Peregrine

Get-Answers 4.1.2
Installation Guide

For Windows 2000, AIX, and Solaris

Peregrine
S Y S T E M S

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Contents

About this Guide

The *Installation Guide* explains concepts and provides step-by-step instructions for installing Get-Answers.

By reading the *Get-Answers Installation Guide,* you will be able to:

- Install and configure the database server, search engine server, web server and application server necessary for Get-Answers.
- Establish a connection between your application server and Web server.
- Create the Get-Answers tables and populate them with sample data.
- Index the sample documents.

Book Audience

The *Installation Guide* was written for Get-Answers administrators. To use this guide make sure you have knowledge of the following:

- Your organization's process for performing software installations and your responsibilities within that process
- Peregrine products that have been previously installed
- Your system architecture
- Your operating system user interface
- Configuring and maintaining local area networks (LANs)
- System administration tasks in your environment
- System administration tasks for associated back-end products

Related Documentation

As you use Get-Answers, you can refer to this related documentation:

- *Get-Answers Release Notes* which provides information about new features, corrected issues, and known issues and is located on the Get-Answers CD.
- *Get-Answers Administration Guide* which provides information about controlling access to document collections and customizing Get-Answers.
- *Get-Answers User Guide* which provides information about searching the Get-Answers document collection, working with documents, authoring new documents, and generating reports.
- *Notification Services Quick Start Guide* and online help which explains concepts, provides step-by-step instructions, and describes tasks that you can complete in Notification Services. It also provides information on configuring and administering Notification Services. Notification services works with other Peregrine applications to enable users to send and receive notifications.

Associated Applications

This guide explains how to integrate Get-Answers with applications such as ServiceCenter and how to use it with Get-Answers. For information on using, installing, and configuring ServiceCenter, see the ServiceCenter documentation.

Note: If you are integrating with other applications, they must be installed and configured before you install Get-Answers.

Typographical Conventions

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

Convention	Meaning
Sans serif	Information that you must type exactly as shown, code examples, output, and system messages appear in a sans serif font.
Bold	Button names, field names, menu names, and menu options appear in **bold**.
Italics	Variables and values that you must provide appear in *italics*. New terms also appear in *italics*.

Special Elements

This book uses special elements to help you locate information. These special elements and their uses are shown 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

Contents of the Product CDs

The Get-Answers product comes with two installation CDs: the Get-Answers CD and the Search Engine CD.

The Get-Answers CD contains the following items, which are required for Get-Answers operation:

- Get-Answers application.
- Get-Answers sample data.
- A ServiceCenter unload file, sc.unl.

The Search Engine CD includes the following, which are also required:

- Get-Answers Search Engine application
- Knowledge Management Library (KMLib)

Need further assistance?

For help with this release, you can contact customer support, download documentation or schedule training.

Customer Support

For further information and assistance with ServiceCenter in general, contact Peregrine Systems' Customer Support at the Peregrine CenterPoint web site.

To contact customer support:

1 In a browser, navigate to http://support.peregrine.com
2 Log in with your user name and password.
3 Follow the directions on the site to find the information you need.

The KnowledgeBase contains informational articles about all categories of Peregrine products. If the KnowledgeBase does not contain an article that addresses your concerns, you can search for information by product; search discussion forums; and search for product downloads.

Documentation web site

For a complete listing of current Get-Answers documentation, see the Documentation pages of the Peregrine Customer Support web site.

To view the document listing:

1 In a browser, navigate to http://support.peregrine.com.

2 Log in with your login user name and password.

3 Click either **Documentation** or **Release Notes** at the top of the page.

4 Click the Get-Answers link.

5 Click a product version link to display a list of documents that are available for that version of Get-Answers.

6 Documents may be available in multiple languages. Click the Download button to download the PDF file in the language you prefer.

You can view PDF files using Acrobat Reader, which is available on the Customer Support Web site and through Adobe at http://www.adobe.com.

Important: Release Notes for this product are continually updated after each release of the product. Ensure that you have the most current version of the Release Notes.

Education Services web site

Peregrine Systems offers classroom training anywhere in the world, as well as "at your desk" training via the Internet. For a complete listing of Peregrine's training courses, refer to the following web site:

http://www.peregrine.com/education

You can also call Peregrine Education Services at +1 858.794.5009.

1 Get-Answers Installation Overview

CHAPTER

This book describes how you install Get-Answers version 4.1.2.

Important: Read all of the information in this chapter before you continue.

This chapter provides the following information:

- An overview of the architecture of the Get-Answers product. See the *Get-Answers installation overview*, next.

- Software and platform requirements for Get-Answers. See *Installation requirements* on page 19.

- Hardware requirements. *Hardware requirements* on page 20.

- The types of installation and the chapters you must read to complete each type. *Get-Answers installation overview* on page 20.

- A worksheet for you to record information as you proceed through installation. See *Get-Answers installation worksheet* on page 22.

What's new in Get-Answers 4.1.2

Major new features of this release include:

- Migration of legacy documents
- Customizable Document Views
- Three-tier architecture where documents are stored in the database instead of in a file structure
- Schema extensions
- Support for SQL Server 2000 and Solaris

Get-Answers architecture

Get-Answers is a Web-based knowledge management application designed for corporations to capture, store, and retrieve information in a knowledge management database. It uses the Peregrine OAA Platform, a software platform that provides common functionality to the following Peregrine products: Get-Answers, Get-Services, and Get-Resources.

The Peregrine OAA Platform is not sold as a separate product. Further, you do not need Get-Services or Get-Resources to use Get-Answers.

Note: This book contains references to OAA, which is the Peregrine OAA platform. The Get-Answers installation includes installation of the Peregrine OAA Platform.

Get-Answers uses three servers: a database server, a search engine server, and a Web server. You do not need a detailed understanding of the functions of each server to install Get-Answers, but a high-level understanding is necessary.

Although all three servers interact with each other in several ways, this table describes the basic functions of each server:

This server...	performs these functions...
Database server	Stores the documents, maintains an index of the documents, and provides information to the other servers about those documents.
OAA/Web server	■ Interacts with user's browsers. ■ Accepts submissions from users for storage on the Database server. ■ Stores retrieved documents in a temporary file. ■ Stores submitted documents in the temporary file. ■ Passes submitted documents to the Database server for storage.
Search Engine server	Queries the Database server to index documents and then retrieves that document from the Database server.

This image explains the relationships between servers as well.

The Database Server keeps track of all Get-Answers documents.

Temporary Document Storage

Database Server

OAA/Web Server

End User Browsers

Search Engine Server

Users access Get-Answers through their browsers, which talk to the OAA-Get Answers Server.

The Search Engine server finds the documents users need.
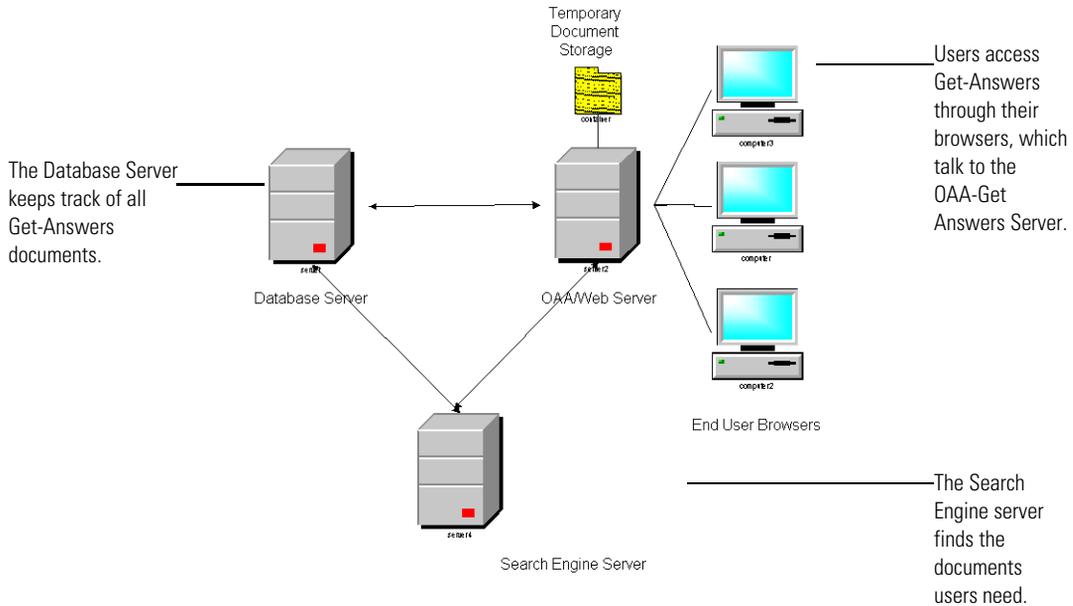
Figure 1-1: Server cross-talk: The Get-Answers servers interact with each other in several ways to manage the information users need.

You can run each server on a separate computer, or you can run all servers on one computer. Peregrine recommends that you use Get-Answers on three computers. The installation instructions describe how to use three servers to install Get-Answers.

Important: To install Get-Answers successfully, you must perform the steps in this guide in the order they appear.

Three-tier architecture

Get-Answers 4.1.2 supports a true 3-tier architecture. The 3-tier implementation does not incorporate the use of a File Server. The physical documents are stored on the Database Server in the third tier.
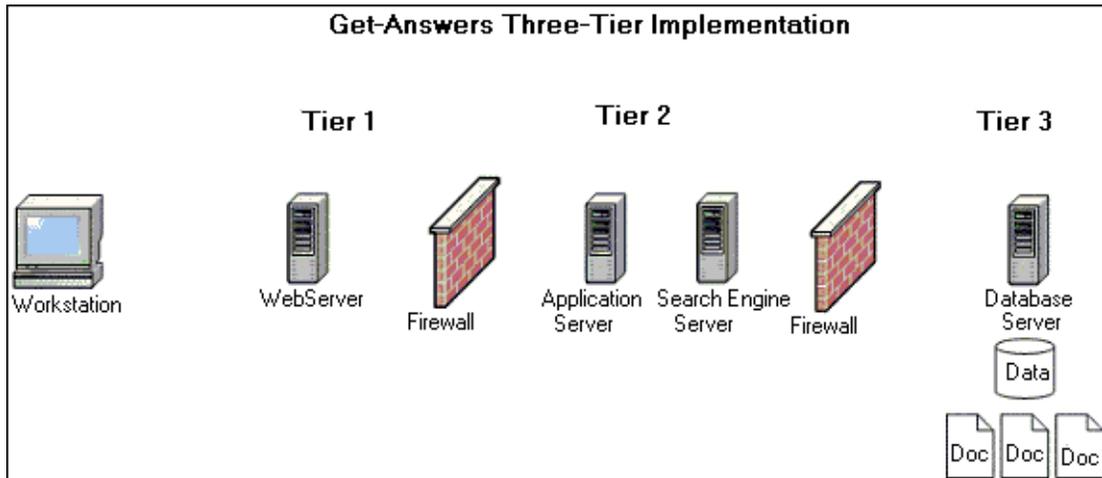
Files, which can be written in chunks, are uploaded and downloaded to the database. This process can be either synchronous or asynchronous.

Installation requirements

The requirements for proper installation and configuration of Get-Answers are described in the Get-Answers Compatibility Matrix, which is available at the Peregrine Systems Customer Support site. Go to http://support.peregrine.com; click **Documentation**; choose **Get-Answers**; and then choose **Compatibility Matrices**.

Important: Make sure to check the entire Get-Answers compatibility matrix *before* starting the installation process.

Note: If you integrate Get-Answers with ServiceCenter, you need to install it separately. This back-end system is *not* included on the Get-Answers CD. The installation instructions for ServiceCenter can be found in the ServiceCenter documentation.

Hardware requirements

The following items are the minimum hardware requirements for Get-Answers:

Item	Minimum Requirement
Processor	Server: Pentium 1 GHz or faster
	Client workstation: Pentium 300 MHz or faster
RAM	512 MB minimum on web server
	128 MB minimum on RetrievalWare server (Search Engine server)
Disk Space	100 MB minimum available on the Web server
	300 MB minimum available on Search Engine server
	615 MB minimum available on Oracle server

Get-Answers installation overview

You can run Get-Answers in either:

- A Windows environment using Oracle, DB2, or SQL Server 2000 as the database

-OR-

- An AIX or Solaris environment, using either Oracle or DB2 as the database.

In the Windows environment, there are several types of installations. For AIX, there is only one.

The following table shows what chapters in the book you must read to install Get-Answers 4.1.2 for your Get-Answers installation.

Installation and platform type	Web and application server type	Installation type	Required chapters
First-time installation on Windows	Default Apache web server or Microsoft IIS web server **and** the Tomcat application server	Typical	■ *Setting Up the Get-Answers Servers* on page 25 ■ *Typical Windows Installation* on page 49 ■ *Completing All Installations* on page 181
First-time installation on Windows	■ JRun, WebSphere, or WebLogic as the application server *or* ■ an existing Tomcat and Apache configuration	Custom	■ *Setting Up the Get-Answers Servers* on page 25 ■ *Custom Windows Installation* on page 59 ■ *Completing All Installations* on page 181
Upgrading to Get-Answers 4.1.2	Either Apache and Tomcat or JRun, WebSphere or WebLogic application servers	Upgrade	■ If upgrading from version 4.0.1, see Chapter 5, "Upgrading from Get-Answers 4.0.1 to Get-Answers 4.1" in the *Get-Answers 4.1 Installation Guide* ■ *Completing All Installations* on page 181
Installing Get-Answers 4.1.2 on AIX with DB2	any of the above	AIX/DB2	■ *Setting Up the Get-Answers Servers* on page 25 ■ *Installation on AIX or Solaris* on page 121
Installing Get-Answers 4.1.2 on Solaris			■ *Installation on AIX or Solaris* on page 121

When you finish installing Get-Answers 4.1.2, no matter what type of installation you use, read these chapters for information that might apply to you.

■ *Configuring Integrations* on page 227

■ *Troubleshooting Installation and Operation* on page 235

Get-Answers installation worksheet

Use this worksheet to record information required for installation. For more information that is specific to the database you are using, see one of the following sections:

- *Setting up Oracle on the Database server* on page 26
- *Setting up DB2 on the Database server* on page 29
- *Setting up SQL Server 2000 on the Database server* on page 31

Step	Configuration item
1	Database Name. Required for Oracle, DB2 and SQL Server.
2	One of the following: the System ID (SID) for Oracle; the Instance Name for DB2; or the Server Name for SQL Server.
3	Database Tablespace Name:
4	Database User ID:
5	Database User Password:
6	Database Server Net Service Name:
7	Database Server Hostname (machine name):
8	Database Server port number: **Note:** The default Oracle port is 1521. The default DB2 port is 50000. The default SQL Server port is 1443. These values can be changed.
9	Search Engine Search Server Installation Directory: From *Installing the Search Engine on the Search Engine server* on page 40.
10	Search Engine Server host name (machine name): From *Installing the Search Engine on the Search Engine server* on page 40.

Step	Configuration item
11	Search Engine Search/Index Port: From *Installing the Search Engine on the Search Engine server* on page 40.
12	Web Server Presentation Directory:

Tip: Print and save this table for use during the Get-Answers installation process and for future reference.

2 Setting Up the Get-Answers Servers

CHAPTER

This chapter provides instructions on setting up the file server, the database server, and the Search Engine server. It includes instructions for setting either Oracle, DB2, or SQL Server 2000 as your database. You complete the procedures in this chapter before you can install Get-Answers.

Important: Complete the tasks in the same order in which they appear.

Step 1 Setting up the Get-Answers database on your Database server. See *Setting up the Database server* on page 25.

Step 2 Setting up and installing the Search Engine server. See *Setting up and installing the Search Engine server* on page 36.

Setting up the Database server

This section includes instructions for setting up the Oracle, DB2, or SQL Server 2000 database.

- If you are using Oracle, see *Setting up Oracle on the Database server*, next.
- If you are using DB2, see *Setting up DB2 on the Database server* on page 29.
- If you are using SQL Server 2000, see *Setting up SQL Server 2000 on the Database server* on page 31.

Setting up Oracle on the Database server

Get-Answers 4.1.2 uses Oracle as the default database server. This section explains how to set up the Oracle server, either version 8.1.7 or 9i, from the Oracle CD.

Note: The only versions of Oracle 9i that the search engine supports are 9.2.0.1 or higher. Both the native client and the server must be the same version.

Assume that you have installed the appropriate version of Oracle on the database server. If you are installing Oracle for the first time on the server, set both the database name and the database instance name to ORCL.

Note: Before starting the installation process, print a copy of the *Get-Answers installation worksheet* on page 22; then use it to record the following information during the Oracle installation: the database name, the Server ID (SID), database server name (machine name), and database port number.

After you install Get-Answers and start completing all installations, make sure the Get-Answers Search Engine settings point to this database.

The next step is to add a new database user to the Oracle database.

Creating the tablespace and the rome user

The tablespace is the storage location for the Get-Answers database. Throughout this documentation, the **rome** user has been desginated as the all-purpose user. You use the **rome** user to complete the installation.

Note: Rather than type the scripts in the following procedures yourself, you can find the scripts for this procedure in the Oracle files directory on the Get-Answers installation CD. The text for the **create tablespace** and **create user** commands are in that folder.

Creating the tablespace

Create the tablespace on the database server.

Note: The tablespace requires 615 MB of free space. Make sure your hard drive has this much free space.

To create the tablespace:

1 On the database server, go the **Start** menu, select **Programs** -> **Oracle** -> **OracleHome8i** -> **Database Administration** -> **SQLPlus Worksheet**.

Note: Do not use SQLPlus. Use SQLPlus Worksheet.

2 Log in as System, using **manager** as the password, or log in as the super user for your system.

Consult your database administrator if you need help here.

3 Type the following:

CREATE TABLESPACE ROME DATAFILE
'C:\ORACLE\Ora81\database\ROME.ora'

SIZE 600M

AUTOEXTEND ON NEXT 1M MAXSIZE UNLIMITED;
commit;

Note: You can use a name other than "rome" for your tablespace if you prefer.

If necessary, edit the string to reference the drive and directory where Oracle is installed. The path you enter, such as C:\ORACLE\ORADATA\ORCL, must already exist on the system.

4 Click the lightning icon to run the script.

The script might take up to three minutes to run. When the following lines appear, the script is finished:

Tablespace created.
Commit complete.

5 Look in the lower pane for any errors messages. If the previous lines appeared and there are no errors, go to the next section, "Creating the Rome user."

Creating the Rome user

The **rome** user is the database administrator ID that Get-Answers uses to connect to the database. The following script creates the **rome** user with "connect" and "resource" rights.

Note: Though this section uses rome as the user and tablespace names, you can use another name if you prefer. In addition, you can tailor the script as necessary for your system. Consult your Database Administrator for assistance.

"Connect" provides the following rights:

- create session
- create table
- create synonym
- create database link

- alter session
- create view
- create sequence
- create cluster

"Resource" provides these rights:

- create cluster
- create procedure
- create sequence
- create table
- create trigger

To create the rome user:

1 On the database server, from the Edit menu, click **Clear All** to delete the text in the window.

2 Type the following script,

   Note: Though the example script that follows uses rome as the user name and tablespace name, you can use another name if you prefer. Specify the database *<password>* that you want to use.

   Make sure to record the database user ID, user password, and tablespace name in the *Get-Answers installation worksheet* on page 22.

```
CREATE USER ROME IDENTIFIED BY <password>
   DEFAULT TABLESPACE ROME
   TEMPORARY TABLESPACE TEMP
   QUOTA UNLIMITED ON ROME
   QUOTA UNLIMITED ON TEMP
   PROFILE DEFAULT
   ACCOUNT UNLOCK;
GRANT CONNECT TO ROME;
GRANT RESOURCE TO ROME;
ALTER USER ROME DEFAULT ROLE CONNECT, RESOURCE;
GRANT UNLIMITED TABLESPACE TO ROME;
COMMIT;
```

3 Click the Lightning Bolt icon to execute the script.

Important:	Do not continue to the next step until the script is finished running.

Setting up DB2 on the Database server

To run Get-Answers and connect to a DB2 database, first follow the instructions in this section to set up the DB2 database.

Important:	Make sure that an expert DB2 Database Administrator sets up DB2. The following instructions require advanced knowledge of DB2 to complete successfully. The database administrator can provide you with the database Server Hostname (machine name) and port number, which you record in the *Get-Answers installation worksheet* on page 22 for use when installing Get-Answers.
	For best results, make sure that your database contains a minimum tablespace size of 800 megabytes.

To set up DB2:

Tip: For future reference, put the commands in this procedure in a text file and call it from the DB2 command line using this command:
db2 -tvf *<fileName>*.sql
Where *<fileName>* is the name of your text file.

Note: Though the example that follows uses rome as the database name, you can use another name if you prefer.

Make sure to record the database name, database user ID, user password, and tablespace name in the *Get-Answers installation worksheet* on page 22 for use when installing Get-Answers.

1 Create the database using this command: create database rome

This creates a database called "rome".

2 Modify the database so that it contains a new BUFFERPOOL that serves the application 8k, 16k, or 32k, using these commands:

■ connect to rome
■ create bufferpool bp32k size -1 pagesize 32K

3 Start and stop DB2 using these commands:

- db2stop
- db2start

Note: You may see an error if you stop the database while applications are running. If so, use the commands **force application all**, and **disconnect <database>**.

4 Create a new user and temp tablespace for each page size you have. Create a User and Temp tablespace for the default 4k page size and a User and Temp tablespace for the 32k page size. Use the following commands:

a connect to rome

b create regular tablespace user32k pagesize 32k managed by system using ('user32k') bufferpool bp32k

c create user temporary tablespace usertemp32k pagesize 32k managed by system using ('usertemp32k') bufferpool bp32k

Make sure the user creating the bufferpool and tablespaces is the db2admin. By default, the user creating those is the user that is logged into the DB2 server that stores the DB2 server software. To identify the user, type "connect to *<Database_Name>*". For example, type: db2 => connect to rome

Information such as the following is displayed:

      Database Connection Information:

         Database server   = DB2/NT 7.2.5

         SQL authorization ID = ADMINIST...

         Local database alias = rome

Note that ADMINIST... is the SQL authorization ID.

You should probably see DB2ADMIN or DB2INST1 (Windows and UNIX, respectively)

5 If this is set up wrong, you can correct it as the ADMINISTRATOR (assuming that is who is logged in) by adding at the end of the section:

- grant use of tablespace user32k to user db2admin
- grant use of tablespace usertemp32k to user db2admin

6 Optionally, once the new temp and user tablespaces have been created, remove the default tablespace to make sure DB2 uses the new one.

7 Increase the size of the default (4k) bufferpool using the following command:

alter bufferpool ibmdefaultbp size 25000

8 Disconnect from the database using the following command: disconnect rome

Setting up SQL Server 2000 on the Database server

This section explains how to set up SQL Server 2000 in preparation for installing Get-Answers. Setting up SQL Server involves the following steps:

Step 1 *Purchasing required software licenses*.

Step 2 *Determining the required number of Sprinta software licenses*.

Step 3 *Preparing the SQL Server 2000 for Get-Answers*.

Step 4 *Creating a Security Login name* on page 34.

Step 5 *Setting security authentication* on page 36.

Purchasing required software licenses

Using the SQL Server database with Get-Answers requires that you purchase two sets of licenses from their respective vendors. First, SQL Server connections require that you purchase four or more SQL Server licenses from Microsoft. In addition, if you are using the Sprinta driver, you must purchase Sprinta driver licenses from i-net Software.

To purchase Sprinta drivers, go to http://www.inetsoftware.de/English; search for JDBC drivers for Microsoft SQL Server; and purchase Sprinta driver licenses.

Determining the required number of Sprinta software licenses

The number of Sprinta licenses required for your Get-Answers deployment is based on the maximum number of database connections that Get-Answers can use, which depends on the number of Java Virtual Machines (JVMs) employed and the number of database adapters configured in the Administration module. The minimum number of connections is 3 per JVM, but in a production environment you would expect to use 12 or more. Each JVM require up to 2 connections for administration plus the number of connections configured. The number of connections actually used increases with load, but never exceeds the configured maximum.

To determine the number of database adapters, click **Settings** in the left Navigation Bar in the Peregrine Portal; click the **rome** tab; and check the Adapter Pool Size field. (The default is 10.) To calculate the maximum number of connections use the following formula:

$$Maximum\_Connections = Number\_of\_JVMs \quad 2 + Adapter\_Pool\_Size$$

For example, a Get-Answers deployment application running on 3 JVMs and configured to use 10 adapters can use up to 36 database connections, calculated as follows: 36 = 3 x (2 + 10).

Preparing the SQL Server 2000 for Get-Answers

You must successfully install the SQL Server and record the information in the Get-Answers worksheet provided on page 22.

The Get-Answers installer generates a section in the local.xml file similar to the following:

```
<rome>

<romeDatabaseUrl>jdbc:inetdae7:qa-sql2k:1433?database=demo1syn0707</
romeDatabaseUrl>
        <romeDatabaseUser>rome</romeDatabaseUser>
        <romeDatabasePassword>password</romeDatabasePassword>
        <romeDatabaseType>MSSQLServer</romeDatabaseType>

<romeDatabaseDriver>com.inet.tds.TdsDriver</romeDatabaseDriver>
</rome>
```

In this example:

- The SQL Server host, <romeDatabaseUrl>, is qa-sql2k. (This value can be changed.)
- The port is 1433. (This value can be changed.)
- The SQL Server databaseName is demo1syn0707. (This value can be changed.)
- The format of the romeDatabaseUrl entry is: jdbc:inetdae7:<host>:<port>?database=databaseName.
- The final result from the installer is <romeDatabaseUrl>jdbc:inetdae7:qa-sql2k:1433?database=demo1syn0707 </romeDatabaseUrl>
- The romeDatabaseUser can be a value other than rome. The romeDatabasePassword should be the database user's password.

To prepare the SQL Server 2000:

1 Acquire and install SQL Server 2000.

2 Create the tablespace on the database server.

   a Right-click the database.

   b Select New Database.

      ▪ A window opens requesting the properties of the new database; for example, getanswers.

Important: Make sure that the database name is alphanumeric and does not contain any dashes.

Note: The tablespace requires 800 MB of free space. Defragment your hard drive if necessary to insure that your hard drive has as much contiguous free space as possible.
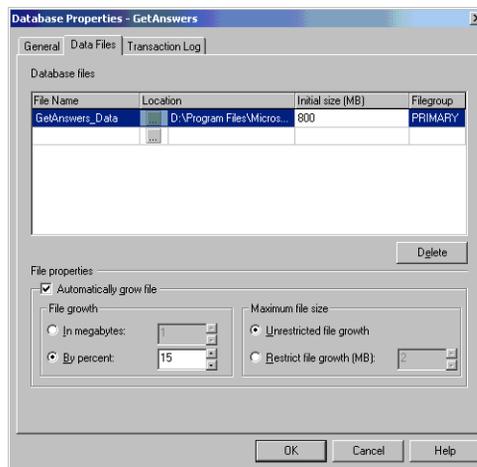
      ▪ In the **Initial size (MB)** field, set the database size to 800 (at a minimum) and set the **By percent** to 15.

         If the database is less than 800 MB at creation time, intermittent **Update failure** messages will occur, and the database will need to be backed up, dropped, a new database of size 800MB created, and the old data restored into the newer larger database.

      ▪ Always consult your SQLServer database administrator on how to best configure the database.

      ▪ Click **OK**.

3 Record this information about your SQL Server installation in the
   Get-Answers installation worksheet on page 22.

   ■ Database name

   ■ Service Name

   ■ Database Server Hostname (machine name)

   ■ Database Server port number

Creating a Security Login name

Use the SQL Server Enterprise Manager to create a login name, assign roles,
and grant permissions.

To create a Security Login name:

1 From the SQL Server Enterprise Manager, scroll to the Security folder and
   right-click **Logins** to open the SQL Server Login Properties - New Login
   dialog box.
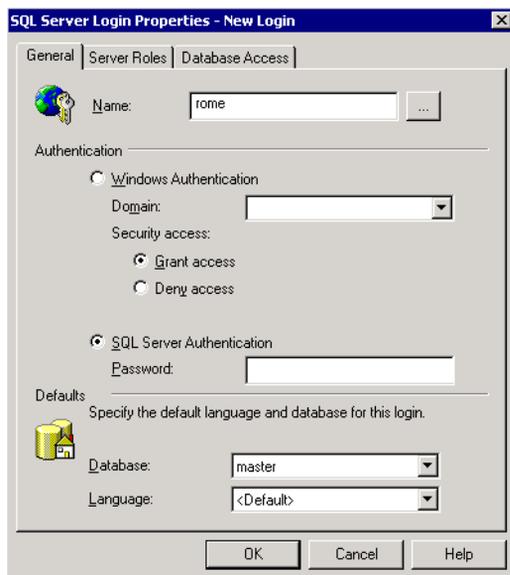
   a Type the login name, for example **rome**.

   b Select the **SQL Server Authentication** option and type a password.

   c Select a database from the drop-down list.

d Click the Server Roles tab to assign roles to this user.
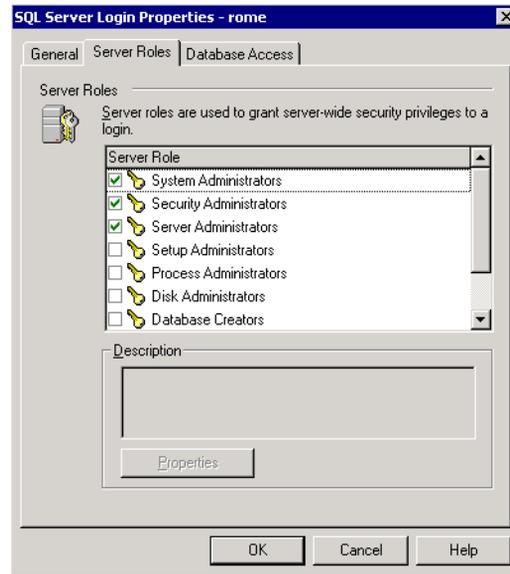
2 Click the Database Access tab to set permissions for the database roles.
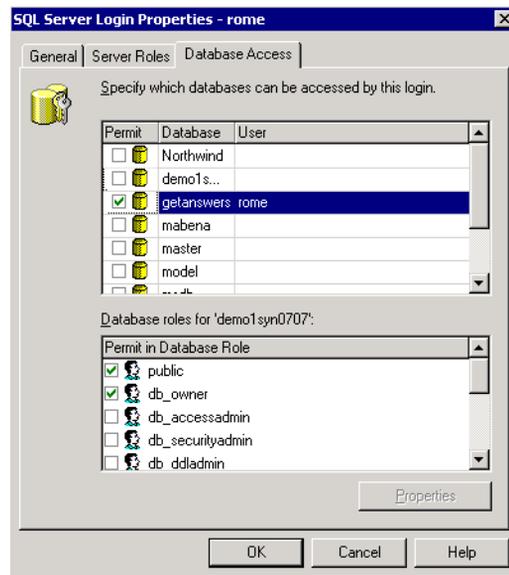
Setting security authentication

After you create the Security Login name, verify that your server has Security set to SQL Server and Windows authentication.

To set security authentication:

1 From the SLQ Server Enterprise Manager, scroll to your server and right-click.

2 Select **Properties** to open the SQL Server (Configure) dialog box.
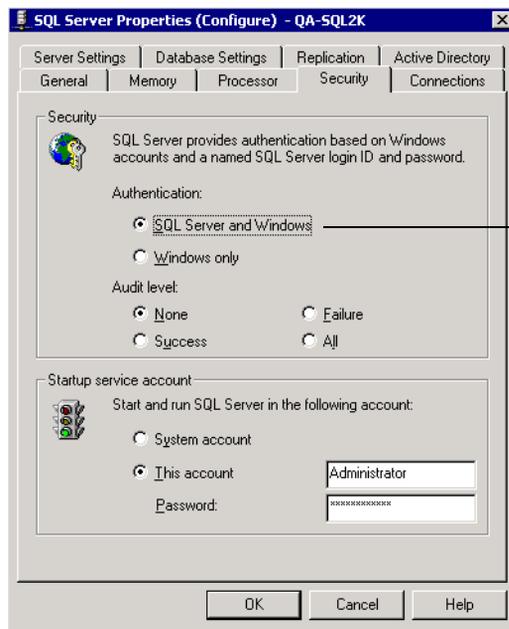
Verify that you select the SQL Server and Windows option.

3 In Security, select **SQL Server and Windows**.

4 Click **OK**.

Setting up and installing the Search Engine server

In this section you set up your Search Engine server so you can install the Get-Answers Search Engine in the next section. Follow the procedures within this section as they appear here.

In a Windows environment

Step 1 Do one of the following:

■ If Oracle is your database, use the procedures in the section, *Making the ODBC connection to the Oracle database* on page 37.

■ If DB2 is your database, use the procedures in the section, *Setting up DB2* on page 37.

■ If SQL Server 2000 is your database, use the procedures in the section, *Setting up SQL Server 2000* on page 39.

Step 2 Follow the procedure in the section, *Installing the Search Engine on the Search Engine server* on page 40 regardless of which database you use.

Step 3 Complete the process by following the steps in the section, *Checking the search engine installation*, regardless of which database you use.

Making the ODBC connection to the Oracle database

The Get-Answers Seach Engine server requires that the Oracle ODBC driver be installed. The Oracle client includes this driver. To install the Oracle client or the Oracle ODBC driver, refer to your Oracle product documentation. After you install the Oracle client or ODBC driver, you connect to the Oracle database in order to use the Get-Answers Seach Engine server.

Note: The Get-Answers Seach Engine server cannot use the Microsoft ODBC for Oracle driver.

To make the ODBC connection to the Oracle database:

1 Click **Start** > **Settings** > **Control Panel**.

2 From **Administrative Tools**, click **Data Sources** (**ODBC**).

3 Click the **System DSN** tab, then click **Add**.

4 Select **Oracle ODBC Driver**.

5 Enter a Data Source Name, a Service Name, and a UserID. Then click OK.

Setting up DB2

Your Get-Answers Search engine server needs a DB2 client to connect to the database. To install the DB2 client, see your IBM documentation.

If you are using DB2 as your database, use this section to set up the DB client on your Search Engine server.

Once you have installed the DB2 client, make sure that the fixpack level of the DB2 client and DB2 server match exactly.

This section includes the procedures for determining your fixpack level and for making the ODBC connection to the DB2 database.

Determining your Fixpack level

Important: Perform this procedure on both the DB2 server and the DB2 client.

To determine your fixpack level:

Note: The following instructions are for DB2 7.2.x.

1 From the command prompt at the server, navigate to the SQLLIB/bin directory.

2 Type **db2level**.

3 Write down the information you see.

4 Repeat this procedure on the client and write down the information you see when you type **db2level**.

5 Compare both the server and the client settings.

The fixpack is the same if the value of the right-most number of each matches in the informational tokens "DB2 v7.1.0.68".

This is a match: "DB2 v7.2.0.68" on the server and "DB2 v7.1.0.68" on the client because the right-most number 68 is the same.

This is not a match: "DB2 v7.1.0.68" on the server and "DB2 v7.1.0" on the client.

Making the ODBC connection to the DB2 database

To make the ODBC connection to the DB2 database:

1 Click **Start** -> **Settings** -> **Control Panel**.

2 From **Administrative Tools**, click **Data Sources** (**ODBC**).

3 Click the **System DSN** tab, then click **Add.**

4 Select **IBM DB2 ODBC Driver**.

5 Enter a data source name and click **Add**.

6 Select the **Search the network** option, and click **Next**.

7 Open the known systems, select your DB2 database from the list of local database or remote databases, and click **Next**.

8 Specify a local nickname and click **Next**.

9 Select any optimization option, and click **Finish**.

A confirmation dialog box opens.

10 Close the box and go to the next section.

Setting up SQL Server 2000

Your Get-Answers Search engine server needs a SQL Server client to connect to the database. To install the SQL Server client, see your SQL Server documentation. After you have installed the SQL Server client, you must make an ODBC connection to the SQL Server database.

To make the ODBC connection to the SQL Server database:

1 Click **Start** -> **Settings** -> **Control Panel**.

2 From **Administrative Tools**, click **Data Sources** (**ODBC**).

3 Click the **System DSN** tab, then click **Add.**

Click Add to add the SQL Server.
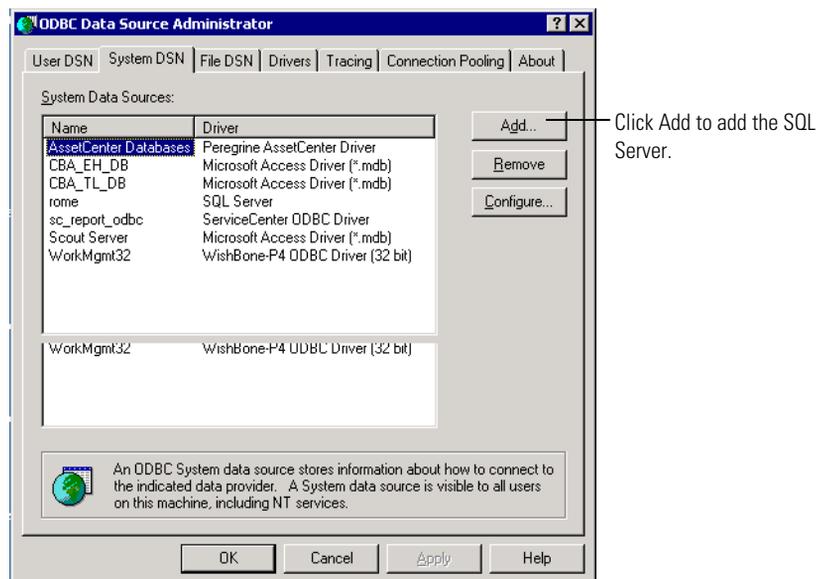
4 Select **SQL Server**, then click **Finish** to open the Create a New Data Source wizard.

   a Specify the Name, Description, and Server, then click **Next**.

   b Select the option **With SQL Server authentication using a login ID and password entered by the user**, then click **Next**.

    c Change the default database to **getanswers**, then click **Next**.

    d Click **Finish**, then click **Test Data Source** to verify the connection.

Your connection is complete.

Installing the Search Engine on the Search Engine server

Install the Get-Answers search engine on the search engine server.

Important: DB2 users: When you are prompted for your database connection parameters during this installation, use your current DB2 connection parameter values.

To install the Get-Answers search engine:

1 Insert the Get-Answers Search Engine Installation CD into the CD drive.

The installation process starts automatically.

This list shows you where you are in the installation process.
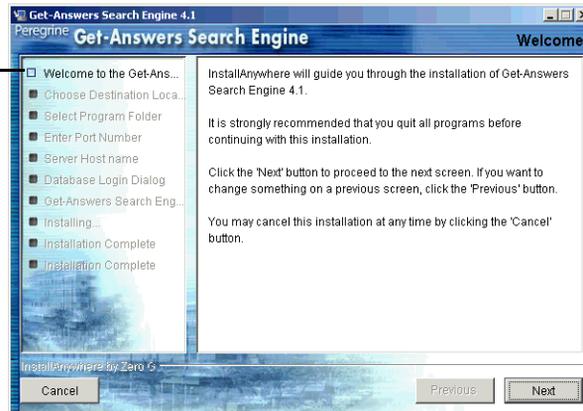
2 Click **Next**.

The Choose Destination Location dialog box that opens shows the default location for the files. Here you can accept the default location or choose another one, as the next steps describe.

The name of the default folder appears here.
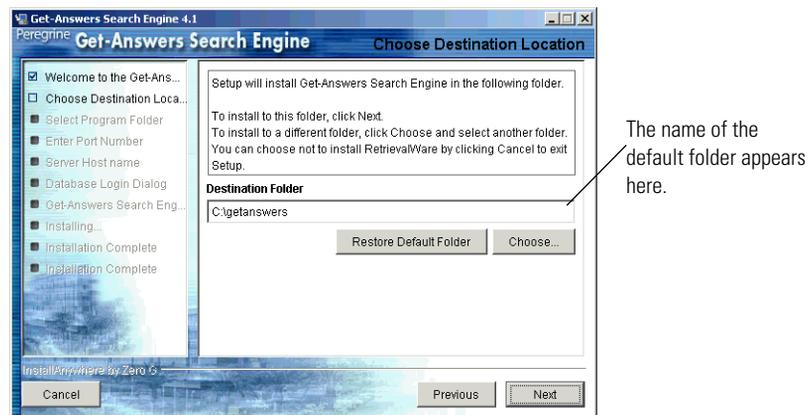
3 To select the destination folder, do one of the following:

■ To accept the default location, click **Next**.

■ To select a different location, click **Choose**, select the folder in the dialog box that opens, and then click **Next**.

Warning: Make sure there are no spaces in this path name.

Note: Record the Search Engine installation folder name in the *Get-Answers installation worksheet* on page 22.

4 In the Select Program Folder screen, select a folder or other location for program icons. Click **Next**.

Select a folder for the program icons, and click Next.
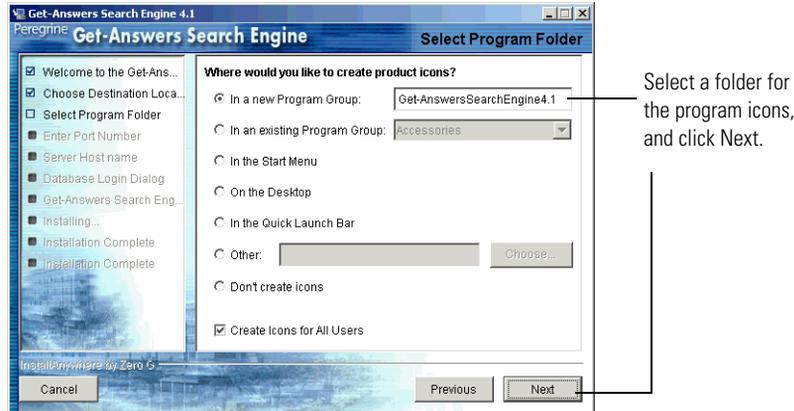
5 In Enter Port Numbers dialog box, type the port number for the search engine server. Click **Next**.

Important: The following rules are crucial for successful installation.

- Do not choose port numbers that are already in use on this server.
- Make sure the port numbers for your search engine server are unique for your site and different from the port numbers for any other search engine server.

Note: Record this port number selection in the *Get-Answers installation worksheet* on page 22.
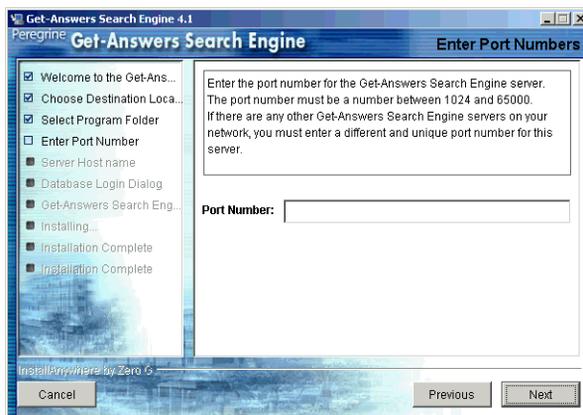
6 In the Server Host name dialog box, type the host name of the search engine server and click **Next**.

> **Note:** Record the search engine server host name in the *Get-Answers installation worksheet* on page 22.

> **Important:** Make sure that you type the host name and not the IP address.

7 If the Accessing User Path Variable message appears, click Yes.
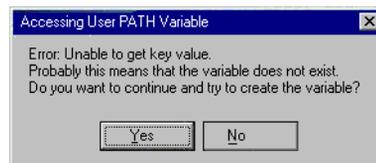
8 In the Select RDBMS Server Type dialog box that opens, choose your server type. Click **Next**.
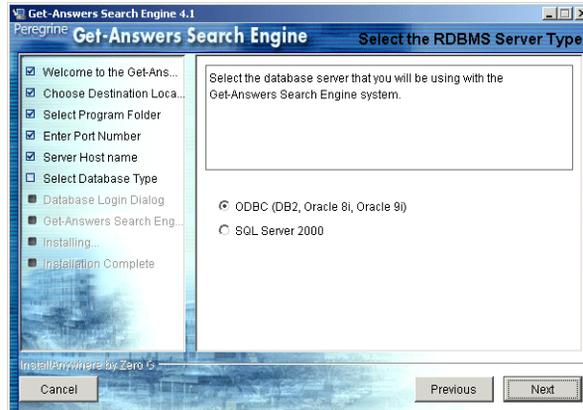
9 If you select SQL Server 2000, type the name of your SQL Server database in the Database Name field. Click **Next**.
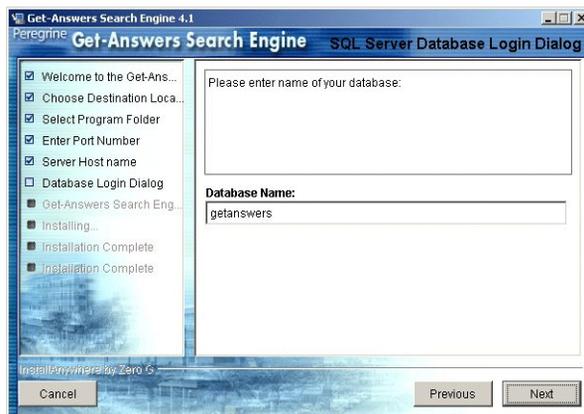
Warning: The field only accepts alphanumeric characters. Do not use dashes or spaces.

If you select another database, proceed to the next step.

10 In the Database Login dialog box, type the values the Search Engine Search Server should use to log on to the Get-Answers database and click **Next**.

a In Username, type the value found in *Database User ID* of the *Get-Answers installation worksheet* on page 22.

b In Password, type the value found in *Database User Password* of the *Get-Answers installation worksheet* on page 22.

c In ODBC Data Source Name (DSN), type the value found in *Database Server Net Service Name* of the *Get-Answers installation worksheet* on page 22.

Note: For SQL, type the HOSTNAME of the server hosting SQL Server 2000.
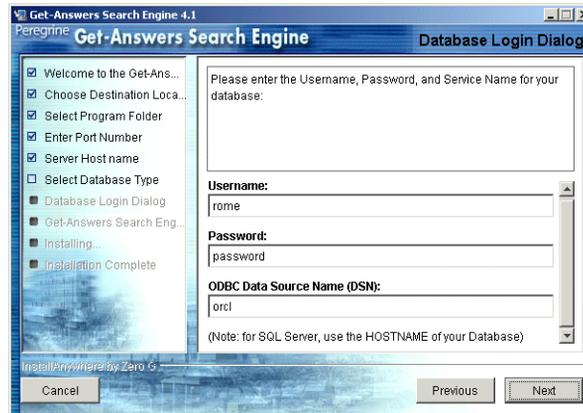
11 In the Configuration Information dialog box, confirm your search engine configuration settings and make sure you have adequate disk space, and click **Install**.
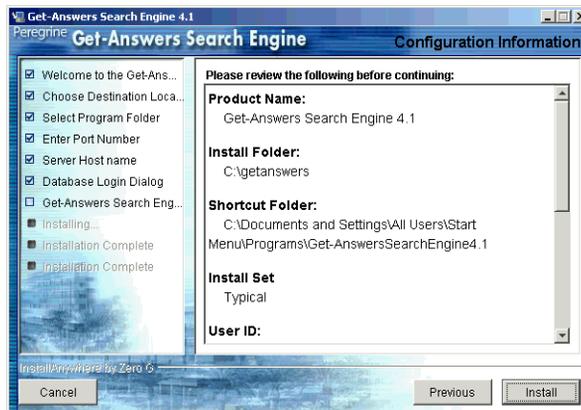
The installer copies the search engine files to your server. This may take several minutes.
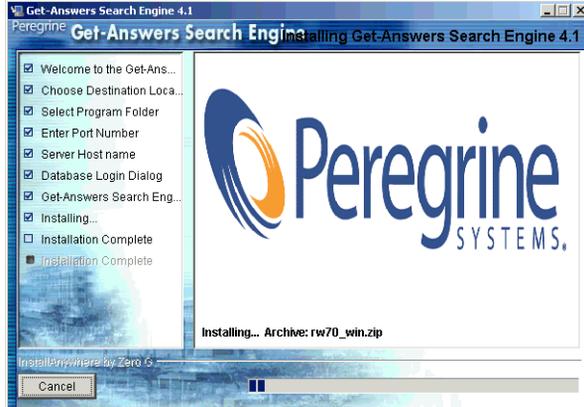
12 When the installation is complete, click Done to exit the installer.
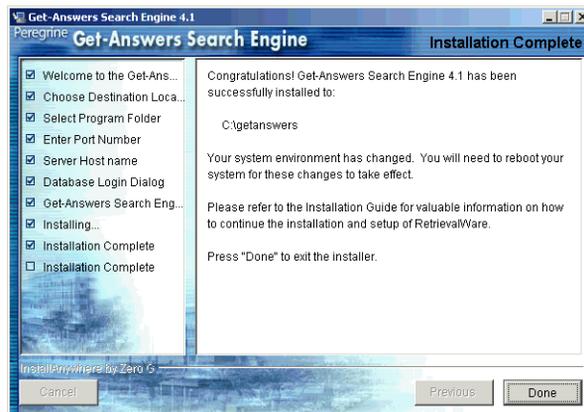
13 Restart your search engine server machine.

Unless the search engine server is already started as a service or running in a DOS window, start it by choosing **Start -> Programs -> Get-Answers Search Engine -> Start Search Engine Search Server**. Press **Enter** to exit the command prompt window.

Checking the search engine installation

Get-Answers provides a method of checking your search engine connection with the database. When the search engine installation completes successfully, this connection is established.

To check your search engine database connection:

1 Choose **Start** -> **Programs** -> **Get-AnswersSearchEngine** -> **Check Database Connection**.

2 After you see the "Successfully tested the connection to the Relational Database" message, press **Enter**.
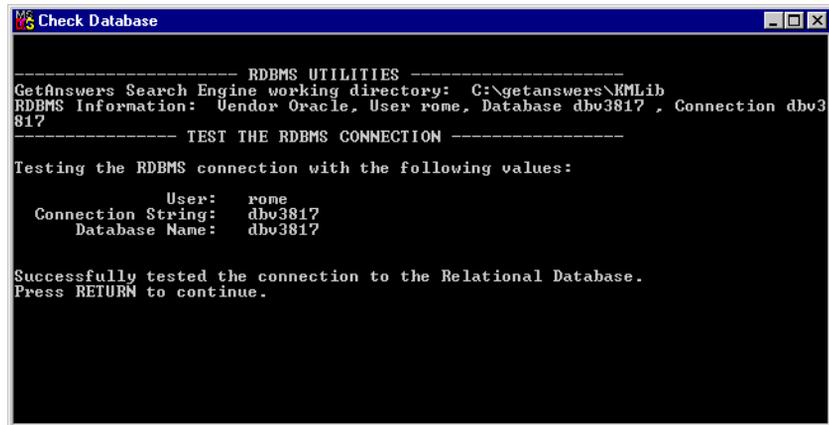
Note: If the test is not successful, check the name of the working directory displayed on the Get-Answers Search Engine working directory line. This should be the name of the directory where you installed the search engine followed by Peregrine\KMLib.

Example: c:\getanswers\Peregrine\KMLib

The name of the search engine installation directory should be recorded in *Search Engine Search Server Installation Directory* in the *Get-Answers installation worksheet* on page 22.

3 Press any key to exit.

3 Typical Windows Installation

CHAPTER

This chapter explains the installation and configuration of Get-Answers and the OAA platform on a Windows system using a Tomcat 4.1.29 application server.

Before you install the OAA platform on the web server, see the recommended configurations in the Get-Answers Compatibility Matrix, which is available at the Peregrine Systems Customer Support site. Go to http://support.peregrine.com; click **Documentation**; choose **Get-Answers**; and then choose **Compatibility Matrices**.

Warning: Before you begin the installation process, close all anti-virus software programs.

If you use one of the alternate application servers supported by the OAA platform (JRun, WebSphere, or WebLogic), see the chapter on custom installations in this book.

Deploying multiple Peregrine Portal applications

When multiple Peregrine Portal applications, including Get-Answers, are deployed, *all* must be applications that use the same version of OAA. Multiple Peregrine Portal applications that use different versions of OAA are not supported.

Further, when you upgrade from a version prior to 4.1, you first upgrade all Peregrine Portal applications to version 4.1. Then you upgrade all Peregrine Portal applications to version 4.1.2.

Previous version of Get-Answers

You use the Get-Answers installer to upgrade to Get-Answers version 4.1.2 *only* from one of the following previously installed versions of Get-Answers: 4.1, 4.1.0.1, or 4.1.0.2.

If you are upgrading to Get-Answers version 4.1.2 from Get-Answers version 4.0.1, see the *Get-Answers 4.1 Installation Guide*, Chapter 5, "Upgrading from Get-Answers version 4..0.1 to Get-Answers version 4.1." Then run the Get-Answers 4.1.2 installer.

Installation Overview

During the installation, Get-Answers will install the following:

- Java 2 SDK Standard Edition v1.3.1_05, a Java run-time environment.
- Tomcat 4.1.29, an application server.
- OAA platform and the Get-Answers web application.

Note: Instructions for adding and configuring multiple Java virtual machines (JVMs) on Tomcat are included in the "Load Balancing" section of the *Get-Answers 4.1.2 Administration Guide*.

Procedures for Typical installation

The following installation procedures are for systems using Tomcat as the application server on a Windows system.

Important: If you are using an application server other than Tomcat, see *Chapter 4, Custom Windows Installation*. Do not use this installation procedure.

Typical installation objectives

In a typical installation Get-Answers uses default locations and directories, and installs the most commonly used components of the product. Most users choose typical installation.

This section explains how to install the OAA platform and Get-Answers on a Tomcat application server on a Windows system. If you are using another supported application server, see the installation instructions in *Chapter 4, Custom Windows Installation*. Perform these steps on the Web server.

Installing Get-Answers using Typical installation

Use the following procedure to install Get-Answers with OAA.

To install OAA platform and Get-Answers in a Typical installation:

1 In the CD Browser, find and open the **Autorun.exe** file.

Click Autorun.exe
here.

Name △	Size	Type
documentation		File Folder
OracleFiles		File Folder
packages		File Folder
10550	15 KB	Bitmap Image
Autorun	396 KB	Application
AUTORUN	1 KB	Setup Information
data1	7,689 KB	Cabinet File
data1.hdr	517 KB	HDR File
data2	104,831 KB	Cabinet File
Demo.dbd	176 KB	DBD File
engine32	411 KB	Cabinet File
icon	3 KB	Bitmap Image
layout	1 KB	BIN File
pere	4 KB	Icon
setup	21 KB	Bitmap Image
setup.boot	335 KB	BOOT File
setup	105 KB	Application
setup	1 KB	Configuration Settings
setup	384 KB	INX File

2 In the Get-Answers page that opens, click **Install.**

Click Install.
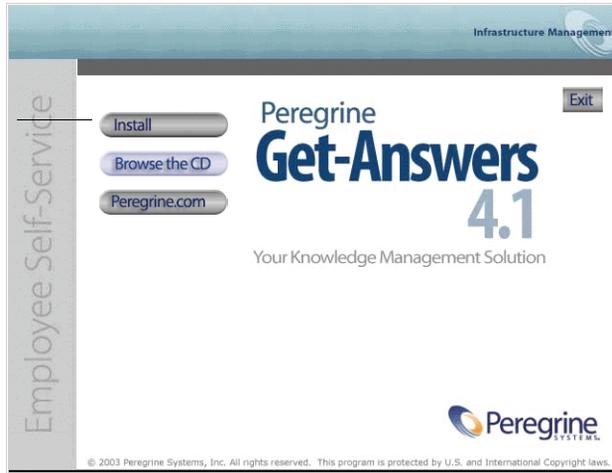
3 In the Setup Type dialog box that opens, select **Typical**, and then click **Next.**

Choose the
Typical option.
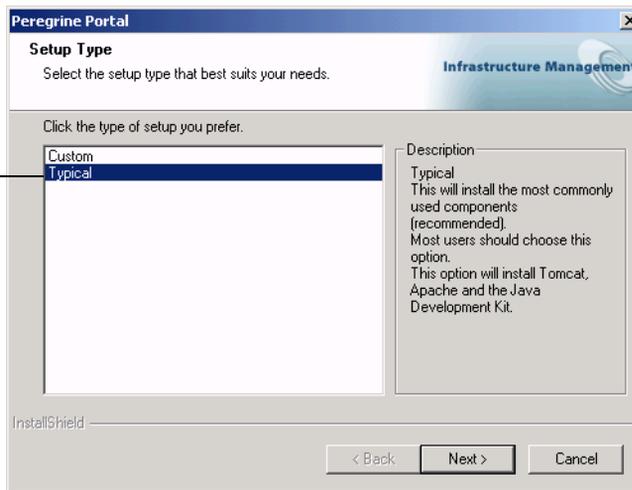
4 In the Start Copying Files dialog box that opens, click **Next.**
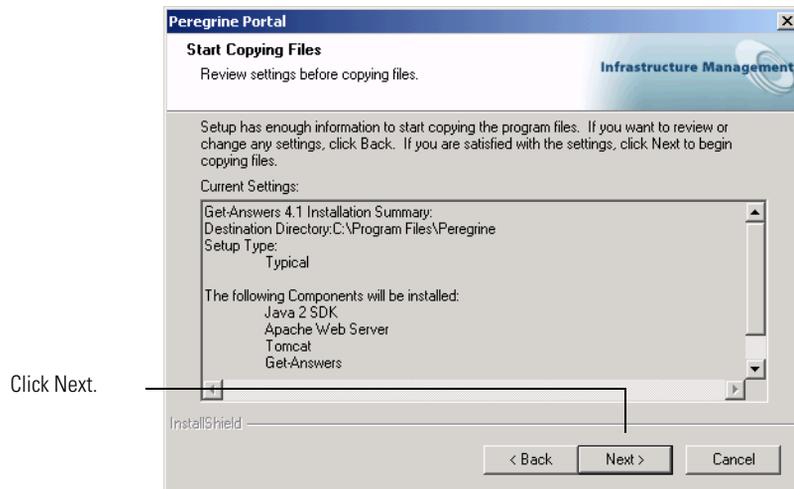
Click Next.

The window displays progress as Get-Answers copies files to your system. It takes several minutes to copy the files.

5 Verify the information in the OAAdeploy section. Click **Next.**
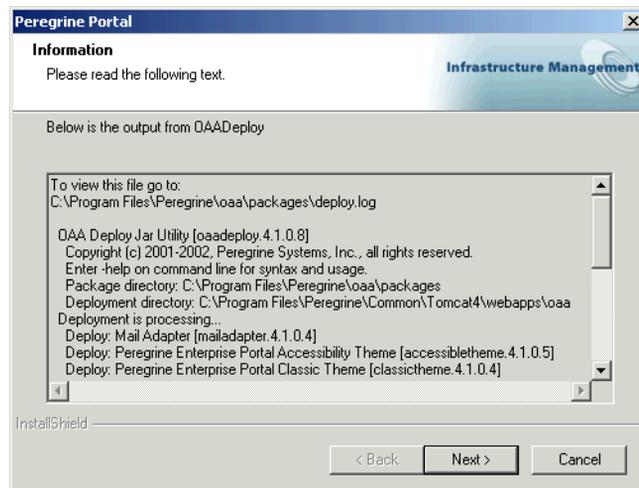
6 In the Select RDBMS Server Type dialog box choose the database. Click **Next**.
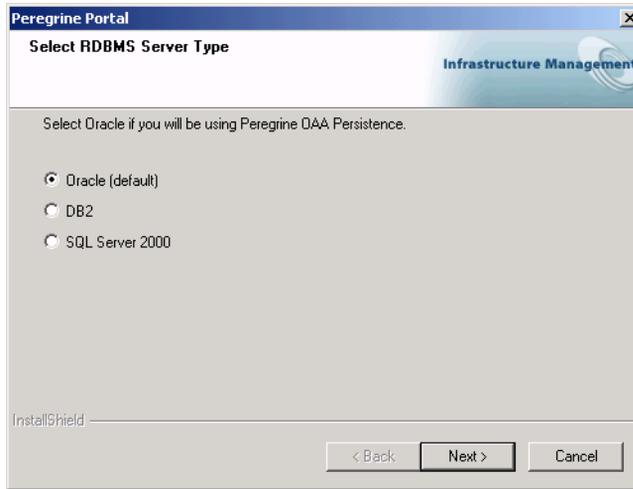
7 If you select SQL Server 2000 as the database, browse to the directory containing the Sprinta.jar driver and click **Next**.
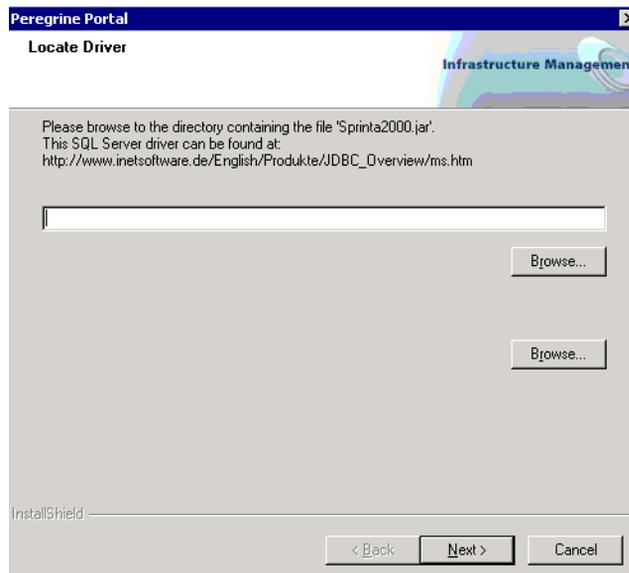
8 In the next dialog box that opens, enter your database name, password, and SID. Then click **Next**.

Note: You can find this information where you recorded it in the *Get-Answers installation worksheet* on page 22.

Enter your database name, password, and SID in these fields.
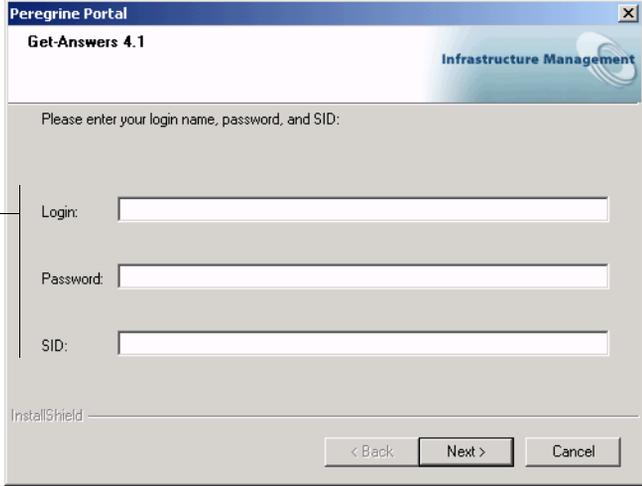
9 In the confirmation dialog box verify the information and click **Next**.
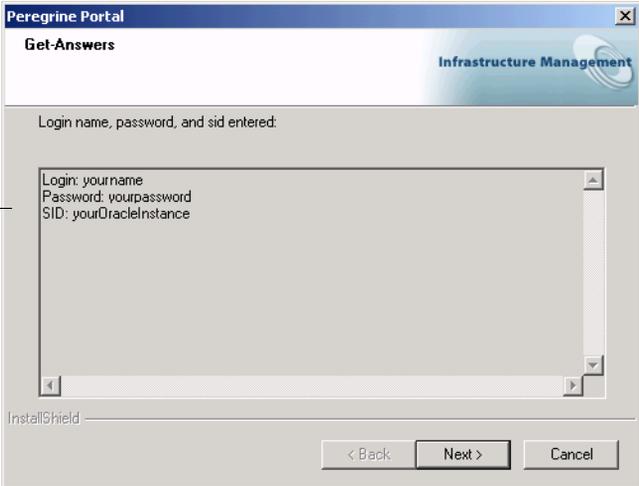
Make sure this information matches your database name, password, and SID.

10 In the next dialog box enter the host name and port number for your Oracle Thin client.
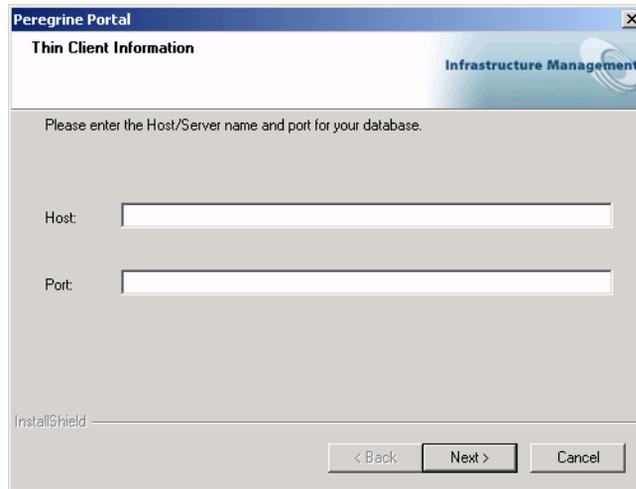
If you enter an invalid name or port number, the following warning message is displayed.
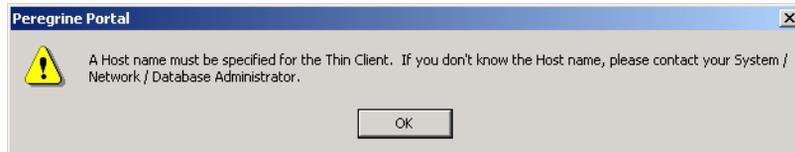
11 In the next dialog box that opens, enter the IP address and port number of the Search Engine server, and then click **Next**.

Note: You can find this information on the *Get-Answers installation worksheet* on page 22.

> **Important:** Make sure that you do *not* accept the default port number. Enter the port number that is mapped to your Search Engine server.

Enter the IP address and port number here.
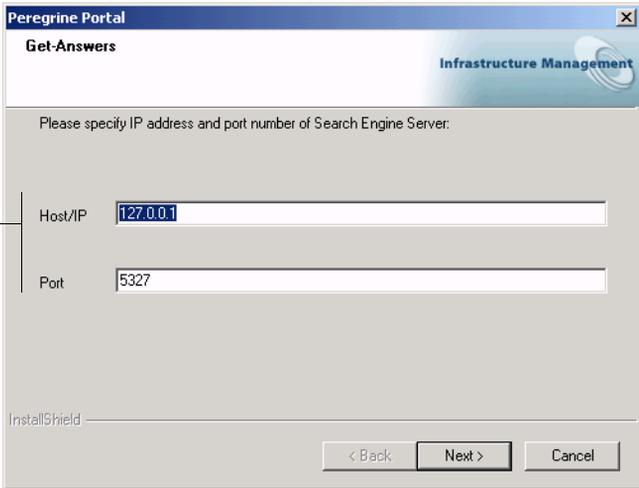
A Setup Status dialog box opens as the installation is completed. At this point the installation is doing the following:

- Copying the documents
- Creating a Tomcat service called **PeregrineTomcat**
- Starting the Apache server.

12 Click **Finish**.
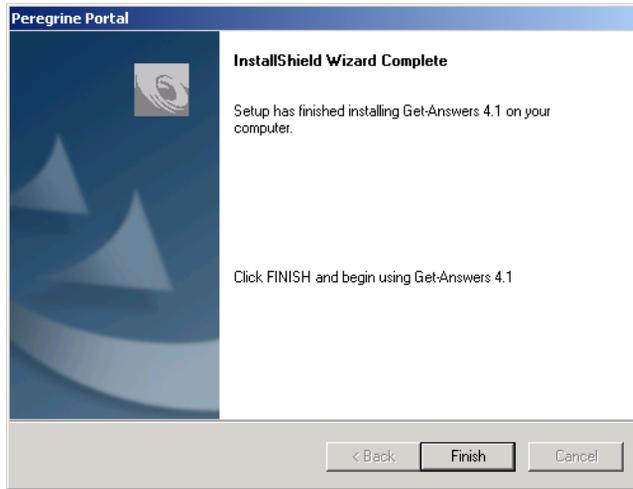
Completing the installation

Go to *Chapter 6, Completing All Installations* to continue with the installation process.

4 Custom Windows Installation

CHAPTER

This chapter explains the installation and configuration of Get-Answers and the OAA platform on a Windows system on application servers other than Tomcat. (Refer to your specific application server documentation for instructions on installing the application server.)

For complete information about specific software components that can be installed and configured with Get-Answers, see the Get-Answers Compatibility Matrix. Go to **support.peregrine.com and** click **Documentation** -> **Get-Answers** -> **Compatibility Matrices** -> **Get-Answers 4.1.2.**

Important: Make sure to check the entire Get-Answers compatibility matrix *before* starting the installation process.

Installation Overview

During the installation, you install the OAA platform and the Get-Answers Web application with an application server. The typical installation option installs Tomcat 4.1.29 and connects to an Apache 2.0 Web server. You can also install Tomcat 4.1.29 using the custom installation option.

Here is an overview of what you must do to install Get-Answers with an alternate application server.

Step 1 Perform the procedures described in the section, *Pre-installation considerations* on page 61.

Step 2 Configure the application server according to the instructions provided in the section, *Configuring alternate application servers* on page 63.

Step 3 Install Get-Answers and OAA as described in the section, *Installing Get-Answers using Custom installation* on page 102.

Step 4 Update the Scriptpollers.ini file as described in the section, *Updating the scriptpollers.ini Files* on page 116.

Step 5 Perform the final steps necessary for your particular application server as described in the section, *Completing the application server installation* on page 114.

Deploying multiple Peregrine Portal applications

When multiple Peregrine Portal applications, including Get-Answers, are deployed, *all* must be applications that use the same version of OAA. Multiple Peregrine Portal applications that use different versions of OAA are not supported.

Further, when you upgrade from a version prior to 4.1, you first upgrade all Peregrine Portal applications to version 4.1. Then you upgrade all Peregrine Portal applications to version 4.1.2.

Previous version of Get-Answers

You can upgrade to Get-Answers version *only* from one of the following previously installed versions of Get-Answers: 4.1, 4.1.0.1, or 4.1.0.2.

If you are upgrading to Get-Answers version 4.1.2 from Get-Answers version 4.0.1, see the *Get-Answers 4.1 Installation Guide*, Chapter 5, "Upgrading from Get-Answers version 4.0.1 to Get-Answers version 4.1;"then run the version 4.1.2 installer.

Pre-installation considerations

Before beginning your Get-Answers and OAA platform installation, you must have the following installed:

- A Java run-time environment. Java 2 SDK Standard Edition v1.3.1_05 is included on the Get-Answers installation CD; however it is for Tomcat servers only. WebLog4.1.10+ic and WebSphere Advanced install their own JDK versions.

Important: Verify that you have a JAVA_HOME environment variable set up in your system environment before proceeding.

- A supported Java application server.
- A supported Web server.

This information is available at the Peregrine Systems Customer Support site. Go to http://support.peregrine.com; click **Documentation**; choose **Get-Answers**; and then choose **Compatibility Matrices**.

> **Important:** If you are using Tomcat as your WebSphere see the installation instructions in *Chapter 3, Get-Answers Typical Installation*.

If you do not want to install OAA platform into the default folders, decide where you want the files to be installed.

> **Important:** Before you begin the installation process, make sure to close all anti-virus software programs.

> **Note:** Note that the *<appsrv>*\WEB-INF\web.xml file has been renamed to <appsrv>\WEB-INF\web.xml.*xxx*.bak, where <*appsrv*> is the path to your application server, and *xxx* represents a unique sequence of characters generated by File.createTempFile(). This preserves any customizations that you might have (see *Preserving customized web.xml file settings*, next).

After upgrading Get-Answers from 4.0.1 to 4.1, a new file called web.xml.xxx.bak is created in the <*appsrv*>/WEB-INF directory. You must reconcile the contents of this file with the contents of the new web.xml file. Any portion of web.xml.*xxx*.bak file that does not exist in the new web.xml file needs to be added to the web.xml file.

Preserving customized web.xml file settings

You can open the web.xml.*xxx*.bak file, copy its customized configuration settings into the new web.xml file, and save the new file to preserve your customizations.

Using Oracle thin client when upgrading to 4.1

When upgrading Get-Answers 4.0.1 to 4.1, the install wizard does not ask for database information since the database already exists from the previous version. Get-Answers 4.0.1 only supported the Oracle thick client. Get-Answers 4.1 also supports using the Oracle thin client. If you want to start using Oracle thin client instead of Oracle thick client, you can do so by changing the database configuration settings in the Administration module.

To configure settings to use Oracle thin client:

1 Go to the **Admin** > **Settings** > **rome** tab.

```
Database URL:                                    URL connection to the database
jdbc:oracle:thin@db_host:port:service_name       Click for default: []
```

2 Set the **Database URL** field to jdbc:oracle:thin:**@***db_host***:***port***:***service_name*** where *db_host* is the name of your database server, *port* is the database listener port, and *service_name* is the network service name that uniquely identifies the database when connecting to the machine.

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 4.1.29 connecting to IIS 5.0*

■ *WebSphere Application Server 4.0.2*

■ *WebSphere Application Server 5.0.2*

■ *WebLogic 6.1 SP4*

The Get-Answers typical installation option installs Tomcat 4.1.29 and connects it to an Apache 2.0 web server. You can also install Tomcat 4.1.29 using the custom installation option.

Important: If you want to use an application server other than Tomcat 4.1.29, then you must configure your application and Web servers *prior* to running the Get-Answers installer.

Existing Tomcat and Apache servers

If you use the typical installation option, the Get-Answers installer configures Tomcat to connect to a new instance of the Apache Web server. If you have existing instances of Tomcat or Apache Web Server installed, you can configure Get-Answers to use these existing instances by copying the necessary files from a typical installation.

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

1 Stop existing instances of both Tomcat and Apache.

2 Copy the following files from the installation CD **\SupportFiles…** directory to the directories indicated below.

Copy this file	To the following location
■ mod_jk.conf	The **\conf** directory of your existing Tomcat installation. The default source file path is: **C:\Program Files\Apache Group\Tomcat 4.1\conf**
■ workers.properties	The **\conf** directory of your existing Tomcat installation. The default source file path is: **C:\Program Files\Apache Group\Tomcat 4.1\conf**
■ mod_jk.dll	The **\modules** directory of your existing Apache installation. The default source file path is: **C:\Program Files\Apache Group\Apache2\modules**

Note: The mod_jk.dll included with this release is compatible with Apache 2.0.43 and Tomcat 4.1.29. If you are using other versions, refer to the jakarta.apache.org/builds/jakarta-tomcat-connectors/jk/doc site to download the compatible version.

3 Using a text editor, open the files **mod_jk.conf** and **workers.properties**. These files are located in the **\conf** directory of your Tomcat installation.

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.

4 Using a text editor, open the **httpd.conf** file. This file is located in the **\conf** directory of your Apache installation.

a Add the path to your existing Tomcat installation to the include statement in the Global Environment section:

```
### Section 1: Global Environment
...
include "<Tomcat_path>/conf/mod_jk.conf"
```

For *<Tomcat_path>*, enter the absolute path to your Tomcat installation.

b Add login.jsp to the list of files in the DirectoryIndex section:

```
# DirectoryIndex: Name of the file or files to use as a pre-written
# HTML directory index.  Separate multiple entries with spaces.
#
```

```
<IfModule mod_dir.c>
 DirectoryIndex index.html login.jsp
</IfModule>
```

c Add the following line to the end of the file:

Alias <*Tomcat*>\webapps\oaa

where <*Tomcat*> is the path to your Tomcat installation.

5 Install Get-Answers using the **Custom** option.See *Installing Get-Answers using Custom installation.*

6 If your application uses Oracle, copy the **classes12.jar** file from: ***<your_Tomcat_installation>*\webapps\oaa\Web-Inf\lib** to the **\ext** folder under your JDK installation.

The default path is: **C:\jdk1.3.1_06\jre\lib\ext**.

7 Restart Tomcat and Apache.

8 Browse to the Get-Answers login URL and verify that you can successfully connect.

> **Note:** Depending on your Web server configuration, if you browse to **http://servername/oaa**, the Web server may display a list of all the OAA files instead of the login page.
>
> If your server displays this behavior, follow these steps to configure your Web server to display the OAA login page instead of a directory listing.

To configure Apache to display login.jsp by default:

1 Open Apache's **conf/httpd.conf** file in a text editor.

2 Find the existing line that reads **DirectoryIndex index.html**.

3 Add **login.jsp** to the end:

DirectoryIndex index.html login.jsp

4 Save **httpd.conf**.

5 Restart the Apache Web server.

Tomcat 4.1.29 connecting to IIS 5.0

You can use the Get-Answers installer to install the Tomcat application server. If you use the typical installation option, the Get-Answers 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 chapter *Load-Balancing Application Servers* on page 201 for information about installing multiple JVMs.

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

Step 1 Run the Get-Answers installer. See *Running the installer* on page 66.

Step 2 Configure the ISAPI Plug-in for IIS. See *Configuring the ISAPI Plugin for IIS* on page 67.

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 67.

Step 4 Create and configure a jakarta virtual directory in IIS. See *Configuring a jakarta virtual directory in IIS* on page 68.

Step 5 Create and configure an oaa virtual directory in IIS. See *Configuring an oaa virtual directory in IIS* on page 69.

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 70.

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 72.

Running the installer

Run the Get-Answers installer and select the Custom installation option. See *Installing Get-Answers using Custom installation* on page 102..

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-Answers installer automatically places a copy of the ISAPI plug-in 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" entries 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 stop and re-start the IIS service for changes to take effect. You 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-Answers 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:

▶ Use the following guidelines to create the virtual directory.

Requirements for an oaa virtual directory

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

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

C:\Program Files\Peregrine\Common\Tomcat4

For *<oaa>*, enter the name of the virtual directory you want to use for Get-Answers. 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 becomes part of the URL that users enter to connect to Get-Answers. For example: http://*server_name*/*<new_name>*/login.jsp

---

Note: Depending on your Web server configuration, if you browse to http://servername/oaa, the Web server may display a list of all the OAA files instead of the login page.

If your server displays this behavior, follow these steps to configure your Web server to display the OAA login page instead of a directory listing.

To configure IIS:

1 Open the Internet Services Manager.

2 Expand the Default Web Site.

3 Right-click on the **OAA** virtual directory and click **Properties**.

4 Click the **Documents** tab.

5 Verify that Enable Default Document is checked.

6 Click the **Add** button.

   a Type login.htm.

   b Click **OK**.

7 Highlight login.htm and using the up and down arrows, move login.htm to the top of the file list.

8 Click **OK** to accept the changes to the OAA directory properties.

Editing the server.xml file for IIS

A default Tomcat installation is sufficient for most Get-Answers 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-Answers files. If you are experiencing performance problems, you can change the <Context> setting for Get-Answers 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-Answers 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-Answers 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"
useURIValidationHack="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 the installservice.bat file.

Note: The installer does not reset the JAVA_HOME environment variable when installing on systems where a previous instance of Tomcat is installed. Manually redefine the JAVA_HOME environment variable to point to the new Java Development Kit. The default path is: C:\Program Files\Peregrine\Common\jdk1.3.1_05

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 and step 2 for each Tomcat service you wish to create.

WebSphere Application Server 4.0.2

Use the following procedures to configure WebSphere 4.0.2 to run Get-Answers on Windows.

Note: The Get-Answers installer creates duplicate alias entries in the IBM HTTP Server when you install more than one Peregrine OAA Platform application on WebSphere.

Duplicate entries can also occur if you reinstall Get-Answers or install another Peregrine OAA Platform application on a system that formerly had Get-Answers installed on it.

Remove any duplicate alias entries from the IBM HTTP Server httpd.conf file.

To configure WebSphere 4.02:

Step 1 Install WebSphere 4.02. Your version of WebSphere 4.0.2 includes the IBM HTTP Server. See *Installing WebSphere 4.0.2* on page 73.

Step 2 Deploy the Portal WAR file to WebSphere to create the necessary folder structure for Get-Answers. See *Deploying the Portal WAR file to WebSphere* on page 74.

Step 3 Set the JVM classpaths to your database classes. See *Setting the JVM classpaths* on page 76.

Step 4 Set the JVM Java heap size for each WebSphere instance running Get-Answers. See *Setting the Java heap size* on page 77.

Step 5 Run the Get-Answers installer. See *Running the installer* on page 79.

Step 6 Regenerate and configure. See *Regenerating the plug-in configuration* on page 79.

If you plan on setting up a WebSphere Portal Server or a WebSphere Translation Server, see *Installing WebSphere Portal Server* on page 83 or *Configuring WebSphere Translation Server for Get-Answers* on page 93.

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.

Verify that you install fix pack 2. To check this, go to the default_server_Stdout.log file under \Websphere\AppServer\logs.

Deploying the Portal WAR file to WebSphere

The Portal WAR file creates the folder structure necessary to deploy Get-Answers in your application server. After you have deployed this file to WebSphere you will be ready to run the Get-Answers 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, perform the following steps:

   a Select **Install stand-alone module**.

   b In the **Path** field, browse to the path to the portal.*<version_number>*.war file. The default file path is: *<CDROM_Drive>*:\portal.*<version_number>*.war.

   For *<version_number>*, 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-Answers 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.
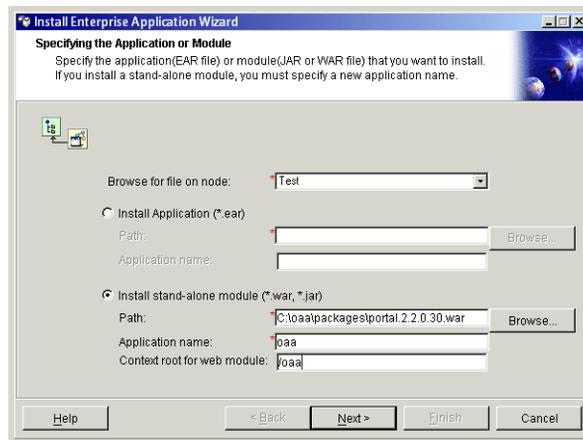
5 Click **Next**.

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. Click **Next**.
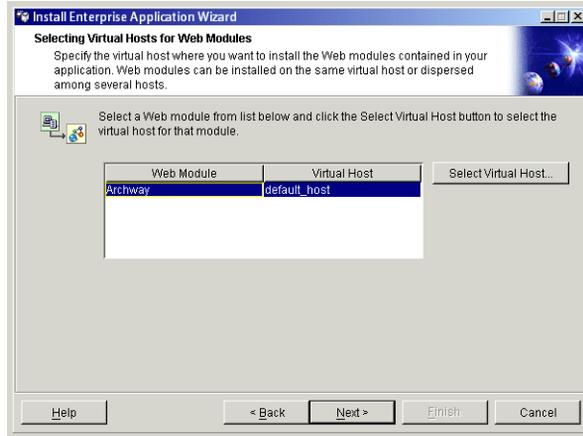
8 In the Selecting Application Servers dialog box, select the WebSphere server instance you want to use, and then click **Next**.
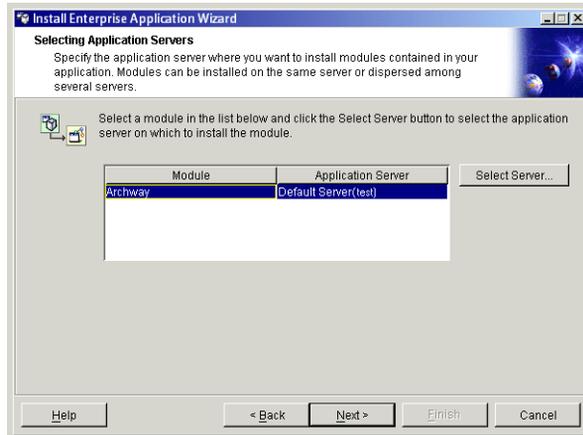
9 On the dialog box displayed, click **Finish**.

Setting the JVM classpaths

Get-Answers requires that you set the JVM classpaths to your database classes.

To set the JVM classpaths:

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 Under Classpaths, click **Add**.

6 Add the path to your database classes.

If you are using Oracle, provide the path to the classes12.jar file:

C:\oracle\ora81\jdbc\lib\classes12.jar

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 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.

Running the installer

Run the Get-Answers installer and select the Custom installation option. See *Installing Get-Answers using Custom installation* on page 102.

Important: After you complete all the steps in the section "Installing Get-Answers using Custom installation" on page 102, make sure to return to this section and complete all the remaining steps.

Regenerating the plug-in configuration

You must regenerate the plug-in configuration using the WebSphere Admin console after running the Get-Answers installer.

To regenerate the plug-in configuration:

1 Open the WebSphere Advanced Administrator's Console (**Start -> Programs -> IBM WebSphere -> Application Server -> Administrator's Console**).

2 Click **Nodes** -> *<System_name>* -> **Application Servers** -> *<Application_server_name>*.

The server settings page opens.

Right-click on your system name and select Regen Webserver Plugin.
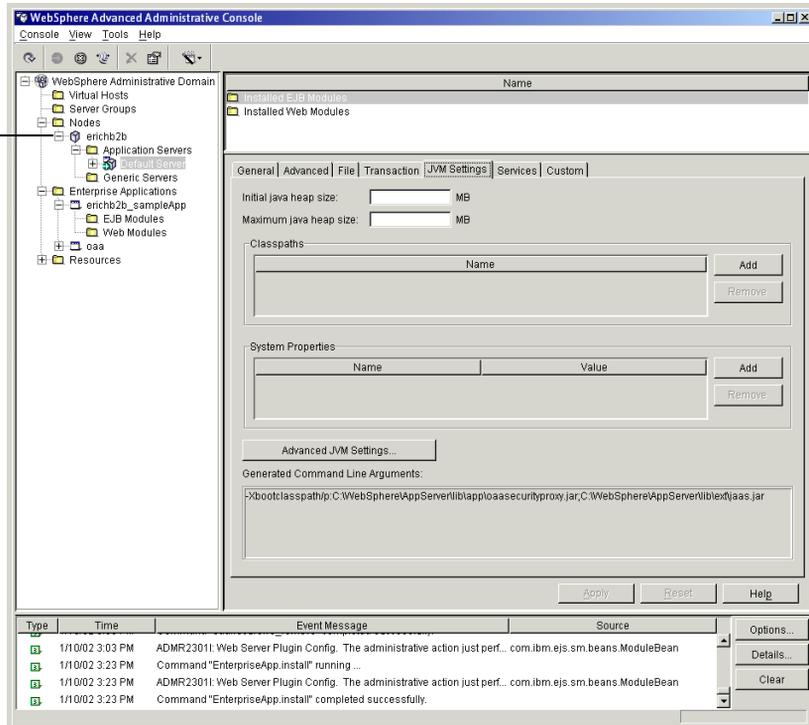
3 Right-click on the <*System_name*>, then click **Regen Webserver Plugin**.

4 Restart your application server.

WebSphere Application Server 5.0.2

Use the following procedures to configure WebSphere 5.0.2 to run Get-Answers on Windows.

Note: The Get-Answers installer creates duplicate alias entries in the IBM HTTP Server when you install more than one Peregrine OAA Platform application on WebSphere.

Duplicate entries can also occur if you reinstall Get-Answers or install another Peregrine OAA Platform application on a system that formerly had Get-Answers installed on it.

Remove any duplicate alias entries from the IBM HTTP Server httpd.conf file.

To configure Get-Answers 4.1.2 to use the WebSphere Application Server 5.0.2:

1 Log on to the Administrative Console, using any login name.

2 Click **Applications** on the Administrative Console menu.

3 Click **Install New Application**.

4 Enter portal.*<version_number>*.war in the Local path field if the installation package resides on the local server machine; or in the Server path field if the installation package resides on a server machine. (The portal.*<version_number>*.war file is located on the installation CD.)

5 Specify the Context Root, a value such as /oaa.

6 Click **Next** twice.

7 Click **Use Binary Configuration**.

8 Specify a name, such as **oaa**, in the Application Name field. Keep all the other settings at their defaults.

9 Click **Next** three times.

10 Click **Finish**.

11 Click **Save to Master Configuration** to save the server configuration.

12 For Get-Answers, you must configure the Oracle classes12.jar file or the DB2 db2java.zip file as a Shared Library.

   a Still in the WebSphere Admin console, click **Environment** in the left column.

   b Under Environment, click **Shared Libraries**.

   c In the main frame, click **New**.

   d Type a name for the library in the Name field, and the full path to classes12.jar or db2java.zip in the Classpath field.

    e Click **Apply**.

    f Under Applications, go back to the definition for the OAA Enterprise Application.

    g Click **Libraries** under Additional Properties.

    h Click **Add**.

    i Select the library you defined and click **Apply**.

    j Save the server configuration.

13 Click **Save**.

14 Log out of the Administrative Console.

15 Stop the WebSphere Administration server.

16 Perform the steps described in the section "Installing Get-Answers using Custom installation" on page 102.

> **Important:** After you complete all the steps in the section"Installing Get-Answers using Custom installation" on page 102, make sure to return to this section and complete all the remaining steps.

17 Copy the files js.jar and **oaasecurityproxy.jar** from …portal.*<version_number>*.war\WEB-INF\lib to **C:\Program Files\WebSphere\AppServer\java\jre\lib\ext**.

18 From the **IBMHttpServer\conf\httpd.conf** file:

    a Verify that the following lines exist in the file; if not, add them.

```
LoadModule ibm_app_server_http_module
<AppServerPath>\bin\mod_ibm_app_server_http.so
WebSpherePluginConfig
<AppServerPath>\config\cells\plugin-cfg.xml
```

    b Verify that the following lines exist in the file; if not, add them. The aliases should not contain any trailing slash marks (\); remove any trailing slash marks if any appear:

```
Alias /oaa opt\WebSphere\AppServer\installedApps\<hostname>
\oaa.ear\portal.<version_number>.war
```

Note: The preceding alias needs to match the context root specified in step 5.

```
Alias /eopro \opt\WebSphere\AppServer\installedApps\
<hostname>\oaa.ear\portal.4.1.2.33.war\eopro
```

    19 Start WebSphere.

    20 Log in to the Admin console again.

        a From Environment on the left side, click **Update Web Server Plugin**.

        b Click **OK** to update the Web server plugin.

        c Wait for confirmation that the plugin is updated. Log out of the WebSphere Admin console.

    21 Stop and restart the WebSphere application server.

    22 Restart the IBM HTTP Server.

    23 Log in to the Peregrine Portal using `admin.jsp` and continue configuring your system.

Installing WebSphere Portal Server

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

- All Get-Answers and WebSphere components running on a single system. See *Recommended WebSphere Portal Server configuration* on page 83.

- Get-Answers components running on one system and WebSphere components running on another. See *Alternate WebSphere Portal Server configuration* on page 85.

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-Answers for the recommended WebSphere Portal Server configuration:

Step 1 Review the WebSphere Portal Server installation requirements. See *WebSphere Portal Server installation requirements* on page 87.

Step 2 Generate a Get-Answers WAR file containing the portal components WebSphere Portal Server can display. See *Generating a Get-Answers WAR file* on page 88.

Step 3 Login to the Get-Answers server and stop the WebSphere application server.

Step 4 Modify the local.xml to change the HTTP authentication method used from Basic to Alternate. See *Modifying the local.xml file* on page 89.

Step 5 Modify the web.xml to enable the AuthController servlet. See *Modifying the web.xml file* on page 89.

Step 6 Modify the ibm-web-ext.xmi file to set the fileServingEnabled parameter. See *Modifying the ibm-web-ext.xmi file* on page 90.

Step 7 Start the WebSphere application server. See *Starting the WebSphere application server* on page 90.

Step 8 Deploy the Get-Answers WAR file to WebSphere Portal Server. See *Deploying the Get-Answers WAR file to WebSphere Portal Server* on page 91.

Step 9 Create places and pages in WebSphere Portal Server to display Get-Answers portlets. See *Configuring WebSphere Portal Server places and pages* on page 91.

Step 10 Enable edit rights for Get-Answers portlets. See *Enabling edit rights for Get-Answers portlets* on page 92.

When complete, your installation will have the following configuration:
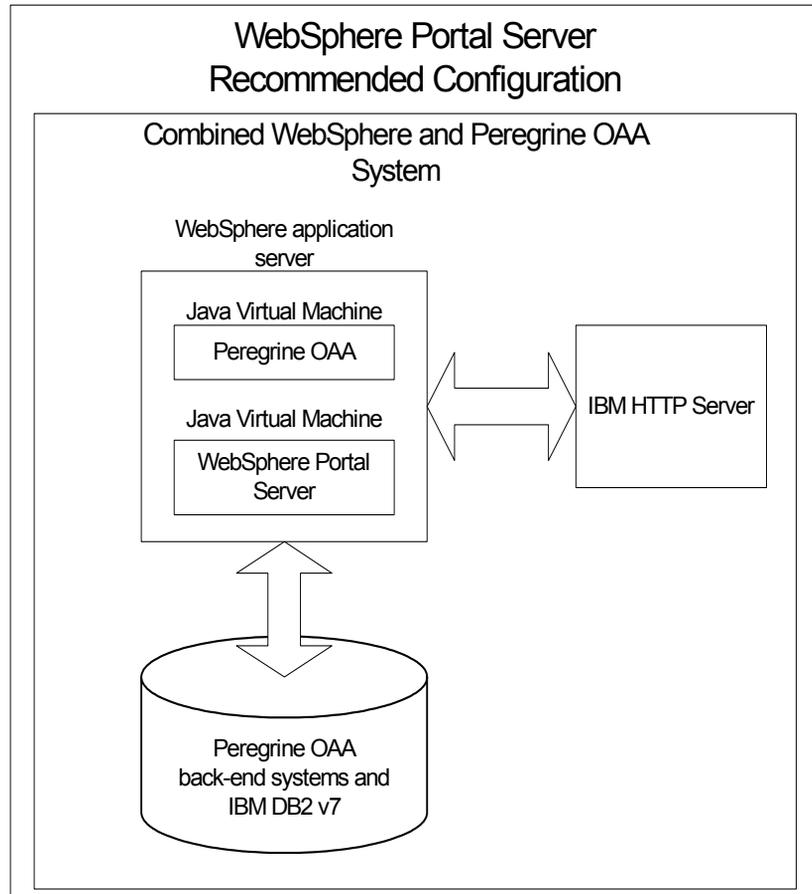
Alternate WebSphere Portal Server configuration

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

Step 1 Review the WebSphere Portal Server installation requirements. See *WebSphere Portal Server installation requirements* on page 87.

Step 2 Generate a Get-Answers WAR file containing the portal components WebSphere Portal Server can display. See *Generating a Get-Answers WAR file* on page 88.

Step 3 Login to the Get-Answers server and stop the WebSphere application server. See *Stopping the WebSphere application server* on page 89.

Step 4 Modify local.xml to change the HTTP authentication method used from Basic to Alternate. See *Modifying the local.xml file* on page 89.

Step 5 Modify web.xml to enable the AuthController servlet. See *Modifying the web.xml file* on page 89.

Step 6 Modify the ibm-web-ext.xmi file to set the fileServingEnabled parameter. See *Modifying the ibm-web-ext.xmi file* on page 90.

Step 7 Modify setDomain.js to call the SetDomain function. See *Modifying the setDomain.js file* on page 90.

Step 8 Start the WebSphere application server. See *Starting the WebSphere application server* on page 90.

Step 9 Deploy the Get-Answers WAR file to WebSphere Portal Server. See *Deploying the Get-Answers WAR file to WebSphere Portal Server* on page 91.

Step 10 Create places and pages in WebSphere Portal Server to display Get-Answers portlets. See *Configuring WebSphere Portal Server places and pages* on page 91.

Step 11 Enable edit rights for Get-Answers portlets. See *Enabling edit rights for Get-Answers portlets* on page 92.

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 92.

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-Answers 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-Answers compatible application server
  - Web server
  - Back-end database for Get-Answers
  - An installation of Get-Answers

Generating a Get-Answers WAR file

In order to display Get-Answers in WebSphere Portal Server, you must first export the Get-Answers 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-Answers WAR file:

1 Login to the Get-Answers 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-Answers 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-Answers WAR file.

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

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

4 Click **Generate WAR file.**

Get-Answers 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-Answers server and stop the WebSphere application server before modifying the configuration.

Modifying the local.xml file
In order to login via WebSphere Portal Server, you configure Get-Answers to use an alternate HTTP authentication method.

To modify the local.xml file:

1 Using a text editor, open the local.xml file located at:

<application_server>\oaa\WEB-INF\.

2 Add the following entry on a separate line anywhere between the <settings> and <\settings> tags:

```
<httpauthclass>HttpAlternateAuthenticationManager</httpauthclass>
```

3 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>\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-Answers server.

2 Stop your application server.

3 Using a text editor, open the setDomain.js file located at:

<application_server>\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-Answers WAR file to WebSphere Portal Server

After you deploy the Get-Answers 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-Answers 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-Answers WAR file.

5 Click **Next** to load the Get-Answers WAR file.

WebSphere Postal 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-Answers 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-Answers portlets that you display in a page must grant "all authenticated users" the minimum edit permission.

Enabling edit rights for Get-Answers portlets

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

To enable edit rights for Get-Answers 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-Answers 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-Answers.

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-Answers 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-Answers is installed.

5 Save the file.

Configuring WebSphere Translation Server for Get-Answers

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

Note: The OAA interface to the WebSphere Translation Server requires a mouse to use. The translation interface will be made 508 accessible in a future release.

To configure WebSphere Translation Server for Get-Answers:

Step 1 Copy the file **wts.jar** to the Get-Answers deployment folder. See *Copying wts.jar to the Get-Answers deployment folder* on page 93.

Step 2 Configure Get-Answers to use the WebSphere Translation Server. See *Configuring Get-Answers to use the WebSphere Translation Server* on page 93.

Copying wts.jar to the Get-Answers deployment folder

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

To copy wts.jar to the Get-Answers 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-Answers deployment folder located at:

<Application_server>\WEB-INF\lib

5 Restart your application server.

Configuring Get-Answers to use the WebSphere Translation Server

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

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

1 Login to the Get-Answers admin page (admin.jsp).

2 Click **Settings** -> **Common** tab.

The Admin Settings page opens.

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.

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-Answers data in a mixture of languages, you can configure Get-Answers 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-Answers 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-Answers to use the WebSphere Translation Server* on page 93.

The translate button appears in the upper right tool bar.
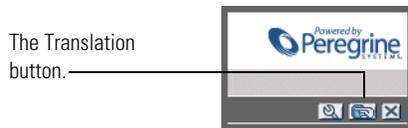
The Translation button.

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.
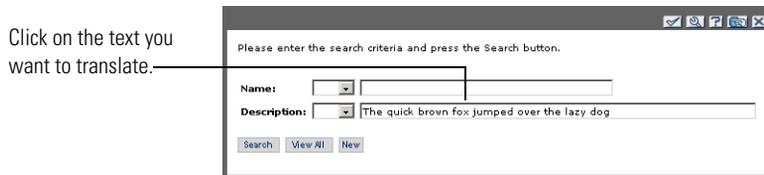
The Translation window opens.

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 SP4

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

To configure WebLogic 6.3 SP4 with IIS:

Step 1 Stop both WebLogic and your Web server. *Stopping the servers* on page 96.

Step 2 Edit the startWebLogic.cmd file to set the system password, memory settings, and start mode. See *Editing startWebLogic.cmd* on page 97.

Step 3 Edit the Server.Policy file to set the debug to true. See *Editing the Server.Policy file* on page 98.

Step 4 Run the Get-Answers installer. See *Running the installer* on page 98.

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 98.

Step 6 Configure IIS to use iisforward.dll as an ISAPI filter and create an extension. See *Configuring the issforward.dll as an ISAPI filter and an extension* on page 99.

Step 7 Configure IIS to use iisproxy.dll as an extension. See *Configuring the iisproxy.dll as an extension* on page 100.

Step 8 Create a virtual directory for Get-Answers in your Web server. See *Creating a virtual directory for Get-Answers* on page 101.

Step 9 Restart WebLogic and your Web server. See *Restarting the Servers* on page 101.

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.
set WLS_PW=password
```

3 In the last line, change the word "password" to your WebLogic system password.

4 Search for the -ms parameter and make sure it is set to "256m" or greater.

5 Search for the -mx parameter setting in the file. This setting should be at least "512m".

> **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.

6 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.

7 Add the following phrase to the entry that precedes the weblogic.Server entry. (Make sure to retain the quotation marks.)

"-Djava.security.auth.login.config==<*Weblogic*>\lib\server.policy"

Where <*Weblogic*> is the installation path for Weblogic. By default this is:

c:\bea\wlserver6.1

8 Save the file.

Editing the Server.Policy file

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 Get-Answers installer using the Custom install option. See *Installing Get-Answers using Custom installation* on page 102.

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 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
jcert.jar
jnet.jar
jsse.jar
local_policy.jar
mlibwrapper_jai.jar
oaasecurityproxy.jar
sunjce_provider.jar
US_export_policy.jar
xalan.jar
xercesImpl.jar
xml-apis.jar

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

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

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

1 Open the Internet Services management console.

2 Right-click the <*Machine_name*> and then click **Properties**.

Note: This is not a Web site; 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 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-Answers

To run Get-Answers, you 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-Answers. You use this name 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*<my_domain>*\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

To activate the new WebLogic configurations, restart the servers.

To activate the WebLogic configurations:

1 Restart your Web server.

2 Restart the WebLogic server.

3 Start Get-Answers.

Installing Get-Answers using Custom installation

This section explains how to install the OAA platform and Get-Answers if you are using a WebSphere or WebLogic application server. If you are using Tomcat, which is packaged with Get-Answers, see the installation instructions in *Chapter 3, Get-Answers Typical Installation*.

Note: The OAA platform installation creates a folder called `oaa` at the root level of the directory you designate to hold the core `zip` files. The installation then deploys the `zip` files in an `oaa` folder in the directory of your application server.

Use the Custom installation options under one of the following conditions:

■ You are using an application server other than Tomcat.

■ You are using Tomcat as your application server but do not want to use the Get-Answers default options.

■ You are using Tomcat and Apache for other applications and do not need for Get-Answers to configure them for you.

Warning: Custom installation is designed for advanced Get-Answers users only.

To install OAA Platform and Get-Answers in a Custom installation:

1 In the CD Browser, find and open the **Autorun.exe** file.

Click Autorun.exe
here.

documentation		File Folder
OracleFiles		File Folder
Autorun.exe	396 KB	Application
AUTORUN.INF	1 KB	Setup Information
data1.cab	7,965 KB	WinZip File
data1.hdr	334 KB	HDR File
data2.cab	137,153 KB	WinZip File
Demo.dbd	93 KB	DBD File
ikernel.ex_	337 KB	EX_ File
layout.bin	1 KB	BIN File
pere.ico	4 KB	Icon
sc.ini	2 KB	Configuration Settings
serial.txt	1 KB	Text Document
Setup.exe	55 KB	Application
Setup.ini	1 KB	Configuration Settings
setup.inx	308 KB	INX File
setup.iss	1 KB	ISS File

2 In the Get-Answers page that opens, click **Install.**

Click Install.

Infrastructure Management

Employee Self-Service

Exit

Install

Browse the CD

Peregrine.com

Peregrine
Get-Answers
4.1
Your Knowledge Management Solution

Peregrine
SYSTEMS

© 2003 Peregrine Systems, Inc. All rights reserved. This program is protected by U.S. and International Copyright laws.

3 In the Setup Type dialog box that opens, click **Custom**. Then click **Next**.
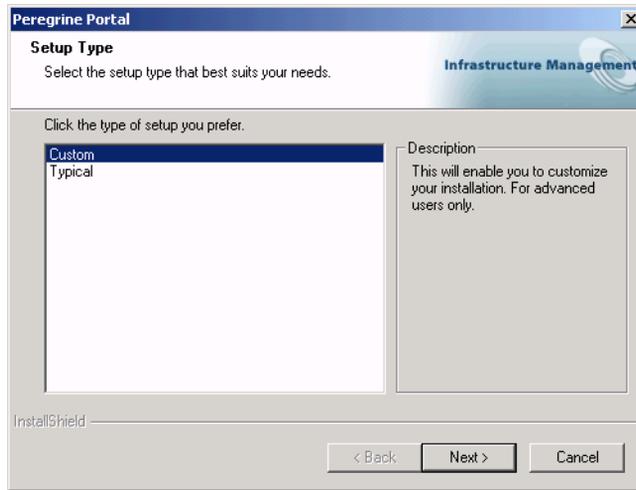
4 In the Choose Destination Location dialog box, choose a location for your files. The default location is C:\Program Files\Peregrine. Click **Next**.
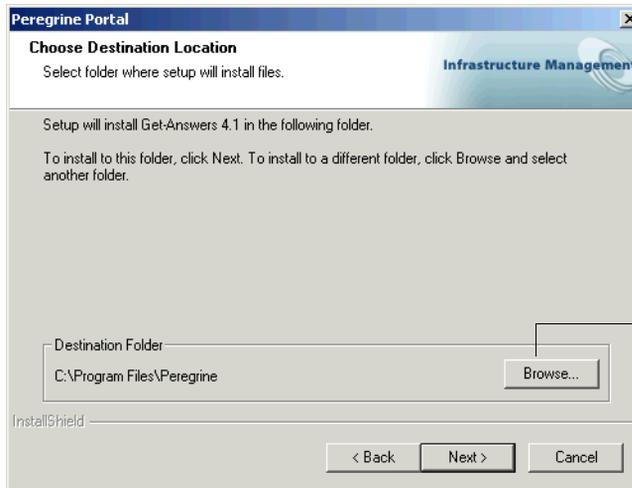
Click **Browse** to specify a different location

5 In the Select Components dialog box, choose the components you want to install. Click **Next**.

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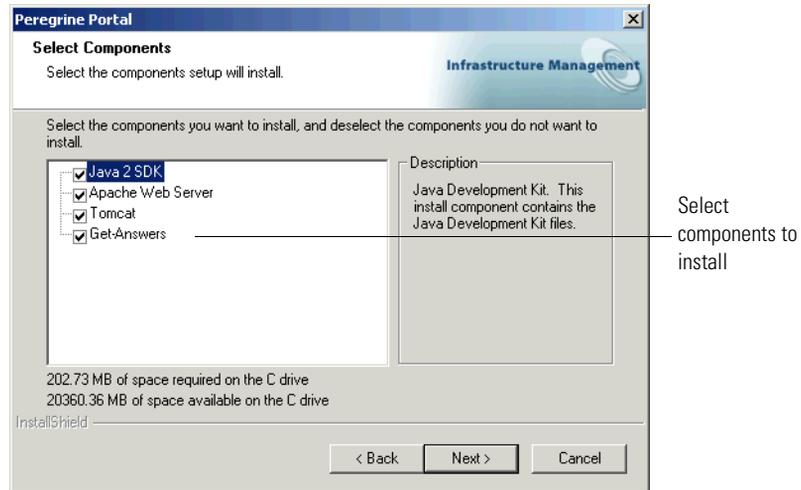
Important: Clear the check box next to components that you do *not* want to install.

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-Answers. Installs the program files necessary for Get-Answers. You install the Get-Answers files on the same machine as the primary application server.

- Apache Web Server. Get-Answers requires a Web server to handle Web 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 install this component on every machine running an application server.

■ Tomcat. Installs the Tomcat application server. Get-Answers 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-Answers files.

6 If you do not choose to install Tomcat as the application server, select the application server you want Get-Answers to configure, in the Select Application Servers Type dialog box. Click **Next**.

Note: If you are using Tomcat, this window is not displayed. Proceed to the next step.

7 Perform *one* of the following tasks:

■ If you clear the Apache Web Server component, the Select Web Server screen opens. Choose a Web server and click **Next**.
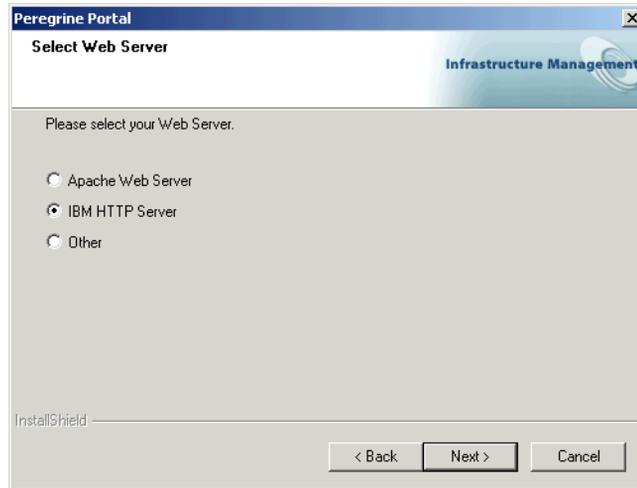
■ If you use the Apache Web server, you enter a port number in the Web Server Port screen; the default is 80. Click **Next**.
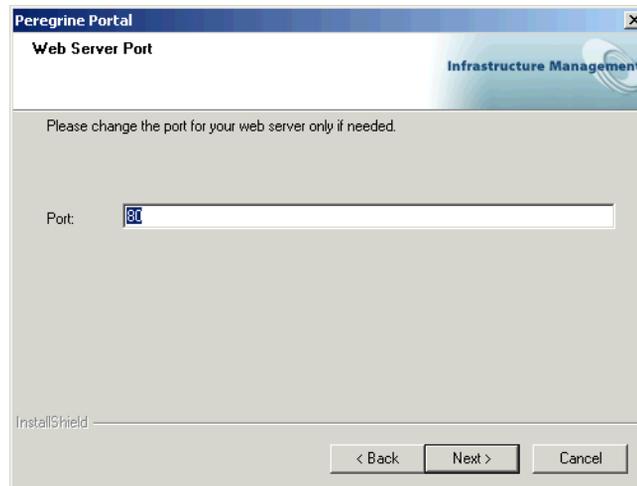
8 In the Start Copying Files screen, verify the Custom installation components. To review or change settings, click **Back**. To continue with the installation, click **Next**.

The information that appears here varies depending on what you are installing.
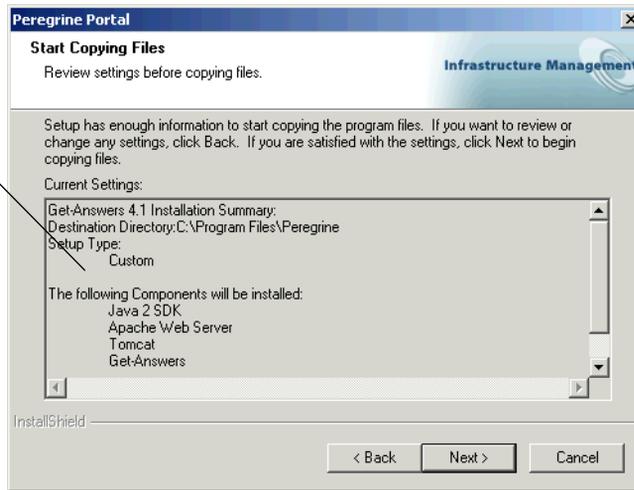
The Setup Status screen is displayed while the Get-Answers installer runs.
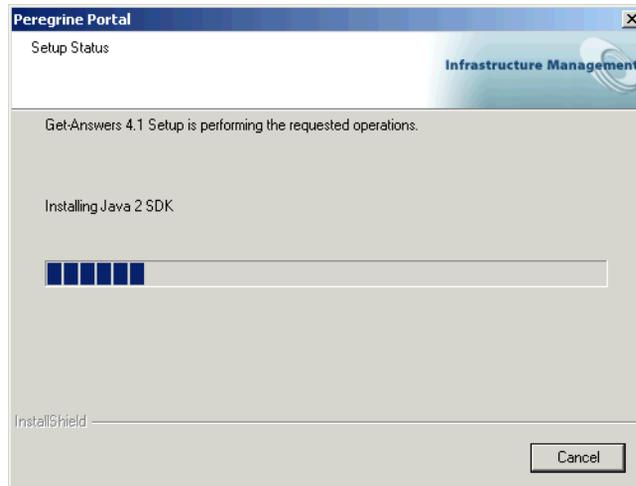
If you are using Tomcat, the Tomcat Installation Directory dialog box is displayed.
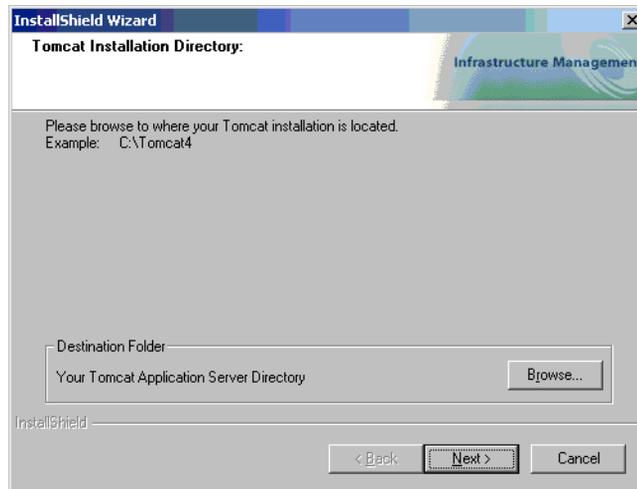
9 Choose your installation directory, and click **Next**.

   Note: If you are not using Tomcat, this dialog box is not displayed. Proceed to the next step.

10 In the Presentation Location dialog box, choose a location and click **Next**.
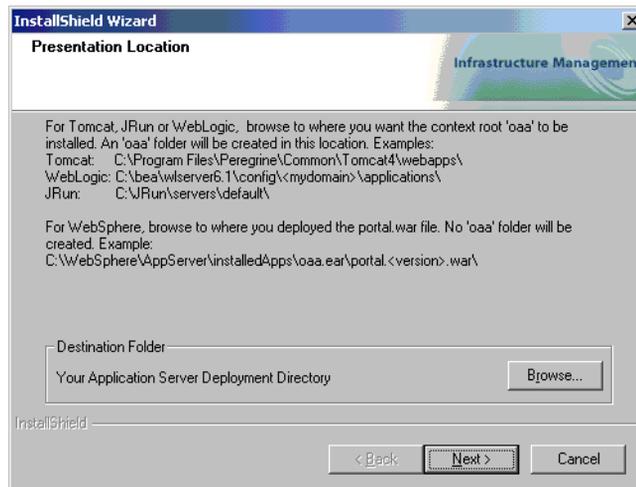
A message indicates that the Get-Answers packages are being deployed to your server. This phase can take several minutes.
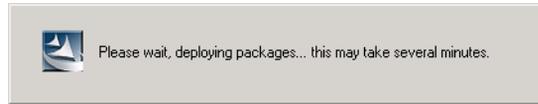
11 Verify the output from the OAAdeploy process. Click **Next**.
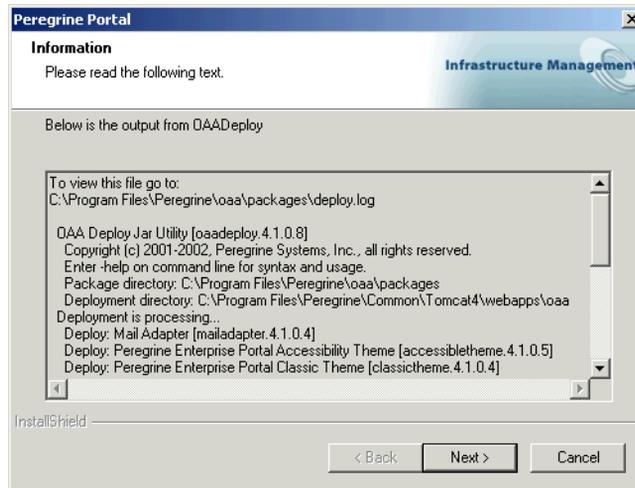
12 In the Select RDBMS Server Type dialog box choose a database server and click **Next**.
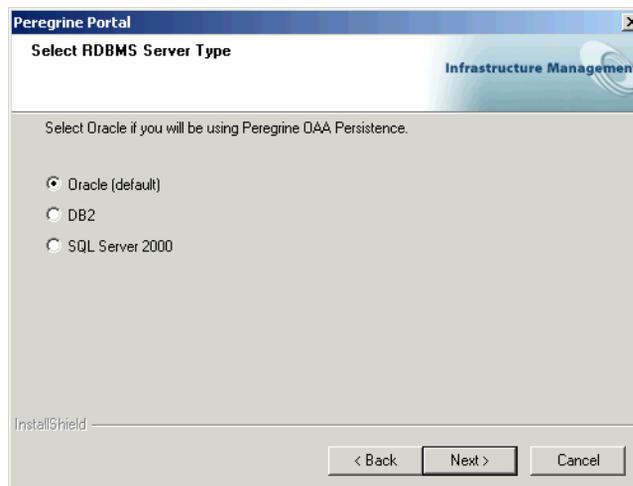
13 In the next dialog box that opens, enter your user name, password and database identification. Click **Next**.
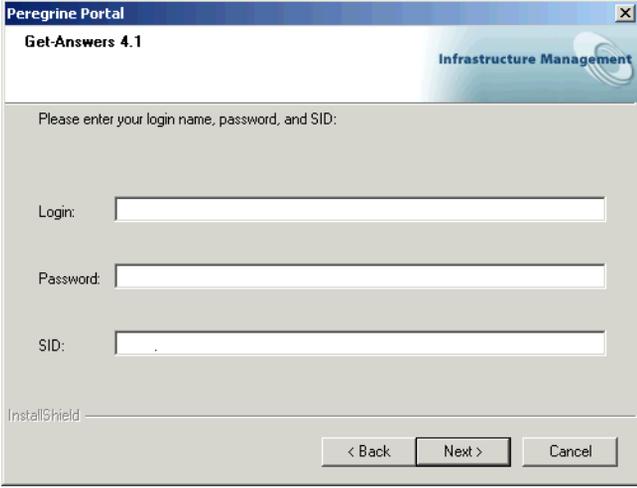
14 In the next dialog box that opens, verify the information you just entered. Click **Next**.
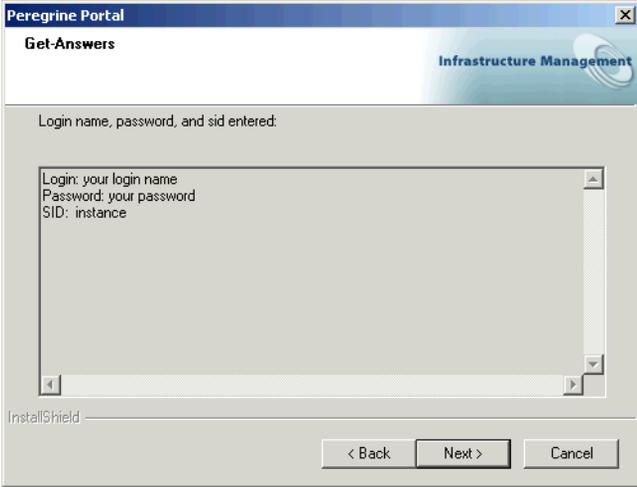
Status messages indicate the validation and location of the Host system name.

15 If you are using Oracle thin client, enter the Host and Port information in the following dialog box.
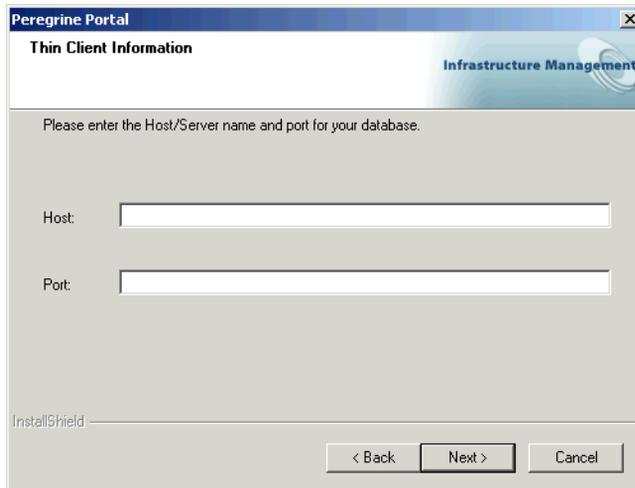
16 In the next dialog box, enter the IP address and port number of the Search Engine server. Click **Next**.

Note: You can find this information on the *Get-Answers installation worksheet* on page 22.

Important: Make sure that you do *not* accept the default port number. Enter the port number that is mapped to your Search Engine server.

Enter the IP address and port number here.
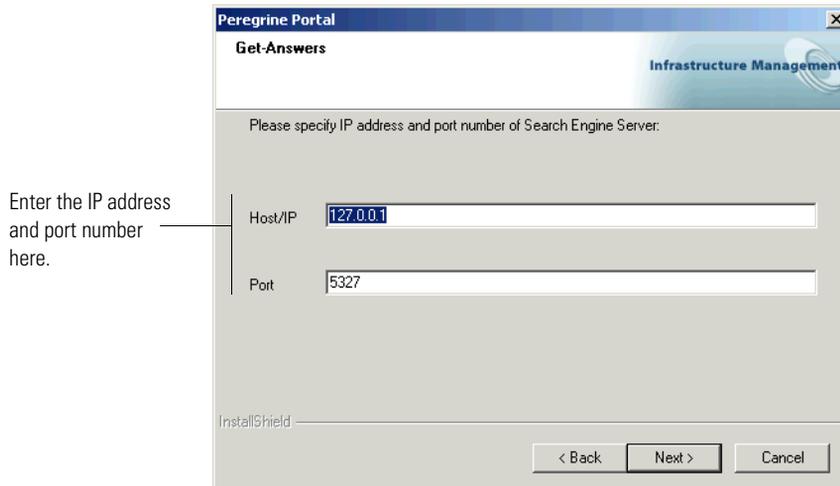
17 The Install Shield Wizard Complete dialog box is displayed. Click **Finish**.
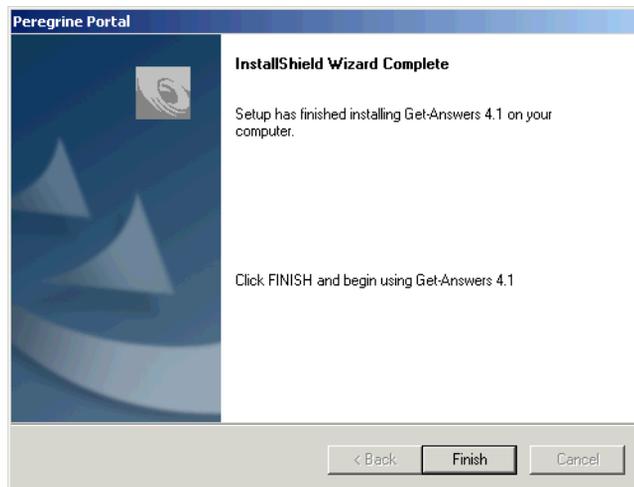
Note: If you installed the Tomcat application server, Tomcat starts automatically now. Let Tomcat run until all the database tables are initialized. This could take several minutes, depending on the size of the database.

Completing the application server installation

Now that you have installed and configured the application server and have installed Get-Answers, complete the application server process by following the instructions specific to your application server in this section.

Websphere

Once you have installed and configured Websphere and then installed Get-Answers and OAA, complete these steps to finish the installation.

To finish Websphere configuration:

1 If you are using WebSphere with IIS as your Web server, create an **/oaa** virtual directory in IIS to point to *<websphere>/<appserver>/<installed_apps>*/oaa.ear/portal.2.2.0.*xx*.war.

2 Open the WebSphere Advanced Administrative Console that you minimized earlier. In the menu on the left, right-click on the server name and select **Start**.

To test the configuration:

1 After the server is started, open a Web browser and type the following in the Address field:

   http://*<server_name>*:9080/oaa/admin.jsp

where 9080 is the port number for WebSphere 4.0.1's built-in Web server. If you are using a different version of WebSphere, enter the correct port number for that version. If you are using IIS as your Web server, omit the port number.

2 Press **Enter**.

3 After the server is started, open a Web browser and type the following in the Address field:

   http://*<server_name>*:7001/oaa/admin.jsp

If you are using IIS as your Web server, omit the port number.

4 Press **Enter**.

If everything is configured properly, the Administrator login page will open. In the Admin module Control Panel, verify that the adapters are connected.

To finalize the configuration:

1   Using the correct path for your portal.war file, open the httpd.conf file in Notepad.

   Note: You can find this file under the /conf directory of the IBM HTTP or Apache web server.

2   Add this single line to the bottom of the file. (Do not wrap the line.)

Alias /eopro "C:\WebSphere\AppServer\installedApps\<*hostname*>\ oaa.ear\portal.war\eopro"

Use the absolute path for your portal.war file.

The Websphere configuration is now complete and you can log in to the Peregrine Portal.

WebLogic

To test the configuration:

1   Start the WebLogic server.

2   Make sure that your Web server has an OAA virtual directory pointing to the application directory.

3   After the server is started, open a Web browser and type the following in the Address field:

   http://<*server_name*>:7001/oaa/admin.jsp

If you are using IIS as your Web server, omit the colon and port number (:7001).

4   Press **Enter**.

If everything is configured properly, the Administrator login page is displayed. In the Admin module Control Panel, verify that the adapters are connected.

   Note: To connect to your database, you may need to modify the connection parameters using the Admin module Settings page.

The WebLogic configuration is now complete and you can log in to the Peregrine Portal.

Updating the scriptpollers.ini Files

If you will be using script pollers, you will need to update the script poller INI files with the name of the Java virtual machine (JVM) for the application server you are using.

The scriptpollers.ini files are configured to use the default Java virtual machine (JVM). If you are using an alternate application server, you instruct Archway where to run the script pollers. Script poller files are located at *<application_server>*\WEB-INF\apps in the common, notifications, and oaaworkflow folders.

In the scriptpollers.ini file, add the ArchwayJVMName parameter, as shown in bold type in the example below. Substitute *jvm_name* with the appropriate value for the application server you are using:

- WebSphere: oaa_bin
- WebLogic: oaa_wlserver60 (This is different if WebLogic is not installed in the default installation directory.)
- Tomcat: oaa_bin

```
<poller>
   <name>KeepAliveSC</name>
   <interval>600</interval>
   <parms>
      <ArchwayJVMName>jvm_name</ArchwayJVMName>
   </parms>
</poller>
```

Completing the installation

To complete the installation process, go to *Chapter 7, Completing All Installations.*

Uninstalling Get-Answers

Follow these procedures to uninstall Get-Answers from your Windows system.

Warning: These procedures remove all the components that you selected to install. If you chose the Typical installation option, uninstall removes Get-Answers, Peregrine Tomcat, Apache, and JDK. If you chose the Custom installation option, then only those components that you selected for installation are removed.

To uninstall Get-Answers:

1 Click **Start** -> **Settings** -> and **Control Panel**. Then click **Add or Remove Programs**.

2 Select **Peregrine Portal 4.1.2** 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 is displayed if any Get-Answers services or applications are running. Click **Next** to continue.

4 The verification message box opens. Click **Yes** to continue.
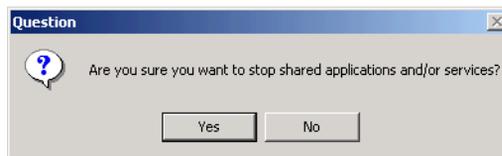
Status messages indicate the termination of the services for Apache and Tomcat.

5 The Confirm Uninstall dialog box opens. Click **OK** to remove Get-Answers.
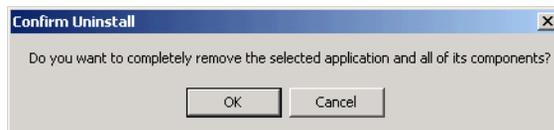
Important: Back up any data you want to save before continuing.

6 The Shared Files screen opens if there are any shared files to be removed during setup.

If WebSphere is installed on this computer, you are prompted to 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. The WebSphere Advanced Administrative Console requires these files.

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 is displayed. Click **Finish** to uninstall Get-Answers.
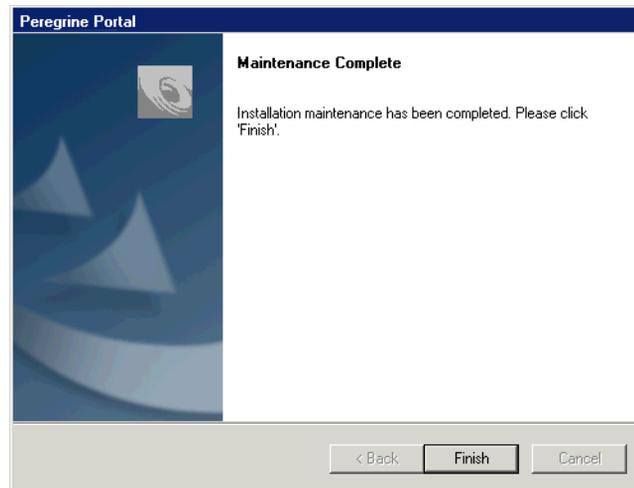
Testing your installation

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

To test your Get-Answers 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-Answers Web server resides.

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

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

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

If the Get-Answers administration login page does not open, see the *Troubleshooting* chapter for solutions.

5 Installation on AIX or Solaris

CHAPTER

This chapter covers the following topics:

Choosing an installation environment

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

- Development environment
- Production environment

The Get-Answers 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-Answers on one computer system.

You have two choices of development environment:

- Typical installation
  - Apache 2.0 Web server
  - Get-Answers deployed on Tomcat 4.1.29 application server
- Custom installation
  - Choice of Web server
  - Choice of application server where you deploy Get-Answers

The Get-Answers 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-Answers on different servers to maximize performance.

You have two choices of production environment:

- Typical installation
  - Apache 2.0 Web server
  - Get-Answers deployed on multiple instances of Tomcat 4.1.29 application server
- Custom installation
  - Choice of Web server
  - Choice of application server where you deploy Get-Answers

---

Important: Before you begin the installation process, make sure to close all anti-virus software programs.

Development Environment

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

To install Get-Answers in a typical development environment:

Step 1 Acquire all necessary hardware and software.

Step 2 Install the back-end database required for Get-Answers.

Step 3 Run the Get-Answers installer and select the Typical installation option. See *Typical Installation Option* on page 154.

Step 4 Configure the back-end databases and create Get-Answers users.

To install Get-Answers in a custom development environment:

Step 1 Acquire all necessary hardware and software.

Step 2 Install the back-end database required for Get-Answers.

Step 3 Install alternate application and Web servers.

Step 4 Configure the alternate application server for Get-Answers. See *Configuring alternate application servers* on page 125.

Step 5 Run the Get-Answers installer and select the Custom installation option. See *Custom Installation Option* on page 166.

Step 6 Configure the back-end databases and create Get-Answers users. See the *ServiceCenter and Administration* chapter of this guide.

Production Environment

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

To install Get-Answers in a typical production environment:

Step 1 Acquire all necessary hardware and software.

Step 2 Install the back-end database required for Get-Answers on a separate server.

Step 3 Run the Get-Answers installer and select the Typical installation option. See *Typical Installation Option* on page 154.

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-Answers users.

To install Get-Answers in a custom production environment:

Step 1 Acquire all necessary hardware and software.

Step 2 Install the back-end database required for Get-Answers.

Step 3 Install the alternate application server and Web server on separate servers.

Step 4 Configure the alternate application server for Get-Answers. See *Configuring alternate application servers* on page 125.

Step 5 Run the Get-Answers installer and select the Custom installation option. See *Custom Installation Option* on page 166.

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-Answers users.

Deploying multiple Peregrine Portal applications

When multiple Peregrine Portal applications, including Get-Answers, are deployed, *all* must use the same version of OAA. Multiple Peregrine Portal applications that use different versions of OAA are not supported.

Further, when you upgrade from a version prior to 4.1, you first upgrade all Peregrine Portal applications to version 4.1. Then you upgrade all Peregrine Portal applications to version 4.1.2.

Previous version of Get-Answers

You can upgrade to Get-Answers version *only* from one of the following previously installed versions of Get-Answers: 4.1, 4.1.0.1, or 4.1.0.2.

If you are upgrading to Get-Answers version 4.1.2 from Get-Answers version 4.0.1, follow the instructions in the *Get-Answers 4.1 Installation Guide*, Chapter 5, "Upgrading from Get-Answers version 4..0.1 to Get-Answers version 4.1," and then run the version 4.1.2 installer.

Configuring alternate application servers

You 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*
- *WebSphere Application Server 4.0.2*
- *WebSphere Application Server 5.0.2*
- *WebLogic 6.1 SP4*

The Get-Answers Typical installation option installs Tomcat 4.1.29 and connects it to an Apache 2.0 Web server. You can also install Tomcat 4.1.29 using the Custom installation option.

Important: If you want to use an application server other than Tomcat 4.1.29, configure your application and Web servers *prior* to running the Get-Answers installer.

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

Existing Tomcat and Apache servers

If you use the Typical installation option, the Get-Answers installer configures Tomcat to connect to a new instance of the Apache Web server. If you have existing instances of Tomcat or Apache Web Server installed, you can configure Get-Answers to use these existing instances by copying the necessary files from a typical installation.

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

1 Copy the following files from the installation CD **/SupportFiles…** directory to the directories indicated below.

Copy this file	To the following location
■ mod_jk.conf	The **/conf** directory of your existing Tomcat installation. The default source file path is: /usr/local/peregrine/common/Tomcat 4/conf
■ workers.properties	The **/conf** directory of your existing Tomcat installation. The default source file path is: /usr/local/peregrine/common/Tomcat 4/conf
■ mod_jk.dll	The **/modules** directory of your existing Apache installation. The default source file path is: /usr/local/peregrine/oaa/CdFiles/SupportFiles /Apache/modules

Note: The mod_jk.dll included with this release is compatible with Apache 2.0.43 and Tomcat 4.1.29. If you are using other versions, refer to the jakarta.apache.org/builds/jakarta-tomcat-connectors/jk/doc site to download the compatible version.

2 Using a text editor, open the files mod_jk.conf and workers.properties. These files are located in the **/conf** directory of your Tomcat installation.

  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 httpd.conf file. This file is located in the **/conf** directory of your Apache installation.

  a Add the path to your existing Tomcat installation to the include statement in the Global Environment section:

```
### Section 1: Global Environment
...
```

```
include "<Tomcat_path>/conf/mod_jk.conf"
```

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

b Add login.jsp to the list of files in the DirectoryIndex section:

```
# DirectoryIndex: Name of the file or files to use as a pre-written
# HTML directory index.  Separate multiple entries with spaces.
#
<IfModule mod_dir.c>
 DirectoryIndex index.html login.jsp
</IfModule>
```

c Add the following line to the end of the file:

Alias <*Tomcat*>/webapps/oaa

where <*Tomcat*> is the path to your Tomcat installation.

4 Install Get-Answers using the Custom option. See *Installing Get-Answers using Custom Installation.*

5 If your application uses Oracle, copy the classes12.jar file from: /*<your_Tomcat_installation>*/webapps/oaa/Web-Inf/lib to the /ext folder under your JDK installation.

The default path is: /oracle/ora81/jdbc/lib/classes12.jar.

6 Restart Tomcat and Apache.

7 Browse to the Get-Answers login URL and verify that you can successfully connect.

Note: Depending on your Web server configuration, if you browse to http://*server_name*/oaa, the Web server may display a list of all the OAA files instead of the login page.

If your server displays this behavior, follow these steps to configure your Web server to display the OAA login page instead of a directory listing.

To configure Apache to display login.jsp by default:

1 Open Apache's conf/httpd.conf file in a text editor.

2 Find the existing line that reads DirectoryIndex index.html.

3 Add login.jsp to the end:

DirectoryIndex index.html login.jsp

4 Save httpd.conf.

5 Restart the Apache Web server.

WebSphere Application Server 4.0.2

Use the following procedures to configure WebSphere to run Get-Answers on AIX and Solaris.

Note: The Get-Answers installer creates duplicate alias entries in the IBM HTTP Server when you install more than one Peregrine OAA Platform application on WebSphere.

Duplicate entries can also occur if you reinstall Get-Answers or install another Peregrine OAA Platform application on a system that formerly had Get-Answers installed on it.

Remove any duplicate alias entries from the IBM HTTP Server httpd.conf file.

To configure WebSphere Application Server 4.02:

Step 1 Install WebSphere 4.02. Your version of WebSphere 4.0.2 includes the IBM HTTP Server. *Installing WebSphere 4.02* on page 128.

Step 2 Deploy the Portal WAR file to WebSphere to create the necessary folder structure for Get-Answers. See *Deploying the Portal WAR file to WebSphere* on page 129.

Step 3 Set the JVM classpaths to your database classes. See *Setting the JVM classpaths* on page 131.

Step 4 Set the JVM Java heap size for each WebSphere instance running Get-Answers. See *Setting the Java heap size* on page 133.

Step 5 Run the Get-Answers installer. See *Running the Get-Answers installer* on page 134.

Step 6 Regenerate and configure. See *Regenerating the plug-in configuration* on page 134.

If you plan on setting up a WebSphere Portal Server or a WebSphere Translation Server, see *Installing WebSphere Portal Server* on page 138 or *Configuring WebSphere Translation Server for Get-Answers* on page 148.

Installing WebSphere 4.02

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

Verify that you install fix pack 2. To check this, go to the
default_server_Stdout.log file under **/Websphere/AppServer/logs**.

Deploying the Portal WAR file to WebSphere

The Portal WAR file creates the folder structure necessary to deploy
Get-Answers in your application server. After deploying this file to
WebSphere, you are ready to run the Get-Answers 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_number>*.war
        file. The default is *<CDRom_Drive>*/portal*<version_number>*.war.

        For *<version_number>*, 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-Answers virtual Web
        server directory you wish to use. Example: **/oaa**.

Important: You later create a Web server virtual directory that matches the
                 context root you enter here.

The following screen shows the completed form.
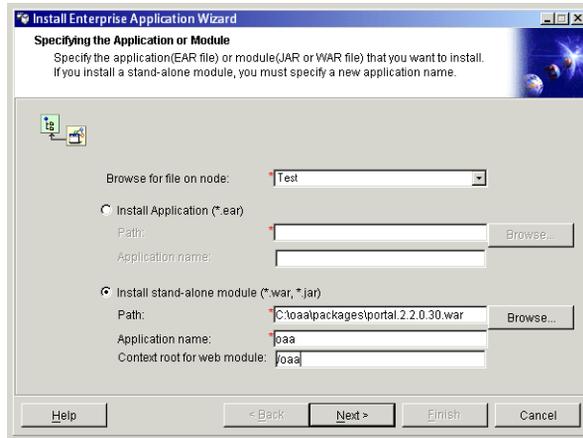
5 Click **Next**.

6 Click **Next** in the following dialog boxes. (They are not 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 dialog box, select the WebSphere Web module you want to use. Click **Next**.
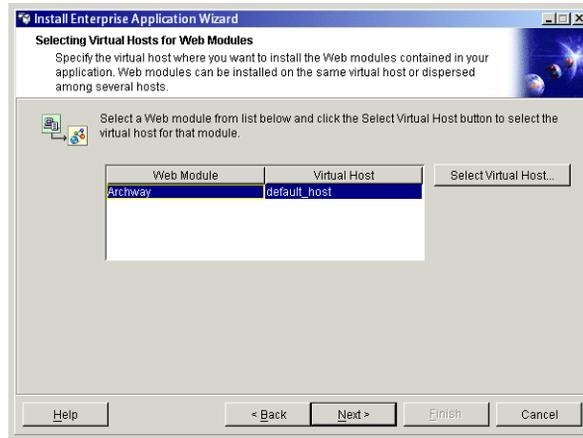
8 In the Selecting Application Servers dialog box, select the WebSphere server instance you want to use. Click **Next**.
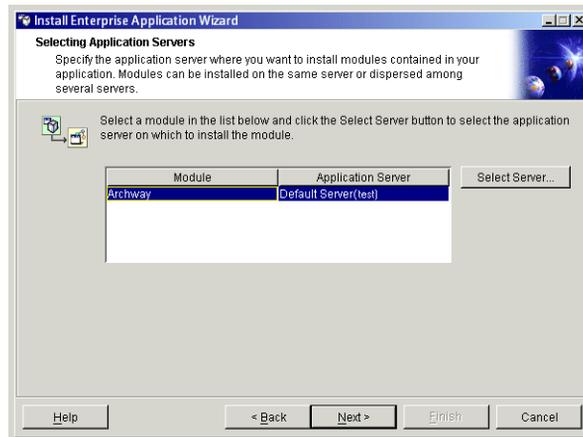
9 In the next dialog box click **Finish**.

Setting the JVM classpaths

Get-Answers requires that you set the JVM classpaths to your database classes.

To set the JVM classpaths:

1 Verify that the WebSphere Admin Server has been started.

2 Open the WebSphere Advanced Administrator's Console
   (**/WebSphere/AppServer/bin/adminclient.sh**).

3 Click **Nodes** -> *<System_Name>* -> **Application Servers** ->
   <Application_Server_Name>. This opens the server settings page.
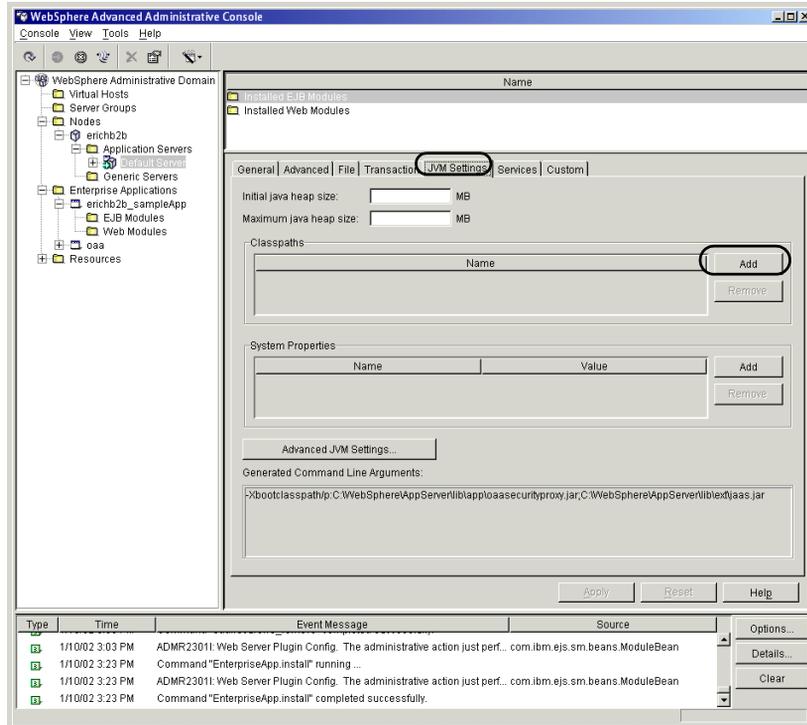
4 Click the **JVM Settings** tab.

5 Under Classpaths, click **Add**.

6 Add the path to your database classes.

   If you are using Oracle, provide the path to the **classes12.jar** file:

   /oracle/ora81/jdbc/lib/classes12.jar

Setting the Java heap size

You can configure the amount of memory that is made available for application server instances. The following instructions assume you are only using one WebSphere instance. 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 Click **Start** -> **Programs** -> **IBM WebSphere** -> **Application Server** -> **Administrator's Console** to open the WebSphere Advanced 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 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.

Running the Get-Answers installer

Run the Get-Answers installer and select the Custom installation option. See *Custom Installation Option* on page 166.

Important: After you complete the steps in *Custom Installation Option* on page 166., make sure to perform the steps in the section *Configuring the WebSphere 4.0.2 startupServer.sh file* on page 176. Then complete the steps in the section *Regenerating the plug-in configuration*.

If you plan on setting up a WebSphere Portal Server or a WebSphere Translation Server, see *Installing WebSphere Portal Server* on page 138 or *Configuring WebSphere Translation Server for Get-Answers* on page 148.

Regenerating the plug-in configuration

You must regenerate the plug-in configuration using the WebSphere Admin console after running the Get-Answers installer.

To regenerate the plug-in configuration:

1 Click **Start -> Programs -> IBM WebSphere -> Application Server -> Administrator's Console** to open the WebSphere Advanced Administrator's Console.

2 Click **Nodes** -> <*System_Name*> -> **Application Servers ->**
<*Application_Server_Name*> to open the server settings page.

Right-click on your
system name and
select Regen
Webserver Plugin.

3 Right-click on the <*System_Name*> and select **Regen Webserver Plugin**.

4 Copy the following lines from the <settings> section of
<*DeploymentDir*>/WEB-INF/default/archway.xml to the <settings> section in
your <*DeploymentDir*>/WEB-INF/local.xml file, where <*DeploymentDir*> is
the path to your Get-Answers application deployment:

```
<SSLProvider>com.ibm.jsse.JSSEProvider</SSLProvider>
<HTTPSHandlerPkg>com.ibm.net.ssl.internal.www.protocol</HTTPSHandlerPkg>
<CryptoProvider>com.ibm.crypto.provider.IBMJCE</CryptoProvider>
```

If a local.xml file does not exist, create a new local.xml file in the folder
specified above, insert the following lines into it, and save the file:

```
<?xml version="1.0" encoding="UTF-8"?>
<settings>
  <SSLProvider>com.ibm.jsse.JSSEProvider</SSLProvider>
  <HTTPSHandlerPkg>com.ibm.net.ssl.internal.www.protocol</HTTPSHandlerPkg>
```

```
        <CryptoProvider>com.ibm.crypto.provider.IBMJCE</CryptoProvider>
    </settings>
```

5   Restart your application server.

WebSphere Application Server 5.0.2

Use the following procedures to configure WebSphere 5.0.2 to run
Get-Answers on UNIX.

Note: The Get-Answers installer creates duplicate alias entries in the IBM
HTTP Server when you install more than one Peregrine OAA
Platform application on WebSphere.

Duplicate entries can also occur if you reinstall Get-Answers or install
another Peregrine OAA Platform application on a system that
formerly had Get-Answers installed on it.

Remove any duplicate alias entries from the IBM HTTP Server
httpd.conf file.

To run Get-Answers 4.1.2 on WebSphere Application Server 5.0.2:

1   With WebSphere running, log in to the Admin console and create a new
Enterprise Application using portal.<*version_number*>.war from the
packages directory on the Get-Answers 4.1.2 CD.

Note: The important option to specify is the context root, typically /oaa or
/getit.

   a   Specify the context root. Click **Next**.

   b   Accept the default settings on this page. Click **Next**.

   c   Click **Use Binary Configuration**. Click **Next**.

   d   Continue to accept the default values and to click **Next**.

   e   When prompted, click **Finish**.

   f   Click **Save to Master Configuration**.

2   For Get-Answers , you must configure the Oracle database classes12.jar file
or the DB2 database db2java.zip file as a Shared Library.

   a   Still in the WebSphere Admin console, click **Environment** in the left
column.

   b   Under Environment, click **Shared Libraries**.

    c In the main frame, click **New**.

    d Type a name for the library in the Name field, and the full path to classes12.jar or db2java.zip in the Classpath field.

    e Click **Apply**.

    f Under Applications, go back to the definition for the OAA Enterprise Application.

    g Click **Libraries** under Additional Properties.

    h Click **Add**.

    i Select the library you defined and click **Apply**.

    j Save the server configuration.

3 Perform the steps described in the section *Custom Installation Procedures* on page 167.

> **Important:** After you complete the steps in *Custom Installation Procedures* on page 167, make sure to perform the steps in the section *Configuring the WebSphere 5.0.2 startServer.sh file* on page 177. Then complete the remaining steps in this section.

4 From the IBMHttpServer/conf/httpd.conf file:

    a Verify that the following lines exist in the file; if not, add them.

```
LoadModule ibm_app_server_http_module
<AppServerPath>/bin/mod_ibm_app_server_http.so
WebSpherePluginConfig
<AppServerPath>/config/cells/plugin-cfg.xml
```

    b Verify that the following lines exist in the file; if not, add them. The aliases should not contain any trailing slash marks (/); remove any trailing slash marks if any appear:

```
Alias /oaa opt/WebSphere/AppServer/installedApps/[hostname]
/oaa.ear/portal.<version_number>.war
```

Note: The preceding alias needs to match the context root specified in step 1.

```
Alias /eopro /opt/WebSphere/AppServer/installedApps/
<hostname>/oaa.ear/portal.4.1.2.33.war/eopro
```

5 Copy the following lines from the <settings> section of
   <DeploymentDir>/WEB-INF/default/archway.xml to the <settings> section
   in your **<DeploymentDir>/WEB-INF/local.xml** file, where <*DeploymentDir*>
   is the path to your Get-Answers application deployment.

   ```
   <SSLProvider>com.ibm.jsse.JSSEProvider</SSLProvider>
   <HTTPSHandlerPkg>com.ibm.net.ssl.internal.www.protocol</HTTPSHandlerPkg>
   <CryptoProvider>com.ibm.crypto.provider.IBMJCE</CryptoProvider>
   ```

   If a **local.xml** file does not exist, create a new **local.xml** file in the folder
   specified above, insert the following lines into it, and save the file:

   ```
   <?xml version="1.0" encoding="UTF-8"?>
   <settings>
     <SSLProvider>com.ibm.jsse.JSSEProvider</SSLProvider>
     <HTTPSHandlerPkg>com.ibm.net.ssl.internal.www.protocol</HTTPSHandlerPkg>
     <CryptoProvider>com.ibm.crypto.provider.IBMJCE</CryptoProvider>
   </settings>
   ```

6 Copy **js.jar** from **<DeploymentDir>/WEB-INF/lib** to
   /opt/WebSphere/AppServer/java/jre/lib/ext, where <*DeploymentDir*> is
   the path to your Get-Answers application deployment.

7 Start WebSphere.

8 Log in to the WebSphere Admin console again.

   a From Environment on the left side, click **Update Web Server Plugin**.

   b Click **OK** to update the Web server plugin.

   c Wait for confirmation that the plugin is updated. Log out of the
      WebSphere Admin console.

9 Stop and restart the WebSphere application server.

10 Start the IBM HTTP Server.

11 Log in to the Peregrine Portal using **admin.jsp** and continue configuring your
    system.

Installing WebSphere Portal Server

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

- All Get-Answers and WebSphere components running on a single system.
  See *Recommended WebSphere Portal Server configuration* on page 139.

■ Get-Answers components running on one system and WebSphere components running on another. See *Alternate WebSphere Portal Server configuration* on page 140.

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

Note: The OAA interface to the WebSphere Translation Server requires a mouse to use. The translation interface will be made 508 accessible in a future release.

Recommended WebSphere Portal Server configuration

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

Step 1 Review the WebSphere Portal Server installation requirements. See *WebSphere Portal Server installation requirements* on page 142.

Step 2 Generate a Get-Answers WAR file containing the portal components WebSphere Portal Server can display. See *Generating a Get-Answers WAR file* on page 143.

Step 3 Login to the Get-Answers server and stop the WebSphere application server. See *Stopping the WebSphere application server* on page 144.

Step 4 Modify the local.xml file to change the HTTP authentication method used from Basic to Alternate. See *Modifying the local.xml file* on page 144.

Step 5 Modify the web.xml file to enable the AuthController servlet. See *Modifying the web.xml file* on page 144.

Step 6 Modify the ibm-web-ext.xmi file to set the fileServingEnabled parameter. See *Modifying the ibm-web-ext.xmi file* on page 145.

Step 7 Start the WebSphere application server. See *Starting the WebSphere application server* on page 146.

Step 8 Deploy the Get-Answers WAR file to WebSphere Portal Server. See *Deploying the Get-Answers WAR file to WebSphere Portal Server* on page 146.

Step 9 Create places and pages in WebSphere Portal Server to display Get-Answers portlets. See *Configuring WebSphere Portal Server places and pages* on page 146.

Step 10 Enable edit rights for Get-Answers portlets. See *Enabling edit rights for Get-Answers portlets* on page 147.

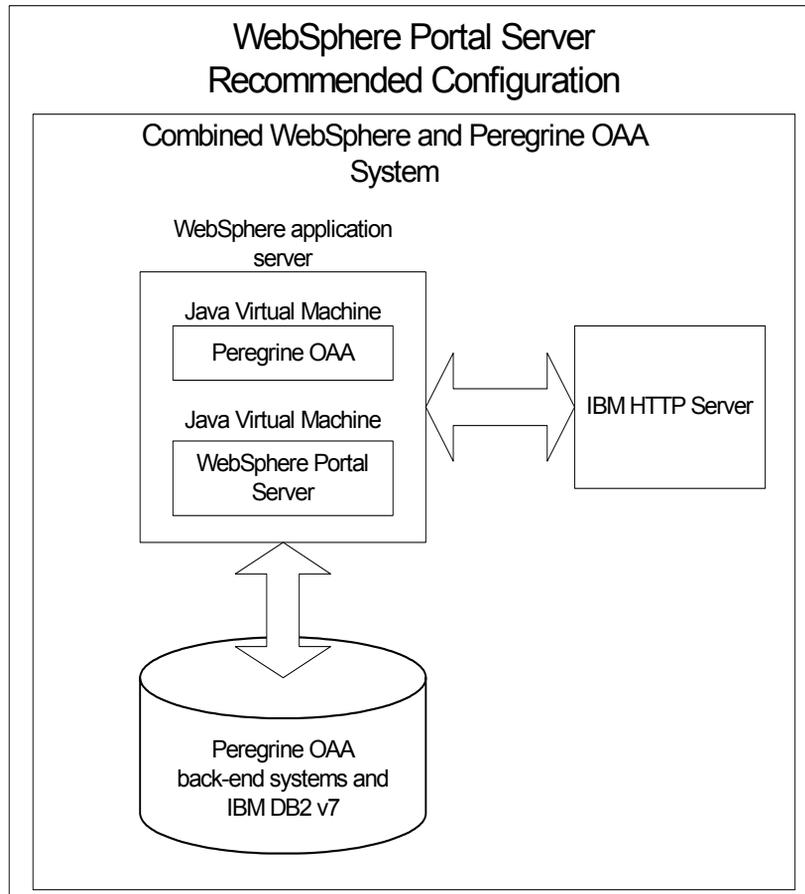When complete, your installation will have the following configuration:

Alternate WebSphere Portal Server configuration

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

Step 1 Review the WebSphere Portal Server installation requirements. See *WebSphere Portal Server installation requirements* on page 142.

Step 2   Generate a Get-Answers WAR file containing the portal components WebSphere Portal Server can display. See *Generating a Get-Answers WAR file* on page 143.

Step 3   Login to the Get-Answers server and stop the WebSphere application server. See *Stopping the WebSphere application server* on page 144.

Step 4   Modify the local.xml file to change the HTTP authentication method used from Basic to Alternate. See *Modifying the local.xml file* on page 144.

Step 5   Modify the web.xml file to enable the AuthController servlet. See *Modifying the web.xml file* on page 144.

Step 6   Modify the ibm-web-ext.xmi file to set the fileServingEnabled parameter. See *Modifying the ibm-web-ext.xmi file* on page 145.

Step 7   Modify the setDomain.js file to call the SetDomain function. See *Modifying the setDomain.js file* on page 145.

Step 8   Start the WebSphere application server. See *Starting the WebSphere application server* on page 146.

Step 9   Deploy the Get-Answers WAR file to WebSphere Portal Server. See *Deploying the Get-Answers WAR file to WebSphere Portal Server* on page 146.

Step 10   Create places and pages in WebSphere Portal Server to display Get-Answers portlets. See *Configuring WebSphere Portal Server places and pages* on page 146.

Step 11   Enable edit rights for Get-Answers portlets. See *Enabling edit rights for Get-Answers portlets* on page 147.

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 148.

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-Answers 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-Answers compatible application server
  - Web server
  - Back-end database for Get-Answers
  - An installation of Get-Answers

Generating a Get-Answers WAR file

In order to display Get-Answers in WebSphere Portal Server, you must first export the Get-Answers 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-Answers WAR file:

1 Log in to the Get-Answers 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-Answers 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-Answers WAR file.

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

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

4 Click **Generate WAR file.**

Get-Answers 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-Answers server and stop the WebSphere application server.

To stop the WebSphere application server:

1 Login to the Get-Answers server.

2 Stop your WebSphere application server.

Modifying the local.xml file
In order to login via WebSphere Portal Server, you configure Get-Answers to use an alternate HTTP authentication method.

To modify the local.xml file:

1 Using a text editor, open the local.xml file located at:

<application_server>/oaa/WEB-INF/.

2 Add the following on a separate line anywhere between <settings> and <\settings>:

```
<httpauthclass>HttpAlternateAuthenticationManager</httpauthclass>
```

3 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>/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:

<root>/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-Answers server.

2 Stop your application server.

3 Using a text editor, open the setDomain.js file located at:

   <application_server>//oaa/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-Answers WAR file to WebSphere Portal Server
After you deploy the Get-Answers 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-Answers 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-Answers WAR file.

5 Click **Next** to load the Get-Answers WAR file.

   WebSphere Postal 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-Answers 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-Answers portlets that you display in a page must grant "all authenticated users" the minimum edit permission.

Enabling edit rights for Get-Answers portlets

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

To enable edit rights for Get-Answers 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-Answers 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-Answers.

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

To modify httpd.conf for IBM HTTP Server:

1 Login to the Get-Answers 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 where Get-Answers is installed and the number of the communications port that Get-Answers uses.

5 Save the file.

Configuring WebSphere Translation Server for Get-Answers

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

To configure WebSphere Translation Server for Get-Answers:

Step 1 Copy the file wts.jar to the Get-Answers deployment folder. See *Copying wts.jar to the Get-Answers deployment folder* on page 148.

Step 2 Configure Get-Answers to use the WebSphere Translation Server. See *Configuring WebSphere Translation Server for Get-Answers* on page 148.

Copying wts.jar to the Get-Answers deployment folder

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

To copy wts.jar to the Get-Answers 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-Answers deployment folder located at:

<Application_Server_Install>/WEB-INF/lib

5 Restart your application server.

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

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

1 Login to the Get-Answers admin page (admin.jsp).

2 Click **Settings** -> **Common** tab to open the Admin Settings page.

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.

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-Answers data in a mixture of languages, you can configure Get-Answers 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-Answers 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-Answers* on page 148.

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.

The translation of your selection displays in the Translation box.

WebLogic 6.1 SP4

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

To configure WebLogic 6.1 SP4:

Step 1 Stop both WebLogic and your Web server. See *Stopping WebLogic* on
page 151.

Step 2 Edit the startWebLogic.sh file to set the system password, memory settings,
and start mode. See *Editing startWebLogic.sh* on page 151.

Step 3 Run the Get-Answers installer. See *Custom Installation Option* on page 166

Step 4 Create a virtual directory for Get-Answers in your Web server. See *Creating
a virtual directory for Get-Answers* on page 153.

Step 5 Restart WebLogic and your Web server. See *Restarting the servers* on
page 154.

Stopping WebLogic

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

Editing startWebLogic.sh

To edit startWebLogic.sh:

1 Open the file startWebLogic.sh file in any text editor. By default the file is
located at:

/bea/wlserver6.1/config/*<my_domain>*/

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
set WLS_PW=password
```

3 In the last line, change the word "password" to your WebLogic system password.

4 Search for the -ms parameter and make sure it is set to "256m" or greater.

5 Search for the -mx parameter setting in the file. This setting should be at least 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.

6 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.

7 Add the following phrase to the entry that precedes the weblogic.Server entry. (Make sure to retain the quotation marks.)

"-Djava.security.auth.login.config==<*Weblogic*>/lib/server.policy"

Where <*Weblogic*> is the installation path for Weblogic. By default this is:

<root>/bea/wlserver6.1

8 Save the file.

Editing the Server.Policy file

To edit Server.Policy:

1 Open the file Server.Policy file in any text editor. The default file path is:

<*root*>/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 Get-Answers installer

Run the Get-Answers installer and select the Custom installation option. See *Custom Installation Option* on page 166.

Creating a virtual directory for Get-Answers

1 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. The following are requirements for the Get-Answers virtual directory:

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

Where *<oaa>* is the name of the virtual directory you want to use for Get-Answers. 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/*<my_domain>*

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 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
jcert.jar
jnet.jar
jsse.jar
local_policy.jar
mlibwrapper_jai.jar
oaasecurityproxy.jar
sunjce_provider.jar
US_export_policy.jar
xalan.jar
xercesImpl.jar
xml-apis.jar
```

Restarting the servers

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

Typical Installation Option

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

Typical Installation Components

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

Applications and File Locations

Get-Answers 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-Answers	`/usr/local/peregrine/oaa`

Communications Ports

Get-Answers uses the following communications ports in a typical installation. After installation, you can configure Get-Answers 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-Answers.

Typical Installation Procedures

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

Note: If you cancel the installation before completing all the steps, you must run Uninstall to remove all the files.

To perform a typical installation of Get-Answers on AIX or Solaris:

1 Log into your server with an account that has root privileges.

2 Insert the Get-Answers 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, using a command such as the following:

```
mount /cdrom
```

Change directories to your CD ROM, using a command such as the following:

```
cd /cdrom
```

Enter the installer script specific for your operating system:

Operating system	Shell script to run
AIX 5.1	./setupaix
Solaris 2.6, 7, 8, 9	./setupsolaris

Important: Verify that your temporary directory has a minimum of 300 MB of available space. The Solaris default temporary directory is **/var/tmp**, and the AIX and Linux default temporary directory is **/tmp**. To run the installer using a temporary directory that you specify, use the appropriate UNIX command as follows:

./setupaix -is:tempdir /*MyTempDirectory* (on AIX)
./setupsolaris -is:tempdir /*MyTempDirectory* (on Solaris)

Where *MyTempDirectory* is the temporary directory you want to use.

The installer welcome page opens.

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

The installation location page opens.
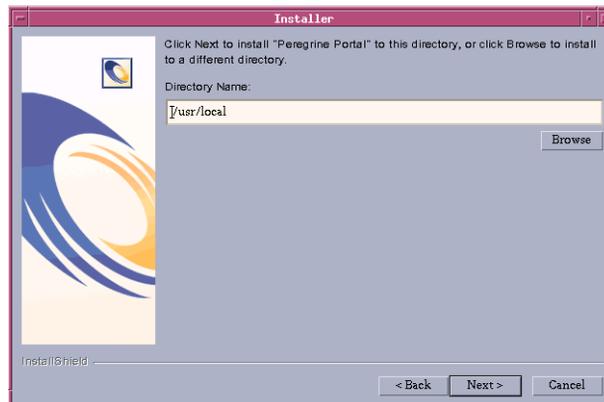
4 Click **Browse** to change the default installation location of **/usr/local**.

5 Click **Next** to open the next page of the wizard that instructs you to stop your application server and Web server.
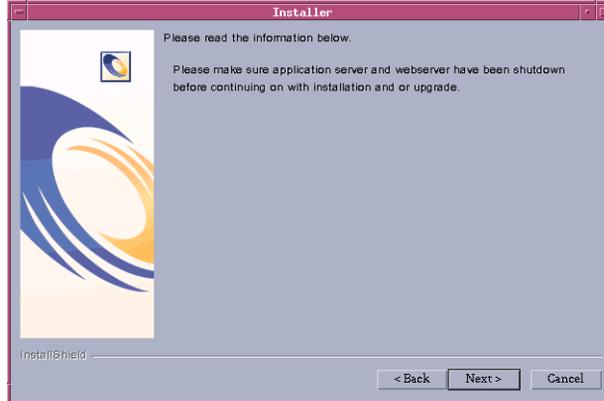
6 Click **Next** to continue to the next page of the wizard.

The setup type page opens.

Click **Typical**.
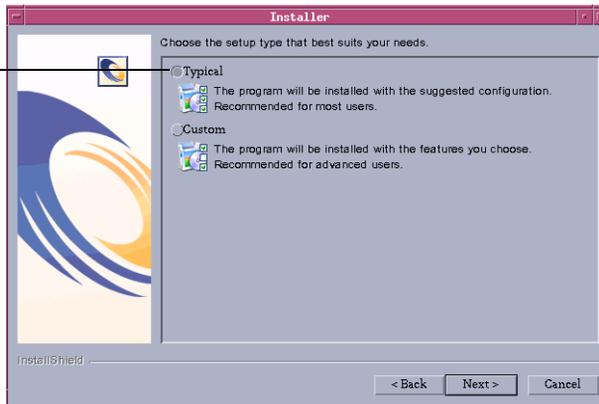
7 Select **Typical**. Click **Next**.

8 The installer displays a list of components that will be installed.
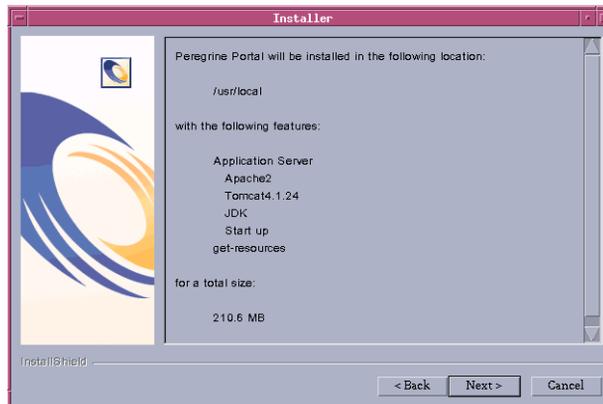
Note: The list depends on the application that you install.

9 Click **Next** to continue installing Get-Answers components.

The installation progress page opens.
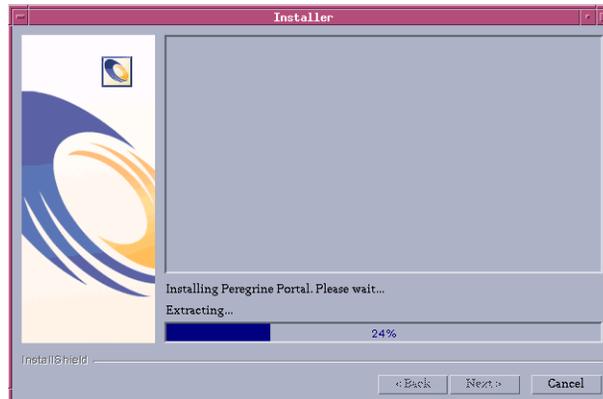
The installer verifies the availability of port 80 for the Apache Web server. If the installer finds a port conflict on port 80, the WebServer Port page opens.
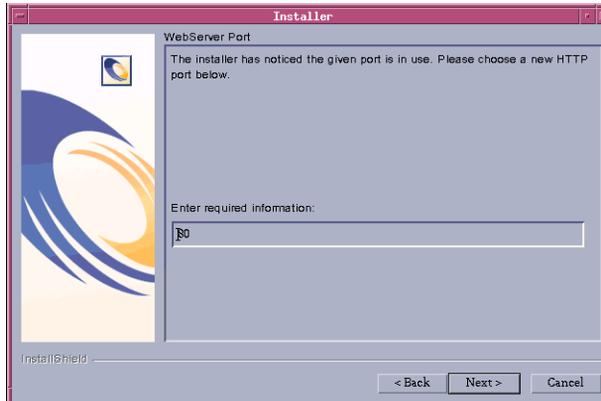
10 If required, enter the new Web server communications port. Click **Next**.

11 Change the Tomcat memory settings as needed and click **Next**.
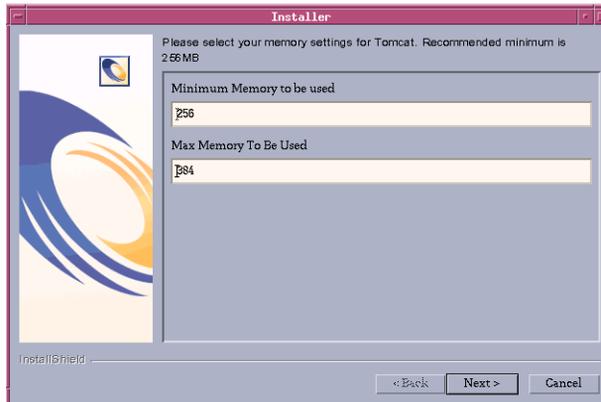
12 A deployment utility page displays the status of deployment of Get-Answers components.

13 The installer displays a list of all deployed packages. Click **Next** to continue.
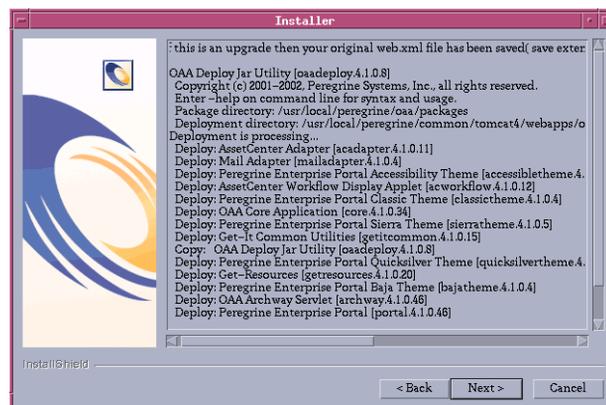
Note: The list of deployed packages depends on the application that you install.

14 Enter the IP address and port number of the Search Engine server, then click **Next**.

Note: You can find this information where you recorded it on the *Get-Answers installation worksheet* in chapter 1.

Enter the IP address and port number here.
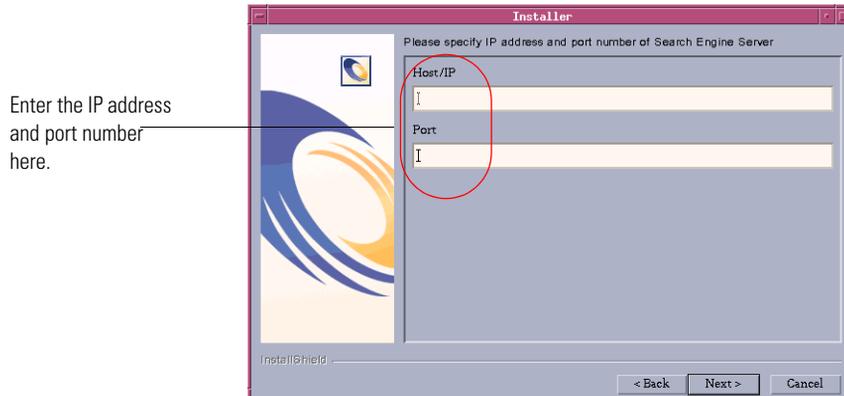
15 Verify the Search Engine information. Click **Approve**, and then click **Next**.
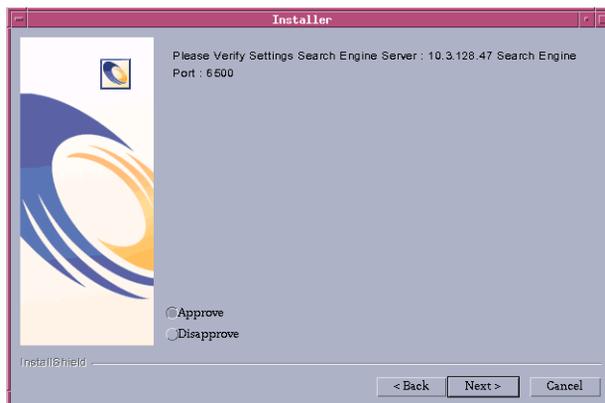
16 Select your database and then click **Next**.
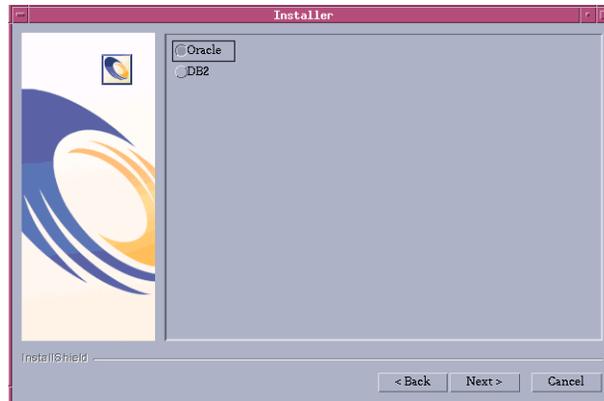
a Enter your login, password, and SID. Click **Next**.

Note: You can find this information where you recorded it on the *Get-Answers installation worksheet* in chapter 1.
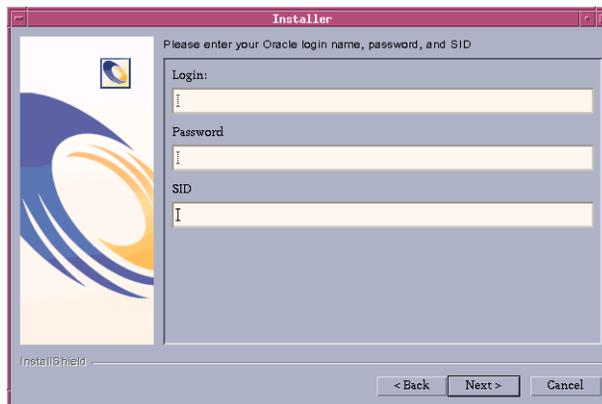
b Make sure the information is correct. Click **Approve** and then click **Next.**

Make sure this information matches your database name, password, and SID.
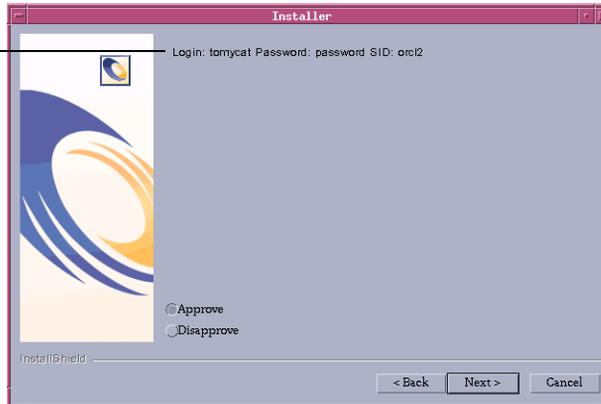
c Type the database server host name and port number. Click **Next.**
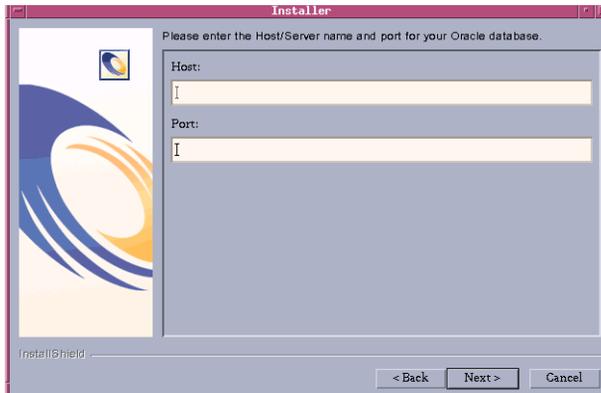
d Verify the database server information. Click **Approve** and then click **Next.**
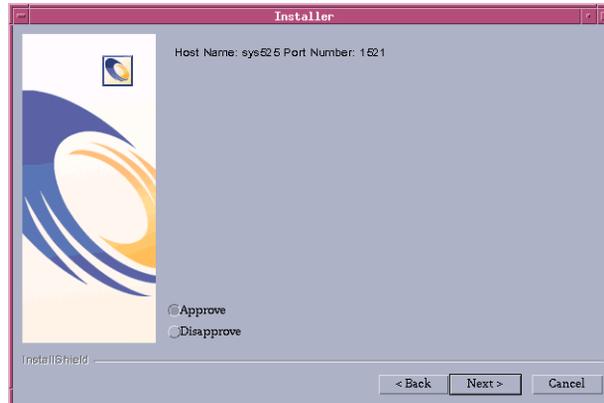
The start OAA page opens. Click **Yes** to start Get-Answers immediately or select **No** to manually start Get-Answers after installation is complete.

Select **Yes** to start Get-Answers immediately.
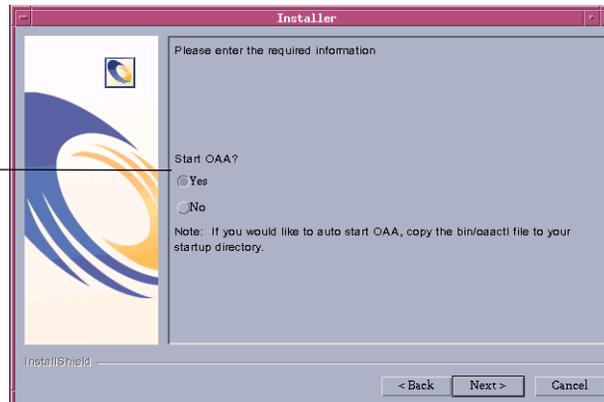
If you want Get-Answers to start every time the server is started, then copy the file oaactl from /usr/local/peregrine/bin/ directory into your startup directory.

17 Click **Finish** to complete the Get-Answers installation.
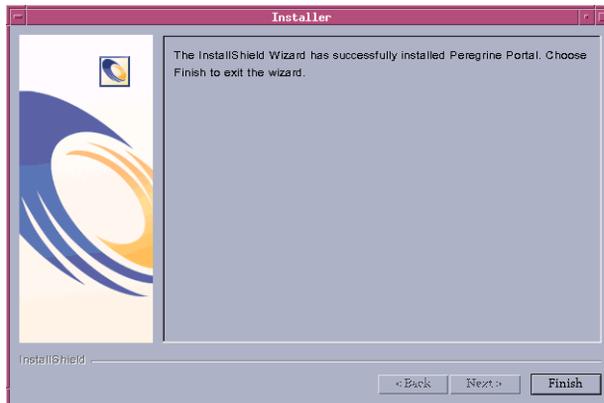
If you have not already done so, configure your system to connect to the back-end database you are using. This is done on the Settings page of the Admin module. To complete the installation, see the chapter, *Completing All Installations*.

Custom Installation Option

The following section describes how to perform a custom installation of Get-Answers 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-Answers:

Application options

For complete information about specific software components that can be installed and configured with Get-Answers, see the Get-Answers Compatibility Matrix. Go to support.peregrine.com and click **Documentation** -> **Get-Answers** -> **Compatibility Matrices** -> **Get-Answers 4.1.2.**

Important: Make sure to check the entire Get-Answers compatibility matrix *before* starting the installation process.

Communications Ports

The communications ports used by a custom installation of Get-Answers 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-Answers to use alternate communications ports if your local network already uses particular communications ports.

Get-Answers on servers running Oracle 9.2.0.1

If you are running Get-Answers 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 the Oracle 9.2.0.1 database and the Tomcat application server, 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

Note: If you cancel the installation before completing all the steps, you must run Uninstall to remove all the files.

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

1 Log into your server.

Important: Verify that your temporary directory has a minimum of 300 MB of available space. On Solaris, for example, the system-wide temp directory is **/tmp**.

2 Insert the Get-Answers 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, using a command such as the following:

mount /cdrom

Change directories to your CD ROM, using a command such as the following:

cd /cdrom

Enter the installer script specific for your operating system:

Operating system	Shell script to run
AIX 5.1	./setupaix
Solaris 2.7	./setupsolaris
Solaris 2.8	./setupsolaris

3 The installer welcome page opens. Click **Next** to continue to the next page of the wizard.

4 The installation location page is displayed. Click **Browse** to change the default installation location of **/usr/local**. Click **Next**.
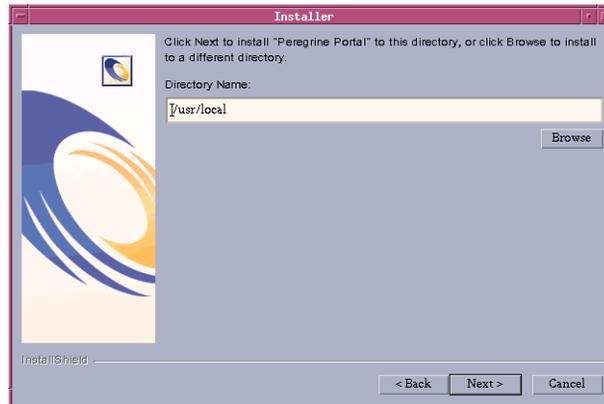
5 The installer prompts you to close the servers before continuing with the installation. After you close the servers, click **Next**.
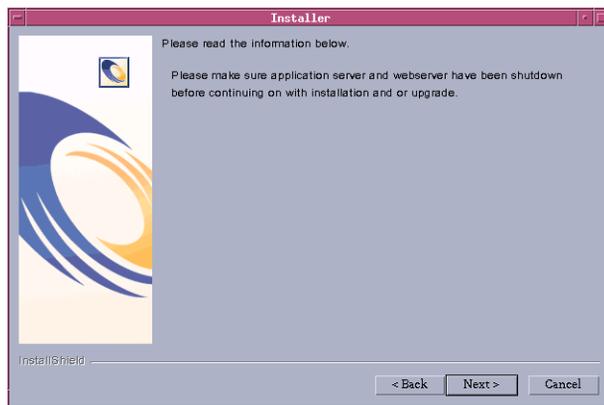
6 Select **Custom** and click **Next.**

Click **Custom.**
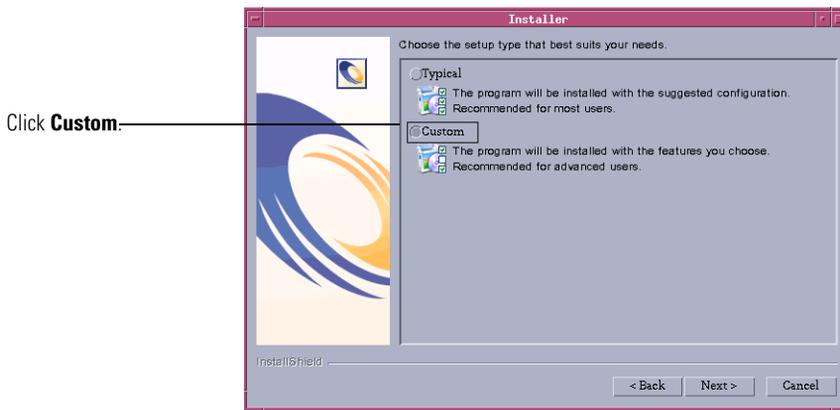
7 Select the Peregrine Portal features that you want to install. Click **Next.**

Select the desired
components from the
list provided.

8 The installer displays a page where you can review components that it will install. Click **Next** to start installing Get-Answers components.
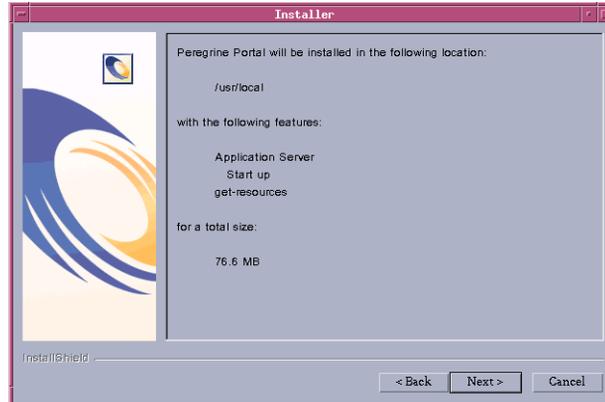
Note: The list of features on this page depends on the components that you have actually installed.

The installer displays its progress.
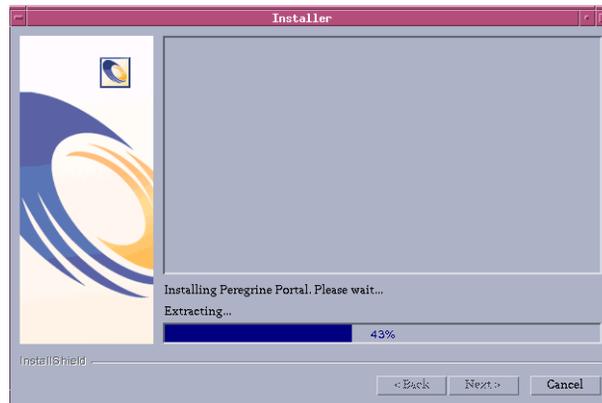
Note: If you are installing multiple applications, you see the following message. Click **Yes to All**.
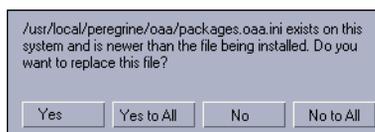
9 Select the Application Server you want to configure. Click **WebSphere** to configure a WebSphere application server, or click **Other** to configure another application server. Click **Next** to continue to the next page of the wizard.

Select your application server from the list provided.
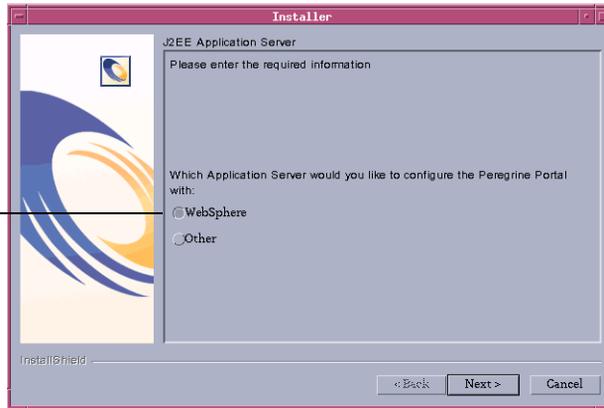
If you have chosen to configure a WebSphere application server, you will see the screens in step a through step n.

a The WebSphere AppServer installation location page opens. Click **Browse** and locate the directory where you installed the WebSphere application server. Click **Next** to continue.
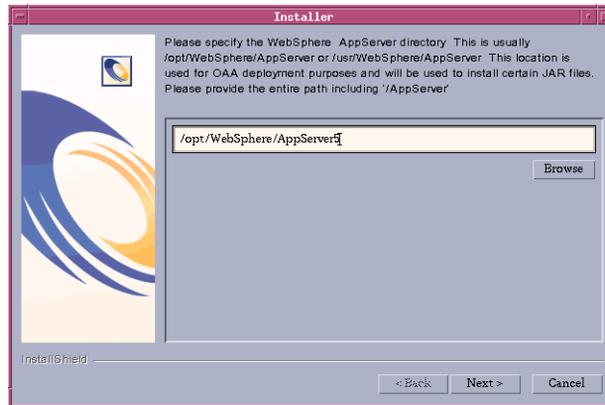
b Click **Browse** and locate the directory where you deployed the portal.*<version_number>*.war file. Click **Next** to continue.

WebSphere automatically created this directory when you deployed the Get-Answers portal.*<version_number>*.war as an enterprise application. See *WebSphere Application Server 4.0.2* on page 128 or *WebSphere Application Server 5.0.2* on page 136 for more information on deploying a WAR file.
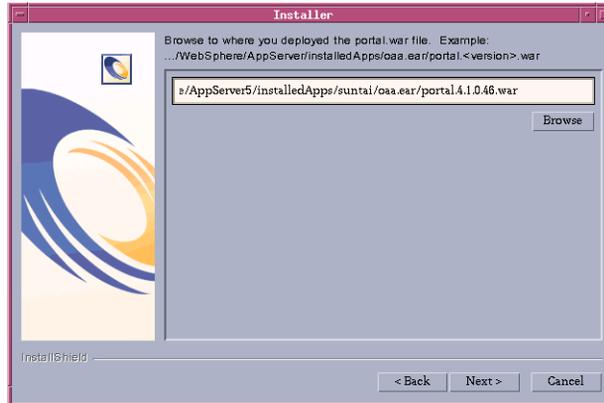
c The WebSphere JDK installation location page opens. Click **Browse** and locate the directory where you installed the Java development kit used by WebSphere. Click **Next**.
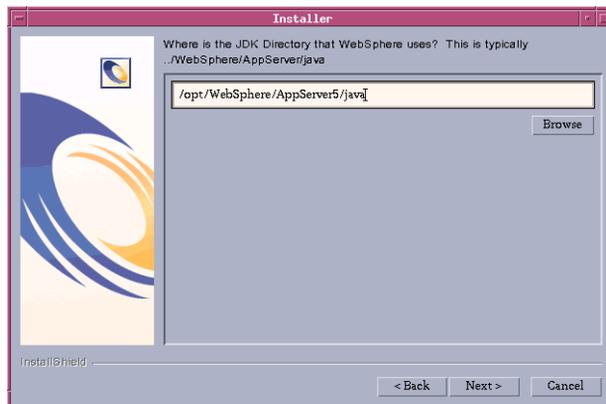
d Read the information about your installation locations and make sure that all the requirements have been met. Click **Next** to continue.
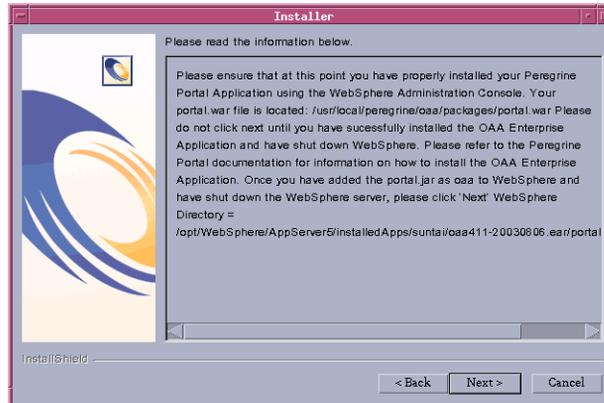
The Get-Answers deployment utility page opens.
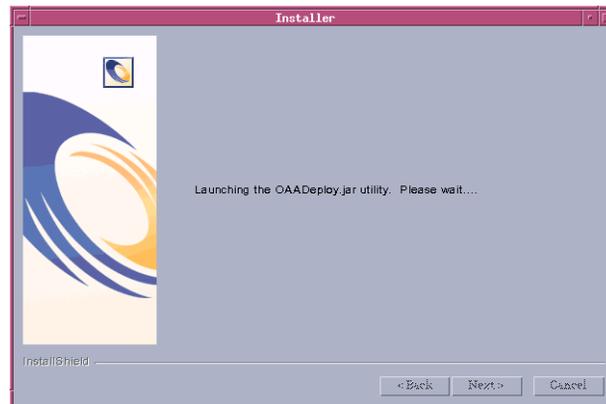
e The installer displays a list of all deployed packages. Click **Next**.
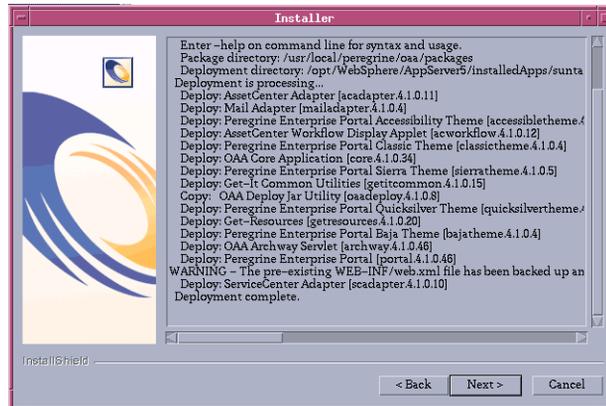
Note: The list of deployed packages depends on the components that you
have actually installed.

f Click **Browse** and locate the directory where you installed the IBM HTTP
Server. Click **Next** to continue.
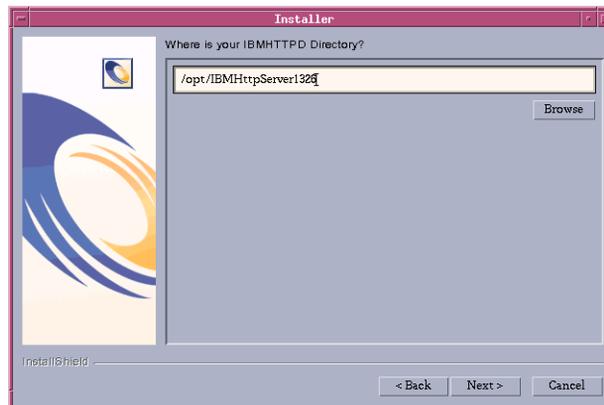
The Get-Answers installer automatically configures a Web server virtual
directory called oaa. If you want to define a different Web server virtual
directory, see *WebSphere Application Server 4.0.2* on page 128 or
WebSphere Application Server 5.0.2 on page 136 for a list of requirements.

g In the next page enter the Web server name, Web server port number, and
Context Root Path.

h In the next page verify that all the information is correct. Click **Next**.

    i In the next page enter the Host/IP (host IP address) and port number of the search engine server. Click **Next**.

    j In the next page verify that the search engine server information is correct. Click **Approve** and then click **Next**.

    k In the next page specify the database, either Oracle or DB2. Click **Next**.

    l In the next page enter the Database User Name, Database User Password, and Database Service Name. Click **Next**.

    m In the next page verify that all the information is correct. Click **Approve** and then click **Next**.

    n Click **Browse** to locate the directory where you installed the Java development kit used by your application server. Click **Next** to continue.

  10 Click **Finish** to close the installer.
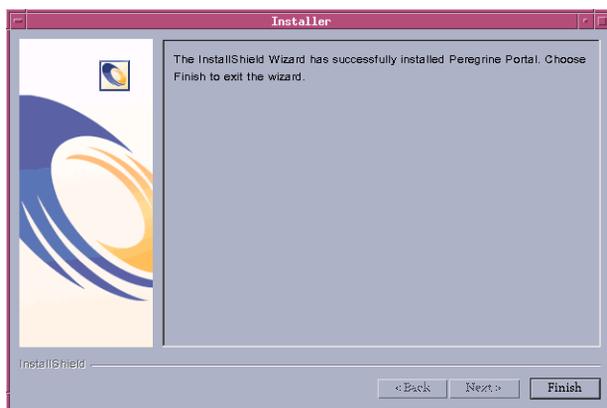
Configuring WebSphere for AIX and Solaris

The following sections show how you configure WebSphere versions 4.0.2 and 5.0.2 for AIX and Solaris.

Configuring the WebSphere 4.0.2 startupServer.sh file

If you are running on an AIX or Solaris server, you must configure your WebSphere 4.0.2 environment by editing the startupServer.sh script.

To configure the WebSphere 4.0.2 environment:

  1 Open startupServer.sh in any text editor.

2 At the top of the file add a single entry for LIBPATH (AIX) or LD_LIBRARY_PATH (Solaris) and set it to a colon-delimited concatenation of the following example paths:

```
/usr/lib

/WebSphere/AppServer/installedApps/oaa.ear/portal.4.1.2.29.war/
    WEB-INF/lib

/WebSphere/AppServer/installedApps/oaa.ear/portal.4.1.2.29.war/
    WEB-INF/lib/<"AIX" or "SunOS">

$DB2_HOME/lib
```

3 Export the completed variable entry using one of the following commands: `export LIBPATH` (AIX) or `export LD_LIBRARY_PATH` (Solaris).

A typical completed entry for AIX looks like:

```
LIBPATH=/usr/lib:/WebSphere/AppServer/installedApps/oaa.ear/portal.4.
    1.2.29.war/WEB-INF/lib:/WebSphere/AppServer/installedApps/oaa.ear
    /portal.4.1.2.29.war/WEB-INF/lib/AIX:$DB2_HOME/lib

export LIBPATH
```

A typical completed entry for Solaris looks like:

```
LD_LIBRARY_PATH=/usr/lib:/WebSphere/AppServer/installedApps/oaa.ear/
    portal.4.1.2.29.war/WEB-INF/lib:/WebSphere/AppServer/
    installedApps/oaa.ear/portal.4.1.2.29.war/WEB-INF/lib/SunOS
    :$DB2_HOME/lib

export LD_LIBRARY_PATH
```

4 At the top of the file add an entry for DB2_HOME. For example:

```
DB2_HOME=/db2inst1/sqllib

export DB2_HOME
```

5 At the top of the file add the following entry to source the DB2 environment:

```
. $DB2_HOME/db2profile
```

6 Save the file.

7 Return to the section

Configuring the WebSphere 5.0.2 startServer.sh file

If you are running on an AIX or Solaris server, you must configure your WebSphere 5.0.2 environment by editing the **startServer**.sh script.

To configure the WebSphere 5.0.2 environment:

1 Open **startServer.sh** in any text editor.

2 At the top of the file add a single entry for LIBPATH (AIX) or
LD_LIBRARY_PATH (Solaris) and set it to a colon-delimited concatenation
of the following example paths:

```
/usr/lib

/WebSphere/AppServer/installedApps/oaa.ear/portal.4.1.2.29.war/
    WEB-INF/lib

/WebSphere/AppServer/installedApps/oaa.ear/portal.4.1.2.29.war/
    WEB-INF/lib/<"AIX" or "SunOS">

$DB2_HOME/lib
```

3 Export the completed variable entry using one of the following commands:
`export LIBPATH` (AIX) or `export LD_LIBRARY_PATH` (Solaris).

A typical completed entry for AIX looks like:

```
LIBPATH=/usr/lib:/WebSphere/AppServer/installedApps/oaa.ear/
    portal.4.1.2.29.war/WEB-INF/lib:/WebSphere/AppServer/
    installedApps/oaa.ear/portal.4.1.2.29.war/WEB-INF/lib/AIX
    :$DB2_HOME/lib

export LIBPATH
```

A typical completed entry for Solaris looks like:

```
LD_LIBRARY_PATH=/usr/lib:/WebSphere/AppServer/installedApps/oaa.ear/
    portal.4.1.2.29.war/WEB-INF/lib:/WebSphere/AppServer/
    installedApps/oaa.ear/portal.4.1.2.29.war/WEB-INF/lib/SunOS
    :$DB2_HOME/lib

export LD_LIBRARY_PATH
```

4 At the top of the file add an entry for DB2_HOME. For example:

```
DB2_HOME=/db2inst1/sqllib

export DB2_HOME
```

5 At the top of the file add the following entry to source the DB2 environment:

```
. $DB2_HOME/db2profile
```

6 Save the file.

7 Return to step 4 on page 137, in the section *WebSphere Application Server
5.0.2*, and complete all the remaining steps.

For information on using Get-Answers, see the *Get-Answers User's Guide* and the *Get-Answers Administration Guide.*

Uninstall—AIX or Solaris

Use the following instructions to uninstall Get-Answers.

Warning: These procedures remove all the components that you selected to install. If you chose the Typical installation option, uninstall removes Get-Answers, Peregrine Tomcat, Apache, and JDK. If you chose the Custom installation option, then only those components that you selected to install are removed.

To uninstall Get-Answers from AIX or Solaris:

1 Open a command prompt.
2 Change directories to:

   <root>/usr/peregrine/_uninst

3 Enter the following command to uninstall Get-Answers:

   ./uninstall.bin

   Note: Stop the servers before proceeding. Type the command: ./ooactl stop.

4 Follow the on-screen instructions to complete the uninstall.

Testing your installation

Use the following steps to confirm that you have properly installed Get-Answers on AIX or Solaris.

To test your Get-Answers 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-Answers Web server resides.

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

Application Server used	Port Number
WebSphere	80, can be omitted from URL
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-Answers administration login page does not open, see the *Troubleshooting* chapter for more information.

6 Completing All Installations

CHAPTER

After you have installed Get-Answers, complete the following tasks to finish the installation process:

- Populate the Get-Answers sample documents using the Import Documents feature. See page 182.
- Set up the Search Engine server as an NT service. See page 184.
- Configure the search engine **rwserver.cfg** file. See page 186.
- Set up the Web crawler. See page 187.
- Explore the features of the Search Engine service. See page 188.
- Access the Peregrine OAA Portal to verify the OAA parameters, and to confirm that the KMGAAdapter is connecting the Web server to the Search Engine server. See page 190.
- Change the Session timeout value. See the section *Changing the Session timeout value* on page 199.
- Restart the Web server. See page 199.

Complete the procedures in this chapter in the order they appear to finish installation of Get-Answers.

Populating sample documents

The Get-Answers category is not automatically populated with the *Get-Answers User Guide*, *Get-Answers Administration Guide*, nor the *Get-Answers Installation Guide*. Instead, six example .XML files with two attachments can be imported using the new Import Documents feature.

You import the ImportRootExample directory structure, which is located in the Integrations folder under the Presentation directory. You unzip the ImportRootExample.zip to restore the directory structure after you import it. You can also backup the ImportRootExample directory before performing the import because the Import Documents feature removes imported documents from the directory structure.
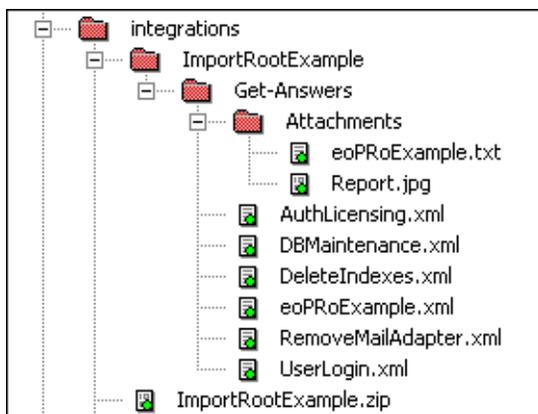
Any user with Get-Answers Administrator permissions, such as the Admin user, can access the Import Documents feature. See the chapter "Importing Legacy Data" in the *Get-Answers Administration Guide* for a complete explanation of the Import Documents feature.

Note: Get-Answers Administrator permissions are set in Set Security Capabilities under the People tab.

To populate the Get-Answers sample documents using the Import Documents feature:

1 Log in as Admin.

2 Click **Get-Answers**.

3 From the left menu, click **Import Documents**.

4 Enter the path to the `ImportRootExample` directory structure, located in the integrations folder under the Presentation directory.

On a typical installation, it is located at:

```
C:\Program Files\Peregrine\Common\Tomcat4\webapps\oaa\integrations
\ImportRootExample
```

5 Under Document Ownership Team for New Categories, choose **Peregrine Get-Answers**.

6 Leave the External Document Options as Require XML Metadata Files.

7 Set the expiration date to 24 months to ensure that the sample documents do not appear in a report of outdated documents for at least two years.

8 Scroll down to the bottom of the page.

The following text appears above the Import Button.

> **Warning:** Documents that are successfully imported will be permanently deleted. Make sure you have backup copies of these files prior to running the Import.

9 Click **Import**.

The Import Results page indicates that six documents and two attachments were successfully imported.

10 Click **x** in the upper right corner to log off.

11 Log on as user "oowner" and use "password" as the password.

12 Click Get-Answers.

13 From the left menu, click **Browse Categories**.

14 Click the **Get-Answers** category.

The six documents appear in the lower frame.

15 Click the link for Rich-text sample document.

The sample document links to a text file and to an image file. It also demonstrates the formatting of numbered lists, bulleted lists, fonts, and special characters.

Setting up the search engine server as an NT service

On Windows NT systems, you can run the Search Engine server as an NT service.

To run the Search Engine server as an NT service:

Note: If you do not run the Search Engine server a service, always make sure the Search Engine is running *before* you start Tomcat.

1 From the Start menu, choose **Programs** -> **Get-Answers Search Engine** -> **Services Console**.

2 In the RetrievalWare Services Console window, select the **Service menu** and click **New Service**.

3 In the RetrievalWare Services Console, choose RetrievalWare Executive and click **OK**.
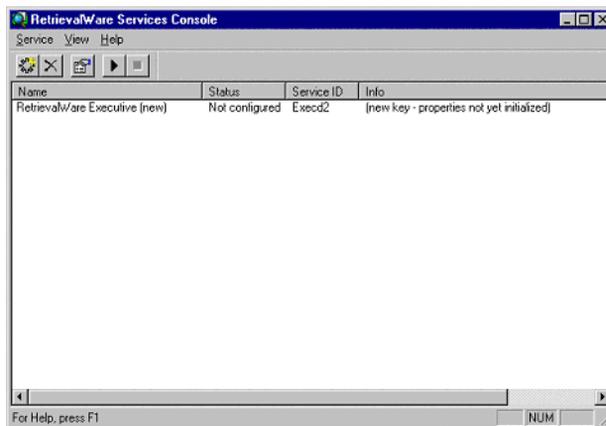
In the Services Console the status of the new service is "Not configured."

4 Click the new service to select it. Then click **Service** -> **Properties.**

The RetrievalWare Executive Properties dialog box is displayed.
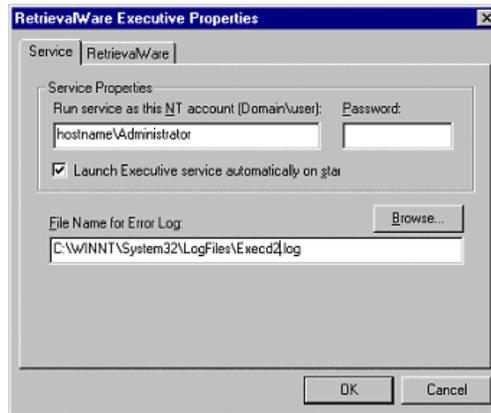
5 On the Service tab, make the following entries and selection:

- In the Run service as this <u>N</u>T account (Domain\user) text box, type a valid domain\username combination for an administrator account. The account must have the rights to log on as a service, and have a valid login name and password for the Search Engine server.

  Example: administrator\password

- Select the **Launch Executive Service Automatically on Startup** check box.

6 On the RetrievalWare tab, perform the following:

- In the Port address box, type the correct port number.

  You entered this information on the *Get-Answers installation worksheet* on page 22. If the default port number is not the number you see when you start your search engine manually, change the port number. For example, if your Get-Answers Search Engine Executive window displays the message: 'Execd v7.0 started on port 6003', then change the port number to 6003.

- Click the **Browse** button. Locate the exec.cfg file under the \config folder.

  Example: C:\getanswers\Peregrine\config\exec.cfg

No entry is required in the Remote Name Server Address section.

Note: To confirm the correct port number, click **Start** -> **Programs** -> **GetAnswersSearchEngine** -> **Start Search Engine Server**.

7 Click **OK**.

8 In the Service Console window, the Executive service status is now "Stopped." To start the service, select the Executive service and click **Service -> Start Service**.

A message confirms that the service is being started, and the status in the Service Console window changes to "Running."

Note: If the service will not start, close the Search Engine Services Console. Open the NT or Windows 2000 Services; double-click the RetrievalWare Executive service to open it; change the permissions under the Log On tab; and then start the service.

9 Close the **RetrievalWare Services Console** window.

Configuring the rwserver.cfg file

During installation, Get-Answers created a file called rwserver.cfg in your *<Web_server_presentation_directory>*/oaa/WEB-INF/config directory.

To configure the rwserver.cfg file:

1 Open the rwserver.cfg file in Notepad or another text editor.

2 Look for the "RWSERVER" entry.

3 Set this property to:
RWSERVER=cqns@SEARCH_ENGINE_IP_ADDRESS:*<port>*
where *<port>* is the port number of your Get-Answers Search Engine server.

Note: You entered the port number in the *Get-Answers installation worksheet* on page 22. Use "localhost" if the Web server and Search Engine server are running on the same machine.

4 Save the file.

Setting up the Web crawler

The following section describes how you set up the Web crawling feature (also called the *spider* feature) in Get-Answers. The Get-Answers Search Engine must be installed before you can configure Web crawling.

Note: The Get-Answers Search Engine directory is installed in $USER_INSTALL_DIR$, under C:\getanswers by default.

To setup the Web crawler:

1 To initialize the Spider Database, run the DBSETUP.BAT file found in <$USER_INSTALL_DIR$>\spider\bin.

A command prompt/log opens with the setup processes taking place.

2 In the start.lst file found in $USER_INSTALL_DIR$\spider\KMSpider\config, add the URLs (one per line) where you want to to "crawl" for documents. For example:

http://www.peregrine.com

Note: See the chapter "Setting up Get-Answers" in the *Get-Answers Administration Guide* for a detailed description of configuring the Web crawler.

Using the Search Engine Search server

This section contains a quick review of the functions available in the Search Engine Search server.

Starting the search engine server

You start the Search Engine server before you start the application server.

Note: If you did not make the Search Engine server a service (see page 184), always make sure the Search Engine is running before you start Tomcat.

To start the search engine search server:

▶ Click **Start** ->**Programs** ->**Get-Answers Search Engine** ->**Start Search Engine Search Server**.

Starting the search engine using the system utilities menu

Complete these steps to start the Search Engine server and update the index to the knowledge management library.

To start the search engine using the system utilities menu:

1 On the Search Engine server machine click **Start** -> **Programs** -> **Get-Answers Search Engine** -> **Systems Utilities Menu**.

2 Choose 4 -> **Search And Indexing Servers**.

3 Choose 2 -> **Start servers in background**.

   The window shows that the Search Engine has started running.

4 Press any key to continue.

5 Choose 1 -> **Return to previous menu**.

6 Choose 6 -> **Indexing and Index Utilities**.

7 Choose 4 -> **Index RDBMS Records**.

8 Choose **Index all RDBMS Records in your library**.

9 Enter **KMLib**.

   This is the knowledge management library you want to index.

10 Enter 1 -> **Yes** to update the index.

11 Choose 1 three times to close the utility.

Note: If errors occur during the indexing process, you can find the error messages in the Log file at
<Search_Engine_install_path>\Peregrine\KMLib\indexes\KMLib\KMLib_index.err.

Stopping the search engine server

After a database connection error, you must stop and restart the search engine server.

To stop the search engine server:

▶ On the Search Engine server machine click **Start** ->**Programs** ->**Get-Answers Search Engine** ->**Stop Search Engine Search Server**.

Indexing Updated Documents

This menu command immediately updates the Get-Answers indexes for newly added, modified, or deleted documents without the usual 5 minute delay.

1 Make sure the search engine search server is running.

A command prompt window appears and displays the message: "Execd v7.0 started on port nnnn."

2 On the search engine server machine click **Start** -> **Programs** -> **Get-Answers Search Engine** -> **Index Updated Documents**.

3 At the command prompt, type "KMLib" for the library name.

4 Type "1" and press **Enter** to start indexing.

5 After indexing is complete, press any key to continue.

Reindexing All Documents

This menu command reindexes every document in the library. It enhances performance. This can be done outside of regular office hours.

1 Make sure the search engine search server is running.

A command prompt window appears and displays the message:
Execd v7.0 started on port nnnn.

2 On the search engine server, choose **Start** > **Programs** > **Get-Answers Search Engine** > **Reindex Updated Documents**.

3 At the command prompt, type KMLib for the library name.

4 Type 1 and press **Enter** to start indexing.

5 After reindexing is complete, press any key to continue.

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.

A default administrator, System, 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>*\\WEB-INF
directory to store these parameters. If you reinstall Get-Answers,
make a copy of this file and store it outside your Get-Answers
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.

System is the default administrator name.
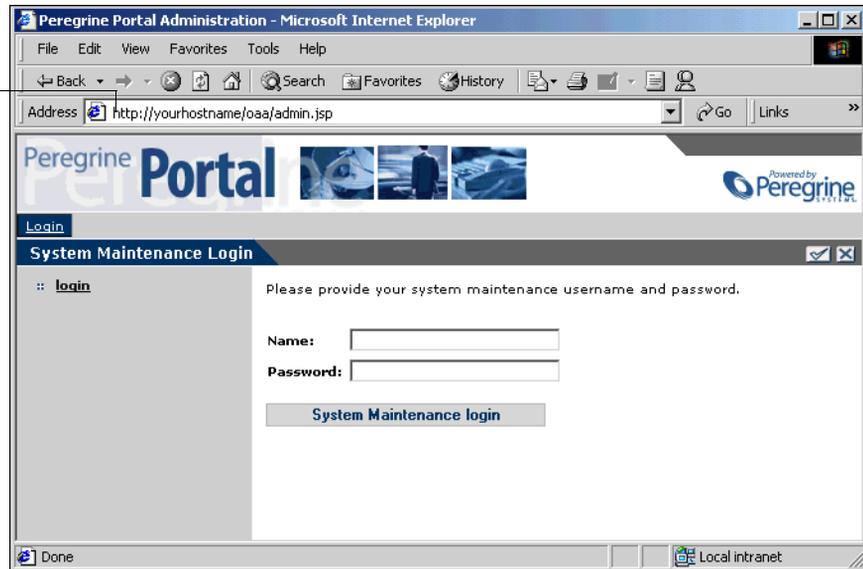
4 In the Name field, type **System**.

No password is required on initial login. Refer to the *Get-Answers Administration Guide* for detailed instructions on how to change the Administrator login name and password.

5 Click **System Maintenance login** to open the Control Panel page.

Use the Admin module to define settings to Get-Answers.

Activity menu

The left pane Activity menu provides access to a number of different administrative utilities for Get-Answers. You need to access some of these during this installation process. The utilities and their functions are described in detail in the *Get-Answers 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-Answers 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 target adapters is "Disconnected." The status changes after you define target adapters, as described later in this section.

All changes involving the Control Panel require the following steps:

Step 1 Log in to the Admin page with the username System.

Step 2 Go to the Settings page.

Step 3 Make your changes.

Step 4 Reset the server.

Using the Settings page

From the Admin module Activity menu, click **Settings** to open the current parameter settings. The Settings page is divided into tabs. The tabs that you see depend on the Web applications that you installed and the adapters that you use. The Common tab is available for all installations.

To open the Settings page:

1 From the Admin module, click **Settings**.

The Settings page opens, you use the various tabs to configure settings for Get-Answers.

By default, the Common settings page opens.

2 Click the appropriate tab to change setting parameters.

When you change the parameter default value for any setting and save it, the corresponding description column adds a link with the default value listed in brackets so that you can return to the default at any time.

To revert to the default setting:

1 Navigate to the appropriate setting parameter.

2 From the description column next to the changed parameter, select the **Click for default** link.

3 To return to the default setting, click **Click for default: [Limited]** and click **Save**.

The parameter returns to the default state.

Anonymous password:	Anonymous user password for the mail adapter
Outbound mail host:	The full name or IP address of the machine hosting the outbound mail server.
mailhost	
Outbound mail user ID:	The user ID used to access the outbound mail server.

Resetting the server

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-Answers.

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 adapter connections

This section describes how to configure and verify the following settings:

- KMGAAdapter

■ Portal DB adapter

■ Web Application database adapter

Connection settings

This section describes how to configure and verify settings.

To define common settings for Get-Answers:

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-Answers.

The Common settings page opens by default.

2 Update the fields as required.

The Common tab includes settings for the following:

■ Language Translation

■ Personalization

■ Attachments

■ Server-Side Scripts

■ Encoding, Locales, and Sessions

■ Performance Tuning

Tip: You can reload forms without having to reset your Peregrine OAA server. Set the **Reload Forms** option to **Yes** under Performance Tuning. This works best in a production environment.

Set the Reload Forms option to yes to automatically reload the forms if their sources have been modified after the server has started.

3 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.

Checking the status of the KMGAAdapter

The KMGAAdapter connects the Web server to the Search Engine search server.

Perform the following steps on the Web server.

Important: This procedure cannot be performed until the documents are indexed. See the section "*Reindexing the sample documents*" in *Appendix A, Troubleshooting Installation and Operation* on page 235.

1 From the Peregrine Portal Admin module, click Settings.

2 Verify the line on the next screen containing a reference to oaakm and com.peregrine.oaa.adapterKMGAAdapter reads **connected**.

Connection Status		
Target	**Adapter**	**Status**
notificationDB	com.peregrine.oaa.adapter.bizdoc.BizDocAdapter	connected
portalDB	com.peregrine.oaa.adapter.bizdoc.BizDocAdapter	connected
mail	com.peregrine.oaa.adapter.mail.MailAdapter	connected
rome	com.peregrine.oaa.adapter.bizdoc.BizDocAdapter	connected
oaaworkflowDB	com.peregrine.oaa.adapter.bizdoc.BizDocAdapter	connected
oaakm	com.peregrine.oaa.adapter.km.KMGAAdapter	connected
weblication	com.peregrine.oaa.adapter.bizdoc.BizDocAdapter	connected

3 Import the Notification Services templates and default work hours. Take these steps:

   a Click the **Notification Services Administration** link, which appears on the Home page when you log in. This requires the oaa.notificationservices.admin capability.

   b Click the **Default Work Hours** link on the left side of the page.

   c If the default work hours are set to the current time, click **Data Import** and follow the instructions.

   d From the Peregrine Portal Admin module, click **Settings**. Then click **Reset Server** at the bottom of the page to install and activate the Get-Answers email templates.

4 Log out.

5 In the **Alias for** field type **rome**. Then click **Save** to return to the Admin Control Panel page.

   Note: The default alias is rome.

6 Click **Reset Server** at the bottom of the page to apply your changes to the system.

7 When the operation completes, verify that the adapter used for the **portalDB** target is com.peregrine.oaa.adapter.bizdoc.BizDocAdapter and displays "Connected" in the Connection Status table.

   Important: If you specify one alias and subsequently change that alias, you lose the personalizations of your portal application screens.

Setting Web Application database adapter

Get-Answers 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-Answers to save personalization to the Web application:

1   From the Peregrine Portal Admin module, click **Settings**.

2   At the top of the Settings page, click the **Web Application** tab to open the Web Application settings page.

3   In the **Alias for** field type **rome**. Then click **Save** to return to the Admin Control Panel page.

Note: The default alias is rome.

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 **weblication** target is com.peregrine.oaa.adapter.bizdoc.BizDocAdapter and displays "Connected" in the Connection Status table.

Important: If you specify one alias and subsequently change that alias, you lose personalizations made to forms.

The installation is complete. For information on using Get-Answers, see the *Get-Answers User Guide* and the *Get-Answers Administration Guide*.

Changing the Session timeout value

If you are implementing the Get-Answers and ServiceCenter integration, you must change the value of the timeout session. A high value is necessary because the background DDE Applet window that is used for the Get-Answers and ServiceCenter integration will time out after the number of seconds in the Session timeout value has elapsed, and this timeout will require a reconnection through ServiceCenter and a re-login in the main Get-Answers window.

To change the Session timeout value:

1 From the Get-Answers Admin home page, click **Settings**.

Note: See *Accessing the Peregrine Portal Admin module* on page 190 for more detailed information on using the Admin page.

2 From the **Common** tab, scroll to the **Session timeout** field under the Encoding, Locales, and Sessions section.

3 Set the Session timeout value in seconds; for example, a 10-hour workday is 36000 seconds.

4 Scroll to the bottom of the page and click **Save**.

The Control Panel page reopens.

5 Click **Reset Server**.

When the server has been reset, a confirmation message appears at the top of the page.

Restarting the servers

Perform the following on the Web and application servers.

▶ Restart the Apache and Tomcat servers.

7 Load-Balancing Application Servers

CHAPTER

This chapter covers the following topics:

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 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-Answers 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:
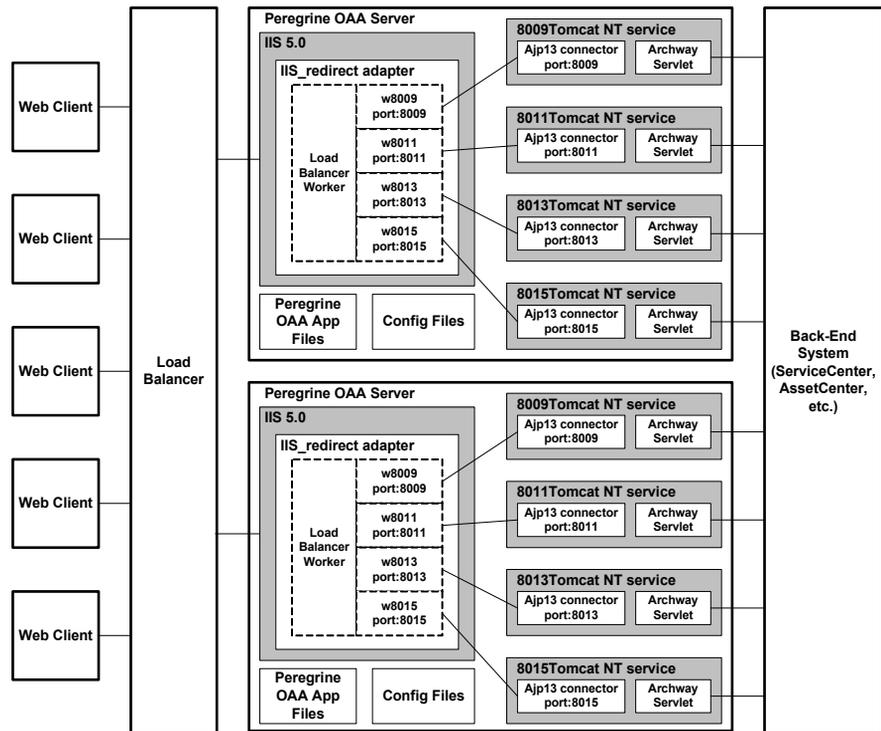
Note: A white paper on Peregrine OAA architecture and optimization is available on the Customer Support Web site at http://support.peregrine.com. In the Search Knowledge Base question field type optimize and click **Go**. Click **Get-It: Guide for planning and implementing OAA-based applications** in the search results list and download the document.

Creating multiple instances of Tomcat for Apache

You can create multiple instance of Tomcat to load balance requests to Get-Answers. You can configure each instance of Tomcat as a service. Although this is not required, it improves performance, makes the instances easier to manage, and provides extra functionality. For example, you can restart the service if it fails or if the machine on which the instances are installed needs to be restarted.

Note: The following procedures assume that you have already installed Get-Answers. Refer to either the Windows or UNIX installation chapter for more information on installing Get-Answers.

For systems using IIS, see *Creating multiple instances of Tomcat for IIS* on page 215.

To create multiple Tomcat instance for Apache:

Step 1 Log in to the Get-Answers admininstration page and disable the script pollers setting. See *Disabling script pollers on the primary Tomcat instance* on page 205.

Step 2 Create copies of the Tomcat directory, then delete the \webapps\oaa directory from the newly copied instances of Tomcat. See *Copying the Tomcat directory* on page 205.

Step 3 Edit the workers.properties file of the first or primary Tomcat instance to set the values for each additional Tomcat instance. See *Editing the workers.properties file* on page 206.

Step 4 Edit the mod_jk.conf file of the first or primary Tomcat instance to establish a connection between Tomcat and Apache. See *Editing the mod_jk.conf file* on page 208.

Step 5 Edit the httpd.conf file to define the Tomcat workers available for Apache. See *Editing the httpd.conf file* on page 209.

Step 6 Edit the server.xml files for each Tomcat instance. See *Editing the server.xml files for Apache* on page 209.

Step 7 Edit the jk2.properties files for each Tomcat instance. See *Editing the jk2.properties files for Apache* on page 211.

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 212.

Step 9   Log in to the Get-Answers admininstration page for the primary Tomcat instance and enable the script pollers setting. See *Enabling script pollers on the primary Tomcat instance* on page 213.

Step 10   Testing the configuration. See *Testing load balancing on Apache* on page 213.

Disabling script pollers on the primary Tomcat instance

You only need one Tomcat instance running script pollers. Before you copy your primary Tomcat instance, you should login to the Get-Answers administration page and turn off script polling. This will disable script polling on all of the Tomcat instances you create by copying the primary Tomcat instance.

To disable script pollers on the primary Tomcat instance:

1   Log in to the Get-Answers administration page. The default URL is:

http://*<server_name>*/oaa/admin.jsp

2   Click **Settings**.

Get-Answers displays the common settings page.

3   Scroll down to the Server-Side Scripts section, and select **No** for the Enable scipt pollers option.

4   Scroll down to the bottom of the form and click **Save**.

Get-Answers displays the Control Panel page.

5   Click **Reset Server** to commit your changes.

6   Log out of the Get-Answers administration page.

7   Stop the Peregrine Tomcat service to temporarily disable Get-Answers.

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 can create 3 copies of the Tomcat folder called \Tomcat4_8011, \Tomcat4_8013, and \Tomcat4_8015. The primary instance uses port 8009.

Warning: If you are using more than four Tomcat instances, change the port numbers to avoid conflicts.

---

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, ajp13, w8011, w8013, w8015
```

Find the worker.loadbalancer.type=lb code and make changes to the line that follows as shown below.

```
worker.loadbalancer.type=lb
worker.loadbalancer.balanced_workers=ajp13, 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.w8011.port=8011
worker.w8011.host=localhost
worker.w8011.type=ajp13
worker.w8011.cachesize=40
worker.w8011.lbfactor=10
```

Note: All Tomcat instances share this workers.properties file; therefore, all additional lines must be in the file for the primary Tomcat instance.

4 Update the last two lines in the Default ajp13 Worker Definition section.

The first three lines are already in the file.

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

Find the `worker.ajp13.lbfactor=10` code and make changes as shown below

Change lbfactor from =1 to =10
Change cachesize from =10 to =40

5 Save the file.

Editing the mod_jk.conf file

The **mod_jk.conf** file defines where the **worker** files are available in Apache. This file is shared by all Tomcat instances on the server. Edit **mod_jk.conf** only after successful deployment of necessary Get-Answers files; otherwise the Get-Answers mount points, file locations, and directories are not included in the **mod_jk.conf** file, and have to be manually added.

To edit the mod_jk.conf file:

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

The **mod_jk.conf** file is located in the Tomcat **conf** directory.

Note: This is done only on the primary Tomcat instance.

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. For example:

```
JkWorkersFile "C:\Program Files\Peregrine\Common\Tomcat4
\conf\worker.properties"
```

4 Change all JkMount entries to use "loadbalancer" instead of "default worker ajp13." The format is: JkMount<*file(s)_or_directory*> <*worker_name*>

For example:

```
JkMount/oaa/servlet/* loadbalancer
JkMount/oaa/*.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.

The default location is:
C:\Program Files\Peregrine\Common\Apache2\conf.

2 Update the following line to include -local:

```
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

You modify the server.xml file for each Tomcat instance. The server.xml file
contains information Tomcat needs to connect to the Web server and to find
Peregrine OAA Platform Web application files.

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

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 Verify that the port number attribute of the <Server> element is a unique
value that does not conflict with other port numbers used by Tomcat. It is
recommended that the port numbers 8005-8008 be used for the shutdown
port when configuring four Tomcat instances. For example:

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

Note: This is not the worker communications port number. The worker port
number is defined in step 4 on page 210.

Warning: If you are using more than four Tomcat instances, change the port
numbers to avoid conflicts.

3 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:

```
<!-- Define a non-SSL Coyote HTTP/1.1 Connector on port 8080 -->
<!--
<Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8080" minProcessors="5" maxProcessors="75"
enableLookups="true" redirectPort="8443" acceptCount="10" debug="0"
connectionTimeout="20000" useURIValidationHack="false" />
-->
```

4 Update the port number used by the Coyote Connector to a unique,
non-conflicting value. If you are configuring four Tomcat instances, the
values 8009 (as the primary port), 8011, 8013, and 8015 are recommended.

Example:

```
<!-- Define a Coyote/JK2 AJP 1.3 Connector on port 8009 -->
<Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8009" minProcessors="5" maxProcessors="75"
enableLookups="true" redirectPort="8443" acceptCount="10" debug="0"
connectionTimeout="20000" useURIValidationHack="false"
protocolHandlerClassName="org.apache.jk.server.JkCoyoteHandler" />
```

5 Update the jvmRoute attribute of the <Engine> element with the name of the
ajp13 worker defined in workers.properties.

Example:

```
<!-- Define the top level container in our container hierarchy -->
<Engine jvmRoute="w8009" name="Standalone" defaultHost="localhost"
debug="0">
```

The port number should follow the convention used elsewhere in the
configuration (8009, 8011, and so on). These entries must be the same as the
Tomcat ID entries you added to the workers.properties file in the primary
Tomcat instance.

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

Example:

```
<!-- Define the default virtual host -->
<Host name="localhost" debug="0"
appBase="C:\Program Files\Peregrine\Common\Tomcat4\webapps"
unpackWARs="true" autoDeploy="true">
```

7 Create a <Context> element entry in the first or primary Tomcat instance and copy it to the other Tomcat instances, changing the OAA context so that it is not reloadable.

This prevents Tomcat from reloading the servlet without restarting the service. It improves performance and helps synchronize the JSP code that the Tomcat instances are serving during an update.

Add the entry just above the "examples" Context entry. For 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 primary Tomcat instance.

8 Save the file.

9 Repeat step 1 through step 8 for the server.xml file in each Tomcat instance.

Editing the jk2.properties files for Apache

You will need to modify the jk2.properties file for each Tomcat instance. 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 instance 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 assign to 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.

Note: The `<service_name>` cannot contain spaces.

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

Warning: The command to create Tomcat instances cannot accept spaces in the file path.

For example:

```
installservice Tomcat8009 C:\Progra~1\Peregrine\Common\Tomcat4_8009
C:\Progra~!\Peregrine\Common\jdk1.3.1_05\jre\bin\server\jvm.dll
```

Note: Use the Windows naming convention to avoid problems of spaces in the file path name. For example, replace Program Files with Progra~!.

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

Tip: You can easily remove a service. From the DOS command prompt, change directories to your Tomcat bin directory. Then enter the following command: Tomcat -uninstall *<service_name>*. The command is case-sensitive.

4 Start each Tomcat service that you install.

Enabling script pollers on the primary Tomcat instance

You need only one Tomcat instance running script pollers. Before you test your load balancing configuration, log in to the Get-Answers administration page of the primary Tomcat instance and enable script polling.

To enable script pollers on the primary Tomcat instance:

1 Log in to the Get-Answers administration page of the Tomcat instance. The default URL is:

http://*<server_name>*:*<port_number>*/oaa/admin.jsp

For *<port_number>* enter the port number defined for your primary Tomcat instance, typically port 8009.

2 Click **Settings**. Get-Answers displays the common settings page.

3 Scroll down to the Server-Side Scripts section, and select **Yes** for the Enable script pollers option.

4 Scroll down to the bottom of the form and click **Save**. Get-Answers displays the Control Panel page.

5 Click **Reset Server** to commit your changes.

6 Log out of the Get-Answers administration page.

Testing load balancing on Apache

After you create 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, open the Windows Control Panel and start each instance from the Services dialog box.

2 Open a browser and log in to Get-Answers.

3 Perform an action in Get-Answers, such as a search.

4 Log out of Get-Answers.

5 Close your browser to clear the connection cache.

6 Repeat step 1 through step 5 once for each Tomcat instance installed. For example, if you have 4 Tomcat instances, you log in, perform an action, and log out 4 times.

The load balancing mechanism uses a round-robin algorithm. If load balancing is working correctly, each login uses a different Tomcat instance.

7 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. For example, you can restart the service if it fails or if the machine on which the instances are installed needs to be restarted.

To create multiple Tomcat instance for IIS:

Step 1 Log in to the Get-Answers admininstration page and disable the script pollers setting. See *Disabling script pollers on the primary Tomcat instance* on page 216.

Step 2 Create copies of the Tomcat directory, then delete the \webapps\oaa directory from the newly copied instances of Tomcat. See *Copying the Tomcat directory* on page 216.

Step 3 Move classes12.jar files to the JDK directory. See *Moving classes12.jar* on page 217.

Step 4 Configure the ISAPI Plugin for IIS. See *Configuring the ISAPI Plugin for IIS* on page 217.

Step 5 Create and configure a jakarta virtual directory in IIS. See *Creating and configuring a jakarta virtual directory in IIS* on page 218.

Step 6 Configure IIS to use isapi_redirector2.dll as an ISAPI Filter. See *Configuring the isapi_redirector2.dll as an ISAPI filter* on page 218.

Step 7 Create and configure an oaa virtual directory in IIS. See *Creating and configuring an oaa virtual directory in IIS* on page 220.

Step 8 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 221.

Step 9 Edit the server.xml files for each Tomcat instance. See *Editing the server.xml files for IIS* on page 222.

Step 10 Edit the jk2.properties files for each Tomcat instance. See *Editing the jk2.properties files for IIS* on page 224.

Step 11 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 224.

Step 12 Log in to the Get-Answers admininstration page for the primary Tomcat instance and enable the script pollers setting. See *Enabling script pollers on the primary Tomcat instance* on page 225.

Step 13 Testing the configuration. See *Testing load balancing on IIS* on page 225.

Disabling script pollers on the primary Tomcat instance

You need only one Tomcat instance running script pollers. Before you copy your primary Tomcat instance, log in to the Get-Answers administration page and turn off script polling. This ensures that script polling is disabled on all the Tomcat instances that you will create by copying the primary Tomcat instance.

To disable script pollers on the primary Tomcat instance:

1 Log in to the Get-Answers administration page. The default URL is:

http://*<server_name>*/oaa/admin.jsp

2 Click **Settings**. Get-Answers displays the common settings page.

3 Scroll down to the Server-Side Scripts section, and select **No** for the Enable scipt pollers option.

4 Scroll down to the bottom of the form and click **Save**. Get-Answers displays the Control Panel page.

5 Click **Reset Server** to commit your changes.

6 Log out of the Get-Answers administration page.

7 Stop the Peregrine Tomcat service to disable Get-Answers temporarily.

Copying the Tomcat directory

You 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 the folder into the same root path. The default 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 want four instances of Tomcat listening on ports 8009, 8011, 8013, and 8015, create four copies of the Tomcat folder and name them \Tomcat4_8009, \Tomcat4_8011, \Tomcat4_8013, and \Tomcat4_8015.

Warning: If you are using more than four Tomcat instances, change the port numbers to avoid conflicts.

---

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

Moving classes12.jar

If your application uses Oracle, move the classes12.jar files to the \ext folder under your JDK installation.

To move classes12.jar:

▶ Move classes12.jar from
   <your_Tomcat_installation>\webapps\oaa\Web-Inf\lib to the \ext folder under your JDK installation.

   The default path is:
   C:\Program Files\Peregrine\Common\jdk1.3.1_05\jre\lib\ext

Configuring the ISAPI Plugin for IIS

The Get-Answers 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"
```

3 Save and close the jk2.reg file.

4 Double-click the jk2.reg file in 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
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\bin. This path must contain the isapi_redirector2.dll file.

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 Make sure that IIS is running as a service.

2 Click **Start** -> **Settings** -> **Control Panel** -> **Administrative Tools** and open the Internet Information Services management console.

3 Right-click the **Default Web Site** node and then click **Properties**.

4 Click the **ISAPI Filters** tab.

5 Click **Add**.

6 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

7 Click **OK**.

8 From the Internet Services management console, right-click the **Default Web Site** node, then click **Properties** -> **Isapi Filters** again.

The ISAPI filter in IIS displays a green status arrow to indicate that it is running.

9 Close the Internet Information Services management console.

Note: Stop and restart the IIS service for changes to take effect. Restart Tomcat as well.

Creating and configuring an oaa virtual directory in IIS

To run Get-Answers 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-Answers. The recommended virtual directory name is "oaa." If you choose to use another virtual directory name, 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-Answers. 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.

To edit the worker2.properties file:

1 Open the workers2.properties file, located in the conf directory of your primary Tomcat installation, in any text editor.

2 Create a channel.socket entry for each Tomcat instance. (A channel socket is 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 where the Tomcat instance is located.

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

The 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. The virtual directory is "oaa" by default. If you defined a different virtual directory other than oaa to run Get-Answers, change the uri values. For example:

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

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

4 Save the file.

Editing the server.xml files for IIS

A separate server.xml file is required for each Tomcat instance running concurrently. The server.xml file contains the information that Tomcat needs to connect to the Web server and to find Peregrine OAA Platform Web application files.

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

To edit the server.xml files:

1 Each Tomcat instance has a server.xml file located in the conf directory. Open server.xml in any text editor.

2 Update the port number attribute of the <Server> element to a unique value that does not conflict with other port numbers used by Tomcat.

Peregrine Systems recommends that you use the port numbers 8005-8008 when configuring four Tomcat instances.

Warning: If you are using more than four Tomcat instances, change the port numbers to avoid conflicts.

For 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.

Peregrine Systems recommends that you use port numbers 8009, 8011, 8013, and 8015 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" useURIValidationHack="false"
protocolHandlerClassName="org.apache.jk.server.JkCoyoteHandler" />
```

4 Create a `<Context>` element entry from the first or primary Tomcat instance and copy it to the other Tomcat instances.

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 primary Tomcat instance.

5 Update the `jvmRoute` attribute of the `<Engine>` element with the server name and communications port used by each Tomcat instance. For 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 primary Tomcat instance. List the server information in the `appBase` attribute. For 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 Comment out port 8080 in the `non-SSL Coyote HTTP...` statement. For example:

```
<!-- Define a non-SSL Coyote HTTP/1.1 Connector on port 8080 -->
<Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8080" minProcessors="5" maxProcessors="75"
acceptCount="10" debug="0" connectionTimeout="20000"
useURIValidationHack="false" />
-->
```

8 Save the server.xml file.

9 Repeat step 2 through step 8 for each copy of the server.xml file you created.

Editing the jk2.properties files for IIS

You modify the jk2.properties file for each Tomcat instance. The jk2.properties 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 workers2.properties file for this Tomcat instance. For example:

```
channelSocket.port=8009
```

3 Save the jk2.properties 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 instance 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 the bin directory of your Tomcat instance.

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 assign to 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.

Note: The *<service_name>* cannot contain spaces.

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

> **Note:** The command to create Tomcat instances cannot accept spaces in the file path. The following example avoids spaces in the file path name by replacing `Program Files` with `Progra~!`.
>
> `installservice Tomcat8009 C:\Progra~!\Peregrine\Common\Tomcat4`
> `C:\Progra~!\Peregrine\Common\jdk1.3.1_05\jre\bin\server\jvm.dll`

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

> **Tip:** You can easily remove a service. From the DOS command prompt, change directories to the `bin` directory of your Tomcat instance, then enter the following command: `Tomcat -Uninstall <service name>`.

4 Start each Tomcat instance that you install.

Enabling script pollers on the primary Tomcat instance

You only need one Tomcat instance running script pollers. Before you test your load balancing configuration, log in to the Get-Answers administration page of the primary Tomcat instance and enable script polling.

To enable script pollers on the primary Tomcat instance:

1 Log in to the Get-Answers administration page of the Tomcat instance. The default URL is:

`http://<server_name>:<port_number>/oaa/admin.jsp`

For `<port_number>` enter the port number you have defined for your primary Tomcat instance, typically port 8009.

2 Click **Settings**. Get-Answers displays the common settings page.

3 Scroll down to the Server-Side Scripts section, and select **Yes** for the Enable scipt pollers option.

4 Scroll down to the bottom of the form and click **Save**. Get-Answers displays the Control Panel page.

5 Click **Reset Server** to commit your changes.

6 Log out of the Get-Answers administration page.

Testing load balancing on IIS

After you have created additional Tomcat instances, test load balancing.

To test load balancing:

1 Start all Tomcat instance services. If you installed Tomcat as a service, you open the Windows Control Panel and start Tomcat in the Services dialog box.

2 Open a browser and log in to Get-Answers.

3 Perform an action in Get-Answers. For example, perform a search.

4 Logout of Get-Answers.

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 four Tomcat instances, log in, perform an action, and log out four times.

The load balancing mechanism uses a round-robin algorithm. If load balancing is working properly, each login attempt should use a different Tomcat instance.

7 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.

8 Configuring Integrations

CHAPTER

This chapter is intended for administrators who want to integrate Get-Answers with ServiceCenter or Remedy Help Desk. It also includes configuration information for the email adapter used by Notification Services.

Configuring the ServiceCenter Integration

To integrate ServiceCenter with Get-Answers perform the following steps:

Step 1 Remove old Get-Answers files from ServiceCenter if you have integrated previous versions of Get-Answers with ServiceCenter. Go to *Removing old Knowlix files from ServiceCenter* on page 227 to learn how.

Step 2 Load the Get-Answers file into ServiceCenter. See page 228.

Step 3 Creating the getans.server field in ServiceCenter. See page 229.

Step 4 Configuring the ServiceCenter files. See page 230.

Removing old Knowlix files from ServiceCenter

Previous versions of Get-Answers incorporated Knowlix with its features. If you are using an older version of Get-Answers that used Knowlix and you integrated that version with ServiceCenter, remove the Knowlix files now.

If you have never integrated ServiceCenter with Knowlix, skip this section.

To remove the old Knowlix files:

1   In ServiceCenter, click the **Toolkit** tab.

2   Click the **Database Manager** button.

3   In the dialog box leave the top field blank. Enter displayoption in the File field, or choose it from the list.

4   Click the **Search** button.

    The Display Application Option Definition window opens.

5   In the Default Label field, type *__Knowlix__*, and press **Enter**.

    Note: This field is case-sensitive. Type *Knowlix* exactly as it appears here.

    A list of all Knowlix files opens.

6   Select each file and click **Delete**. Repeat this step for each Knowlix file.

7   Click the Back button to return to the Database Manager.

    Now you can import the new Get-Answers file using the next procedure.

Loading the Get-Answers file into ServiceCenter

The file you incorporate into ServiceCenter is called SC05GA.unl. It is included with your Get-Answers installation. In this procedure, you must copy the SC05GA.unl file from your Get-Answers Web server directory on to the ServiceCenter Server hard drive before you can load it into ServiceCenter.

To load the Get-Answers file into ServiceCenter:

1   Copy the SC50GA.unl file from oaa\WEB-INF\etc\Version5 folder on your Get-Answers server to the ServiceCenter Server machine.

2   In ServiceCenter, open the ServiceCenter System Administrator menu and select **Toolkit**.

3   Click **Database Manager**.

4   Click the **Options** menu and choose **Import/Load**.

5 In the ServiceCenter File Load/Import dialog box, click the Browse button in the File Name field to navigate to the **SC50GA**.unl file, as shown here.

Click the Browse button to find the SC50GA.unl file.
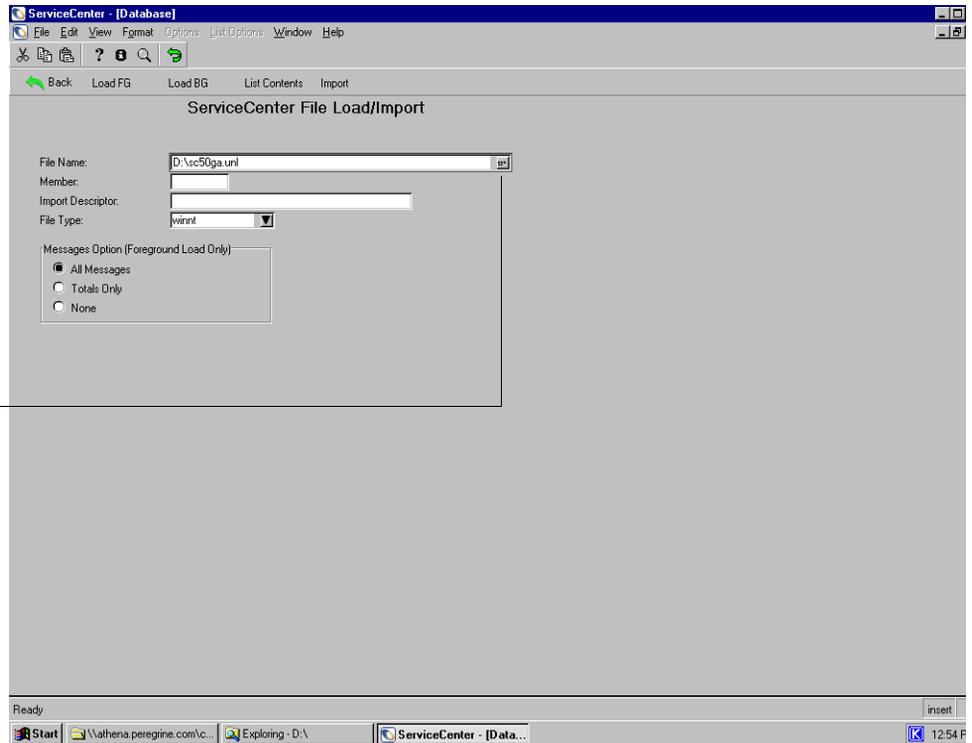
6 Click **Load FG** to start the process.

The process runs for several minutes. The message * **too many messages** might appear. This is normal; it is not an error message.

Go to the next section to continue.

Creating the getans.server field in ServiceCenter

After you import the **SC50GA**.unl file into ServiceCenter, add the **getans.server** field to the Database Dictionary and configure the file.

To add the getans.server field:

1 In ServiceCenter click **Database Dictionary**.

2 In the dialog box type info in the File Name field.

3 In the DBDict window click **Descriptor Field**.

4 Click **New**.

5 In the dialog box enter **getans.server**, choose **character** as the type, and then click the Plus sign button.

6 In the next screen, scroll down the list and make sure your field was added.

7 Click **OK**.

Configuring the ServiceCenter file

As the final phase in integrating Get-Answers with ServiceCenter, you configure the **SC50GA.unl** file that you just added.

To configure the SC50GA.unl file:

1 In ServiceCenter, click the **Utilities** tab and click **Administration**, as shown here.

Click the Administration button.
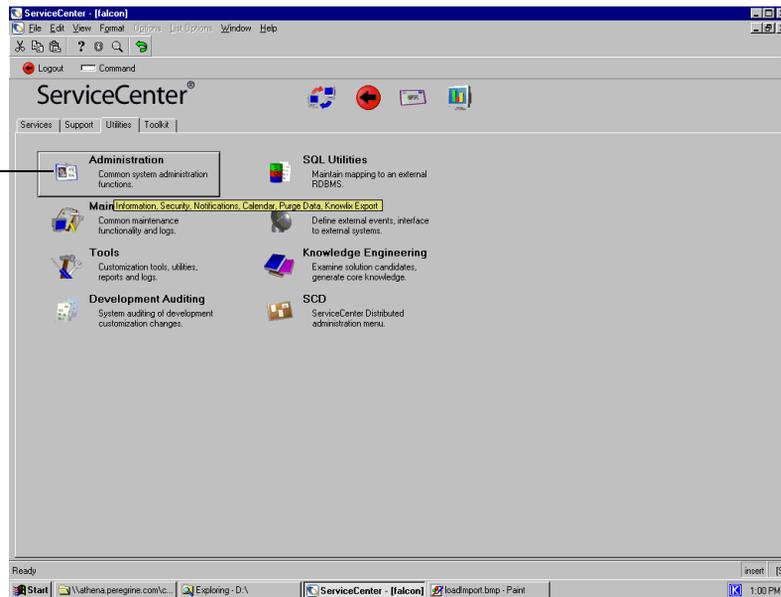
2 Click **Systemwide Company Record.**

Click Systemwide
Company Record.
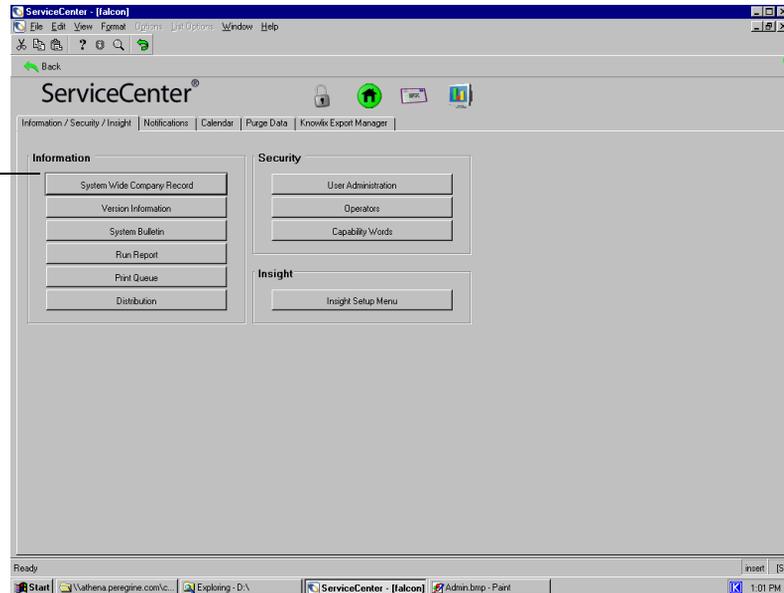
3 Type the name of your Get-Answers server in the Get-Answers server field.

Enter the name of
your Get-Answers
server here.
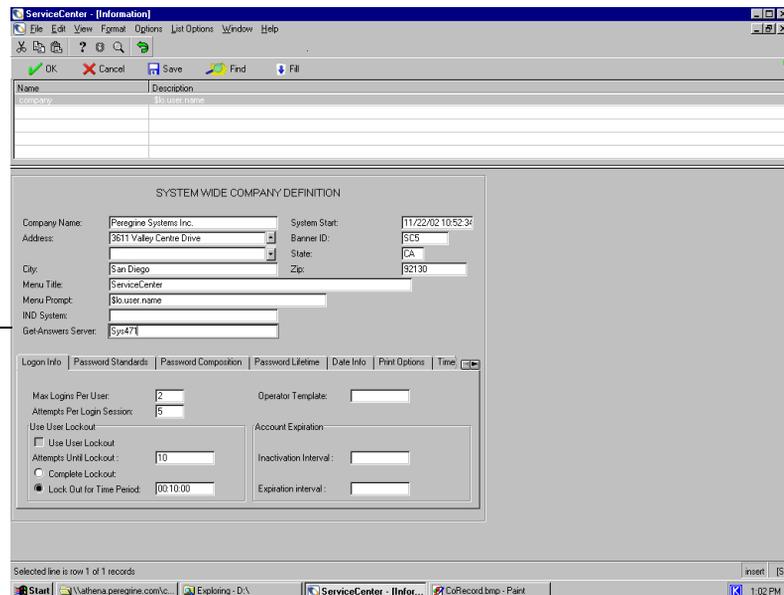
4 Click **OK** at the top of the window to finish the procedure.

Running the Java coroutine on SC clients

Each ServiceCenter user who wants to use the Get-Answers integration must run a Java coroutine file on each ServiceCenter client. Find the **jcinst.exe** file in the path indicated and send it to each ServiceCenter client machine:

C:\ProgramFiles\Peregrine\Common\Tomcat4\webapps\oaa\integrations
\jcinst.exe

If you did not deploy Get-Answers in the default directory, look for the file in your Get-Answers directory on the Web server.

Configuring the E-mail adapter

The following parameter controls the default setting used by the E-mail Adapter. To use Notification Services to alert users to changes in the status of Get-Answers documents, configure the following settings.

To configure the E-mail adapter settings for Get-Answers:

1 In the Peregrine Portal Admin module, click the **E-mail** tab of the Settings screen.

Note: For information on accessing the Admin Module, see *Accessing the Peregrine Portal Admin Module* in *Chapter 7, Completing All Installations* of this guide.

2 Configure these settings..

E-mail Settings box	Default setting	Description
Inbound mail host	mailhost	The full name or IP address of the machine hosting the inbound mail server. If this field is empty, then the status of the mail adapter indicates the status of the outbound mail server connection.
Inbound mail protocol	imap	The protocol used by the inbound mail server, which is either imap or pop3.
Inbound mail user ID		The user ID used to access the inbound mail server.

E-mail Settings box	Default setting	Description
Inbound mail password		The user password used to access the inbound mail server.
Mail sender address		
Legal domains	peregrine.com;	Enter a semicolon-separated list of mail domains with which the Peregrine Portal can correspond. Only users with an email address in these domains are allowed to complete online self-registration.
Anonymous user	falcon	The Anonymous user name used when an unknown user attempts to communicate with the mail adapter.
Anonymous password		The Anonymous user password for the mail adapter.
Outbound mail host	mailhost	The full name or IP address of the machine hosting the outbound mail server.
Outbound mail user ID		The user ID used to access the outbound mail server.
Outbound mail password		The user password used to access the outbound mail server.
Adapter	com.peregrine.oaa. adapter.mail.MailAdapter	Full class path for the adapter associated with this target.

3 Scroll to the bottom of the form and click **Save**.

APPENDIX A Troubleshooting Installation and Operation

This chapter explains the problems that may occur during or after installing Get-Answers and their solutions. The format of each problem includes symptom, cause, and solution.

- The *symptom* is the error message that appears or other sign you see when an error occurs.
- The *cause* is the underlying problem that produced the symptom.
- The *solution* is the procedure you can use to fix the problem.

Troubleshooting errors

This table describes the errors (symptoms) you might see, the probable causes, and the solutions. Where the solutions require a procedure, the table refers you to the *Procedures for troubleshooting problems* on page 243.

Symptom	Cause	Solution
You receive a General Protection Fault error when using Netscape 6.2 or 6.2.1 browsers	The Authoring applet causes these versions of Netscape to fail.	Use Internet Explorer browsers when authoring documents.
Imbedding images in the document text does not work properly if the name of the image file contains spaces.	Get-Answers does not support image files if the name of the image contains spaces.	Rename the file before attaching it to the document. Make sure the name does not include spaces.

Symptom	Cause	Solution
You access Get-Answers by using localhost in the URL—for example, http://localhost/oaa.login.jsp—and you encounter licensing problems when you try to Author documents.	The localhost URL does not support licensing.	When logging into the application server for the first time, use the server name (for example, http://<servername>/oaa/login.jsp).
When logged into Get-Answers and using the browser's Forward, Back and Refresh buttons, you see unexpected behavior.	Some Get-Answers pages do not work properly with a browser's navigation and Refresh buttons.	Do not use the browser navigation or Refresh buttons on the pages that do not behave as expected.
After you refresh the login page (login.jsp), the language option drop-down list and the **Login** and **Register** buttons do not appear. This is true for both Internet Explorer and Netscape browsers.	Unknown	Click **Refresh** again to bring the list and buttons back.
Resizing the browser in Netscape 4.x causes the browser to behave unexpectedly.	Unknown	Avoid sizing the browser after starting Get-Answers.
In the Control Panel form under the Administration tab, the following error appears: ERROR: jdbcCalls: ***SQLException caught***	An adapter could not connect because the adapter is not configured properly. The system reports a "ORA-12154:TNS:could not resolve service name" error, which results in a SQLException.	Check the adapters and configure the adapters if necessary. See *Checking and configuring adapters* on page 244.
You see the following error repeated in the Archway Log file: ERROR [noticenterpoller] GetitAnonymous(0) - MAILsendEmail(): Unexpected error - The mail adapter failed to connect. - com.peregrine.util.ResourceCreationFailure Exception	The Mail adapter is not configured.	Remove the Mail adapter as a target. See *Procedures for troubleshooting problems* on page 243.
You notice that you cannot upload a file in Contribute Documents pages,	The Maximum Attached File Size parameter is too small.	Change the Maximum attached file size parameter. See *Setting Maximum attached file size parameters* on page 246.

Symptom	Cause	Solution
You see this error: An error occurred while ending the current transaction; ArchwayJVMName=getit_3.2.4.\bin	The application server has lost its connection to the database.	Correct any connectivity issues with the database and restart the application server.
You see the following error in the archway.log file: Runtime error Cannot build new class java.io.FileWriter, error: FESI.Exceptions.EcmaScriptException: Runtime error Error creating class java.io.FileWriter: java.io.FileNotFoundException	The connection was lost between the Web server or the File server, or the Search Engine server and the File server.	Remap the drives between the servers. Restart the application server.
Your system cannot sustain more than 10 Websphere connections to DB2 at one time.	Undetermined	See the IBM Knowledge Base article #1009742 on IBM Web site. http://www-3.ibm.com/cgi-bin/db2www/data/db2/udb/winos2unix/support/document.d2w/report?&fn=1009742
The system appears to be frozen. You see the following error in the archway.log file: ORA-03114: not connected to ORACLE	The database connection was lost.	See the section *Reestablishing the database connection and restarting the Search Engine* on page 246.
You notice the following error: Error Number : -6, Severity: FATAL, Source: rdb_index v6.9 CQDH Server Returned Error Clearing the indexes in preparation to rdbindex -	The database connection to the search engine is unstable or the Search Engine indexes are incomplete or corrupted.	See the section *Correcting the "RPC Failed" error* on page 243.
You see the following error: ORA-01658: unable to create INITIAL extent for segment in tablespace ROME	In the database, the Rome tablespace must be extended.	See the section, *Extending the Rome tablespace* on page 247.
You are on a Solaris system and you see the following error: Schema not found	Your application is using a schema or server-side JavaScript whose file name contains both upper- and lower-case letters.	If you add a schema or a server-side JavaScript, make the file name all lowercase.

Symptom	Cause	Solution
You see that Boolean search results show a relevance of 0% on the Advanced Search page.	Boolean search results are not ranked.	Ignore these zero-ranked search results items.
You see the following error: FATAL, Source: rdb_index v6.9 Connect system call failed: "cqdh@10.11.12.231"	You have attempted to index your documents without starting the Search Engine.	Start the Search Engine server and then index the documents. See the section, *Starting the Search Engine and indexing sample documents* on page 248.
The Search Results page shows this message: We're sorry, but we are unable to perform your query - please contact your system administrator.	The Search Engine is not running.	See the section, *Avoiding the "unable to perform query" error* on page 245.
Users are either missing workflow messages or receiving duplicates of them.	There is a configuration problem with the web application.	Make sure that all of the properties set on the various tabs off of admin.jsp are correct. In particular, make sure the **Enable script pollers** property on the Common tab is set to Yes.
On the Manage Documents page, Multiple workflow messages occur if you click the **Transfer** or **Proceed** button multiple times. An Editorial workflow is initiated for every click on the **Proceed** button. A Triage Workflow is initiated for every click on the **Transfer** button.	You have clicked the Transfer or Proceed button more than once for one item.	If you do click one of these buttons multiple times, you can revert the second Editorial Workflow message and accompanying working copy document after the first valid workflow is finished. You Delete any extra Triage Workflow items.
The Get-Answers workflow templates were not imported properly as part of the Get-Answers installation.	undetermined	The system will import the templates if no template is named **Editorial Workflow** or **Triage Workflow**. 1 Log in as the Admin. 2 From the Workflow tab Template Design menu item, rename any template named **Editorial Workflow** or **Triage Workflow**.

Symptom	Cause	Solution
This error appears in the archway.log file once every minute: ERROR [noticenterpoller] GetitAnonymous(0) - MAILsendEmail(): Unexpected error - The mail adapter failed to connect. - com.peregrine.util.ResourceCreationFailure Exception	The noticenterpoller is running.	Stop the noticenterpoller. See the section *Stopping the Noticenter poller* on page 248.
The Search form shows this message when the user attempts to search: We're sorry, the oaakm server is unavailable. Please contact your administrator or try again later. This message appears in the archway.log file: KMGAdapter::connect - ERROR: unexpected exception when trying to login to RWcom.convera.hl. RWLoginFailedException: Failed to login to RetrievalWare server. API not initialized. Re-instantiate RWLoginSession.	The KMAdapter cannot connect to the search engine.	Set the environment path correctly. See *Setting the environment path to the Search Engine* on page 248.
The session times out while in the process of entering feedback and the feedback is not saved.	The default session timeout setting is for 600 seconds.	Change the default setting. See *Changing the default session timeout* on page 250.
With an ODBC connection to a DB2 back-end, as soon as a user logs in, the screen displays: Unexpected error in OAAForm.generate(). With an ODBC connection to a DB2 backend, workflow task messages do not appear after submitting a new document. Under Template Design, the workflow templates will not display. In addition, the archway.log file contains this error: ERROR [Thread] – Message.newMessage XML parsing error at line –1 column –1 org.xml.sax.SAXParseException: Premature end of file	The setting LONGDATACOMPAT must be set to zero (0) in the $DB2PATH/db2cli.ini file.	On the Windows server(s) with the ODBC connection, perform the following steps: **1** Open the file $DB2PATH/db2cli.ini in a text editor. **2** Ensure that the value LONGDATACOMPAT is equal to LONGDATACOMPAT=0 in the $DB2PATH/db2cli.ini file. **3** Ensure that LONGDATACOMPAT=0 does NOT have a semicolon preceding it; for example, ;LONGDATACOMPT=0. The semicolon would eliminate it (comment it out) from the code.

Symptom	Cause	Solution
After a WebSphere installation, the Admin form at http://hostname/oaa/login.jsp does not render.	Duplicate alias entries can occur from the IBM HTTP Server httpd.conf file during a WebSphere installation.	Remove duplicate Alias /oaa lines from the httpd.conf file under the conf directory of the IBM HTTP or Apache web server. You want only one of the following: `Alias /oaa "C:\WebSphere\AppServer\installedApps\oaa.ear\portal.war"` `Alias /oaa "C:/WebSphere/AppServer/installedApps/oaa.ear/portal.war"`
On a WebSphere installation, the Authoring applet displays a licensing error.	During install, a SEVERE warning message is displayed: `Please add OEMLicenseServlet mapping definition to web.xml after the installation completes.`	Add lines to the web.xml and httpd.conf files. See *Licensing error during WebSphere installation* on page 250.
On a WebSphere installation, the documents do not display.	During the install, a SEVERE warning message is displayed: `Please add GAAttachmentDown- load mapping definition to web.xml after the installation completes.`	Add lines to the web.xml file. See *Documents do not display message* on page 251.

Symptom	Cause	Solution
Initialization data is missing from the database. The symptoms of this are: ■ the sample authoring views (How-To, Reference, Error Message/Cause, External, Problem/Solution) do not display correctly ■ the sample authoring views are not listed in Contribute New Document ■ default images do not display in the sample authoring views ■ the workflow templates are missing ■ the out-of-box users cannot log on ■ the search engine shows a KMCOLLECTIONREFERENCE error	This is caused at the time of a new installation by the application server being stopped before it has completed the installation and database initialization.	Use these two steps to change several presentation directory files, and restart the application server to re-initialize the database. **1** Unzip ga_default_imgs.zip in the images folder under the presentation directory into the same /images director. **2** Remove this text <intalled>true</installed> from these files: <presentation directory>\WEB-INF\apps\getanswers\rKmDocViewRoles.dat If your database is Oracle, remove <installed>true</installed> from <presentation directory>\WEB-INF\etc\Oracle\GATablePopulateOracle.sql If your database is DB2, remove <installed>true</installed> from <presentation directory>\WEB-INF\etc\DB2\GATablePopulateDB2.sql If your database is MS SQLServer, remove <installed>true</installed> from <presentation directory>\WEB-INF\etc\MSSQLServer\GATablePopulateMSSQLServer.sql If this does not solve the problem, drop and recreate the user in your database.

Symptom	Cause	Solution
On SQLServer, intermittent **Update failure** messages appear when the a document is published in a workflow, or a newly transferred document is lost and fails to appear in the Workflow My Messages list, or a new document view does not display correctly.	There was a configuration sizing error when your SQLServer database was created.	See the instructions for *Preparing the SQL Server 2000 for Get-Answers* on page 32. Consult your SQLServer database administrator to determine how to backup your database, drop it, create a new database of size 800 MB, and restore the data into the larger new database.
After 30 minutes into a Get-Answers and ServiceCenter session, the Get-Answers login page appears, causing the next ServiceCenter call to Get-Answers to hang. The connection from ServiceCenter to Get-Answers has been lost and the system is waiting for the DDE timeout to occur. The user must then: **1** Close the DDE Applet window behind the Get-Answers window. **2** Reconnect to Get-Answers using **Options->Open Get-Answers**. **3** Log in to Get-Answers.	The value in the Session timeout field in the Get-Answers Admin settings is not sufficient.	See *Changing the Session timeout value* on page 199 to set the Session timeout value on the Common tab in Administration settings to the number of seconds in a normal ServiceCenter user's workday.
After an upgrade of the DB2 database, Get-Answers doesn't function.	The version of the database driver is not current.	Upgrade the database driver. Copy the **db2java.zip** file from the *<DB2home>*/java directory on the OAA Get-Answers server to these directories on the OAA Get-Answers server : *<JavaHome>*\jre\lib\ext and *<PresentationDir>*\WEB-INF\lib

Procedures for troubleshooting problems

Some errors have solutions that do not involve procedures. Others require a a series of steps to fix. This section describes the procedures for solving some of the errors described in the section *Troubleshooting errors* on page 235. See the table in that section to find out if the solution for an error you have seen is included in the table or described here instead.

Removing the mail adapter

To remove the Mail adapter:

1 Open http://<servername>/oaa/admin.jsp.

2 Log in as an administrator so that you have Administrator rights.

3 Click the **Settings** link.

4 Click the **Common** tab.

5 In the **List of target aliases** field, remove the word **mail**.

6 Scroll to the bottom of the page and click the **Save** button.

7 Click the **Notification Services** tab.

8 In the **Targets** field, remove the **mail**.

9 Scroll to the bottom of the page and click **Save**.

The Control Panel page opens.

10 Click **Reset Server**.

Correcting the "RPC Failed" error

To correct this "RPC Failed" error

1 From the Start menu, choose **Programs** >**Get-Answers Search Engine**> **Stop Search Engine Server**.

The following messages appear:

exec at IPAddress:port
exec - shutdown
Shutting down the Search Engine Server
Press any key to continue . . .

2 Press any key to continue.

3 From the Start menu, choose **Programs**> **Get-Answers Search Engine**> **System Utilities Menu**.

4 Choose option 6 - Indexing and index utilities.

5 Choose option 10 - Delete and create empty indexes for a library.

6 At the "Indexes should be deleted for which library? Enter Library Name []>" command prompt, type KMLib.

7 At the "Are you sure? (1 = YES, 2 = NO)" command prompt, type 1.

These messages appear:

Opening Library: KMLib
Thank you!

8 Press any key to continue.

9 Choose option 1 - Return to previous menu.

10 Choose option 1 - Exit this program.

11 From the Start menu, choose **Programs**> **Get-Answers Search Engine**> **Start Search Engine Server.**

These messages appear:

Starting up the Search Engine Server
Press any key to continue . . .

12 From the Start menu, choose **Programs**> **Get-Answers Search Engine**> **Reindex all Documents.**

13 At the "Enter the name of the library to be indexed. Enter Library Name []>" command prompt, type KMLib.

14 At the "Are you sure you wish to index the entire RDBMS now? (warning: this will delete any existing indexes in KMLib). (1 = YES, 2 = NO)" command prompt, type 1.

This message appears:

All records have been submitted to the document handler.

15 Press any key to continue.

Checking and configuring adapters

Use the following procedure to resolve

1 Go to the **Administration** tab and click **Control Panel**.

2 The page that opens shows a list of adapters and their connection status.

3 If the Mail adapter is disconnected and you do not use the mail adapter for notifications or the Business Objects database for reporting, ignore these messages.

4 If a adapter other than the Mail adapter is disconnected, click the **Reset Server** button.

5 If the status is still Disconnected, see the *Get-Answers Administrator's Guide* to configure the adapter again.

Reindexing the sample documents

To reindex the documents:

1 Go to **Start** > **Programs** > **Get-Answers Search Engine** > **System Utilities Menu**.

2 Choose option 6 - Indexing and Index Utilities.

3 Choose option 4 - Index RDBMS Records.

4 Choose option 3 - Index all RDBMS Records in your library.

5 Enter KMLib. This is the knowledge management library you want to index.

6 Enter 1 - Yes to update the index.

7 Choose option 1 - Return to previous menu.

8 Choose option 1 - Return to previous menu.

9 Choose option 1 - Exit this program.

Avoiding the "unable to perform query" error

To avoid this error:

1 Make sure the Get-Answers Search Engine's Search Engine Server is running before you start your application server; for example, Tomcat.

Tip: Start the search engine by choosing **Start** > **Get-Answers Search Engine** > **Start Search Engine Server**.

2 Then start the application server.

Note: It must be done in this order. If you're already running the application server, stop it, start the search engine server, then start the application server.

To verify that you've started everything correctly:

1 In your browser, go to

http://SERVERNAME/oaa/admin.jsp

where SERVERNAME is the name of your server.

Warning: Do not use "localhost" as the server name. There is a known defect for problems caused when you reference the server by calling it localhost the first time after you start the application server.

2 In the login screen, use:

login: System

no password

Note: This should bring up the OAA control panel. You should see a line in the list of adapters that says "oaakm." The status of oaakm should be "connected".

After that, you should be able to access our sample data. We have one sample document ownership team (called "Get-Answers Team"). That team owns one domain ("Get-Answers") and the Get-Answers documentation has been published into that domain.

There are three pre-defined users.

Login	Password	Function
oowner	password	owner of the team
eeditor	password	an editor on the team
rreviewer	password	a reviewer on the team

Setting Maximum attached file size parameters

Go to the Common tab in the Admin Settings. The maximum attached file size parameter is used to limit the size of files that may be submitted as attachments. A value of 0 indicates that no limit is set. This setting is a default that you can override by individual attachment fields. If for example, a value of 2048 was set, this would limit to 2mg, the size of a file that could be submitted in Get-Answers via the Contribute Documents menu option.

Reestablishing the database connection and restarting the Search Engine

To re-establish the database connection:

■ Reboot the tomcat server.

If necessary, based on the presence of a database error in the Get-Answers Search Engine console screen, stop and then restart the Get-Answers Search Engine.

To restart the Get-Answers Search Engine:

1 Go to **Start** > **Programs** > **Get-Answers Search Engine** > **System Utilities Menu**.

2 Choose option 4 - Search and Indexing Servers.

3 Choose option 5 - Stop servers. The Get-Answers Search Engine Executive window will close.

4 Press any key to continue.

5 Choose option 2 - Start servers in background. The Get-Answers Search Engine Executive will start running in a separate window.

6 Press any key to continue.

7 Choose option 1 - Return to previous menu.

8 Choose option 1 - Exit this program.

Extending the Rome tablespace

This procedure can resolve the cause of the following error:

ORA-01658: unable to create INITIAL extent for segment in tablespace ROME

To extend the Rome tablespace:

1 From the Start menu, select **Programs** > **Oracle - OracleHome8i** > **Database Administration** > **SQLPlus Worksheet**.

2 Log in,

User: system

Password: manager

Or you can login as the super user for your database. Consult your Database Administrator for assistance.

3 Delete the connect line in the upper pane.

4 Run this script:

ALTER TABLESPACE ROME AUTOEXTEND ON NEXT 1M MAXSIZE UNLIMITED;
Commit;

Starting the Search Engine and indexing sample documents

1. From the Start menu, choose **GetAnswers Search Engine**> **Start Search Engine Server**.

2. Index your documents by taking these steps:

   a. Click the Start menu, and choose **Get-Answers**.

   b. Click **Search Engine**, and then choose **Index Updated Documents**.

Stopping the Noticenter poller

To stop the noticenterpoller:

1. Click Administration and choose the Show Script Status.

2. Click the noticenterpoller link to suspend it.

   Note: You must perform this step every time you start or restart the web or application server.

3. Rename or remove the scriptpollers.ini file located in the \WEB-INF\apps\notification directory.

   You can rename the file to **scriptpollers.iniSave** or something similar.

   You need to do this step only once. The only way to restart the noticenterpoller is to place the scriptpollers.ini in the \WEB-INF\apps\notification directory again.

4. Remove the default notification capabilities from the Administration -> Settings -> NotificationDB tab so that users will not see the basic notification UI.

   For example, change:
   notificationDB(oaa.ns.send;oaa.ns.view;oaa.ns.gui;oaa.ns.preferences) *to* **notificationDB** without the parenthesis.

5. Notify the workflow template/process designer that the notification options on the Workflow Activity details screens will not trigger email notifications without proper configuration of the email adapter and operation of the noticenterpoller.

Setting the environment path to the Search Engine

If a user receives the message: The oaakm server is unavailable, it might occur because the KMAdapter cannot connect to the Search Engine because the environment path is not set correctly. These instructions provide solutions for Windows and AIX installations.

To configure the PATH environment variable on Windows:

1 Make sure that these fields appear in the **PATH** environment variable and that the **PATH** environment variable is less than the maximum size (256 characters).

```
<SearchEngineInstallDirectory>\lib;<SearchEngineInstallDirectory>
\inso;<SearchEngineInstallDirectory>\bin;<Get-AnswersContextRoot>
\WEB-INF\lib;
```

The default value for *<SearchEngineInstallDirectory>* is **c:\getanswers**.

The default value for *<Get-AnswersContextRoot>* on a Typical installation is **C:\Program Files\Peregrine\Common\Tomcat4\webapps\oaa**.

Note: You can create a drive mapping to a shorter path using the **subst** command; the **subst** command can then be run on startup from a batch file.

2 Stop the search engine, application server, and Web server.

3 Restart the search engine server before starting the application server and Web server.

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.

For example:

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

3 Save the file.

Changing the default session timeout

To avoid timing out while a popup window is open, modify the default session timeout in the Admin settings to be a higher time interval than 10 minutes (600 seconds). The Common tab has a section heading called Encoding, Locales, and Sessions. Session timeout is directly below the section heading.

To modify the default session time:

1 From Admin>Settings>Common tab, scroll to the **Encoding, Locales, and Sessions** heading.

2 In the **Session timeout** parameter, type the number of seconds that you want for the session to remain active; for example, 6000.

3 Click **Save**, then click **Reset Server**.

Licensing error during WebSphere installation

To correct the licensing error message, add the mapping definition to the web.xml file and update the httpd.conf file.

To correct the licensing error message:

1 Using a text editor, open the **web.xml** file located at
<*application server*>**oaa\WEB-INF** and update the following sections.

Note: Be sure the lines are not within a section containing <!-- comment --> lines.

a Add these lines to the <servlet> section:

```
<servlet id="Servlet_eopro">
   <servlet-name>OEMLicenseServlet</servlet-name>
   <display-name>Edit-On Pro License Servlet</display-name>
   <servlet-class>oemlicense.OEMLicenseServlet</servlet-class>
</servlet>
```

b Add these lines to the <servlet-mapping> section:

```
<servlet-mapping id="ServletMapping_eopro">
   <servlet-name>OEMLicenseServlet</servlet-name>

<url-pattern>/servlet/oemlicense.OEMLicenseServlet</url-pattern>
</servlet-mapping>
```

    c Save and close the file.

2 Using a text editor, open **httpd.conf** under the **conf** directory of the IBM HTTP or Apache web server.

    Note: Use the absolute path for your **portal.war** file.

    a Add the following line to the end of the file.

```
Alias /eopro "C:\WebSphere\AppServer\installedApps\oaa.ear\portal.war\eopro"
```

    b Save and close the file.

Documents do not display message

To correct the documents not displaying error message, add the mapping definition to the **web.xml** file.

To correct the documents not displaying error message:

1 Using a text editor, open the **web.xml** file located at *<application server>***oaa\WEB-INF** and update the following sections.

    Note: Be sure the lines are not within a section containing `<!-- comment -->` lines.

2 Add the following lines after the installation completes.

    a Add these lines to the `<servlet>` section:

```
<servlet id="Servlet_GAAttach">
    <servlet-name>GAAttachmentDownload</servlet-name>
    <display-name>GAAttachmentDownload</display-name>
    <description>A compression capable servlet used for
downloading file attachments associated with DBMS
records.</description>

<servlet-class>com.peregrine.getanswers.GADocumentDownloadServle
t</servlet-class>
    <init-param>
      <param-name>scope</param-name>
      <param-value>attachmentsOnly</param-value>
    </init-param>
  </servlet>
```

b Add these lines to the \<servlet-mapping\> section:

```
<servlet-mapping>
   <servlet-name>GAAttachmentDownload</servlet-name>
   <url-pattern>/answers/attachments/*</url-pattern>
</servlet-mapping>
```

c Save and close the file.

Glossary

This glossary contains general terms used when describing Get-Answers, OAA platform, and Workflow.

Activity A task or set of tasks that forms one logical step within the process definition. An activity can be a *manual activity* or an *automated activity*.

Activity instance A single instance of an activity within a process instance. A process instance can include multiple activity instances.

An activity that has been started is an activity instance.

Adapter Provides a connection between the back-end database and the Web application, allowing data to pass back and forth from the database to the Web browser.

AND-Join A point within the workflow where two or more parallel activities are joined and the next logical activity is executed (see *Parallel routing*).

AND-Split A point within the workflow where a sequential route splits so that two or more parallel activities are formed for independent, simultaneous processing (see *Parallel routing*). An AND-Join is used to join the parallel activities when their processing is complete.

Application server Processes data from a Web application database and delivers it to the Web server.

Archway   A Java servlet that listens to HTTP requests from clients and foreign servers, routes the requests to an appropriate server, and returns data or displayable documents. The requests supported by Archway can vary, but they fundamentally consist of queries, data updates, and system events. Archway processes HTTP requests and formats them into messages understood by the Get-Answers processing layer. The resulting messages are ultimately dispatched to a data store adapter which produces an XML formatted result set.

Authoring   Authoring is the ability to create new documents and edit the content using an RTF editor.

Audit data   An historical record of the progress of process instances and activity instances.

Get-Answers collects the following information for process instances and activity instances:

Process Instance	Activity Instance
Date Started	Date Assigned
Date Ended	Date Due
	Date Ended

Automated activity   An activity that is performed by a computer, without user intervention.

Business process   A set of linked activities that complete a business objective. A business process is defined in a process definition that can include both automated and manual activities.

Capabilities   Capabilities are the tasks that Members, Submitters, Readers, Reviewers, Editors, and Owners can perform. There are seven capabilities including read, create, update, revert, retire, publish, and transfer.

Deadline   A time-based scheduling constraint where the work item for an activity must be completed by a specified time.

Domains   Domains contain published documents. Each domain is managed by one Ownership Team.

ECMAScript	Server-side scripting language. Used to write scripts for Get-Answers.
Editor	Editor is one of the four Document Ownership Team permissions. An editor has read, create, and update capabilities for any document owned by the Ownership Team. An Editor also has special responsibilities in the editorial workflow.
Editorial workflow	The Get-Answers Editorial Workflow is used to edit and review an unpublished (working copy) document and its metadata.
Escalation	A procedure that is invoked when a specific constraint or condition is not met. An escalation can be automated or manual and generally involves a higher level of authority (see *Organization- al Role*).
Event	An occurrence that causes the workflow management software to take one or more actions. An event notifies the workflow engine of an internal or external action.
HTML	Hypertext Markup Language. A language used to compose Web pages, which can be read and displayed by a Web browser.
HTTP	Hypertext Transfer Protocol. The communications protocol used to connect to Web servers. Sends HTML pages to the Web browser to be read and displayed. HTTPS can be used to provide extra data level security.
Iteration	A repetitive execution of one or more activities until a specified condition is met.
JAAS	Java Authentication and Authorization Service: JAAS is used by Get-Answers to authenticate users. The set of services against which a user must be authenticated can be configured, and each service can be defined as REQUIRED, OPTIONAL, REQUISITE, or SUFFICIENT through login modules.
Java Run-Time Environment	A JRE is required to run Java programs. It consists of the Java Virtual Machine, the Java platform core classes, and supporting files.

JSP	Java Server Page. Allows separation of page content from the design and display of a page. HTML tags with embedded Java source code are executed by the Web or application server. JSP technology is an extension of Java servlet technology.
Manual activity	An activity that requires user resources for performance of the required tasks associated with the activity.
Member	Member is one of the two Domain permissions. A member has read access to any document published in the domain.
Metadata	Metadata consists of information stored about each document, such as file name, title, file size, document type, version number, creation date, and editorial status.
OAA Platform	The software platform that the Peregrine Get-It products use. These products are Get-Answers, Get-Resources, and Get-Services. This platform provides features and functionality common to the Get-It employee self-service products. The OAA Platform is a software product included with any or all of the Get-It products and is not sold without them.
OR-Join	A point within the workflow where two or more alternative activity branches are joined into a single activity.
OR-Split	A point within the workflow where a sequential route splits based on a decision upon which branch to take. An OR-Split is conditional and the branch to the next activity is determined by the value returned.
Organization-al Role	A group of workflow participants having a specific set of attributes, qualifications, and skills. The participants within the group can perform work items that require a participant who has that set of attributes.
Owner	Owner is one of the four Document Ownership Team permissions. An owner has read, create, update, revert, retire, publish, and transfer capabilities for any document owned by the Ownership Team. An Owner also has special responsibilities in the editorial and triage workflows.
Ownership teams	Ownership Teams manage documents. There are four permissions associated with an Ownership Team. They include Reader, Editor, Owner, and Reviewer.

Parallel routing	A segment of a process instance where two or more activity instances execute in parallel. Parallel routing normally is created with an AND-Split and concludes with an AND-Join.
Peregrine Portal	The first screen displayed when starting a Peregrine Web application. Provides a login screen and access to the modules that make up the application.
Process	A set of process activities designed within the process definition according to the requirements of a business process.
Process definition	A process definition represents a business process and consists of activities where the process tasks are defined.
	A process definition includes information about the activities and workflow users. Both manual activities and automated activities can be included in the process definition.
Process instance	A single instance of a process as defined by the process definition.
	A process that has been started is a process instance.
Process role	A mechanism that associates workflow participants with workflow activities. The role defines how the user participates in a specific process or activity.
Process state	A representation of the status of a process instance. The Get-Answers workflow uses the following process states:
	Running—the process instance is running and one or more activities have started.
	Completed—the process instance has successfully completed all activities.
	Error—the process instance has encountered an error and stopped.
Reader	Reader is one of the four Document Ownership Team permissions. A reader has read access to any document owned by the team. Readers play no role in the editorial or triage workflows.
Reviewer	Reviewer is one of the four Document Ownership Team permissions. A reviewer can read any document owned by the Ownership Team. A Reviewer also has special responsibilities in the editorial workflow.

Roles	Roles consist of a group of users. Permissions are given to roles and/or individual users.
Sequential routing	A segment of a process instance where several activity instances are executed in sequence.
Servlet	A platform-independent Java application component that is used by the system as needed to perform server-side processing (for example, to access a database).
Submitter	Submitter is one of the two Domain permissions. A submitter has read access to any document published in the Domain, and can contribute new documents to the Domain.
Triage workflow	The Get-Answers Triage Workflow is used to examine newly submitted documents that have never been published before, in order to determine if the document should be further reviewed in an Editorial Workflow, published immediately, transferred to a different Document Team, or deleted.
Web application	An application that opens in a Web browser.
Web server	Reads data directly from a Web application or from the application server and converts it to a form that can be displayed by a Web browser.
Work item	The work to be processed by a workflow user, as defined in the associated activity. Work items for a user or group of users are accessed through the worklist.
Workflow	The automation of a business process where tasks are passed from one user to another, as defined by the process definition. Get-Answers workflow consists of the lifecycle stages of each document. Up to three copies of a document can exist at any time. They include the published copy, the working copy, and the copy currently under revision.
Workflow engine	A software service or "engine" that provides the run time execution environment for a process instance.

The workflow engine interprets the process definition, creates process instances and manages their execution, and navigates activities and creates work items for their processing.

Workflow participant A user that performs the work items assigned through the worklist. Each work item is represented by a workflow activity.

Working copy A working copy is a version of the published document in an editorial status.

Worklist A list of work items associated with a specific user or group of users.

XML Extensible Markup Language: A documentation meta-language that allows you to author self-describing data documents, which can then be formatted with a style sheet for display in a Web browser or exchanged with foreign systems. Unlike HTML, you create your own XML tags and define their meaning to suit the application.

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