click for default: \[ACDemo351ENG\]](#)

Anonymous name: Anonymous user name used when an unknown user attempts to communicate with AssetCenter.
Admin

Anonymous password: Anonymous user password.
[Empty field]

Admin name: Administration user used by the Peregrine Portal when performing tasks such as user authentication and registration.
Admin

Admin password: Administration password.
[Empty field]

2 Update the following fields:

Field Name	Value Description	Default Value
Database	Name of the AssetCenter database you are using as a back-end for Get-Resources.	ACDemo351ENG
Anonymous name	Anonymous user name used when an unknown user attempts to communicate with AssetCenter.	Admin
Anonymous password	Password for the anonymous user name.	(none)
Admin name	Administration login name used by the Peregrine Portal when performing tasks such as user authentication and registration.	Admin
Admin password	Administrator password.	(none)

3 When you finish updating these fields, click **Save** to return to the Admin Control Panel page.

Portal database settings

Get-Resources enables personalization of portal application screens without the need to manually change and compile code. To enable this feature, Get-Resources requires a database adapter connection to store settings and customizations to the portal interface in the back-end database. Until a database adapter is defined for the portal page, users will not be able to see or make personalization changes to the Peregrine portal home page.

To configure Get-Resources to save personalization settings in the AssetCenter back-end database:

- 1 From the Peregrine Portal Admin module, click **Settings**.
- 2 At the top of the Settings page, click the **Portal DB** tab.

This displays the Portal Database settings page.

- 3 In the **Alias for** field, type `ac`, then click **Save** to return to the Admin Control Panel page.

Web application settings

Get-Resources requires a database adapter connection to store settings and customizations to the Web application's interface screens. Until a database adapter is defined for the Web application, users cannot make personalization changes to the Web application.

To configure Get-Resources to save personalization to the Web application in the AssetCenter back-end database:

- 1 From the Peregrine Portal Admin module, click **Settings**.
- 2 At the top of the Settings page, click the **Web Application** tab.

This displays the **Web Application** settings page.

- 3 In the **Alias for:** field type `ac`, then click **Save** to return to the Admin Control Panel page.

Resetting the server

Reset the server (see page 186) to apply your configuration changes to Get-Resources. Verify that the **weblication**, **portalDB** and **ac** targets are using the `com.peregrine.oaa.adapter.ac.ACAdapter` and are *connected* in the Connection Status table.

Troubleshooting the AssetCenter database connection

If you are having trouble making a connection between Get-Resources and the AssetCenter back-end database (that is, the Connection Status displays *disconnected* for the target adapters in the Admin Control Panel), follow these instruction to verify the AssetCenter Database Settings.

To troubleshoot the AssetCenter database connection:

- 1 From the AssetCenter tab, verify that the parameter defined for the Database field is the same as the database name displayed in the Connect to database dialog box when you log into AssetCenter.

- 2 Verify that the correct Admin name and password is defined for Get-Resources to login to AssetCenter.
- 3 Check the ODBC connections to AssetCenter.
Depending on the way you run the application server, it looks for either an ODBC User DSN or an ODBC System DSN.
 - If you start your application server as a service (the default method), it references the System DSN for the ODBC connection to the AssetCenter database.
 - If you start your application server as an application, it references the User DSN to determine the ODBC connection.

Refer to *AssetCenter database settings* on page 189 for detailed instructions on how to perform these functions.

Instructions for ServiceCenter

Get-Resources connects to the ServiceCenter database through a special adapter, the SCAdapter. This section describes how to configure and verify back-end system settings and connect to the ServiceCenter database.

Connection settings

To define ServiceCenter as the back-end system for Get-Resources:

- 1 From the Peregrine Portal Admin module, click **Settings**.
This displays the Settings page which provides access to the various tabs that configure settings for Get-Resources.

The Common settings page is displayed by default.

The screenshot shows the 'Common' tab selected in the top navigation bar. Below the navigation bar, there are tabs for 'Logging', 'Get-Resources', 'XSL', and 'E-mail'. The 'Common Backend' section contains a text input field with 'portalDB'. The 'List of target aliases' section contains a text input field with 'weblication;mail'. The 'Admin name' section contains a text input field with 'Admin'. The 'Admin password' section contains an empty text input field. To the right of each input field is a descriptive text block.

Common Backend:	Adapter target name used to support common user operations.
List of target aliases:	Specifies a list of semicolon delimited target aliases used by web applications in this package.
Admin name:	The admin login name. This login provides access to administrative functionality without authenticating against backend adapters.
Admin password:	The admin login password.

- At the top of the page, click the **Get-Resources** tab.

This displays the **Connections Settings** page for Get-Resources:

The screenshot shows the 'Get-Resources' tab selected in the top navigation bar. Below the navigation bar, there are tabs for 'Logging', 'Get-Resources', 'XSL', and 'E-mail'. The 'Get-Resources Connection Settings' section contains a text input field with 'sc'. The 'Request Backend' section contains a dropdown menu with 'sc' selected. To the right of each input field is a descriptive text block.

Get-Resources Target:	The backend for Get-Resources web applications. This should be either AC if AssetCenter is installed or SC if ServiceCenter is installed.
Request Backend:	Backend used to manage requests. (for example, sc , or ac .) The default is ac .

Save

- Update the following fields as follows:

Field Name	Enter Value	Description
Get-Resources Target	sc	Back-end for Get-Resources web applications.
Request Backend	sc	Back-end used to manage requests.

- 4 Click **Save** to return to the Admin Control Panel page.
 - 5 Click **Reset Server** at the bottom of the page to apply your changes to the system.
 - 6 When the operation is complete, verify that the `sc` target adapter, `com.peregrine.oaa.adapter.sc.SCAdapter`, is displayed in the **Connection Status** table.
- Note:** Unless the ServiceCenter system you are using as a back-end is configured with default login information, the status for the ServiceCenter target adapter displays *disconnected* until you follow instructions to connect Get-Resources to the ServiceCenter database.

ServiceCenter database settings

To connect to the ServiceCenter database:

- 1 From the Peregrine Portal Admin module, click **Settings**.
 - 2 At the top of the Settings page, click the **ServiceCenter** tab.
- This displays the ServiceCenter settings page.

Host:	localhost	Host name of the ServiceCenter server
Port:	12670	Port number of the ServiceCenter server
Log:		Path to SC logging used by the ServiceCenter client connection
Admin user:	falcon	Administration user used by the Peregrine Portal when performing tasks such as user authentication and registration in ServiceCenter
Admin password:		Admin user password for ServiceCenter

- 3 Update the following fields as necessary:

Field Name	Value Description	Default Value
Host	Host name of the ServiceCenter server.	localhost
Port	Port number of the ServiceCenter server.	12670

Field Name	Value Description	Default Value
Admin user	Administration user used by the Peregrine Portal when performing tasks such as user authentication and registration in ServiceCenter.	falcon
Admin password	Admin user password for ServiceCenter	(none)
Anonymous user	Anonymous user name used when an unknown user attempts to communicate with ServiceCenter	falcon
Anonymous password	Anonymous user password for ServiceCenter	(none)

- 4 When finished, click **Save** at the bottom of the page to return to the Admin Control Panel page.
- 5 Click **Reset Server** at the bottom of the page to apply your changes to the system.
- 6 Verify that the Connection Status table displays *connected* for the sc target adapter.

Portal database settings

Get-Resources enables personalization of portal application screens without the need to manually change and compile code. To enable this feature, Get-Resources requires a database adapter connection to store settings and customizations to the portal interface in the back-end database. Until a database adapter is defined for the portal page, users will not be able to see or make personalization changes to the Peregrine portal home page.

To configure Get-Resources to save personalization settings in the ServiceCenter back-end database:

- 1 From the Peregrine Portal Admin module, click **Settings**.
- 2 At the top of the Settings page, click the **Portal DB** tab.

This displays the Portal Database settings page.

- 3 In the Alias for field, type sc, then click Save to return to the Admin Control Panel page.
- 4 Click Reset Server at the bottom of the page to apply your changes to the system.
- 5 When the operation completes, verify that the adapter used for the portalDB target is com.peregrine.oaa.adapter.sc.SCAdapter and displays *connected* in the Connection Status table.

Web application settings

Get-Resources requires a database adapter connection to store settings and customizations to the Web application's interface screens. Until a database adapter is defined for the Web application, users cannot make personalization changes to the Web application.

To configure Get-Resources to save personalization to the Web application in the ServiceCenter back-end database:

- 1 From the Peregrine Portal Admin module, click **Settings**.
- 2 At the top of the Settings page, click the **Web Application** tab.

This displays the Web Application settings page.

- 3 In the **Alias for** field type `sc`, then click **Save** to return to the Admin Control Panel page.
- 4 Click **Reset Server** at the bottom of the page to apply your changes to the system.
- 5 When the operation completes, verify that the adapter used for the **weblocation** target is `com.peregrine.oaa.adapter.sc.SCAdapter` and displays *connected* in the Connection Status table.

Troubleshooting the ServiceCenter database connection

If the Connection Status table in the Admin Control Panel displays *disconnected* for any of the target adapters, perform the following procedures to troubleshoot possible configuration issues:

In the ServiceCenter settings page of the Admin module in Get-Resources:

- Verify that the parameters entered for the **Host:** and **Port:** fields are correct.
- Verify that the Admin user name and password defined for Get-Resources are the same login values used when logging directly into the ServiceCenter back-end system as an Administrator.

Refer to *ServiceCenter database settings* on page 195 for detailed instructions on how to perform these functions.

In ServiceCenter:

- Verify that the ServiceCenter services are running. If they are not running, access the ServiceCenter Console to start the ServiceCenter services.
- Verify that you have ServiceCenter full client connectivity by starting a client that is pointed to the port listed on the ServiceCenter settings page in the Admin module.

Refer to the *ServiceCenter Administration Guide* for detailed instructions on how to perform these functions.

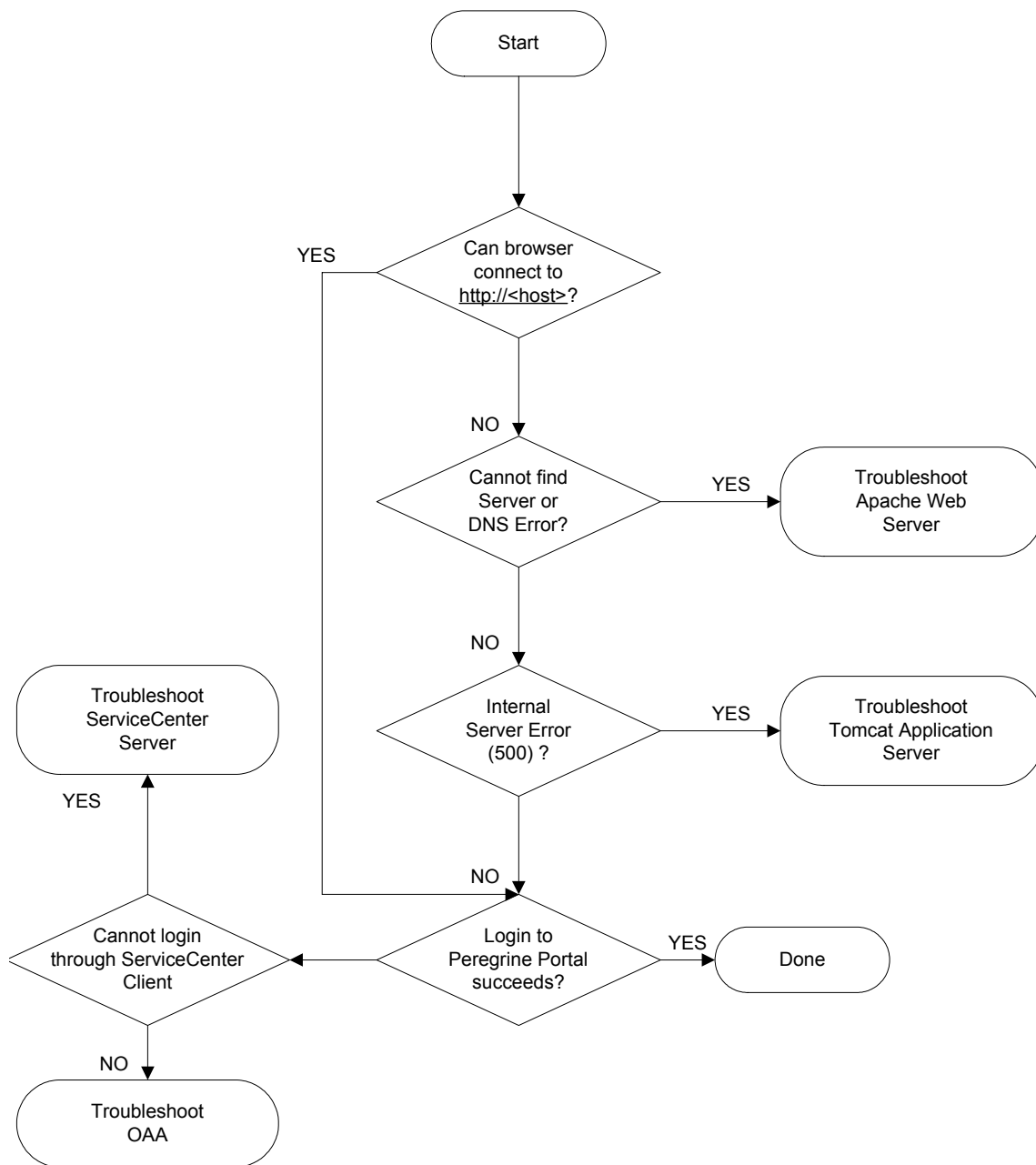
6 Troubleshooting

CHAPTER

This chapter covers the following topics:

- *Troubleshooting Apache Web server for Windows* on page 203
- *Troubleshooting Apache Web server for Unix* on page 206
- *Troubleshooting Tomcat* on page 207
- *Troubleshooting OAA* on page 210
- *Troubleshooting ServiceCenter server* on page 211

The following troubleshooting diagram shows areas to consider when trying to resolve installation problems.



Troubleshooting Apache Web server for Windows

If you are having trouble with the Apache Web server for Windows, follow these instructions.

The Web server is not responding

If the Web server is not responding:

- Step 1** Verify that the network connections are enabled.
- Step 2** Verify that the `apache.exe` program is running.
- Step 3** Restart Apache service.
- Step 4** Make sure the port that Apache uses is not in use by another network service (Apache uses port 80 by default).

To verify that the network connections are enabled:

- 1** Click Start.
- 2** Point to Settings.
- 3** Click Network and Dial-up connection.
- 4** Click Local area connection.
- 5** In the dialog box, verify that under Connection, Status is listed as Connected.

To verify that the `apache.exe` program is running:

- 1** Press Ctrl+Alt+Del.
- 2** Click Task Manager.
- 3** On the Processes tab, verify that the `Apache.exe` program is listed in the Image Name column.

To restart Apache service:

- 1** Click Start.
- 2** Click Programs.
- 3** Click Administrative Tools.
- 4** Click Services.
- 5** Locate the Apache service in the list and restart it.

To make sure the port that Apache uses is not in use by another network service (Apache uses port 80 by default):

- 1 Stop Apache.
 - a Click Start.
 - b Click Programs.
 - c Click Administrative Tools.
 - d Click Services.
 - e Locate the Apache service in the list and stop it.
- 2 Click Start.
- 3 Click Run.
- 4 Enter `cmd` and click OK.
- 5 In the command line window, enter `netstat -a` and press return.
- 6 Make sure that an entry with Proto=TCP, Local Address=<host>:http does not exist.

Note: This ensures that when Apache is not running, no other service is listening on the http port (80).
- 7 Correct the problem by either changing Apache's default port (refer to customization documentation) or disabling/changing the conflicting service.

Users cannot access the Web server even though the server is running, and the network and Internet connections are enabled

If users cannot access the Web server, follow these instructions:

- Step 1** Verify that the WINS server is installed.
- Step 2** Verify that the DNS server is installed.
- Step 3** Check Apache log files for additional errors.

To verify that the WINS server is installed:

- 1 Click Start.
- 2 Point to Settings.
- 3 Click Control Panel.
- 4 Click Add/Remove program.
- 5 Click Add/Remove Windows Components.

- 6 Click Networking Services.
- 7 Click Details.
- 8 Verify that the WINS Server check box is selected and properly configured on the network. Also verify that it is functioning.

To verify that the DNS server is installed:

- 1 Click Start.
- 2 Point to Settings.
- 3 Click Control Panel.
- 4 Click Add/Remove program.
- 5 Click Add/Remove Windows Components.
- 6 Click Networking Services.
- 7 Click Details.
- 8 Verify that DNS is installed, and that the DNS servers (or server) are connected and working on the network.

To view Apache log files for additional errors:

- From a text editor, open the Apache log files.
The default files are in c:\Program Files\Peregrine\Common\Apache2\logs.

Troubleshooting Apache Web server for Unix

If you are having trouble with the Apache Web server for Unix, follow these instructions.

The Web server is not responding

If the Apache Web server is not responding, check the network setup.

To check the network setup:

- 1 Make sure the port that Apache uses is not in use by another network service.

Note: Apache uses port 80 by default. You can change this by using the **Port** directive in the `httpd.conf` file. Use the `netstat` command to list all ports being listened to after shutting down Apache.

```
$ /etc/init.d/oaactl stop
$ netstat -a | grep 80
```

- 2 Make sure the IP address and hostname of the server are configured correctly. If so,
 - The Ping command successfully gets a response from the server.
 - The `nslookup hostname` displays the correct mapping from the hostname to the IP address.
 - The `telnet hostname 80` successfully connects to the server.

```
$ /usr/sbin/ping hostname -n 5
```

```
$ telnet hostname 80
Trying...
Connected to hostname
Escape character is '^['.
```

View Apache log files for advanced errors

If you are having trouble with the Apache Web server, view the log files.

To view Apache log files for advanced errors:

- From a text editor, open the Apache log files.

The default Apache log files are in:

```
<base install directory>/peregrine/common/apache2/logs.
```

Troubleshooting Tomcat

Before you can troubleshoot problems on Tomcat, you must become familiar with starting and stopping Tomcat on your operating system. You also need know where the Tomcat log files are located.

To start/stop Tomcat on Windows

- 1 Click Start.
- 2 Click Programs.
- 3 Click Administrative Tools.
- 4 Click Services.
- 5 Locate the PeregrineTomcat service in the list and start/stop/restart it.

To start/stop Tomcat on UNIX

- `$ /etc/init.d/oaactl <start/stop/restart>`

The following table contains the default Tomcat log file locations.

Operating system	Default Tomcat log files location
Windows	C:\Program Files\Peregrine\Common\Tomcat4\logs
Unix	/<installed base directory>/peregrine/common/tomcat4/logs

Check for Tomcat port conflicts

The following table displays the default Tomcat port usage.

Port number	Tomcat service
8005	Tomcat Administration
8009	Tomcat AJP13 Worker Port

In the Tomcat log file `stderr.log`, the following line indicates the currently succeeded AJP13 port being used:

[INFO] ChannelSocket - -JK2: ajp13 listening on tcp port 8009

To check for Tomcat port conflicts:

- 1 Shutdown Tomcat.

- 2 Use **netstat -a** to list ports being listened on to make sure that there are no conflicts.
- 3 Make necessary modifications to Tomcat port configuration or disable (or modify) the conflicting service.

Check for Tomcat errors

Make sure that you are working with clean files.

To ensure a clean environment for troubleshooting:

- 1 Shutdown the Apache and Tomcat services.
- 2 Remove all log files.
- 3 Restart Apache and Tomcat.
- 4 Use a browser to connect to the Web server.
- 5 Stop.

File mod_jk.log

This file contains log information regarding the out-of-process TCP connection between the Apache Web server and Tomcat.

This file is empty when there are no errors. It contains hints about connection failures when the AJP13 port is in conflict with another service, or when the Tomcat mod_jk connector is configured incorrectly.

File stdout.log

The following is a normal output of this log file:

```
Bootstrap: Create Catalina server
Bootstrap: Starting service
Starting service Tomcat-Standalone
Apache Tomcat/4.1.12
Instantiating Archway Servlet...
2002-12-10 12:22:13,079 INFO [main] - Using application preferences in
/C:/Program Files/Peregrine/Common/Tomcat4/webapps/oaa/WEB-INF/local.xml
2002-12-10 12:22:13,119 INFO [main] - Using default preferences in /C:/Program
Files/Peregrine/Common/Tomcat4/webapps/oaa/WEB-INF/default/archway.xml
2002-12-10 12:22:13,200 INFO [main] - Using default preferences in /C:/Program
Files/Peregrine/Common/Tomcat4/webapps/oaa/WEB-INF/default/common.xml
2002-12-10 12:22:13,240 INFO [main] - Using default preferences in /C:/Program
Files/Peregrine/Common/Tomcat4/webapps/oaa/WEB-INF/default/logging.xml
2002-12-10 12:22:13,270 INFO [main] - Using default preferences in /C:/Program
Files/Peregrine/Common/Tomcat4/webapps/oaa/WEB-INF/default/themes.xml
2002-12-10 12:22:13,280 INFO [main] - Using default preferences in /C:/Program
Files/Peregrine/Common/Tomcat4/webapps/oaa/WEB-INF/default/xsl.xml
Bootstrap: Service started
```

Look for the following in this file during an error:

- Archway Servlet is not instantiated.
- The webapps location is incorrect.
- Bootstrap service failed to start.

File stderr.log

The following is a normal output of this file:

```
Created catalinaLoader in: C:\Program Files\Peregrine\Common\Tomcat4\server\lib
[INFO] Registry - -Loading registry information
[INFO] Registry - -Creating new Registry instance
[INFO] Registry - -Creating MBeanServer
[INFO] ChannelSocket - -JK2: ajp13 listening on tcp port 8009
[INFO] JkMain - -Jk running ID=0 time=0/120 config=C:\Program
Files\Peregrine\Common\Tomcat4\conf\jk2.properties
```

Look for the following problems in this file during an error:

- catalinaLoader was not created or is pointing to an incorrect location.
- ChannelSocket - JK2: ajp13 failed to connect or is connecting on an incorrect port number.
- JkMain is not using the right jk2.properties.

File localhost_log.<date>.txt

There should not be any Java errors in this log file. This file logs application manager activity in deploying Peregrine OAA Web applications.

Troubleshooting OAA

If you are having trouble with your Peregrine OAAWeb application, verify your application's back-end server and view the OAA logs.

OAA back-end configuration

Make sure that the Peregrine OAA application is connecting to the right back-end server and that it is currently functional.

To check back-end configuration:

- 1 Browse to <http://hostname/oaadmin/admin.jsp>.
- 2 Login as **Admin** and no password (providing this has not changed after installation).
- 3 From the Administration module, verify the connection status of the listed adapters.
- 4 Click on the target for the back-end server, for example, sc.
- 5 Verify that the host and port for the back-end server are correct.

OAA log files

The following table lists the default file locations of the Peregrine OAA log files.

Operating system	Default Peregrine OAA log files location
Windows	C:\Program Files\Peregrine\Common\Tomcat4\bin\archway.log
Unix	/<installed base directory>/peregrine/common/tomcat4/archway.log

Make sure that the log files contain:

- A listing of installed OAA components and their version numbers.
- A correct listing of registered packages.
- An Archway **initialization complete** statement.

If the file contains Java ClassNotFoundException exceptions, check to see if all the required jar files are found.

Troubleshooting ServiceCenter server

If you are having trouble with the ServiceCenter server:

Step 1 Check the ServiceCenter Auth code and port setting.

Step 2 Check the ServiceCenter log.

Before you troubleshoot problems, you must become familiar with starting and stopping the ServiceCenter server on your operating system. You also need to know where the ServiceCenter log files are located.

To start/stop ServiceCenter on Windows:

- 1 Click Start.
- 2 Click Programs.
- 3 Click Administrative Tools.
- 4 Click Services.
- 5 Locate the PeregrineServiceCenter service in the list and start/stop/restart it.

To start/stop ServiceCenter on UNIX:

- ▶ `$ /etc/init.d/oaactl <start/stop/restart>`

The following table contains the default ServiceCenter log file locations.

Operating system	Default ServiceCenter log files location
Windows	C:\Program Files\Peregrine\ServiceCenter\sc.log
Unix	/<installed base directory>/peregrine/servicecenter/sc.log

Check ServiceCenter Auth code and port setting

The following table contains the ServiceCenter setting file location.

Operating system	ServiceCenter setting file location
Windows	C:\Program Files\Peregrine\ServiceCenter\RUN\sc.ini
Unix	/<installed base directory>/peregrine/servicecenter/RUN//sc.ini

To check the ServiceCenter Auth code and port setting:

- 1 Make sure the auth code set by the **auth:** tag is correct.
- 2 Make sure the port setting for **system:** matches the setting for the OAA back-end.

View ServiceCenter log

To view the ServiceCenter log:

- 1 View the log file for auth code expiration errors.
- 2 View the log for resource attachment errors.
- 3 Refer to *ServiceCenter Administration Guide* for further troubleshooting if required.

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