

OSAS Installation

OSAS 7.6 User Guide



OSAS[®]



OSAS Installation User's Guide

Version 7.6

2210.RI76

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This document has been prepared to conform to the current release version of OPEN SYSTEMS Accounting Software. Because of our extensive development efforts and our desire to further improve and enhance the software, inconsistencies may exist between the software and the documentation in some instances. Call your customer support representative if you encounter an inconsistency.

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CHAPTER 1

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Welcome to OSAS

The OPEN SYSTEMS® Accounting Software (OSAS®) product line has a modular design and consists of several accounting applications linked by a base manager application. Each application addresses a different phase of your financial operations; together, they form a powerful accounting solution to your daily and periodic accounting needs.

About this Guide

This guide describes how to install and maintain OSAS and its related components.

- This chapter 1 introduces OSAS, describes the languages OSAS uses to work correctly, and details the deployment options that are available.
- Section 1, Desktop Installation, contains the procedures you need to follow to install OSAS on a single Windows, Linux, or UNIX workstation.
- Section 2, Enterprise Installation, contains the procedures you need to follow to install OSAS in an enterprise environment, with client workstations accessing OSAS programs and data from one or more servers.

- Section 3, OSAS Administration, details how to install OSAS applications (such as Accounts Payable or General Ledger) if you did not install them as part of the OSAS installation routine, as well as describes the BASIS License Manager and licenses that are required to run OSAS and how to maintain them.
- The Appendixes contain supplementary material about Resource Manager.
- The Index is a topical reference to the information in this guide.



OSAS Overview

The OPEN SYSTEMS Accounting Software (OSAS) product line consists of several accounting applications linked by a base engine that provides the operating environment necessary for the system to run. Each application addresses a different phase of your financial operations; together, they form a powerful solution for your daily and periodic accounting needs.

Open Systems, Inc. has a strong commitment to customer service and product quality. If you have difficulty using OSAS, refer to the user guides and other OSAS reference materials included with the software. If you need more information, consult a customer support representative.

Resource Manager

The Resource Manager application is the foundation or shell of OSAS. It provides the operating environment that holds the other applications and manages the master files needed for the entire system. Resource Manager also includes three powerful business features: Global Inquiry, Executive Information Summary (EIS), and Print Manager. With Global Inquiry, you can drill through your accounting data to find selected information throughout your system. With EIS, you can access company information quickly and view key business metrics and summaries of all aspects of a company or a group of companies. With Print Manager, when you print or archive reports to files, your reports can be stored, sorted, printed, and searched for specific text.

For more information on Resource Manager, refer to the Resource Manager guide.

Base Applications

Base applications are designed and produced with the largest possible number of industries in mind. They are most effective when you interface them with each other. Base applications are usually named after common accounting operations, such as General Ledger, Accounts Payable, Purchase Order, Accounts Receivable, Sales Order, Payroll, or Inventory. For more information on base applications, refer to the application's user's guide.

Language Platforms

OSAS 7.6 gives you a choice of language platforms: you can choose the older PRO/5 language, traditionally used in OSAS or the newer Java-based BBj language that takes advantage of Java's strengths. OSAS behaves the same in either language, but some new features are available only in BBj due to technical constraints. You choose which language platform to use when you install OSAS.

- PRO/5 (or VPRO/5 on Windows) is a stable, scalable language used in previous versions of OSAS to give you cross-platform portability with a small footprint. OSAS on PRO/5 runs natively on a variety of operating systems and is not processor or memory intensive. It's available in two modes: a character or text-based mode for quick data processing and (on Windows) a graphical mode that uses the graphical elements you're used to in other software programs.
- BBj brings you all the strengths of PRO/5 plus the power and flexibility of the Java[®] language. BBj offers enhanced graphical interfaces on both Windows and non-Windows operating systems, increased deployment options, integration with other Java code for additional customization, and coordination with web services. BBj requires a Java Runtime Environment (JRE) to be installed on each server and workstation running OSAS.

JRE Requirements for BBj

Because the JRE is constantly updated by its manufacturers, it is not included on the OSAS installation DVD. Instead, download the free JRE for your system from www.oracle.com/technetwork/java (or from other websites) as part of the J2SE or J2EE and install it per the instructions provided with the download. Although OSAS requires at least JRE v1.6 (generally; the version for your system may differ), you can install the latest version to take advantage of the most recent updates.

OSAS Components

As with all software applications, OSAS is made up of a number of components. These components are briefly described below. All components are installed in the correct locations as necessary when you install OSAS.

- **BBj or PRO/5 interpreters**—These interpreters translate the instructions written into the OSAS software into what you see on the screen and allow OSAS to complete processing. You cannot run OSAS without these interpreters.
- **BASIS License Manager (BLM)**—The BLM manages and distributes the licenses that are required for OSAS to run. In an enterprise environment, the BLM is installed on the application server and distributes licenses to clients from a shared license pool when these clients access OSAS.
- **Data Server**—When you install OSAS in an enterprise environment, the data server stores and controls access to the OSAS data files. The data server receives requests from the application server and sends it the requested data. When the application server completes processing, the data server receives and stores those results.
- **Application Server**—When you install OSAS in an enterprise environment, the application server stores and manages the OSAS programs and completes all OSAS processing by managing requests from clients and querying the data server for required data. The application server allows multiple client workstations to access OSAS at the same time.
- **Client**—When you install OSAS on client workstations in an enterprise environment, the client allows the workstation to communicate with the application server. The information and commands you enter on the client workstation are captured and sent to the application server for processing.

When you install OSAS on a single workstation (the “desktop installation”), the data server, application server, and client are combined into one install.

- **Enterprise Manager**—In enterprise environments, the Enterprise Manager controls the IP addresses of the servers used for the data and application servers and enables data processing in multi-tier deployment setups.

- **ODBC/JDBC Drivers**—These drivers allow you to connect to OSAS data from an ODBC- or JDBC-compliant external source, such as spreadsheets, reporting software, word processors and the like, so that you can share data between applications.

If you use OSAS on BBj, these drivers are installed automatically as part of BBj. If you use OSAS on PRO/5, you need to install the ODBC driver manually.

- **Programs**—The OSAS programs contain the instructions required to complete OSAS processing. Program files are stored in the **\progXX** directories (**XX** being the two letter abbreviation for an OSAS application, such as AP or GL) on the application server.
- **Data Files**—These files store the data you enter, update, and manage with OSAS. The data files are stored in the **\data** directories on the data server.
- **System Files**—These files store the information OSAS needs to run the system as a whole (window definitions, directory locations, and menu setups, for example). These files are shared between sample and live data and are stored in the **\sysfil** directory on the data server.
- **Sample Data Files**—OSAS includes data files for a sample company to help get you started and learn your way around the software. These sample data files are stored in the **\sample** directory on the data server.
- **Graphical Files**—These files create the graphical user interface if you use the OSAS graphical mode. They are stored in the **\gui** directory on the application server.
- **Report Writer Data Files**—These files are used by the GENERAL Report Writer application to generate custom reports and are stored in the **\RWdata** directory on the data server. The OSAS data dictionary files used to provide ODBC or JDBC connectivity are stored in this directory as well.

Deployment Options

OSAS can be installed in one of two deployment methods: you can install OSAS on a single computer, then optionally set up workstation terminals to access OSAS on that computer via mapped drives, or you can install OSAS in a network “enterprise” environment that allows several workstations to access OSAS on one or more servers in a true client/server deployment. In either environment, the number of users that can connect to OSAS is limited by your license’s user count.

Desktop Deployment

The desktop installation bundles all OSAS components into one comprehensive program for simpler installation when you use a single machine as data server, application server, and client workstation. Because all data access is completed on one machine, processing is fast and data corruption is minimized. To install OSAS on a single desktop, refer to chapter 2.

If you use OSAS on VPRO/5, you can optionally set up terminals to connect to OSAS on the desktop via mapped drives. When you use OSAS on VPRO/5 in this manner, all OSAS programs and components are stored on the desktop from which they are accessed by a terminal, but all processing is completed on the terminal. Results are written back to the correct directory via mapped drives.

This sort of terminal-to-desktop deployment is available on VPRO/5 only when you use the Desktop installation option. If you use the Enterprise installation option with VPRO/5, the components needed to set up terminals are not installed. Instead, use the Client Setup option to install the client workstations that connect to the OSAS servers in an enterprise environment.

Because BBj is structured differently than PRO/5, this type of configuration is not available. You cannot use mapped drives with BBj. Instead, you set up a true client/server environment by using the Combined enterprise installation option to install OSAS on the main computer, then the Thin Client enterprise installation option on each client workstation to install the terminals that connect to it.

Enterprise Deployment

When you install OSAS in an enterprise environment, you install the data server and the application server components on one or more servers, then you install client software on the workstations that communicate with those servers.

By sharing data across a network of servers and clients, you can allow a number of workstations (and people) to open OSAS applications, share information, print reports, and input data, all while keeping data secure. The data server also reduces the risk of data corruption that can occur if workstations fail.

The exact configuration depends on the type of computers you want to use on your network. You can use Windows servers with Windows workstations, Linux or UNIX servers with Linux/UNIX workstations, or a combination of Linux/UNIX servers with Windows and UNIX workstations.

To install OSAS on BBj in an enterprise environment, turn to chapter 3. To install OSAS on PRO/5 in an enterprise environment, turn to chapter 4.

Terminology

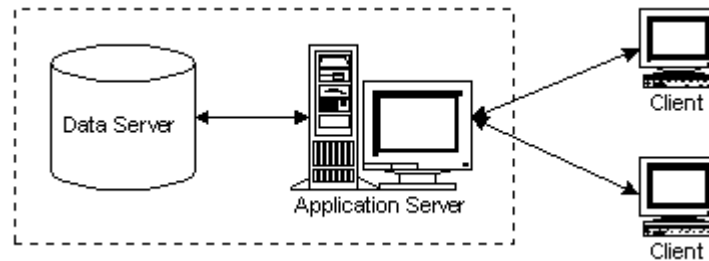
You'll find it easier to set up and plan your client/server network if you understand the following terms.

- A **Data Server** handles requests from the workstations (or clients) and responds with the requested data. The requests from the clients are processed faster (depending on your setup) with the data server because the amount of data traffic between the workstations and the server is significantly reduced.
- The **File Server** or **Application Server**—whether on a separate computer or on the same computer that houses the data server—stores and manages the OSAS program files. Using a file server as a centralized program repository requires much less maintenance than that required by a system with the programs loaded on each client.
- **Client Workstations** are separate computers, each capable of accessing the OSAS applications stored on the file or application server and accepting user input. These clients handle day-to-day input.

- **TCP/IP** is a communication protocol that works within your network to allow computer-to-computer transfer of data. TCP/IP is the basis of the data server communications on Windows, Linux/UNIX, and Mac OS X systems.
- Every workstation has an **IP Address**, which is like a telephone number for your workstation. Depending on how your network is set up, these addresses can be set automatically by the network servers or assigned manually. Consult your IT specialist for help with finding the IP address for a specific workstation.

Deployment Options on BBj

If you use BBj, you can install OSAS in a two- or three-tier environment. You can install the data server and application servers on separate machines (a three-tier setup) or on the same computer (in a two-tier environment). After installing OSAS on the servers, you can then set up the client workstations.



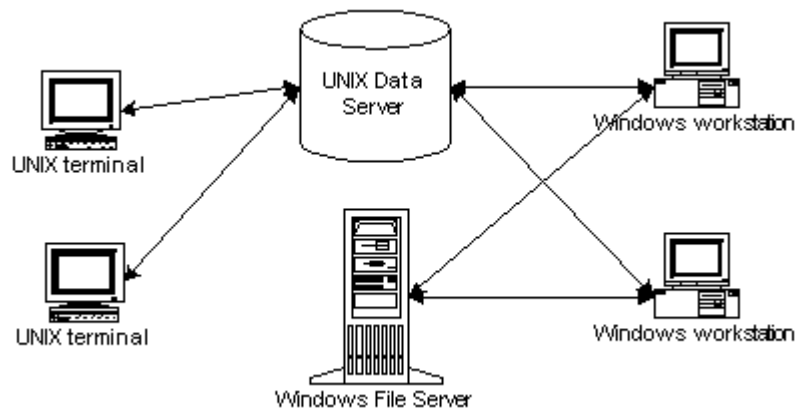
- The data server stores the OSAS data files and responds to requests from the application server. When the application server completes its processing, the data server receives and stores the results.
- The application server houses the OSAS program files, manages access to these programs, and completes all processing. After receiving a client request, the application server queries the data server for the data requested and then “paints” the client’s screen with a representation of the data. The commands and information you enter at the client are sent to the application server, which completes any necessary processing. When processing completes, the application server sends the results back to the client (if necessary) and to the data server for storage.

- Clients communicate with the application server to access OSAS programs and enter data. Although it looks as though you're working locally, all processing is completed on the application server. The thin client software sends requests to the application server, generates the screens, and captures the commands and data you enter.

If you use BBJ, you can choose one of two thin clients on client workstations: the BASIS BBJ thin client or the Java Web Start client. While the BBJ thin client is set up automatically as you install OSAS on workstations, the Java Web Start client requires a web server and some manual setup.

Deployment Options on PRO/5

As with BBJ, you can install OSAS in a two- or three-tier environment. The PRO/5 enterprise deployment differs from BBJ; however, in two important ways: a file server is used, instead of an application server; and clients complete all processing locally (if you use Windows workstations).



This example illustrates a mixed environment using a UNIX data server, a Windows file server, and UNIX and Windows clients. At a minimum, your network will contain a data server and at least one workstation.

- The data server houses the OSAS data files and responds to requests from client workstations. When the client completes its processing, the data server receives and stores the results. In a two-tier environment, the data server also houses the interpreters and the OSAS Resource Manager and applications.
- In a three-tier environment, the file server stores the OSAS program files to reduce maintenance and allows you to use other file server functions (such as file or program sharing).
- The client workstations accesses programs from the file server (or data server) and runs them in a reserved memory space, completing all processing locally. When processing completes, the client sends data results to the data server for storage and releases any program locks on the file server. If you use UNIX workstations and servers, the workstations can connect to and complete processing on the data server directly via terminal emulation.

Workstation and Printer Setup

During OSAS setup, you need to define workstation terminal IDs and printer names so that OSAS functions correctly.

Workstation Setup

OSAS uses terminal IDs to identify workstation-specific options (like user-defined defaults) and for some batch processes (to prevent data corruption). Terminal IDs are defined in the config.bbx configuration file that ships with OSAS.

When you first install and start OSAS, the workstation you use to access OSAS uses the first terminal ID (T000) defined in the config.bbx file by default. You can change the terminal ID by editing the OSAS shortcut's properties, by using the setuptrm.exe file to set up terminal icons (see page 2-52 for more information), or by setting up users in Resource Manager. Consult the Resource Manager guide for more information on OSAS shortcuts or users.

The terminal ID that the workstation uses must exist in the config.bbx file or OSAS will deny access to that workstation. If you set up terminal icons or users to define terminal information, OSAS can modify the config.bbx file accordingly for you. If you start multiple instances of OSAS on the same workstation, they all will use the same terminal ID. If you need to run multiple instances for batching, set up two terminal icons or two users that use different terminals.

Printer Setup

When you set up the network, you gave each shared printer a name or number. Since Resource Manager identifies shared printers by their device names, you need to use the **Devices** function to give each shared printer a device name. Name the primary printer **LP**, the second one **P0**, the third one **P1**, and so on.

Each workstation has its own set of printer names, so several workstations might have a local printer named **P2**. Workstations that share printers also share the names of those printers, and local printers must be named accordingly. For example, if several workstations share printers **LP** and **P0**, the first local printer at each workstation should be **P1**, the second **P2**, and so on. (If more than one workstation has a local printer, the printers should have the same device name—for example, **P1**.)

For both shared and local printers, you must specify the ports to which the printers are attached. For a parallel printer, the port is **PRN** or **LPTn** (**n** is the port number); for a serial port, the port is **COMn**. On some networks, the printer ports must be unique, whether they are shared or local; for example, you cannot have both a local **LPT1** and a shared **LPT1**.

Make a list of the type and model number for each printer. (When you define the printers, you can select the type from an inquiry window.) If your printer is not listed, check the printer manual to see if it uses the same control codes as one of those in the list.

Consult the Resource Manager guide for more information on setting up printer devices for use with OSAS.

ODBC/JDBC Connectivity and Productivity Reports

OSAS 7.6 includes ODBC and JDBC drivers to let you connect to your OSAS data from any ODBC-compliant (such as Microsoft® Windows® software) or JDBC-compliant (such as programs developed for Java®, like OpenOffice.org®) source, such as spreadsheets, reporting software, word processing applications, or external databases. The easiest way to connect to OSAS data is by opening one of the productivity reports, also included with each OSAS 7.6 application.

These productivity reports are Microsoft Excel® spreadsheets that connect directly to your OSAS data via the ODBC driver and allow you to use the spreadsheet's tools to manipulate the data as you want and produce charts and graphs to visualize trends.

To open a report, double-click a report name on the application's **Productivity Reports** menu to automatically launch Excel or any other spreadsheet program capable of opening an Excel-formatted spreadsheet to open the report. Use the selection boxes to filter the information that appears in the report, or use the tools within your spreadsheet software to refresh the data or create charts and graphs.

When you install BBj, the ODBC and JDBC drivers are installed automatically as part of BBj. You can install these drivers separately, if necessary. If you use PRO/5, you must install the ODBC driver in a separate step. After installing the drivers, you need to set them up by entering information in the BBj Enterprise Manager (for BBj) or by editing the config.tpm file (for PRO/5). See chapter 7 for more information.

Licenses

The ODBC or JDBC driver requires a license to make the connection to retrieve OSAS data. If you use BBj, this license is included in your BASIS license user pool. That is, the driver included with BBj retrieves the license it needs to make a connection from your existing user pool. If all licenses are in use, the driver cannot connect.

If you use PRO/5, you may now use the option of installing the ODBC/BBJ driver and BBj services. See "ODBC Driver for PRO/5 and VPRO/5" on page 8-11 for more information.



Serial and Authorization Numbers

You received a CD activation key in addition to your BASIS serial number and authorization number. The CD activation key unlocks the applications you purchased.

The keys are easily distinguished by their format:

OSAS CD activation key	xxxxx-xxxxxxxxxxxxxxxxxxxxxx
BASIS serial number	OSHxxxxxx
BASIS authorization number	xxxxxxxxxx

You enter these numbers when you install OSAS and when you register and install the BASIS license. Please note, when you enter the numbers—they are case-sensitive.

Section I

OSAS Installation Guide

Desktop Installation

CHAPTER 2

2

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OSAS Desktop Installation

This chapter contains OSAS setup and installation information for the Windows, Linux, and SCO UNIX operating systems.

New, full installations are covered in this chapter. If you are upgrading from a version between 3.2 and 7.6, install 7.6 on a new directory and then convert your data from the old path to the new path. See “Conversion” on page A-1 for conversion instructions.

These installation instructions assume that you have a basic knowledge of your operating system. If you are unfamiliar with your operating system, consult the operating system manuals before you begin.

OSAS on BBJ

This section details how to install OSAS on the BBJ language platform on a single Windows, Mac, or Linux/UNIX workstation. To complete this installation, you'll proceed through these stages (each stage is broken down into its individual steps in this section):

1. Start the Installation Wizard.
2. Register a BASIS license.
3. Send and receive license information.
4. Install the BASIS license.
5. Finish the installation.

Non-graphical Linux or UNIX Installation

The instructions in this chapter are accompanied by examples of the screens you'll see as you work through the installation program. If you're installing the data and application servers on a Linux or UNIX computer that does not have graphical capabilities, the wizard's text prompts are very similar to the example screens. Enter the option number or press the appropriate key to move forward.

Windows 64-bit Installation

Before installing OSAS on a Windows 64-bit operating system, ensure the Environment Variables path points to the 64-bit installation of the JRE.

1. Enter **sysdm.cpl** at a **Run** prompt to open the System Properties window.
2. Select the **Advanced** tab.
3. Click the **Environment Variables** button.
4. Select the **Path** variable from the **System variables** section and click the **Edit** button.
5. Add **;C:\Program Files\Java\jre6** to the end of the **Variable value**.
Note: The semicolon is necessary when adding the JRE path to an already existing value.
6. Click **OK** until the System Properties window closes.

Start the Installation

1. If you used a previous version of OSAS, stop and uninstall the current BASIS License Manager and BBj (if present on this computer) before you begin the installation. A new BLM and BBj will be installed automatically.

Note: You can point all BBj installs to the same BBj interpreter.

2. If you use Linux or UNIX, log in as root.
3. Make sure you have downloaded and installed the correct Java Runtime Environment (JRE) for your system. OSAS on BBj will not work without the JRE. See page 1-4 for more information.
4. If you are installing OSAS on Linux or UNIX, set the JAVA_HOME environment variable so that the installation program can locate the JRE. Enter this command at the prompt (substituting the directory in which you installed Java; the path used below is only an example):

export JAVA_HOME=/opt/java

Enter only the home directory in which you installed Java; the installation program automatically adds any other directories it needs to the path name.

In Windows and Mac OS X, the installation program automatically detects the JRE, so no additional steps are necessary.

5. Insert the installation DVD into your DVD-ROM drive.
 - In Windows, the OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive) , and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.

- In Linux and UNIX mount the DVD-ROM to a drive that exists on your system, and change to the DVD directory. Enter these commands at the prompt:

Linux	# mount /dev/cdrom /mnt/cdrom # cd /mnt/cdrom/
SCO6	# mount -o fperm=777 /dev/cdrom/cdrom1 /mnt/cdrom # cd /mnt/cdrom

In the above examples, the **/mnt/cdrom** mount directory must exist before you can mount the DVD-ROM.

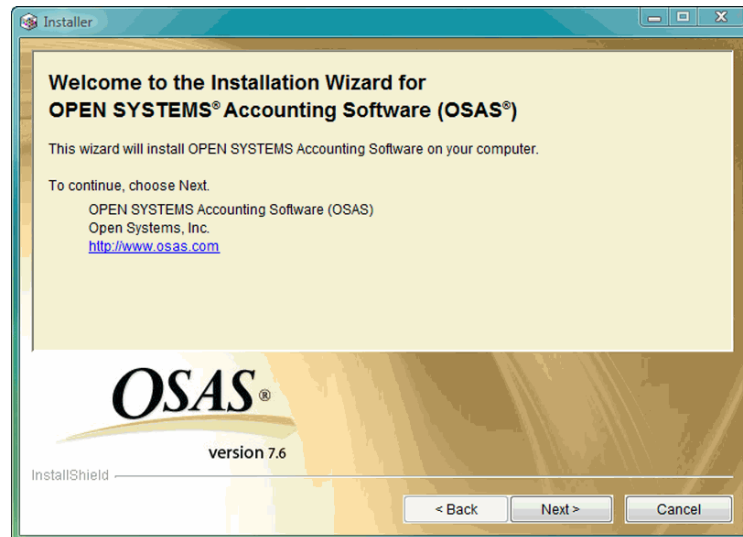
When the listing of files on the DVD appears, enter the installation script, **# ./osasinstall.sh**, at the prompt.

- In Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

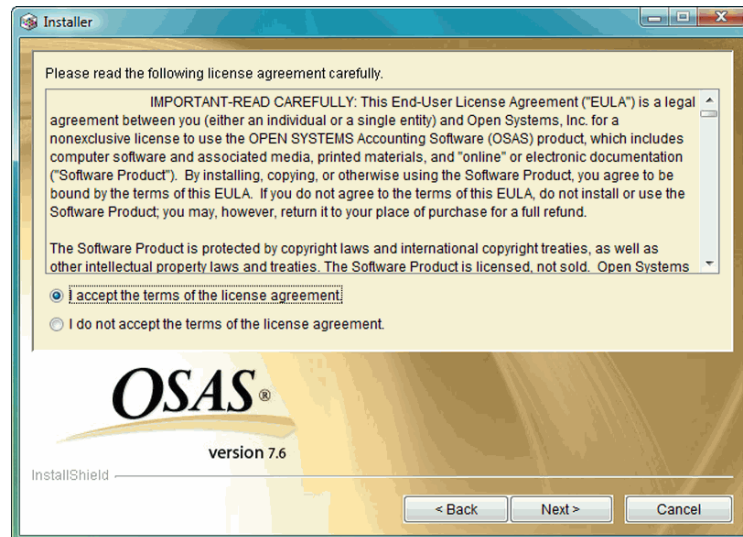
Mac OS X	cd /Volumes cd OSASv76_Beta umask 0
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Enter the installation script, **# ./osasinstall.sh**, at the prompt.

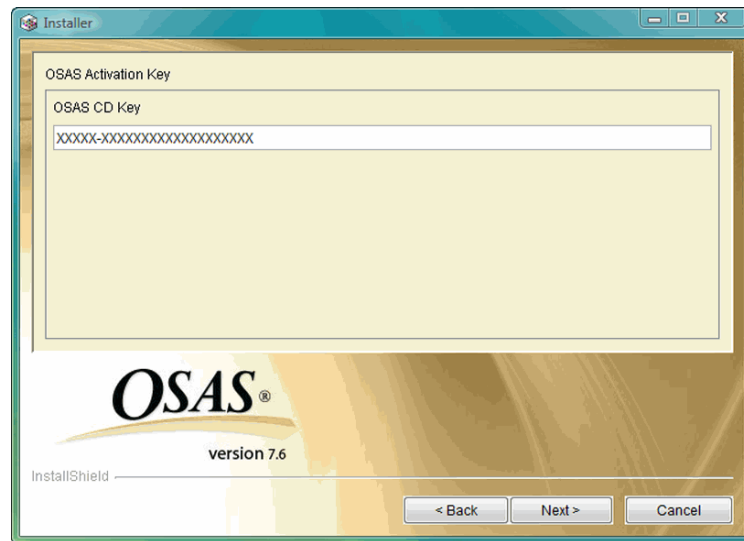
6. When the Welcome screen appears, click **Next** to begin the install.



7. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

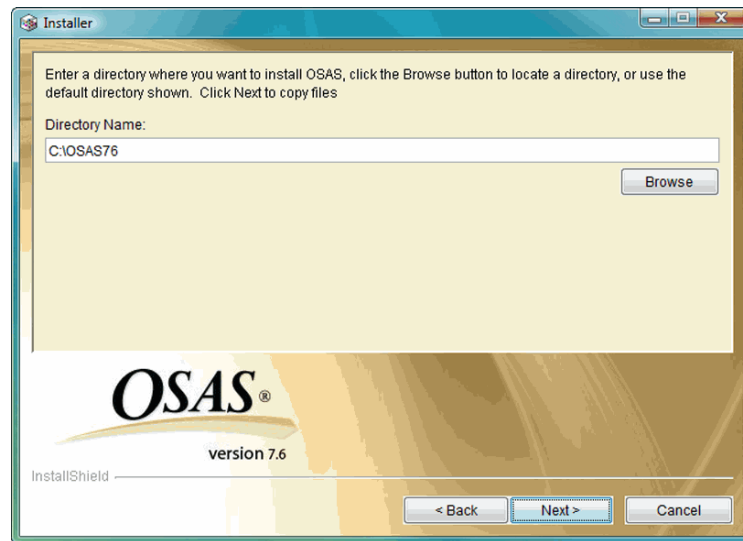


8. Enter your OSAS activation key exactly as it appears on the License Registration Form. Please note—the key is case-sensitive.



Click **Next** to continue.

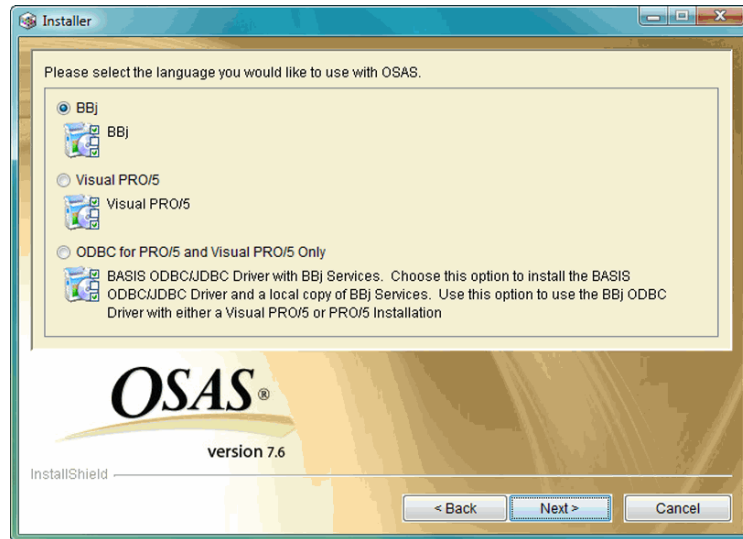
9. Change the directory path in which to install OSAS, if you like. You can also click **Browse** to navigate to this directory and enter the path automatically.



Note: Do not use spaces in the path name during installation. OSAS will not function correctly if you use a path name that includes spaces. Instead, omit spaces or replace them with underline characters. For example, rather than using the path name *OSAS v76*, omit the space and use *OSASv76* instead.

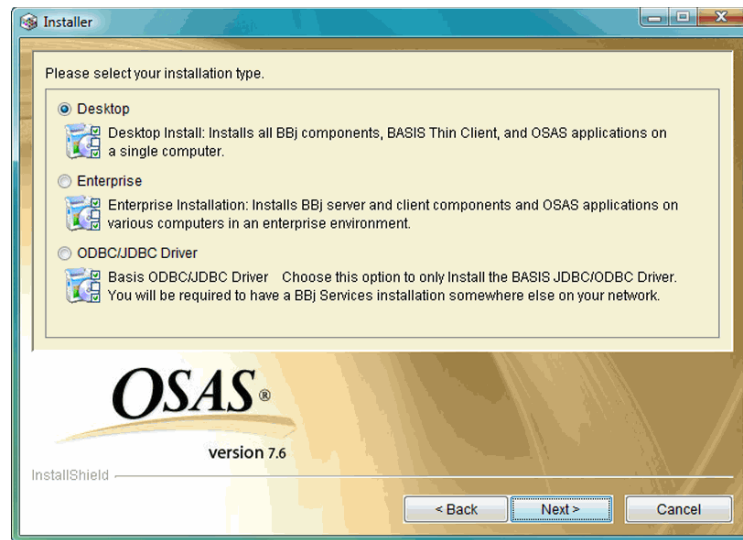
Click **Next** after specifying the installation directory to continue.

10. If you are installing OSAS on Windows, select the language platform on which to install OSAS. Select **BBj** and click **Next** to continue.

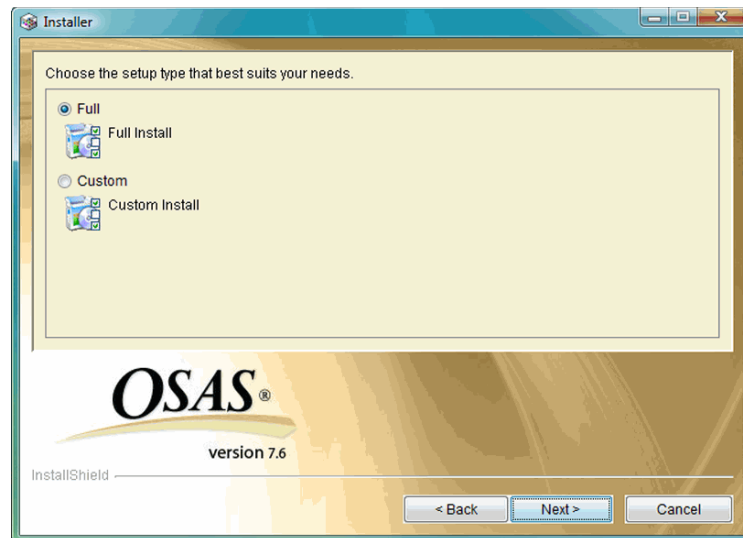


This screen does not appear if you install OSAS on Linux, UNIX, or Mac OS X as the system assumes you are installing OSAS on BBj when you use the installation program on these operating systems. To install OSAS on PRO/5 on a Linux or UNIX desktop, see page 2-49.

11. Select **Desktop** as the installation type and click **Next** to continue.

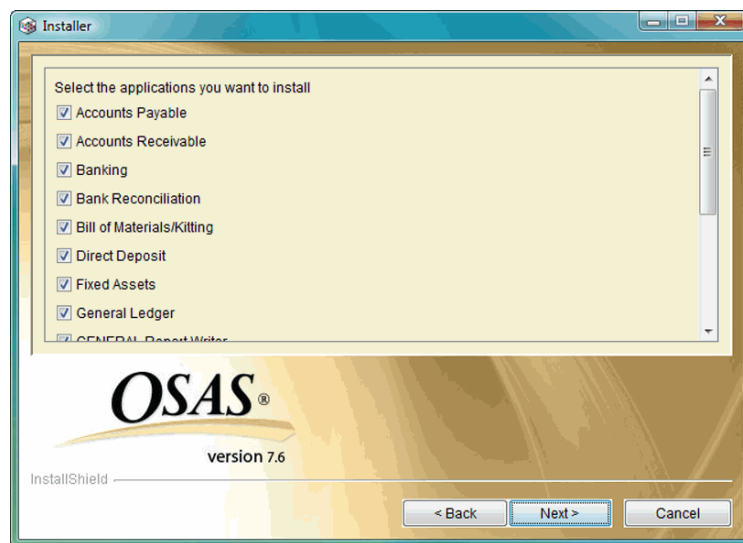


12. Select **Full** as the setup type and click **Next** to continue.



Select **Custom** only if you need to install or re-install specific components. When you select this option, a screen appears after you click **Next** so that you can select the components to install. See page 5-8 for more information.

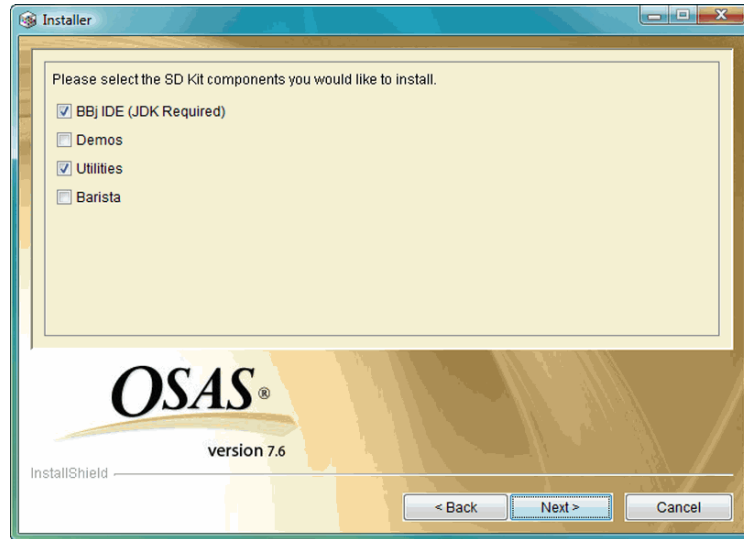
13. Select the OSAS applications and components to install and click **Next**. Your OSAS activation key determines which applications appear in the list.



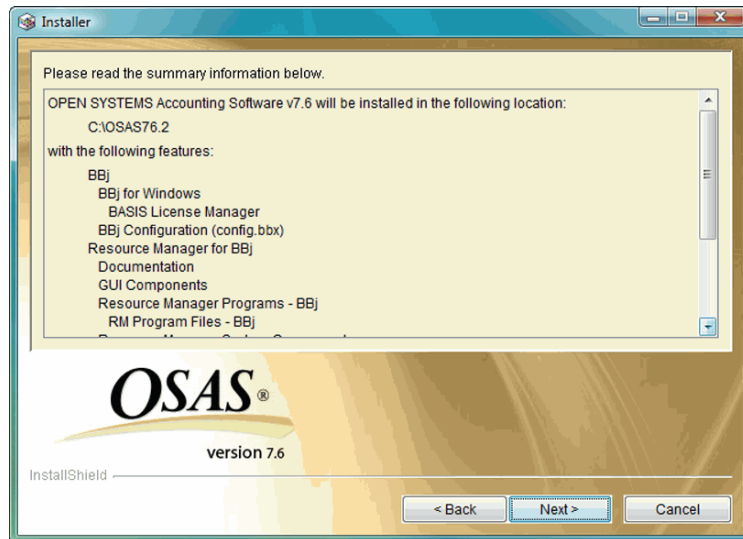
If you do not want to install an application, clear its check box. While installing applications here is most convenient, you can also use the **Install Applications** function in Resource Manager to install an application later.

If your OSAS activation key includes CJC, the installation program automatically selects the **Contractors' Job Cost** check box and clears the **Job Costing** check box. To avoid problems with processing, you must install one or the other, but not both at the same time. If you select both check boxes, a message appears when you click **Next**.

14. If you have purchased the OSAS Software Developer's Kit, select the SDK components you would like to install, and click **Next**.



15. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.

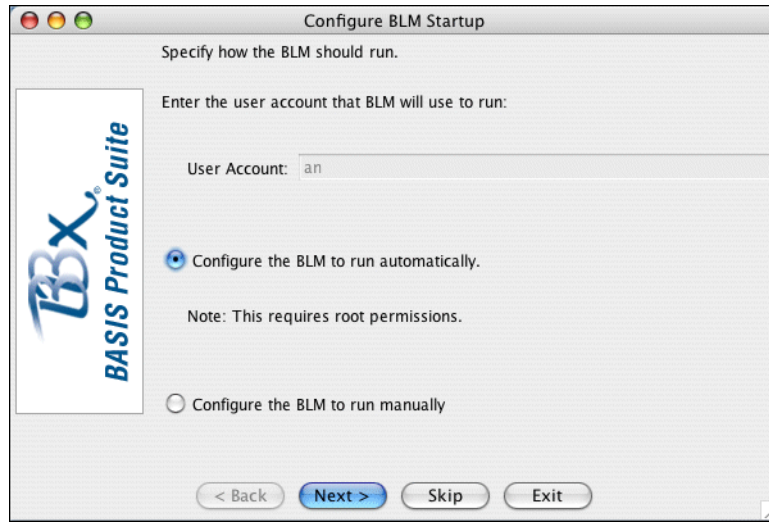


Because the installation program automatically installs BBJ components and the BASIS License Manager (BLM) in addition to OSAS, installation may take several minutes.

You must register and install a BASIS license before OSAS installation can complete. The Register for a BASIS License screen appears automatically during installation.

16. If you are installing OSAS on Windows XP with Service Pack 2, a warning message may appear stating that the Windows Firewall has temporarily blocked BBJ Services. Click **Unblock** to let BBJ Services function correctly.

17. If you are installing OSAS on Mac OS X, the Configure BLM Startup screen appears.

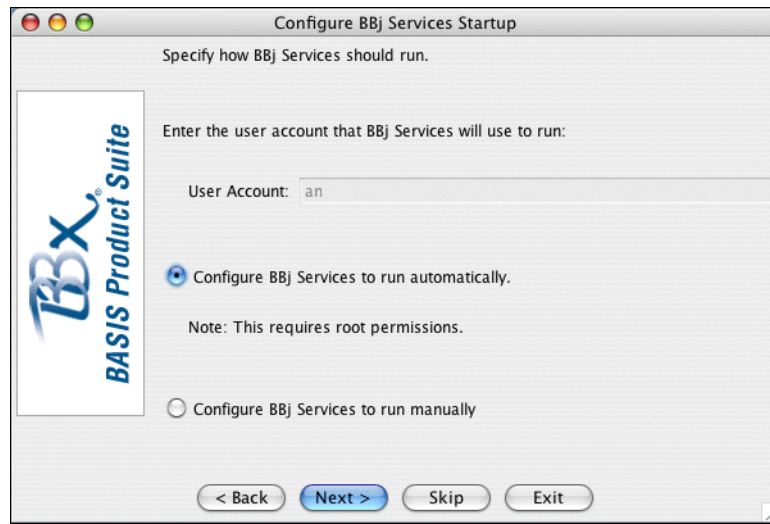


Select **Configure the BLM to run automatically** and click **Next** to continue. When the Authenticate dialog box appears, enter your password and click **OK**.



These screens do not appear if you use Linux, UNIX, or Windows.

18. If you are installing OSAS on Mac OS X, the Configure BBJ Services Startup screen appears.

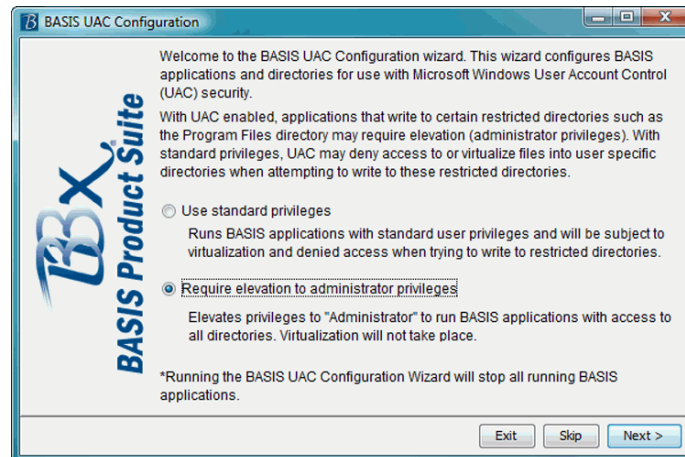


Select **Configure BBJ Services to run automatically** and click **Next** to continue.

This screen does not appear if you use Linux, UNIX, or Windows.

Register a BASIS License

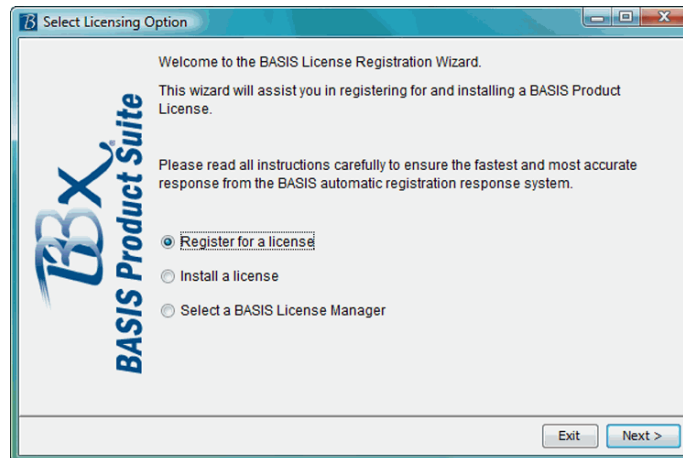
1. During installation, if you have the User Account Control option enabled in Windows Vista or Windows 7, the BASIS UAC Configuration screen appears.



Select **Require elevation to administrator privileges**, then click **Next** to continue.

If you do not use User Account Control in Windows Vista or Windows 7, skip to step 2.

2. In order for OSAS to work correctly, you need to register and install the BASIS license you received from Open Systems.



Select **Register for a license**, then click **Next** to continue.

If you have already registered a license and want to install it, or if you use the BASIS License Manager to serve licenses for other BASIS products, select one of those options.

- If you select **Install a License**, skip to “Install the BASIS License” on page 2-27 for instructions on installing your license file.
- If you choose **Select a BASIS License Manager**, enter the name of the server on which the BASIS License Manager is stored, click **Next** to continue, then click **Finish** when the Wizard Process Complete screen appears. Finally, skip to step 5 on page 2-29 to complete the process.

3. When the Register for a BASIS License screen appears, enter your contact information in the fields. These fields are required. Select the check box at the bottom of the screen if you would like to receive product information from BASIS; otherwise, leave the check box blank.

Click **Next** to continue.

Register for a BASIS License

Your contact information is confidential and will only be used to assist BASIS in further identifying your product license.

BASIS Product Suite

Product License Information

Company Name: Open Systems

First Name: Sam

Last Name: Davies

E-mail Address: samd@osas.com

Phone: (952) 403-5700

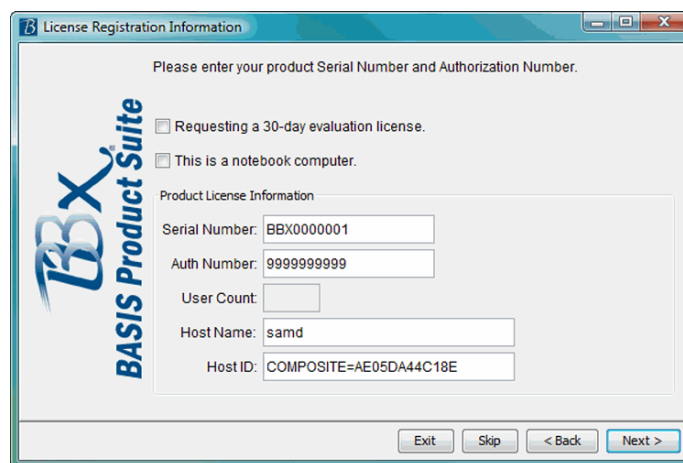
☐ Request product announcements/information

Exit Skip < Back Next >

4. Enter the **Serial Number** and **Auth Number** that are printed on the License Registration Form you received from Open Systems as part of your installation materials on the License Registration Information screen. If you elect to receive a 30-day license, these fields are automatically filled in for you and cannot be changed once you select the **Requesting a 30-day evaluation license** check box. The installation wizard determines the computer's **Host Name** and **Host ID**; if these fields are not already filled in, enter the **Host Name** and **Host ID** to use. Enter the **User Count** from the License Registration Form (this value is automatically set to **2** if you are registering a demo license).

Select the **This is a notebook** computer check box to tie the **Host ID** to your computer's hard disk rather than to its network card if you are installing OSAS on a laptop or notebook computer. This step allows you to use OSAS when you are disconnected from the network.

Click **Next** to continue.

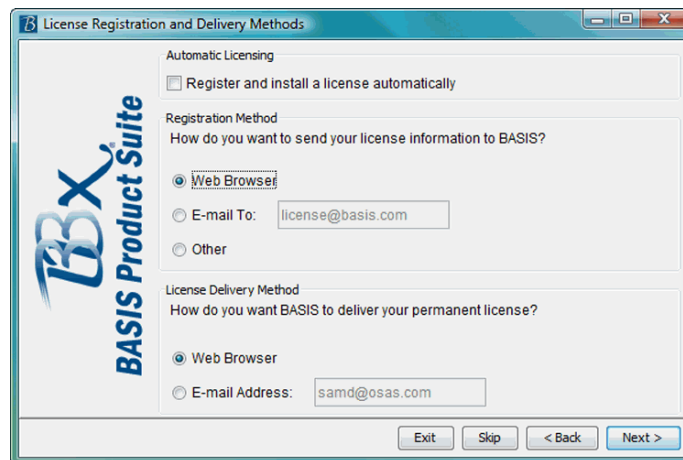


The image shows a Windows-style dialog box titled "License Registration Information". On the left side, there is a vertical logo for "BBX BASIS Product Suite". The main area of the dialog contains the following elements:

- A prompt: "Please enter your product Serial Number and Authorization Number."
- Two checkboxes:
 - ☐ Requesting a 30-day evaluation license.
 - ☐ This is a notebook computer.
- A section titled "Product License Information" containing several text input fields:
 - Serial Number: BBX0000001
 - Auth Number: 9999999999
 - User Count: (empty field)
 - Host Name: samd
 - Host ID: COMPOSITE=AE05DA44C18E
- At the bottom right, there are four buttons: "Exit", "Skip", "< Back", and "Next >". The "Next >" button is highlighted in blue.

Send and Receive License Information

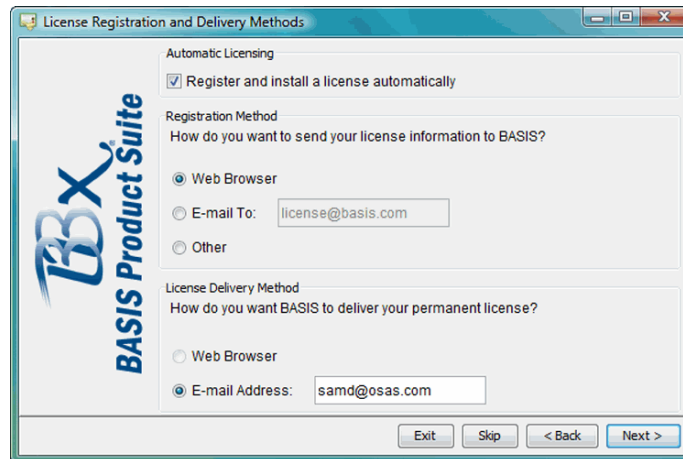
Next, you must send your registration information to BASIS. When the License Registration and Delivery Methods screen appears, select the method to use to register your BASIS license. Turn to the appropriate page for more information.



Method	Refer to
Automatic licensing	page 2-21
Send by Web Browser / Receive by Web Browser	page 2-22
Send by E-mail / Receive by E-mail	page 2-24
Send by Other / Receive by E-mail	page 2-26

Automatic Licensing

1. If the computer is connected to the Internet, select the automatic licensing check box to send, receive, and install license information in one step. This method is the fastest, easiest way to register and install a license.

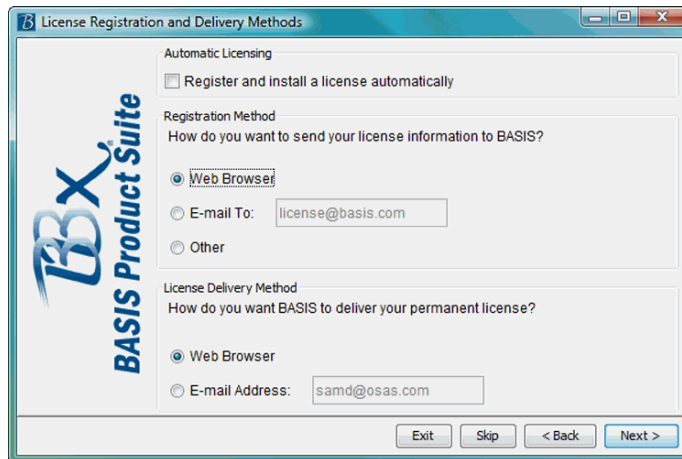


Click **Next** to send your information to BASIS. After receiving your information, BASIS sends the computer a license file and automatically installs it in the correct directory.

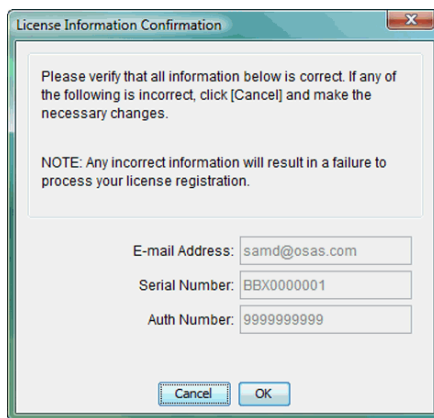
2. A message appears when the license file is installed and asks whether you want to register another license. Click **No** to continue.
3. The Change EM Admin Password screen appears. Turn to page 2-30 for information on changing the BBJ Enterprise Manager password and completing the OSAS installation.

Send by Web Browser / Receive by Web Browser

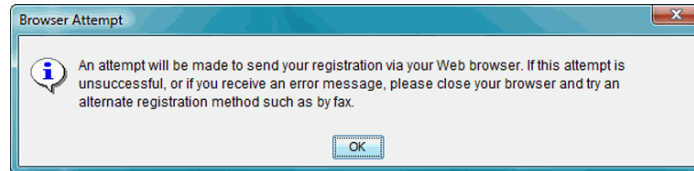
1. If the computer is connected to the Internet, select **Web Browser** as both the **Registration Method** and **License Delivery** method to send and receive information via your web browser. Click **Next** to continue.



2. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.



3. Click **OK** when the following message appears to send the information via your web browser.



4. Your web browser opens a screen that lists two ways to save the license information.
 - To save the information automatically in one step, click the **Install License File** on this machine link. When the download/security warning dialog box appears, select either **Run** or **Open** to save the file in the correct directory. If you use Windows, warning messages may appear. These messages appear routinely and are intended to keep your computer secure. Click **Run** if any additional messages appear.
 - To manually save the file in the necessary directory, click the **Retrieve License File** link. Text similar to this appears in your browser:

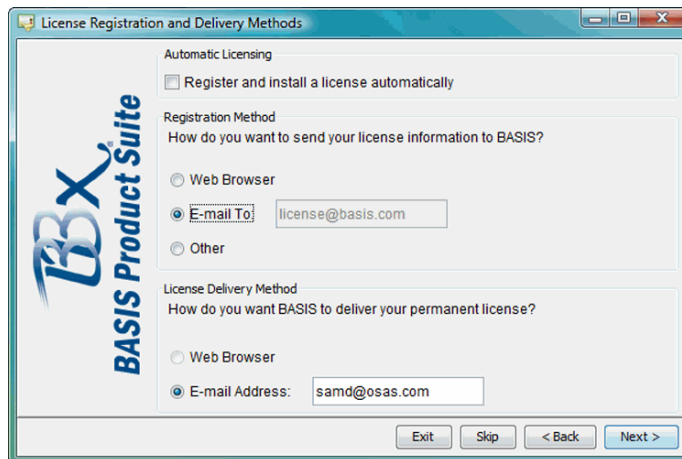
```
# Here is the BASIS product license file you requested.
#
# Please save this page as "C:\TEMP\BASIS BBJ License.txt".
# If "C:\TEMP" does not exist, then please create it and save
# this page there. After you have done this, please run the
# "Install a BASIS License" program from your program folder
# to complete the installation of this license.
#
# DO NOT MODIFY THIS FILE
#
SERVER this_host COMPOSITE=C3597D001706
VENDOR basis
FEATURE BBJ basis 10 permanent 1 44429487975E VENDOR_STRING=EWf \
HOSTID=ANY ck=108 SN=BBX000001
```

Save the file as instructed. If the **temp** directory does not exist, create it and save the .txt file in that directory.

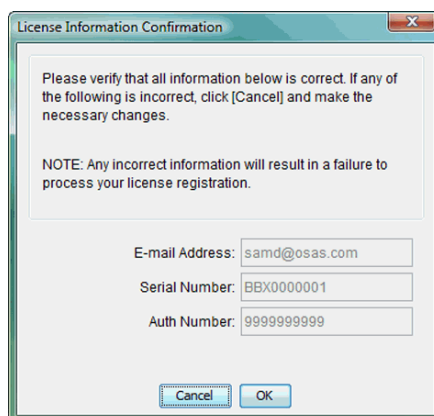
5. When you are prompted to register for another license, click **No**. Then click **Next** on the Registration Notification screen.

**Send by
E-mail /
Receive by
E-mail**

6. The BASIS License Installation screen appears. Continue with “Install the BASIS License” on page 2-27 to install the license file.
1. To send and receive license information via e-mail, select **E-mail** as both the **Registration Method** and **License Delivery** method, then enter your e-mail address and click **Next** to continue.



2. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.



3. When the Emergency Contact Information screen appears, enter information about the person to contact in case a problem should arise during delivery and click **OK** to continue.



Emergency Contact Information

Please enter a name and phone number to expedite the delivery of a permanent license file in the unlikely event that problems occur during the license registration process.

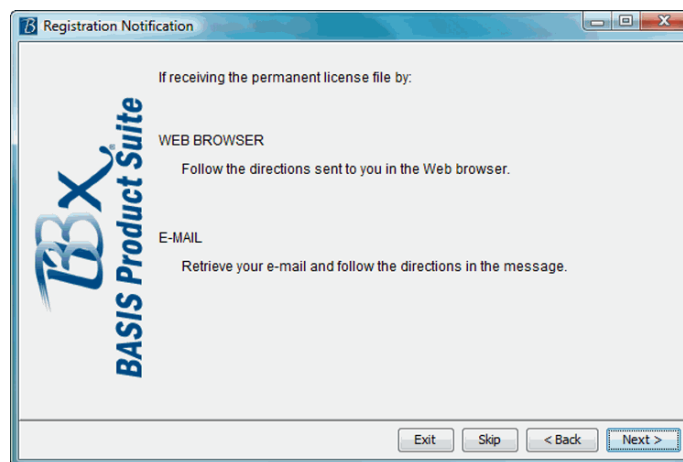
First Name: Sam

Last Name: Davies

Phone: (952) 403-5700

OK

4. A message appears after the e-mail is sent to BASIS successfully. Click **OK**.
5. When you are prompted to register for another license, click **No**.
6. When the Registration Notification screen appears, read the instructions on the screen and click **Next** to continue.



Registration Notification

If receiving the permanent license file by:

WEB BROWSER
Follow the directions sent to you in the Web browser.

E-MAIL
Retrieve your e-mail and follow the directions in the message.

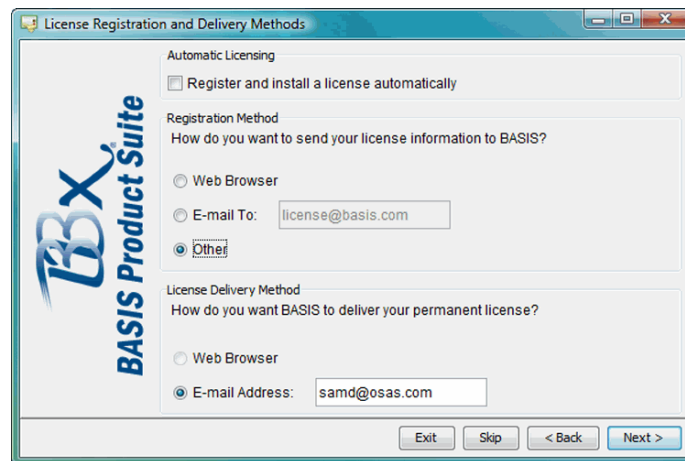
Exit Skip < Back Next >

7. The BASIS License Installation screen appears. Continue with “Install the BASIS License” on page 2-31 to install the license file.

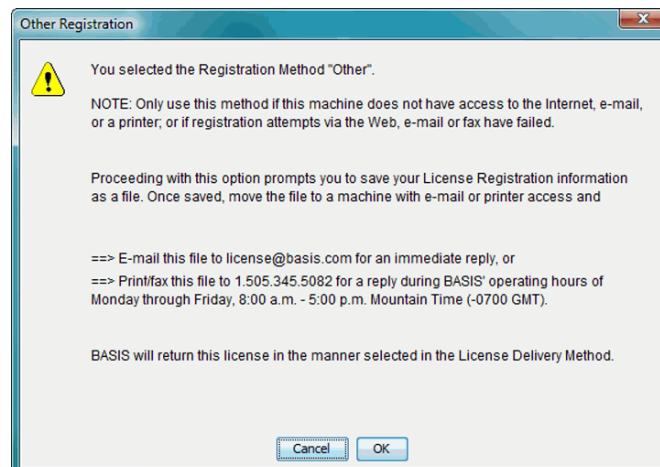
**Send by
Other /
Receive by
E-mail**

Use the **Other** option if the computer you are working on is not connected to the Internet or does not have e-mail access.

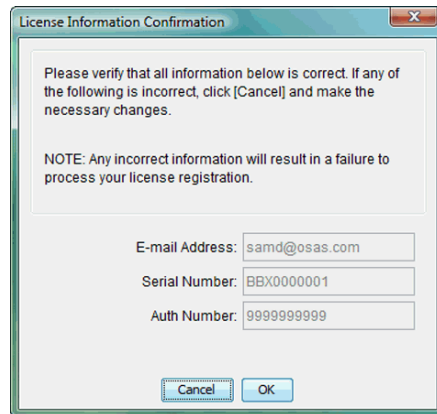
1. Select **Other** as the **Registration Method** and **E-mail Address** as the **License Delivery Method**. Click **Next** to continue.



2. A warning message appears. Read the message carefully and click **OK**.



3. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.

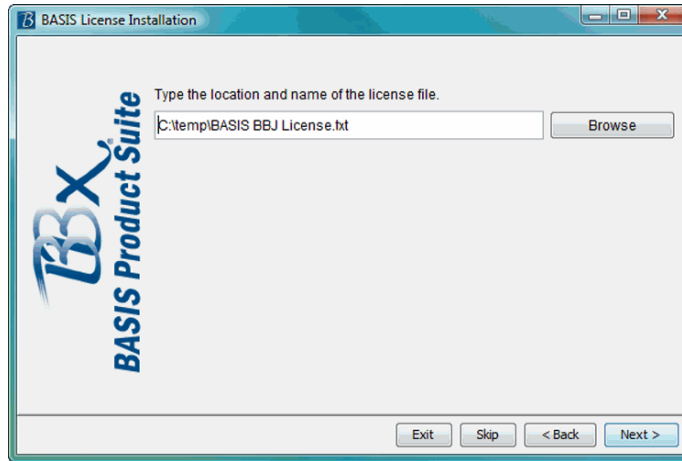


4. When the Save dialog box appears, save the license file onto the appropriate media or network drive by selecting the destination and clicking **Save**.
5. Send the file to BASIS. You can do this from a computer with e-mail access, attach the file from the media or network drive to an e-mail message and send it to BASIS.
6. After you receive the e-mail from BASIS, return to the original computer and click **No** when you are prompted to install another license.
7. When the Registration Notification screen appears, click **Next** to continue.
8. The BASIS License Installation screen appears. Continue with "Install the BASIS License" on page 2-27 to install the license file.

Install the BASIS License

If you used a method other than the automatic licensing method to register the BASIS license, you need to install the BASIS license so that OSAS functions correctly.

1. When the BASIS License Information screen appears after you register the license, enter your license information.

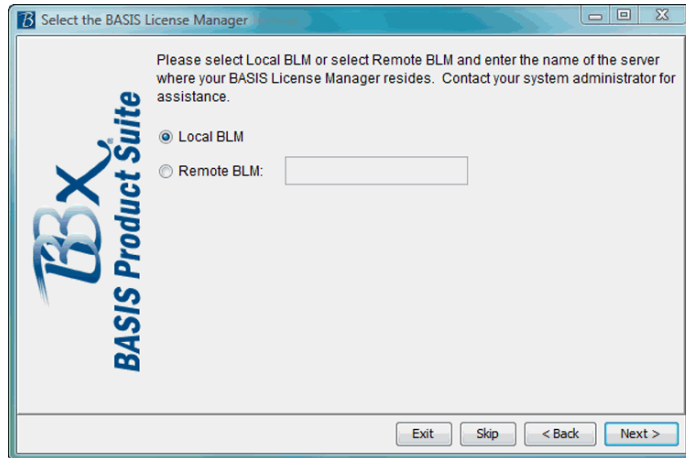


Enter the directory location of the license file you saved during registration. You can also click **Browse** to navigate to the directory in which you saved the file.

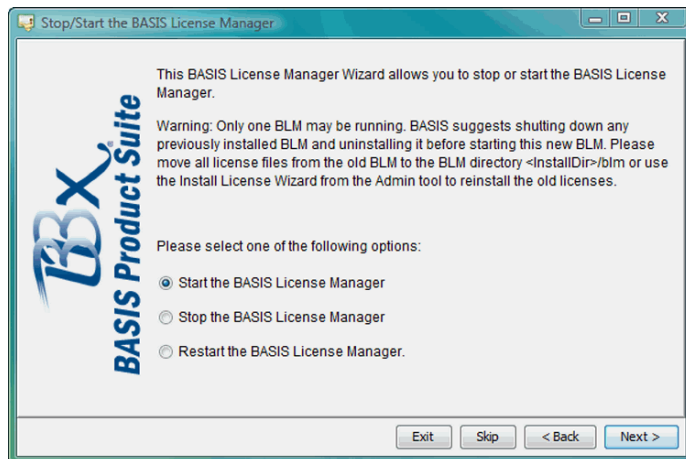
Click **Next** to continue.

2. The installation successful message appears after the license is installed successfully. This message also asks whether you want to install another license. Click **No** to continue.
3. The Installation Complete screen appears. Your license file is installed. Click **Next** to continue.

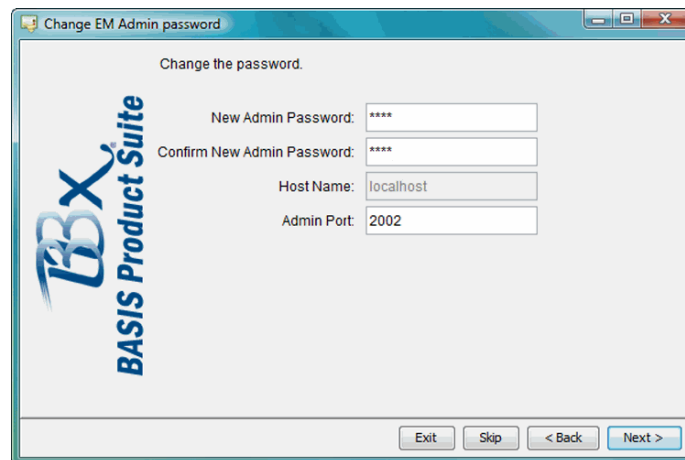
4. When the Select the BASIS License Manager screen appears, enter **localhost** as the location of the BLM and click **Next** to continue.



5. When the "BASIS License Manager installation successful" message appears, click **OK**.
6. If you used a method other than the Automatic Licensing method to register your license, the Start/Stop the BASIS License Manager screen appears. Select **Start the BASIS License Manager** and click **Next** to continue.



7. A message appears when the BLM starts successfully. Click **OK** to continue.
8. When the Change EM Admin Password screen appears, enter a new password to use as the default password for the BBJ Enterprise Manager admin user and click **Next** to continue.



During installation, the wizard installs all BBJ components, including the BBJ Enterprise Manager, an administrative program you can use to optimize how BBJ works. Enterprise Manager is initially installed with an **admin** user, which is given the password **admin123**. Change this password to increase your system's security.

Make a note of the new password in a safe location for your reference later when working with Enterprise Manager.

If you want to keep the default **admin123** password, enter it into the two password boxes on the screen.

9. A message appears when the password for Enterprise Manager is changed successfully. Click **OK** to continue.

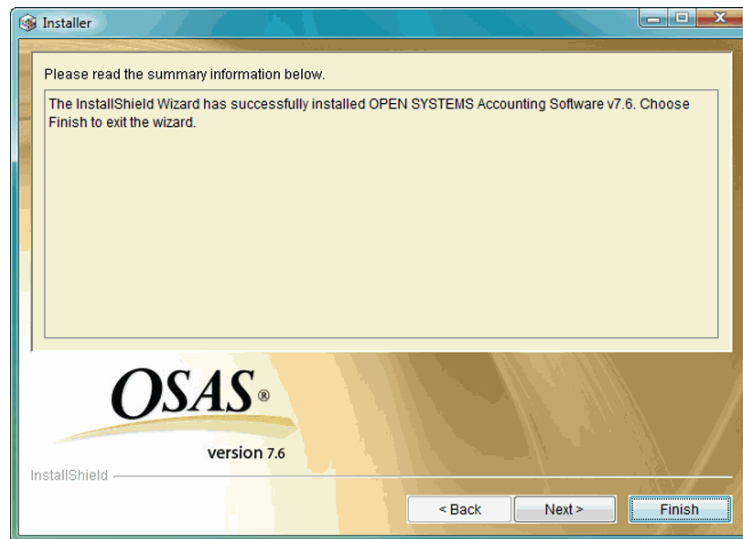
After you complete the BASIS license registration, the installation program automatically installs the remaining components and the OSAS applications you selected.

10. If you are installing OSAS on Windows XP with Service Pack 2, a warning message may appear during application installation stating that the Windows Firewall has temporarily blocked the Thin Client Proxy Service. Click **Unblock** to allow the thin client to function correctly.

After the OSAS applications are installed, you need to finish the installation by launching OSAS and entering your company information. Continue to the next section for details.

Finish the Installation

1. When the “installation successful” message appears, click **Finish** to exit the installation wizard.



2. Launch the new OSAS installation. If you use Windows, click **Start**, select the **OSAS v7.6** program group, then select **OSAS v7.6 (BBj)** from the submenu that appears.

If you use Linux or UNIX, enter **osas** at the command prompt.

If you use Mac OS X, double-click **OPEN SYSTEMS Accounting Software** on the Applications menu. You access the Applications menu by pressing **Apple+Shift+A** from anywhere in Finder.

3. OSAS launches and builds the files it needs to run. After this initial startup process completes, the Company Information screen appears.

Company Information

Commands Edit Modes Other Help

Company ID: H

Name: Builders Supply

Address 1: 4301 Dean Lakes Blvd.

Address 2:

City: Shakopee

State: MN

Zip: 55379

Country: US U.S.A.

Site: 999999

Phone: (952)496-2465

Fax: (952)496-2495

Logo File: COMPANY_LOGO.GIF

E-mail Address: Webmaster@builderssupply.com

Web Site: www.BuildersSupply.com

Images must be stored in the OSAS Documents folder.

Company H | 09/07/2010 | Terminal T000 | IHS

Enter your company's ID (up to three characters) and press **Enter**—the remaining fields are available only after you enter the **Company ID**. Enter the company's related information as prompted and click **OK** or press **Page Down** to save the new record. When the cursor returns to the **Company ID** field, press **F7** to close the screen and open the OSAS main menu.

OSAS installation is now complete. Before you can begin using OSAS on a daily basis, you must set up Resource Manager, company data files, and the applications you installed. See page 6-15 for more information on setting up Resource Manager, and refer to the appropriate application guide for information on setting up that application.

4. If you use Windows, change the access group on the user account you set up for BBj Services from **Administrator** to **User** to secure your system and prevent unauthorized access.

After changing the access group for the BBj user account, make sure that user still has full permissions for the directory in which you installed OSAS. Check the directory's properties and give this user full access, if needed.

OSAS on VPRO/5 for Windows

This section details how to install OSAS on the Visual PRO/5 language on a single Windows workstation. To complete this installation, you'll proceed through these stages (each stage is broken down into its individual steps):

1. Install the BASIS License Manager
2. Start the Installation Wizard.
3. Register and install a BASIS license.
4. Finish the installation.
5. Install terminals (optional).

Windows 64-bit Installation

Before installing OSAS on a Windows 64-bit operating system, ensure the Environment Variables path points to the 64-bit installation of the JRE.

1. Enter **sysdm.cpl** at a **Run** prompt to open the System Properties window.
2. Select the **Advanced** tab.
3. Click the **Environment Variables** button.
4. Select the **Path** variable from the **System variables** section and click the **Edit** button.
5. Add **;C:\Program Files\Java\jre6** to the end of the **Variable value**.
Note: The semicolon is necessary when adding the JRE path to an already existing value.
6. Click **OK** until the System Properties window closes.

Install the BASIS License Manager

If you have a multiuser license, you can set up a desktop installation of OSAS on VPRO/5 such that other computers (or terminals) can access that installation via mapped drives. When you use this configuration, you must install the BASIS License Manager (BLM) to manage licenses and set up terminals (see page 2-49) on the workstations that will access the main installation. This type of configuration is only available on a desktop VPRO/5 installation; you cannot use it with BBj as BBj does not recognize mapped drives.

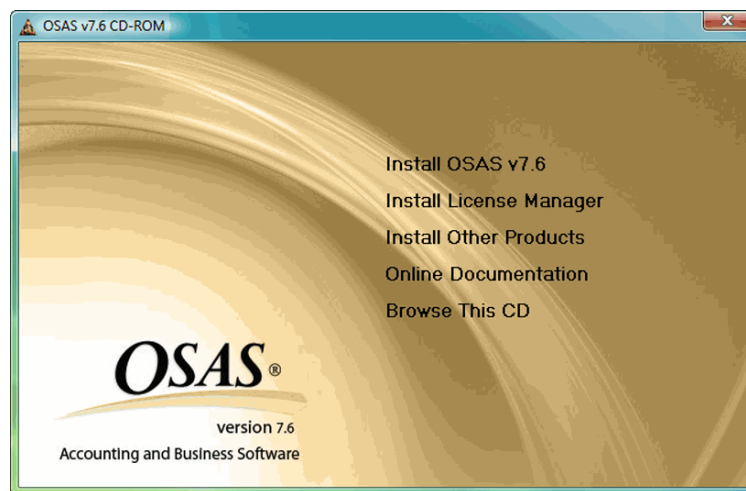
Please note that if you use this configuration, performance may not be optimal as you are not using the data server (included with OSAS 7.6) to manage data access. Using the data server gives you faster connections, greater security, and reduced risk of data corruption. Refer to chapter 4 for details on installing OSAS on VPRO/5 in an enterprise environment that uses the data server.

To install the BLM, turn to page 4-4. After you've installed the BLM, you need to register your multiuser license and install it. Follow the instructions on page 4-8 and page 4-19 to register and install the license. When you finish, continue on to the next section to install OSAS on VPRO/5 on a desktop.

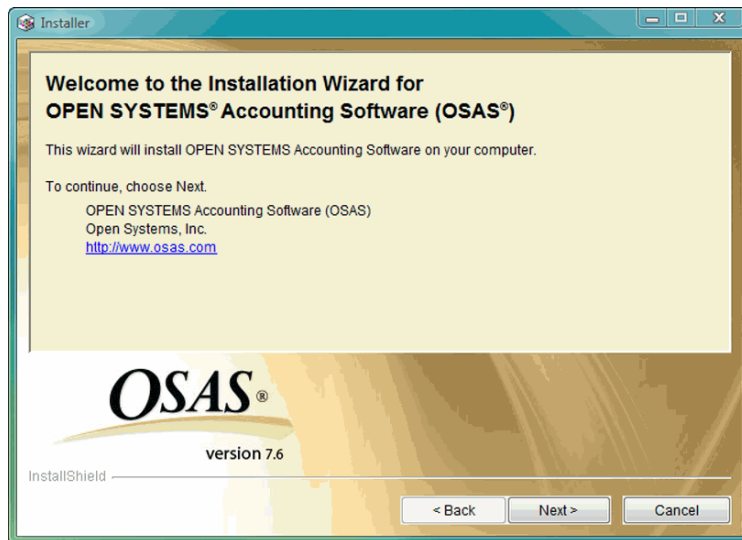
Start the Installation

1. Start Windows and log in as an administrator.

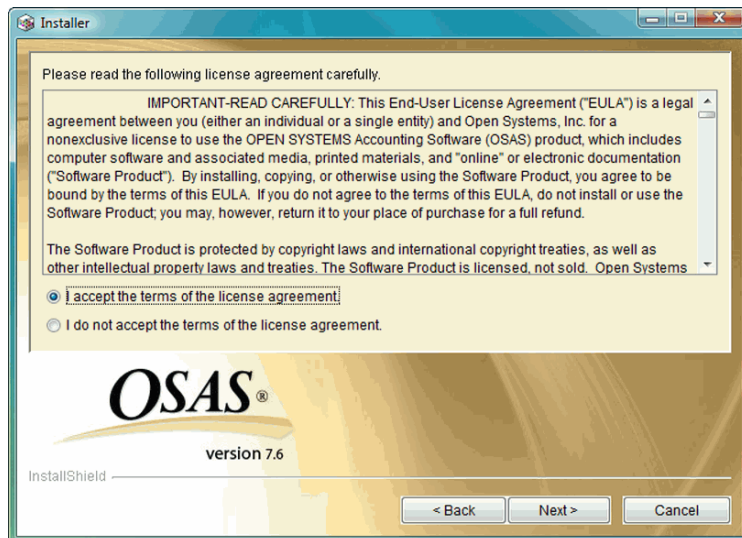
2. Insert the installation DVD into your DVD-ROM drive. The OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.



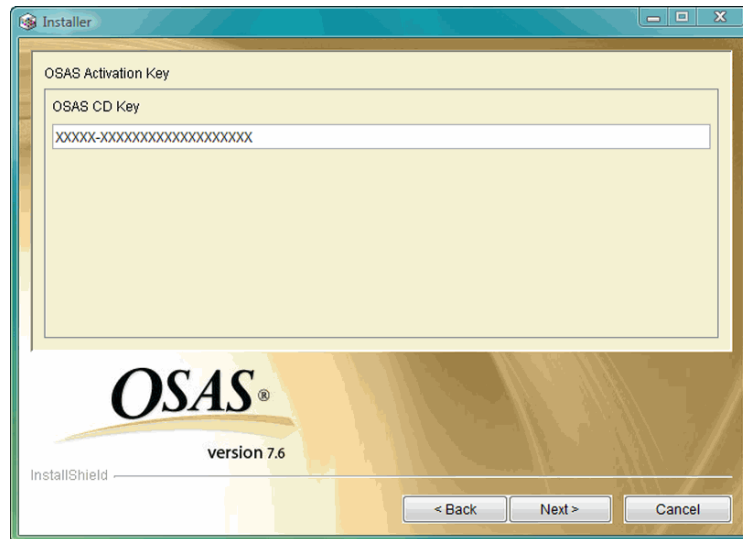
3. When the Welcome screen appears, click **Next** to begin the install.



4. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

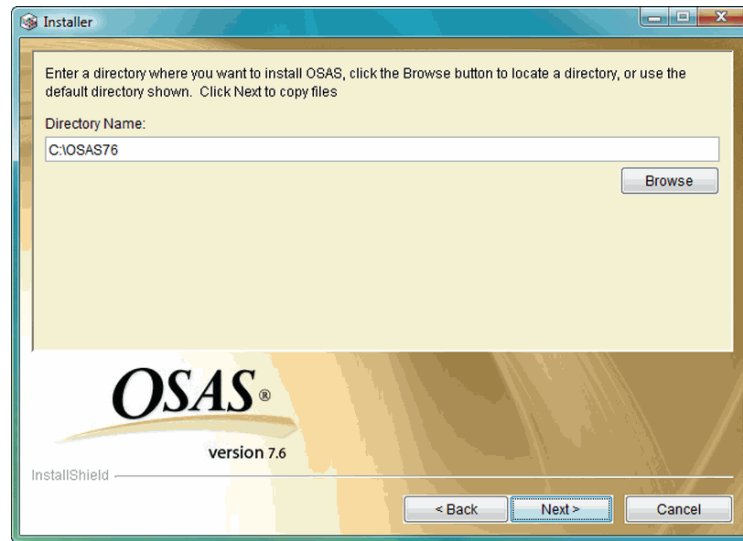


5. Enter your OSAS activation key exactly as it appears on the License Registration Form. Please note—the key is case sensitive.



Click **Next** to continue.

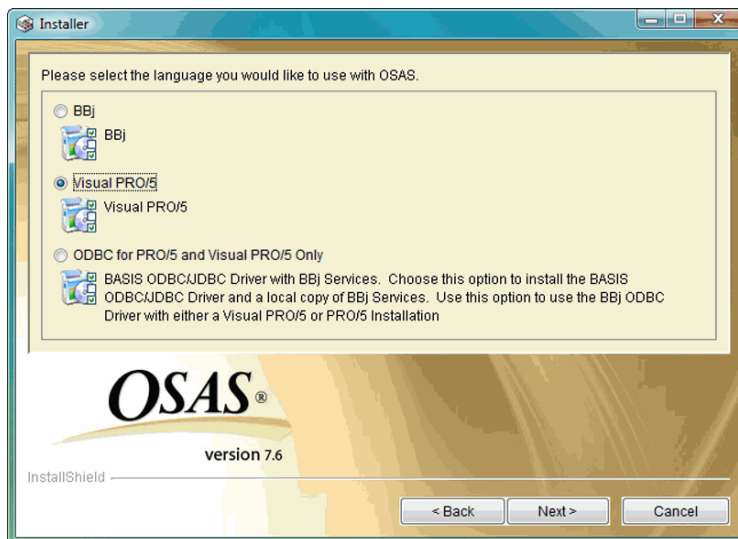
6. Change the directory path in which to install OSAS, if you like. You can also click **Browse** to navigate to this directory and enter the path automatically.



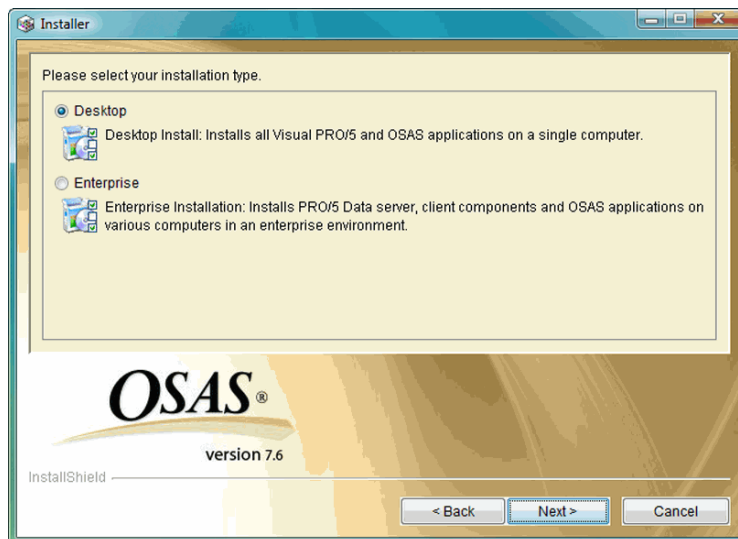
Note: Do not use spaces in the path name during installation. OSAS will not function correctly if you use a path name that includes spaces. Instead, omit spaces or replace them with underline characters. For example, rather than using the path name *OSAS v76*, omit the space and use *OSASv76* instead.

Click **Next** after specifying the installation directory to continue.

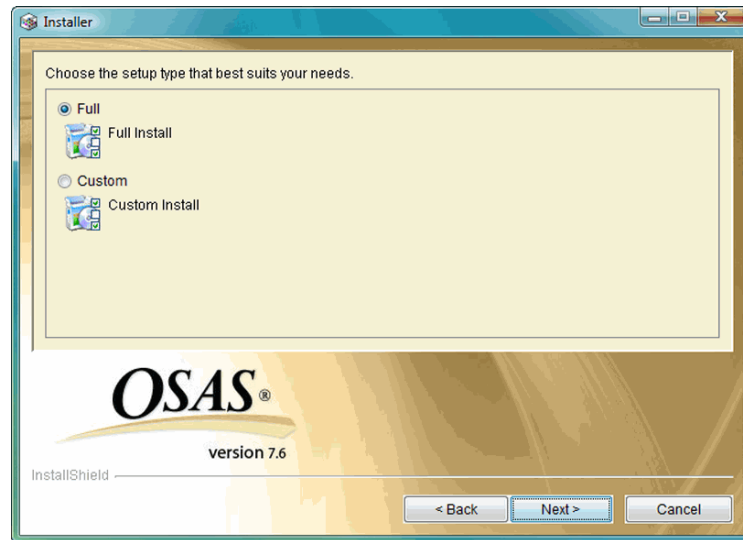
7. Select **Visual PRO/5** as language platform on which to install OSAS and click **Next** to continue.



8. Select **Desktop** as the installation type and click **Next** to continue.

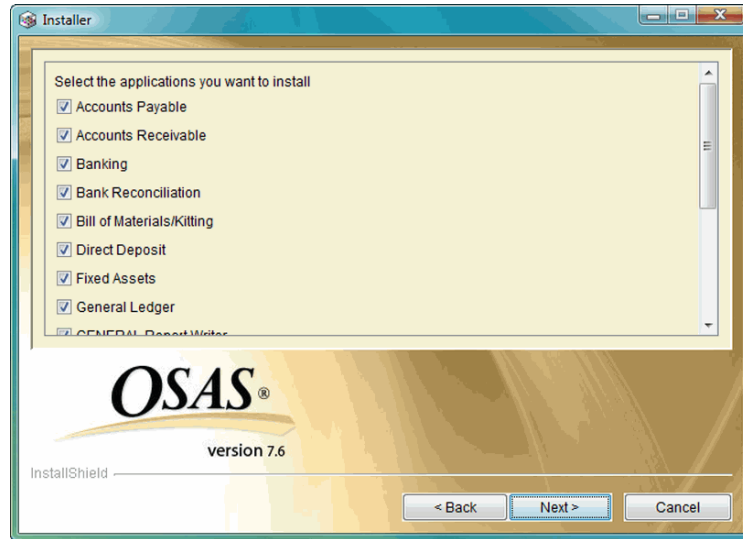


9. Select **Full** as the setup type and click **Next** to continue.



Select **Custom** only if you need to install or re-install specific components. When you select this option, a screen appears when you click **Next** where you can select the components to install. See page 5-33 for more information.

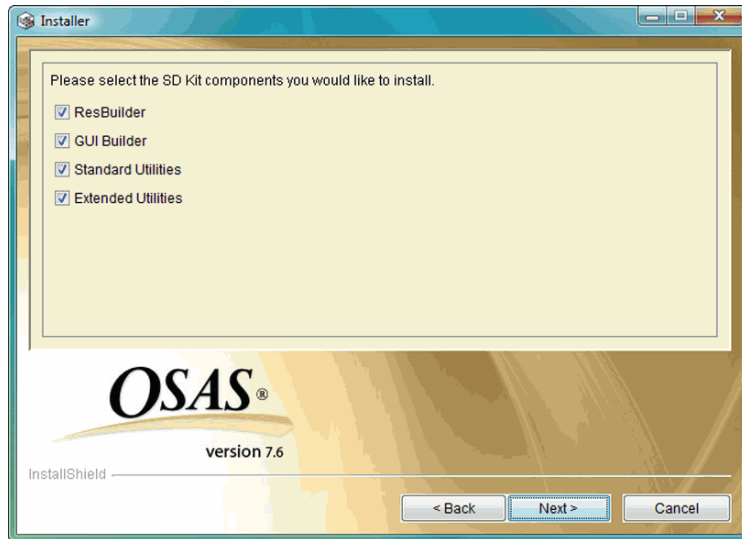
10. Select the OSAS applications and components to install and click **Next**. Your OSAS activation key determines which applications appear in the list.



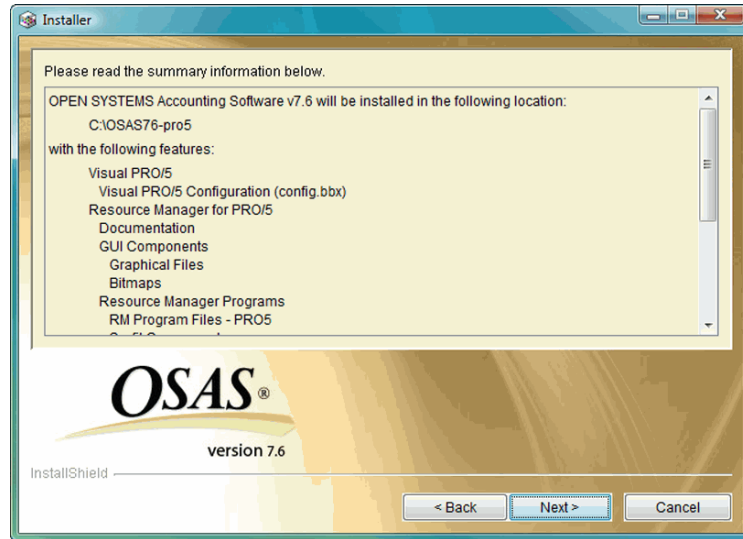
If you do not want to install an application, clear its check box. While installing applications here is most convenient, you can also use the **Install Applications** function in Resource Manager to install an application later.

If your OSAS activation key includes CJC, the installation program automatically selects the **Contractors' Job Cost** check box and clears the **Job Costing** check box. To avoid problems with processing, you must install one or the other, but not both at the same time. If you select both check boxes, a message appears.

11. If you have purchased the OSAS Software Developer's Kit (SDK), select the SDK components you would like to install, and click **Next**.



12. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.



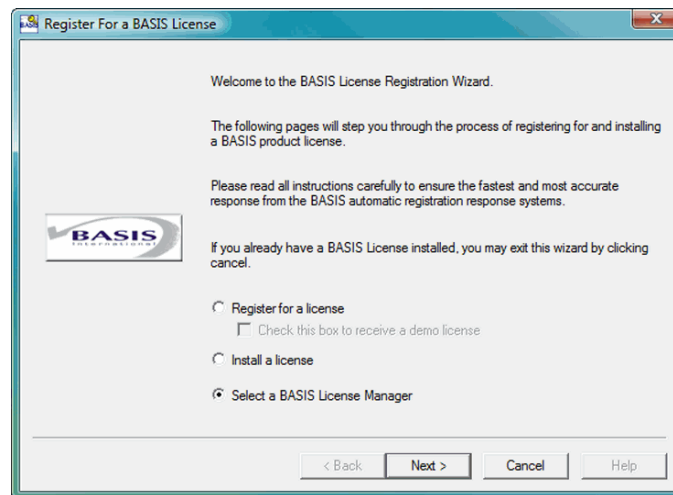
If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

Because the installation program automatically installs all OSAS components, installation may take several minutes. Any apparent “lag time” results from the process needed to install these extra components and installation will resume in a few moments.

You must register and install a BASIS license before OSAS installation can complete. The Register for a BASIS License screen appears automatically during installation.

Select a BASIS License

1. During installation, the Register for a BASIS License screen appears. In order for OSAS to work correctly, you need to register and install the BASIS license you received from Open Systems.

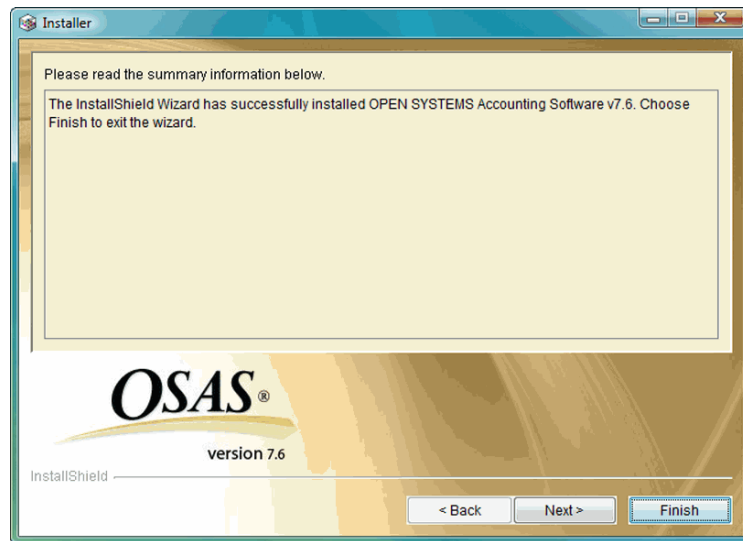


Select **Select a BASIS License Manager**, then click **Next** to continue.

2. Enter the server name on which the BASIS License Manager is stored.
3. The Installation Complete screen appears. Your license file is installed. Click **Finish** to return to the OSAS installation wizard and install the OSAS applications.

Finish the Installation

1. When the “installation successful” message appears, click **Finish** to exit the installation program.



2. Launch the new OSAS installation. Click **Start**, select **Programs**, select the **OSAS v7.6** program group, then click **OSAS v7.6 (VPRO/5)**.

3. OSAS launches and builds the files it needs to run. When this initial startup process completes, the Company Information screen appears.

Company Information

Commands Edit Modes Other Help

Company ID: H

Name: Builders Supply

Address 1: 4301 Dean Lakes Blvd.

Address 2:

City: Shakopee

State: MN

Zip: 55379

Country: US U.S.A.

Site: 999999

Phone: (952)496-2465

Fax: (952)496-2495

Logo File: COMPANY_LOGO.GIF

E-mail Address: Webmaster@builderssupply.com

Web Site: www.BuilderSupply.com

Images must be stored in the OSAS Documents folder. Company H 09/07/2010 Terminal T000 INS

Enter your company's ID (up to three characters) and press **Enter**—the remaining fields on this screen are available only after you enter the **Company ID**. Enter the company's related information as prompted and click **OK** or press **Page Down** to save the new company record. When the cursor returns to the **Company ID** field, press **F7** to close the screen and open the OSAS main menu.

OSAS installation is now complete. Before you can begin using OSAS on a daily basis, you must set up Resource Manager, company data files, and the applications you installed. See "Setting Up Resource Manager" on page 6-15 for information, and refer to the appropriate application guide for information on setting up that application.

OSAS on PRO/5 for Linux/UNIX

Use the information in this section to install OSAS on the PRO/5 language platform on a single Linux or UNIX workstation. Because OSAS on PRO/5 for Linux/UNIX cannot take advantage of the Visual PRO/5 interpreters for Windows, its install process is largely manual.

To complete this installation, you'll proceed through these stages (each stage is broken down into its individual steps in this section):

1. Install the BASIS License Manager (BLM).
2. Register the BASIS license.
3. Send and receive license information.
4. Install the BASIS license.
5. Start the BLM.
6. Install Resource Manager.
7. Set up company information.

Install the BASIS License Manager (BLM)

The TCP/IP protocol is required on your network to use the BASIS License Manager. See "TCP/IP Information" on page C-1 for more information.

Note: As you follow these installation steps, do not anticipate commands. For example, if a prompt reads *Please wait*, do not press **Enter** until you are specifically directed to do so.

1. Log in as root.

2. Insert the OSAS installation DVD into the DVD-ROM drive. Then, set **umask 0** and mount the DVD-ROM drive to a path that exists on your system. For example, in the instructions below, the sample mount directory **/mnt/cdrom** must exist before you can mount the DVD-ROM drive. Enter these commands (as appropriate for your operating system):

SCO6 UNIX: **# umask 0**
mount -o fperm=777 /dev/cdrom/cdrom1 /mnt/cdrom
cd /mnt/cdrom/UNIX/SCO6RM
./CDINSTAL

Linux: **# umask 0**
mount /dev/cdrom /mnt/cdrom
cd /mnt/cdrom/UNIX/LINUXRM
./CDINSTAL

3. After you enter the commands above, this prompt appears:

INSTALLATION PROCESS for: BASIS License Manager

Press Enter to continue or DEL (interrupt key) to quit the installation.

Press **Enter** to continue or **DEL** (the interrupt key) to quit the installation.

4. When the following prompt appears, press **Enter** to accept the default path or enter a different path.

Enter the pathname on which to install the BASIS License Manager
or press Enter to accept the default (/usr/basis)

5. The BLM files are copied to the path you entered. When the copy process is complete, the following menu appears. Enter **BLM**.

```
BASIS Install Main Menu

From this menu you may go to the install menus for the following products:

BLM      Install BASIS License Manager

PRO5     Install PRO/5

DS       Install PRO/5 Data Server

EXIT     Exit installation

Please type BLM, PRO5, DS or EXIT: BLM
```

6. The BLM screen appears. Press **Enter** to continue.

```
BBBBBBBBB  LL      MM      MM
BB      BB  LL      MMMM  MMMM
BB      BB  LL      MM  MMMM  MM
BBBBBBBBB  LL      MM  MM  MM
BB      BB  LL      MM      MM
BB      BB  LL      MM      MM
BBBBBBBBB  LLLLLLLLLL  MM      MM

This installation procedure will assist you in installing and licensing
PRO/5 and PRO/5 Data Server for your particular configuration.

Please have your Serial Number(s) and Authorization Number(s) ready.
These numbers are provided by BASIS on the license registration form
sent with the product(s).

Enter to continue
```

**Create the
BLM Script**

7. The BASIS License Manager Install Menu appears. Enter **CREATE**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: CREATE
```

8. The following prompt appears. Press **Enter** to continue.

```
Create BasisRunLM

This installation automatically creates a Bourne shell script to start the
BASIS License Manager. The script can be installed automatically, at your
request, and invoked as part of this installation.

Enter to continue
```

9. The following prompt appears. Press **Enter** to continue.

```
This installation just created the following script to start your BASIS
License Manager:

/usr/basis/blmgr/BasisRunLM

To start the BASIS License Manager at system startup, invoke the above script
from the startup sequence as appropriate to your UNIX system. The next
section will ask if you want this script to install the BasisRunLM script
into your startup sequence.

Enter to continue
```

**Add the BLM
to the Linux/
UNIX Startup
Sequence**

10. The BASIS License Manager Install Menu reappears. Enter **ADD**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: ADD
```

11. The Install BasisRunLM message appears.

```
Install BasisRunLM

The BASIS install created the script BasisRunLM. BasisRunLM starts the BASIS
License Manager from the BASIS install directory. PRO/5 requires a license
manager to be running. BasisRunLM can be placed in the appropriate startup
scripts for your UNIX system.

If desired, this script attempts to modify the file /etc/inittab.
It tries to append the following entry:

    brlm:2345:once:/usr/basis/blmgr/BasisRunLM; # start BASIS License Manager

This entry will invoke the BasisRunLM script in run levels 2, 3, and 4.

If you do not want this script to edit the /etc/inittab file, type N to
answer the next question. Otherwise, type Y. Typing Y requires root
privileges.

Do you want this script to edit the /etc/inittab file? (Y/N) Y
```

At the prompt, enter **Y**. Do not reboot your computer now. The BLM will be started automatically when you reboot the server.

12. The following prompt appears. Press **Enter** to continue.

```
Entry added to /etc/inittab file.  
Enter to continue
```

13. Continue with the instructions in the next section to register your license.

Register the BASIS License

Follow these instructions to register your BASIS license:

1. The BASIS License Manager Install Menu appears. Enter **REG**.

```
BASIS License Manager Install Menu  
  
REG      Register for BASIS product license  
INSTALL  Install BASIS product license  
CREATE   Create script to start BASIS License Manager  
ADD      Add BASIS License Manager to UNIX startup sequence  
START    Start the BASIS License Manager  
STOP     Stop the BASIS License Manager  
EXIT     Exit BASIS License Manager Install Menu  
  
Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: REG
```

2. The following message appears. Press **Enter** to continue.

```
Welcome to BASIS License Registration  
  
The following questions will step you through the process of registering for  
a BASIS product license. Please read all instructions carefully to ensure the  
fastest and most accurate response from the BASIS automatic registration  
response system.  
  
Enter to continue
```


3. The Contact Information prompts appear. This information is required.

Contact Information

Your contact information is confidential and will only be used to assist BASIS in further identifying your product license.

Please enter the value and press ENTER. If a previous entry has been made for the field, press ENTER to retain this information.

Please enter Company: Open Systems

Please enter First Name: Sam

Please enter Last Name: Davies

Please enter Phone Number: 952-403-5700

Enter your contact information as prompted and press **Enter** to continue. If you would like to receive more product information from BASIS, enter **Y** when prompted.

4. The Product License Information prompts appear. Enter your serial and authorization numbers. Press **Enter** to accept the hostname that appears.

Product License Information

The Serial Number and Authorization Number are provided to you by BASIS and must be typed exactly as shown.

The HostName provides you an easy method of identifying the host.

Please enter the value and press ENTER. If a previous entry has been made for the field, press ENTER to retain this information.

Please enter Serial Number: OSH123456

Please enter License Authorization Number: 1234567890

Please enter Hostname: (<CR> for redhat_server)

5. The Contact and Product License Information Confirmation screen appears:

```

Contact and Product License Information Confirmation

Below is the contact and product license information you just entered.
Please review the information and verify that all fields are correct.
If correct, type Y to continue. If incorrect, type N and update the
fields that are incorrect.

#####
# Registration information follows
#####
Company:      Open Systems
Last Name:    Davies
First Name:   Sam
Phone Number: 952-403-5700
Serial Number: OSH123456
License Auth Num: 1234567890
Hostname:     redhat_server
Host ID:      00d0b721ceda
ProdInfo Email: No

Is this OK? [Y/N] Y
```

The **Host ID** field is filled in for you and you cannot change it. Enter **Y** and continue with the next section to send the license information.

Send and Receive License Information

Choose the method by which you want to send the registration information to BASIS. Then follow the instructions on the corresponding pages.

Method	Refer To
Send by E-Mail / Receive by E-Mail	page 2-57
Send by Other / Receive by E-Mail	page 2-62

**Send by
E-Mail /
Receive by
E-Mail**

To use the e-mail option, your server must support outgoing Internet e-mail. If it doesn't, choose another method. Follow these steps to send and receive your license registration information by e-mail:

1. When the Registration Method menu appears, enter **EMAIL**.

```
Registration Method

How do you want to send your license information to BASIS?

EMAIL      (To: license@basis.com)
OTHER
EXIT       (exit the install script)

Please type EMAIL, OTHER or EXIT and press ENTER: EMAIL
```

2. The License Delivery message and menu appears. Enter **EMAIL**.

```
License Delivery Method

BASIS will return your permanent license via the method selected below. If
EMAIL is selected, an email address must be entered. To skip an optional
field, press ENTER. To clear an optional field, enter a dash '-'.

How do you want BASIS to deliver your permanent license?

EMAIL Address
EXIT (exit the install script)

Please type EMAIL or EXIT and press ENTER: EMAIL
```

3. Enter your e-mail address.

```
Please enter Email Address: samd@osas.com
```

4. The License Information Confirmation screen appears. If the information on the screen is correct, enter **Y** to continue. If you entered information in error, enter **N** and enter the correct information.

License Information Confirmation

Please verify that all information below is correct. If any of the following is incorrect, please type N to update the fields that are incorrect.

NOTE: Any incorrect information will result in a failure to process your registration for a BASIS license.

Email Address: sam@osas.com
Serial Number: OSH123456
License Auth Num: 1234567890

Is this OK? [Y/N] Y

5. When the e-mail has been sent, the following prompt appears. (If the prompt does not appear, skip to step 9 below.) Press **Enter** to continue.

Your license request has been sent via email to license@basis.com.

Enter to continue

6. The following screen appears. Enter **N** to continue.

The permanent license information will be emailed to samd@osas.com.

Would you like to register for another BASIS license? (Y/N) N

7. The BASIS License Registration Process screen appears. Press **Enter** to continue.

```
BASIS License Registration Process

When BASIS receives the registration information, your permanent license file
is generated and returned to you by the delivery method you previously
selected in the registration dialog. This process should take no more than
a few minutes.

**** If after 30 minutes you still have not received the ****
**** permanent license information, please contact BASIS ****
**** Technical Support. ****

If there is a delay in receiving your license number and you have tried
email delivery, including "Other," we recommend you install the
temporary license printed at the bottom of the BASIS License Registration
form until you receive the permanent license.

Enter to continue
```

8. The BASIS License Manager Install Menu appears again. Skip to “License Installation” on page 2-65.
9. If the e-mail could not be sent, you must select a different method to register your license. The following prompts appear. Press **Enter** to continue.

```
./install: sendmail: not found

The sendmail program was not found in your current path.
Searching some common directories for the sendmail program ...

Unable to find sendmail program.

Please select OTHER for your Registration Method.

Enter to continue
```

10. The following prompt appears. Enter **Y** to continue.

```
Would you like to register for another BASIS license? [Y/N] Y
```

11. The Contact Information screen appears. Press **Enter** to accept each entry.

Contact Information

Your contact information is confidential and will only be used to assist BASIS in further identifying your product license.

Please enter the value and press ENTER. If a previous entry has been made for the field, press ENTER to retain this information.

Please enter Company: Open Systems

Please enter First Name: Sam

Please enter Last Name: Davies

Please enter Phone Number: 952-403-5700

12. The Product License Information screen appears. Press **Enter** for each entry.

Product License Information

The Serial Number and Authorization Number are provided to you by BASIS and must be typed exactly as shown.

The HostName provides you an easy method of identifying the host.

Please enter the value and press ENTER. If a previous entry has been made for the field, press ENTER to retain this information.

Please enter Serial Number: OSH123456

Please enter License Authorization Number: 1234567890

Please enter Hostname: (<CR> for redhat_server)

13. The confirmation screen appears. If the information is correct, enter **Y**. If you entered information in error, enter **N** and enter the correct information.

```

Contact and Product License Information Confirmation

Below is the contact and product license information you just entered.
Please review the information and verify that all fields are correct.
If correct, type Y to continue. If incorrect, type N and update the
fields that are incorrect.

#####
# Registration information follows
#####
Company:      Open Systems
Last Name:    Davies
First Name:   Sam
Phone Number: 952-403-5700
Serial Number: OSH123456
License Auth Num: 1234567890
Hostname:     redhat_server
Host ID:      00d0b721ceda
ProdInfo Email: No

Is this OK? [Y/N] Y
```

14. The Registration Method screen appears.

```

Registration Method

How do you want to send your license information to BASIS?

EMAIL      (To: license@basis.com)
OTHER
EXIT       (exit the install script)

Please type EMAIL, OTHER or EXIT and press ENTER:
```

**Send by Other/
Receive by
E-Mail**

Use the **Other** method only when the e-mail method is unavailable. This method produces a file containing the license registration information. You can then take the file to a system that has e-mail access to register the license.

Follow these steps to send and receive your license information using the **Other** method:

1. At the Registration Method screen, enter **OTHER**.

```
Registration Method

How do you want to send your license information to BASIS?

EMAIL      (To: license@basis.com)
PHONE      (call the BASIS Telephone License Request System)
EXIT       (exit the install script)

Please type EMAIL, OTHER or EXIT and press ENTER: OTHER
```

2. The WARNING screen appears. Read the warning. Enter **Y** to continue.

```
WARNING

You have selected Other as your Registration Method.

ONLY USE THIS METHOD WHEN:
* you DO NOT have access to email or a printer on this machine.
* or you have been UNABLE to successfully register via email.

Proceeding with this option saves your License Registration information in
the file BasisLicRequest so you can move the file to a machine with email and
email this file to license@basis.com for an immediate reply.

The permanent license will be returned by email.

Is this OK? [Y/N] Y
```


3. The License Delivery Method screen appears. Enter **EMAIL** as the delivery method.

```
License Delivery Method

BASIS will return your permanent license via the method selected below. If
EMAIL is selected, an email address must be entered. To skip an optional field,
press ENTER. To clear an optional field, enter a dash '-'.

How do you want BASIS to deliver your permanent license?

    EMAIL Address
    EXIT (exit the install script)

Please type EMAIL or EXIT and press ENTER:
```

4. The following screen appears. Enter your email address in the **EMAIL** field.

```
Please enter Email Address:
```

5. The License Information Confirmation screen appears. Enter **Y** if the information is correct. If you entered information in error, enter **N** and enter the correct information.

```
License Information Confirmation

Please verify that all information below is correct. If any of the following
is incorrect, please type N to update the fields that are incorrect.

NOTE: Any incorrect information will result in a failure to process your
registration for a BASIS license.

Email Address:
Serial Number:  OSH123456
License Auth Num: 1234567890

Is this OK? [Y/N] Y
```

6. The following screen appears. The license file is saved to the directory in which you installed the BLM (the default directory is **/usr/basis**). Press **Enter** to continue.

```
Your license request has been saved in the file

    BasisLicReq4_26967.txt

To receive your permanent license, email the license request file to

    license@basis.com

Enter to continue
```

7. The following screen appears. Enter **N** to continue.

```
The permanent license information will be emailed to samd@osas.com.

Would you like to register for another BASIS license? (Y/N) N
```

8. The BASIS License Registration Process screen appears. Press **Enter** to continue.

```
BASIS License Registration Process

When BASIS receives the registration information, your permanent license file
is generated and returned to you by the delivery method you previously
selected in the registration dialog. This process should take no more than
a few minutes.

**** If after 30 minutes you still have not received the ****
**** permanent license information, please contact BASIS ****
**** Technical Support. ****

If there is a delay in receiving your license number and you have tried both
email delivery, including "Other," we recommend you install the
temporary license printed at the bottom of the BASIS License Registration
form until you receive the permanent license.

Enter to continue
```

Install the BASIS License

When you receive the license information, you must install the license before you can start the License Server.

Invoke the Install Procedure

1. At the BASIS License Manager Install Menu, enter **INSTALL**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: INSTALL
```

2. If you received your license by e-mail, continue to the steps below to install the license.

**Install a
License
Received by
E-Mail**

3. The BASIS License Installation screen appears. You should have copied the license file to the directory in which you installed the BLM (the default directory is **/usr/basis**).

Enter the path and the file name of the file that you received via e-mail. When you save the license file that you received by e-mail, make sure that the file name does not have any spaces in it. The default name of the PRO/5 license file is **basispro5license.txt**.

BASIS License Installation

If you have an electronic version of the license file, please enter the complete path of the license file and press ENTER. Otherwise, press ENTER to type the license information manually.

License File:

4. The following screen appears. Press **Enter** to continue.

The BASIS product license file has been successfully installed.

Enter to continue

5. The following prompt appears. Enter **N** to continue.

Do you want to install another license on this machine? [Y/N] N

6. The License Installation Complete screen appears. Press **Enter** to continue.

License Installation Complete

Installation of your BASIS product license is complete.

If you are accessing a BASIS License Manager, please make sure it is started before attempting to use your BASIS product.

Thank you for choosing BASIS!

Enter to continue

Note: If you are reinstalling a license or increasing your user counts on a pre-existing system, you must stop and then restart the BLM for the new license to take effect (see “Starting and Stopping the BASIS License Manager” on page 7-7 for more information).

Start the BLM

1. The BASIS License Manager Install Menu appears. Enter **START**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: START
```

2. The following prompt appears. Press **Enter** to continue.

```
Starting BASIS License Manager using ./BasisRunLM ...

Starting License Manager Daemon

Enter to continue
```

3. The BASIS License Manager Install Menu reappears. Enter **EXIT** to continue. When the BASIS Install Main Menu appears, enter **EXIT** again. When the Finished BASIS Install screen appears, press **Enter** to continue. The Resource Manager Installation screen automatically appears.

Install Resource Manager

Workstation and Printer Setup

Each workstation has a PRO/5 terminal device name. Resource Manager identifies workstations by their device names. The terminal ID is determined by the device name. You set up terminal IDs and printer devices after you install Resource Manager.

Printers can be set up as shared or local. A shared printer can be used by any user on the system, can be connected to the central processing unit (CPU) or to any terminal, and can be direct, spooled, or both. A local printer can be used by only one terminal, can be connected to the CPU or to any terminal, and can be direct, spooled, or both.

To use the same printer as both a spooled and a direct printer, you must define two output devices—one that routes the output to the spooler and one that routes the output directly to the printer.

If a system has two printers—for example, one for reports and one for Accounts Receivable forms—one printer can be shared, spooled, and connected to the CPU because it does not matter whose report is printed first. But because the accounts receivable clerk needs to control form alignment, the other printer can be local and direct.

Usually shared printers should be connected to the CPU. While shared printers can be connected to any terminal, sending a report to a slave printer, which is connected directly to the terminal, usually makes the terminal unavailable to others until the job is finished.

Direct Printers

When you set up the operating system, you gave each shared printer a name or number. Since a UNIX/Linux device name refers to the port the printer is attached to and Resource Manager identifies shared printers by their device names, you must now give each shared printer a device name. Give the primary printer the device name **LP**. Other printer names, which can have four characters (for example, **Pnnn**), must start with the letter **P** and be in full uppercase letters.

Each workstation has its own set of printer names, so several workstations might have a local printer named **Pnnn**. Workstations that share printers also share the names of those printers, and local printers must be named accordingly. For example, if several workstations share printer **Pnnn**, this name is used by each workstation and you must use a different name for local printers.

For both shared and local printers, you must specify the ports to which the printers are attached. For a parallel printer, the port is **/dev/lpn** or **/dev/plpn** (**n** is the port number); for a serial printer, the port is **/dev/tty**.

Make a list of the type and model number for each printer. (When you define the printers, you can select the type from an inquiry window.) If your printer is not listed, check the printer manual to see if it uses the same control codes as one of those in the list.

Note: See Appendix B for more information about UNIX devices.

Installing Resource Manager

Follow these steps to install Resource Manager.

1. After you complete the BLM installation, the following screen appears. Press **Enter** to continue.

```
INSTALLATION PROCESS for:

Resource Manager 7.60          Copyright (c) 1985 - 2010
Open Systems Holdings Corp.     All rights reserved.

Press Enter to continue or DEL (interrupt key) to quit the installation.
```

2. The following prompt is displayed. Press **Enter** to accept the default path or enter a different path.

```
Enter the pathname on which to install Resource Manager
or press Enter to accept the default (/opt/OSAS/progRM)
```

3. The following screen appears. Enter **2** (other) to continue.

```
Please choose your computer from the menu below.
If your computer is not one of the choices shown, choose Other.

1. Personal Computer with 3.5 in. diskette drive
2. Other
2
```

4. The following prompts appear. Press **Enter** at each command prompt to accept the defaults. Then verify the appropriate tar command for your operating system when prompted. For SCO6, the tar command is normally **/usr/bin/tar**. For Linux, the tar command is normally **/bin/tar**.

```
Computer Type:      Personal Computer with 3.5 in. drive
Enter new value or press ENTER for default:

Floppy device for installation: /dev/fd0
Enter new value or press ENTER for default:

Command for Floppy Backup:
Enter new value or press ENTER for default:

Command for Floppy Restore:
Enter new value or press ENTER for default:

Command for Tape Backup:
Enter new value or press ENTER for default:

Command for Tape Restore:
Enter new value or press ENTER for default:

tar Command:       /bin/tar
Enter new value or press ENTER for default:
```

Do not press **Enter** at the following screen or you will miss the PRO/5 Installation screen, after which you will see **FLEXlm** error messages.

Next, the installation process uncompresses some files. When it is finished, this message appears. Do not press **Enter**.

```
Please wait - copying installation files.
```

5. After a few moments, the following screen appears. Enter the name of the server that is running the BLM.

```
PRO/5 Installation

Please enter the name of the server where your BASIS License Manager resides
or contact your system administrator for assistance.

redhat_server
```

Note: Do not press **Enter** on the following screen. The screen will be replaced by the terminal type screen when the interpreter has been activated.

6. The following screen appears. Do not press **Enter**. Rather, wait until the activation is done.

```
Please wait while your executable is updated ...

** PRO/5 has been activated.
Activate done
```

7. When the activation is complete, the Terminal Type screen appears. Depending on your operating system, you may need to change the terminal type from the default value so that your function keys will work properly:

Operating System	Default Value	Recommended Value
SCO6 UNIX	ansi	ansico
Linux	linux	linux

8. When the Multiuser Configuration screen appears, a message tells you that the system is building a terminal list. When it is finished, enter the number of OSAS workstations and shared printers on the system.

Define Shared Printers

9. After you have defined your network, select a printer alias and press **Enter** to edit it; the Devices - Printer screen appears.
- Enter the device name (**LP**, **Pnnn**, etc.).
 - Enter the system device name. For example, the first parallel port is usually **/dev/lp0**, the second is **/dev/lp1**, and so on.
 - Enter the printer device type.
 - Move to the device mode (code required to operate the device) you want to edit and press **Enter**.

If you are sharing a printer that is not spooled, enter the name of a file to use as a lock file. You must use a different lock file name for each shared printer that is not spooled. (This is a BASIS convention, not a UNIX function.)

- When you finish editing device modes, use the **Done (D)** command to save your entries. Repeat these steps until you have defined all the shared printers.

Define Workstations

10. When you finish defining shared printers, define your workstations by selecting a terminal alias and pressing **Enter** to edit it. The Devices - Terminal screen appears and lists the device name. The device name for workstation 1, which is where you are installing the software, is **T1**. Workstation 2 is **T2**, and so on.

- Enter the system device name.
- Enter the terminal device type.
- Move to the device mode (code required to operate the device) you want to edit and press **Enter**.
- After you answer the last prompt, press **D** to save your entries.

11. Enter the number of local printers you want to use with OSAS. (Do not include the shared printer you defined earlier.)

Define Local Printers

12. After you enter the number of local printers on the Devices - Terminal screen, the Local Printers screen appears. For each local printer, follow these steps:

- Enter the device name (**LP**, or **Pnnn**, and so on). Remember, workstations that share printers also share the names of those printers, and local printers must be named accordingly. For example, if several workstations share printer **Pnnn**, you cannot use that name for a local printer at any workstation.
- Enter the system device name. For example, the first parallel port is usually **/dev/lp0**, the second is **/dev/lp1**, and so on.
- Enter the device type.
- Move to the device mode (code required to operate the device) you want to edit and press **Enter**.

- When you are finished editing device modes, use the **Done (D)** command to save your entries. Repeat these steps until all the local printers are defined.

13. When you have defined all the workstations and local printers, the Multiuser Configuration screen appears. Use the **Proceed (OK)** command to continue with the installation.

If you omitted something during installation, or if you add more devices to the system later, use the **Devices** function to change or add device information.

**Edit
Directories**

14. Edit the names of the directories where you want to keep the OSAS programs and data files.
15. When you finish, use the **Proceed (OK)** command to save your changes and begin copying the rest of the Resource Manager files into the appropriate directories. Press **Enter** when instructed to do so.

Set up Company Information

When the Resource Manager files have been copied to the hard disk, the Company Information screen appears.

OSAS T000
Settings Edit Print Help

Company Information

Company ID H

Name Builders Supply

Address 1 4301 Dean Lakes Blvd.

Address 2

City Shakopee

State MN

Zip 55379

Country US U.S.A.

Site 999999

Phone (952) 496-2465

Fax (952) 496-2495

Logo File SAMPLOGO.GIF

E-mail Address Webmaster@builders_supply.com

Web Site www.builders_supply.com

Company H Map Verify

Enter your company's information, then press **Page Down** to save the information. When the cursor returns to the **Company ID** field, press **F7** to exit to the OSAS main menu.

OSAS installation is now complete. Before you can begin using OSAS on a daily basis, you must set up Resource Manager (including any other companies you use), install and set up OSAS applications, and plan a backup schedule. See page 6-15 for information on setting up Resource Manager. See page 6-3 for information on installing applications. Finally, refer to the appropriate application guide for information on setting up that application.

Section II

OSAS Installation Guide

Enterprise Installation

CHAPTER 3

3

Combined Installation	3-3
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Jetty Web Server Setup	3-101

OSAS BBJ Enterprise Installation

This chapter contains details on installing and setting up OSAS on the BBJ language for enterprise environments. If you want to install OSAS on PRO/5, turn to chapter 4 for instructions and details.

New, full installations are covered in this chapter. If you are upgrading from a version between 3.2 and 7.6, you must install 7.6 on a new path and then convert your data from the old path to the new path. See “Conversion” on page A-1 for conversion instructions.

These installation instructions assume that you have a basic knowledge of your operating system. If you are unfamiliar with your operating system, consult the operating system documentation before you begin.

Installation Order

When installing OSAS on BBJ in an enterprise environment, we recommend you install the server and client components in this order:

1. Data Server
2. Application Server (this can be installed on the same server as the data server; select the **Combined** option during installation to install both in one step).
3. Client Software

Non-graphical Linux or UNIX Installation

The instructions in this chapter are accompanied by examples of the screens you'll see as you work through the installation wizard. If you're installing the data and application servers on a Linux or UNIX computer that does not have graphical capabilities, the wizard's text prompts are very similar to the example screens. Enter the option number or press the appropriate key to move forward.

Windows 64-bit Installation

Before installing OSAS on a Windows 64-bit operating system, ensure the Environment Variables path points to the 64-bit installation of the JRE.

1. Enter **sysdm.cpl** at a **Run** prompt to open the System Properties window.
2. Select the **Advanced** tab.
3. Click the **Environment Variables** button.
4. Select the **Path** variable from the **System variables** section and click the **Edit** button.
5. Add **;C:\Program Files\Java\jre6** to the end of the **Variable value**.
Note: The semicolon is necessary when adding the JRE path to an already existing value.
6. Click **OK** until the System Properties window closes.

Combined Installation

If you're installing OSAS in a two-tier environment (that is, the data server and application server on the same computer, accessed by clients), you can use the **Combined** option in the OSAS installation wizard to install both in one pass.

When you install the OSAS data and application server together, you'll progress through these stages (each stage is broken down into its individual steps in this section):

1. Start the installation wizard.
2. Register a BASIS license.
3. Send and receive license information.
4. Install the BASIS license.
5. Set up the .rhosts file (on Linux, UNIX, and Mac OS X).
6. Finish the installation.

Note: You must perform the installation while physically at the server.

Start the Installation Wizard

1. If you used a previous version of OSAS, stop and uninstall the current BASIS License Manager and BBj (if present on this computer) before you begin the installation. A new BLM and BBj will be installed automatically.

Note: You can point all BBj installs to the same BBj interpreter.

2. In Windows, BBj runs as a service under a user account. If you are installing OSAS on Windows, set up a new user account for BBj and give it Administrator rights. Record the user name and password you assign to this account; you'll enter them later during the installation.

After you complete the installation, reset this account's access group from **Administrator** to **User** to secure your system against unauthorized access.

3. Make sure you have downloaded and installed the correct Java Runtime Environment (JRE) for your system. OSAS on BBj will not work without the JRE. See page 1-4 for more information.
4. If you use Windows, restart the operating system and log in as the user account you created above. If you use Linux or UNIX, log in as root.
5. If you are installing OSAS on Linux or UNIX, set the JAVA_HOME environment variable so that the installation program can locate the JRE. Enter this command at the prompt (substituting the directory in which you installed Java; the path used below is only an example):

```
# export JAVA_HOME=/opt/java
```

Enter only the home directory in which you installed Java; the installation program automatically adds any other directories it needs to the path name.

In Windows and Mac OS X, the installation program automatically detects the JRE, so no additional steps are necessary.

6. Insert the installation DVD into your DVD-ROM drive and start the wizard.
 - In Windows, the OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive) , and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.
 - In Linux or UNIX, mount the DVD-ROM to a drive that exists on your system, and change to the DVD directory. Enter these commands at the prompt:

```
# mount /dev/cdrom /mnt/cdrom
# cd /mnt/cdrom/
```

In the above example, the **/mnt/cdrom** mount directory must exist before you can mount the DVD-ROM.

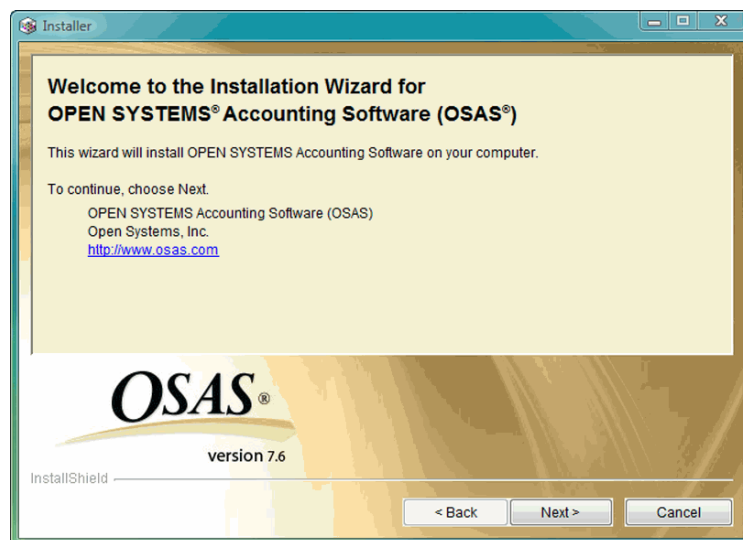
When the listing of files on the DVD appears, enter the installation script, **# ./osasinstall.sh**, at the prompt.

- In Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

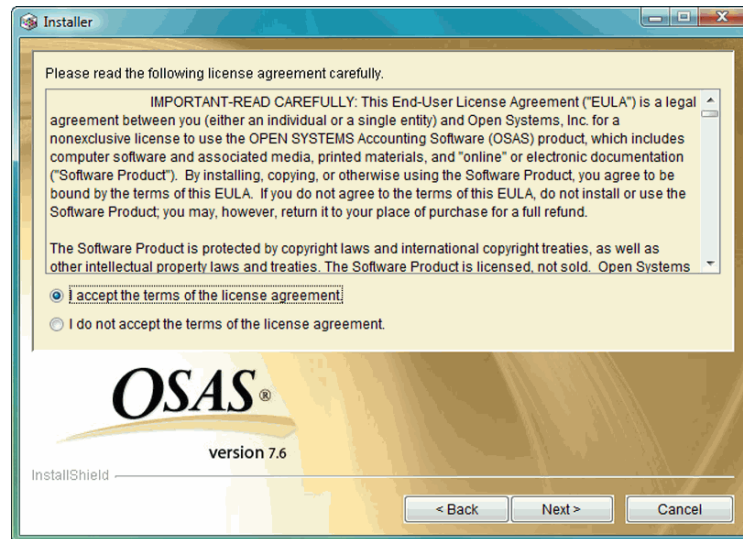
```
Mac OS X      cd /Volumes
               cd OSASv76_Beta
               umask 0
```

Enter the installation script, # **.osasinstall.sh**, at the prompt.

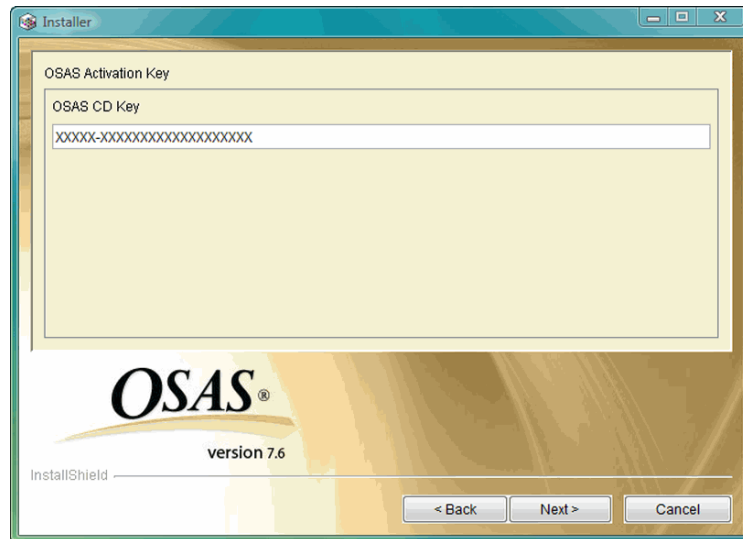
7. When the Welcome screen appears, click **Next** to begin the install.



8. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

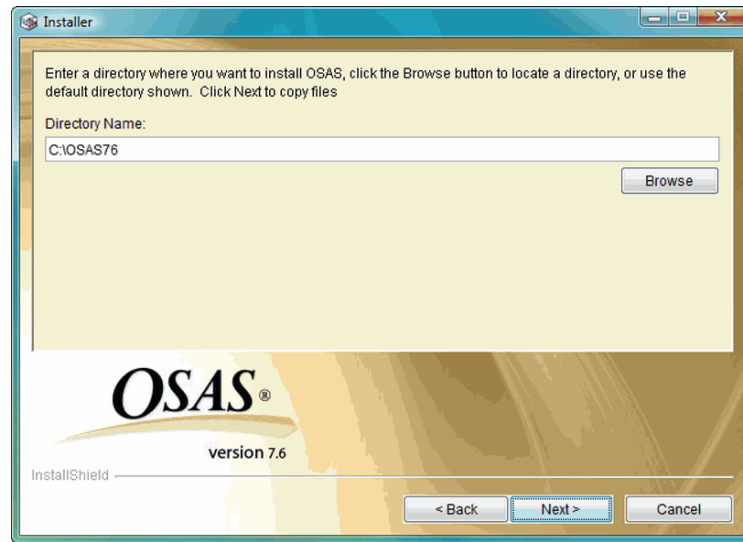


9. Enter your OSAS activation key exactly as it appears on the License Registration form. Please note—the key is case-sensitive.



Click **Next** to continue.

10. Change the directory path in which to install OSAS, if you like. You can also click **Browse** to navigate to this directory and enter the path automatically.

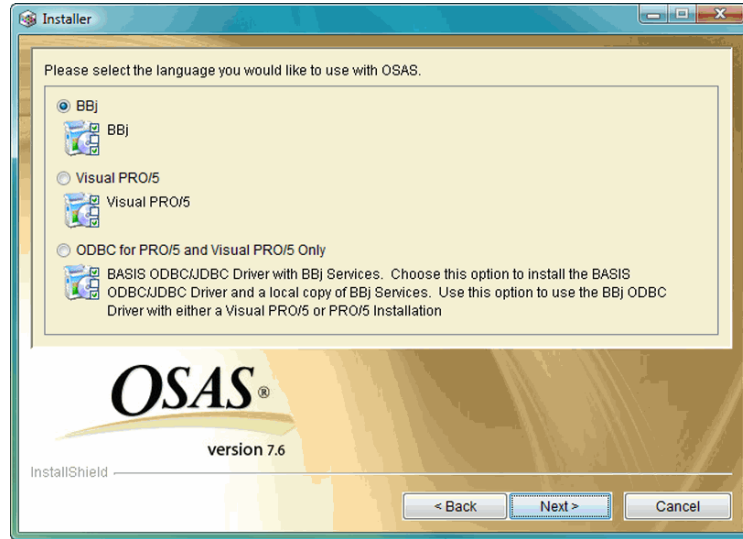


Note: Do not use spaces in the path name during installation. OSAS will not function correctly if you use a path name that includes spaces. Instead, omit spaces or replace them with underline characters. For example, rather than using the pathname *OSAS v76*, omit the space and use *OSASv76* instead.

Enter the actual physical path; do not use mapped drives.

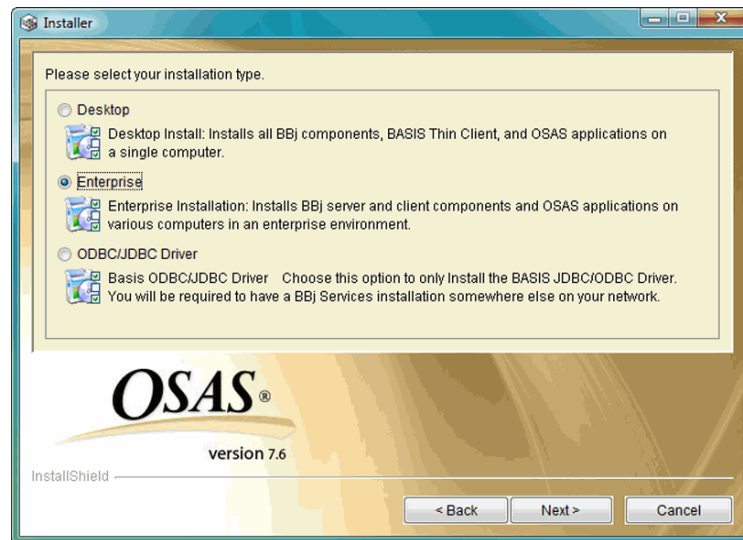
Click **Next** after specifying the installation directory to continue.

11. If you are installing OSAS on Windows, select the language platform on which to install OSAS. Select **BBj** and click **Next** to continue.

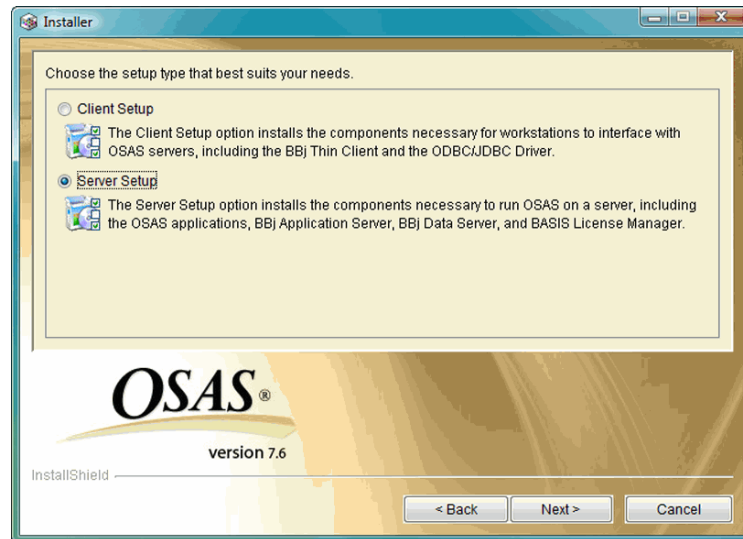


If you are installing OSAS on a Linux, UNIX, or Mac OS X, this screen does not appear. The system assumes you are using BBj when you use the installation program on these operating systems. To install OSAS on PRO/5 on Linux or UNIX in an enterprise environment, turn to chapter 4.

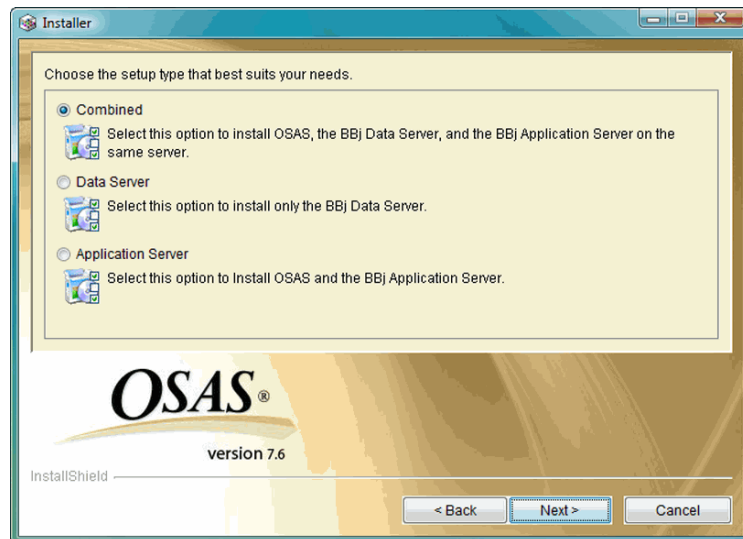
12. Select **Enterprise** as the installation type and click **Next** to continue.



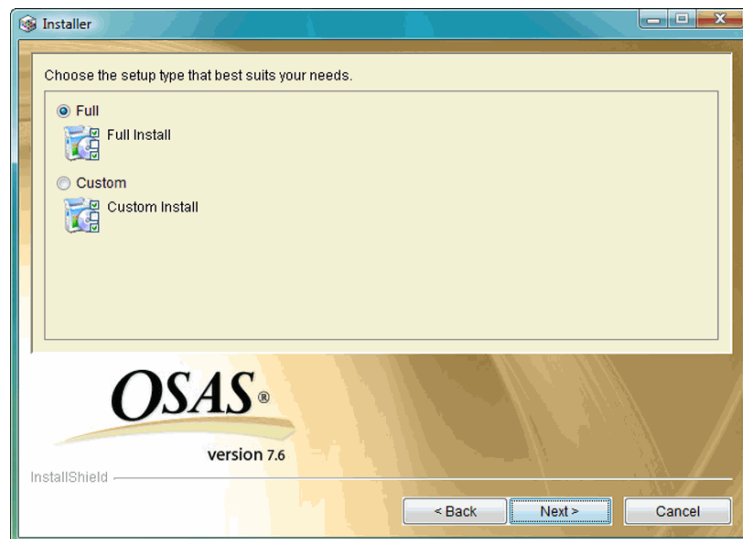
13. Select **Server Setup** as the setup type and click **Next** to continue.



14. Select **Combined** to install both the data server and the application server on the same computer in one pass. Click **Next** to continue.

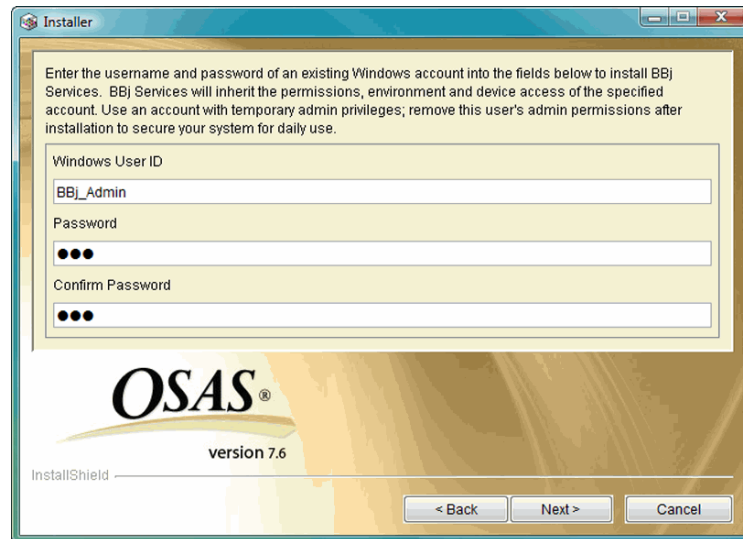


15. Select **Full** as the setup type and click **Next** to continue.



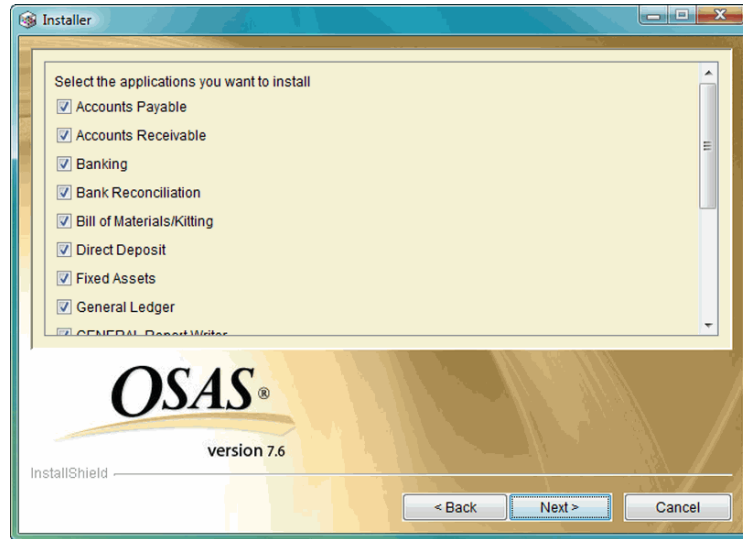
Select **Custom** only if you need to install or re-install specific components. When you select this option, a screen appears after you click **Next** so that you can select the components to install. See page 5-8 for more information.

16. If you are installing OSAS on Windows, enter the user name and password of the user account to use for BBJ Services and click **Next** to continue.



This screen does not appear if you're installing OSAS on Linux, UNIX, or Mac OS X.

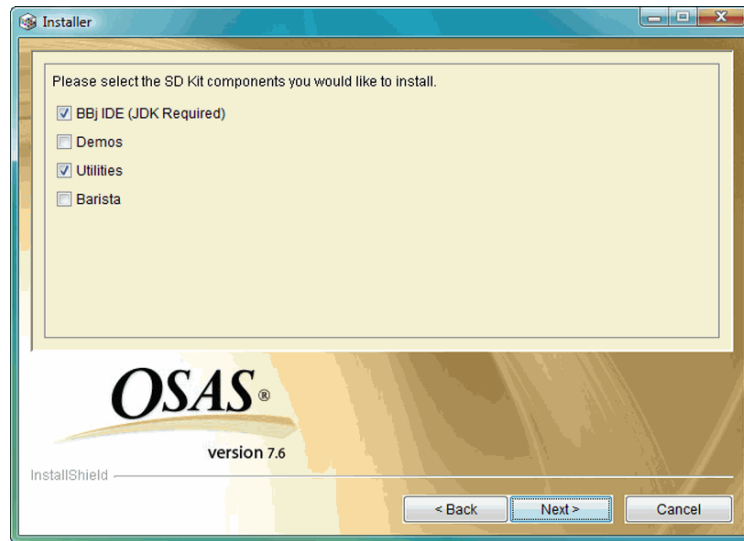
17. Select the OSAS applications and components to install and click **Next**. Your OSAS activation key determines which applications appear in the list.



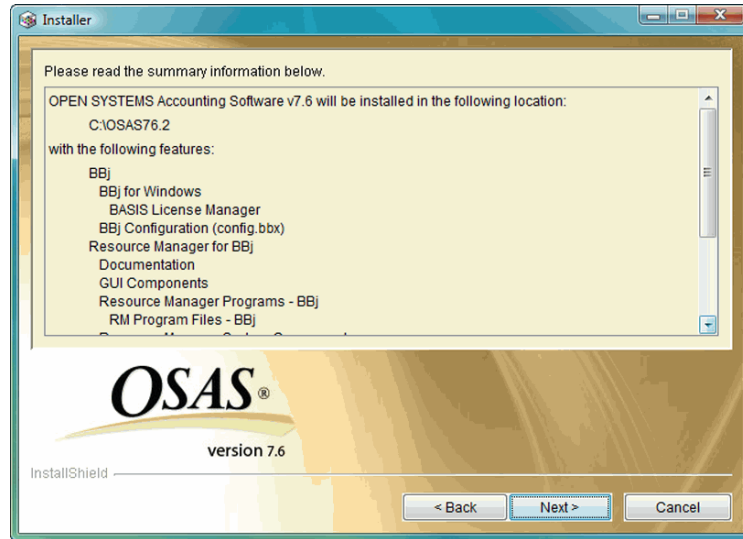
If you do not want to install an application, clear its check box. While installing applications here is most convenient, you can also use the **Install Applications** function in Resource Manager to install an application later.

If your OSAS activation key includes CJC, the installation program automatically selects the **Contractor's Job Cost** check box and clears the **Job Costing** check box. To avoid problems with processing, you must install one or the other, but not both at the same time. If you select both check boxes, a message appears when you click **Next**.

18. If you have purchased the OSAS Software Developer's Kit (SDK), select the SDK components you would like to install, and click **Next**.



19. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.



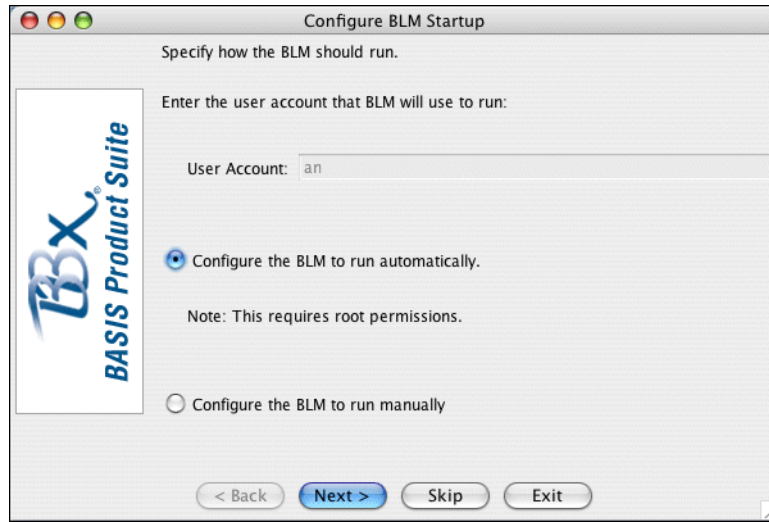
If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

Because the installation program automatically installs BBJ components and the BASIS License Manager (BLM) in addition to OSAS, installation may take several minutes.

You must register and install a BASIS license before OSAS installation can complete. The Register for a BASIS License screen appears automatically during installation.

20. If you are installing OSAS on Windows XP with Service Pack 2, a security message may appear stating that the Windows Firewall has temporarily blocked BBJ Services. Click **Unblock** to let BBJ Services function correctly.

21. If you are installing OSAS on Mac OS X, the Configure BLM Startup screen appears.



Select **Configure the BLM to run automatically** and click **Next** to continue. When the Authenticate dialog box appears, enter your password and click **OK**.



These screens do not appear if you use Linux, UNIX, or Windows.

22. If you are installing OSAS on Mac OS X, the Configure BBJ Services Startup screen appears.

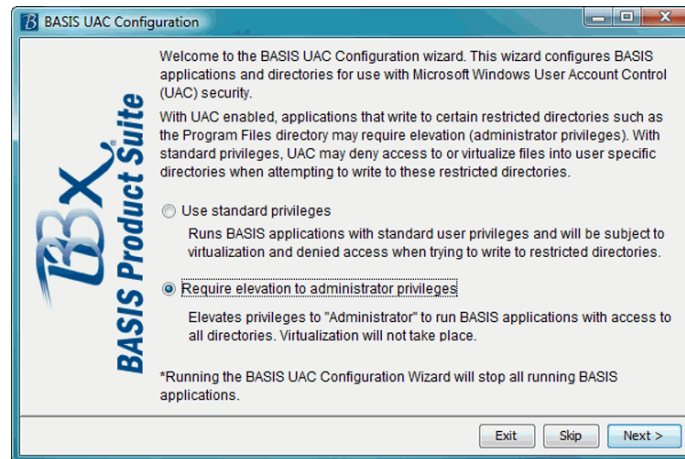


Select **Configure BBJ Services to run automatically** and click **Next** to continue.

This screen does not appear if you use Linux, UNIX, or Windows.

Register a BASIS License

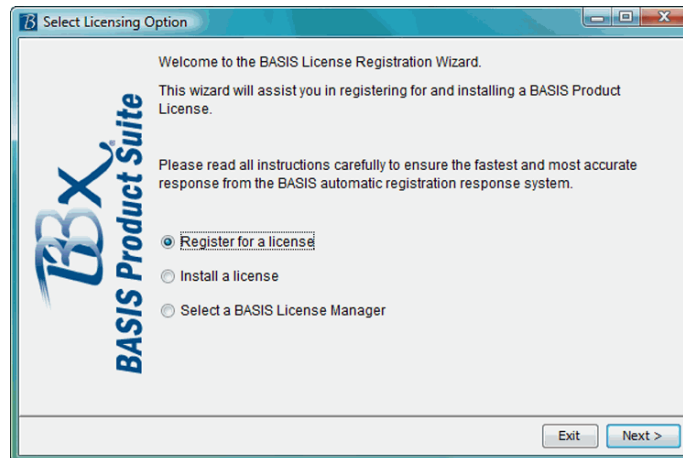
1. During installation, if you have the User Account Control option enabled in Windows Vista or Windows 7, the BASIS UAC Configuration screen appears.



Select **Require elevation to administrator privileges**, then click **Next** to continue.

If you do not use User Account Control in Windows Vista or Windows 7, skip to step 2.

2. In order for OSAS to work correctly, you need to register and install the BASIS license you received from Open Systems.



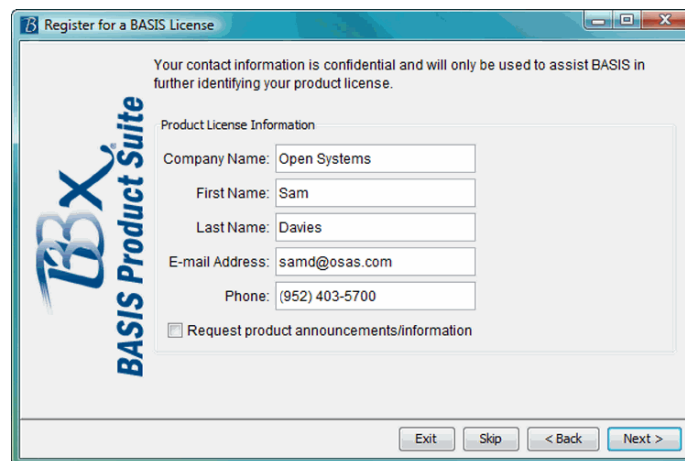
Select **Register for a license**, then click **Next** to continue.

If you already have a license you want to install, or if you use the BASIS License Manager in a client/server environment, select one of those options.

- If you select **Install a License**, skip to “Install the BASIS License” on page 3-30 for instructions on installing your license file.
- If you choose **Select a BASIS License Manager**, enter the name of the server on which the BASIS License Manager is stored, click **Next** to continue, then click **Finish** when the Wizard Process Complete screen appears. Finally, skip to step 5 on page 3-32 to complete the process.

3. When the Register for a BASIS License screen appears, enter your contact information in the fields. These fields are required. Select the check box at the bottom of the screen if you would like to receive product information from BASIS; otherwise, leave the check box blank.

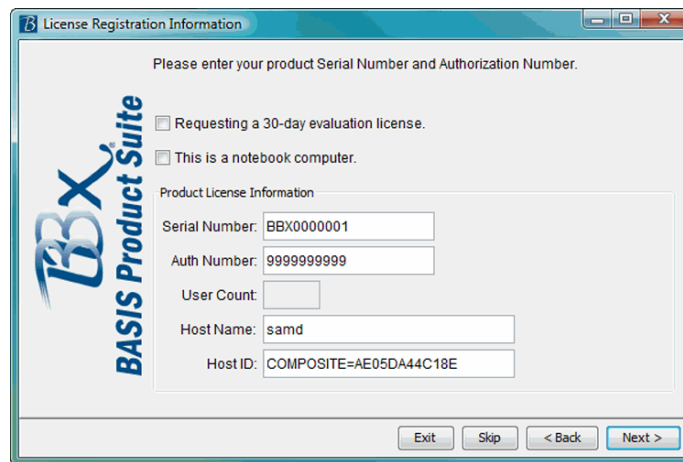
Click **Next** to continue.



4. Enter the **Serial Number** and **Auth Number** that are printed on the License Registration Form you received from Open Systems as part of your installation materials. on the License Requesting Information screen. If you elect to receive a 30-day license, these fields are automatically filled in for you and cannot be changed once you select the **Requesting a 30-day evaluation license** check box. The installation wizard determines the computer's **Host Name** and **Host ID**; if these fields are not already filled in, enter the **Host Name** and **Host ID** to use. Enter the **User Count** from the License Registration Form (this value is automatically set to **2** if you are registering a demo license).

Select the **This is a notebook** computer check box to tie the **Host ID** to your computer's hard disk rather than to its network card if you are installing OSAS on a laptop or notebook computer. This step allows you to use OSAS when you are disconnected from the network.

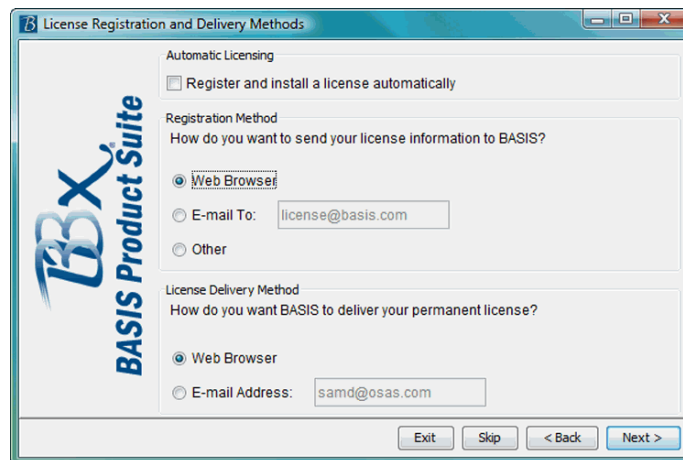
Click **Next** to continue.



The image shows a Windows-style dialog box titled "License Registration Information". The window has a blue header bar with the title and standard minimize, maximize, and close buttons. The main content area is light gray. On the left side, there is a large blue logo that reads "BBX" in a stylized font, with "BASIS Product Suite" written vertically in a smaller blue font next to it. The text "Please enter your product Serial Number and Authorization Number." is centered at the top of the main area. Below this, there are two checkboxes: "Requesting a 30-day evaluation license." and "This is a notebook computer.", both of which are currently unchecked. Under the heading "Product License Information", there are five text input fields: "Serial Number:" containing "BBX0000001", "Auth Number:" containing "9999999999", "User Count:" which is empty, "Host Name:" containing "samd", and "Host ID:" containing "COMPOSITE=AE05DA44C18E". At the bottom right of the dialog, there are four buttons: "Exit", "Skip", "< Back", and "Next >". The "Next >" button is highlighted with a blue border.

Send and Receive License Information

Next, you must send your registration information to BASIS. When the License Registration and Delivery Methods screen appears, select the method to use to register your BASIS license. Turn to the appropriate page for more information.

**Method**

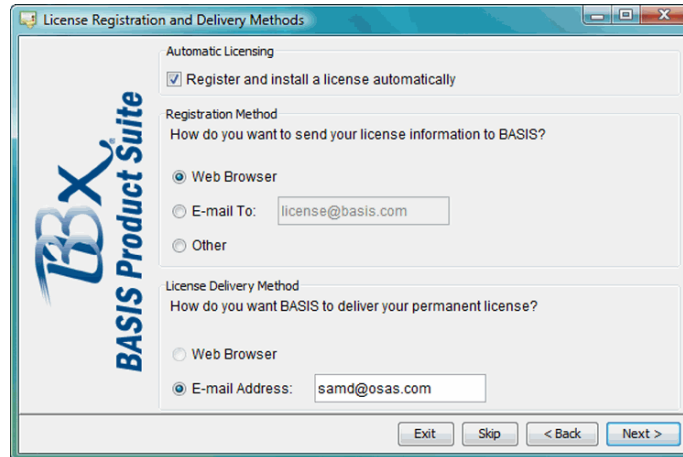
Automatic licensing
Send by Web Browser / Receive by Web Browser
Send by E-mail / Receive by E-mail
Send by Other / Receive by E-mail

Refer to

page 3-23
page 3-24
page 3-26
page 3-29

Automatic Licensing

1. If the computer is connected to the Internet, select the automatic licensing check box to send, receive, and install license information in one step. This method is the fastest, easiest way to register and install a license.

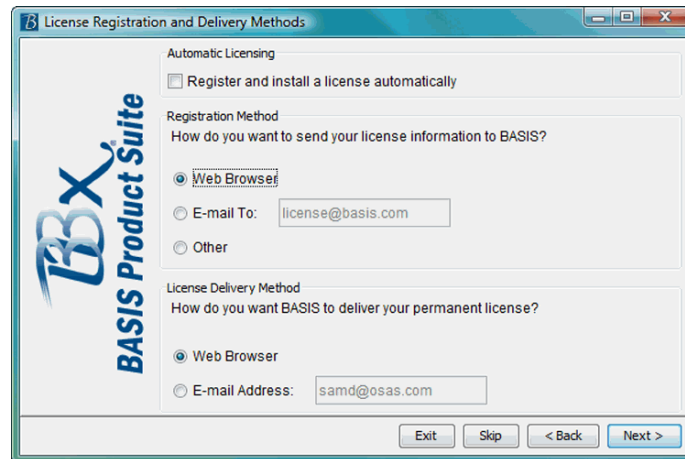


Click **Next** to send your information to BASIS. After receiving your information, BASIS sends the computer a license file and automatically installs it in the correct directory.

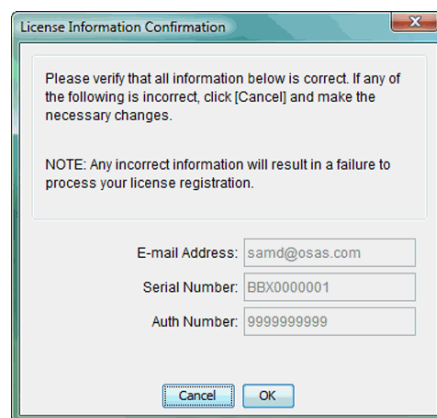
2. A message appears when the license file is installed and asks whether you want to register another license. Click **No** to continue.
3. The Wizard Process Complete screen appears. Your license file is registered and installed. Click **Finish**.
4. The Change EM Admin Password screen appears. Turn to page 3-33 to change the BBJ Enterprise Manager password and complete the OSAS installation.

Send by Web Browser / Receive by Web Browser

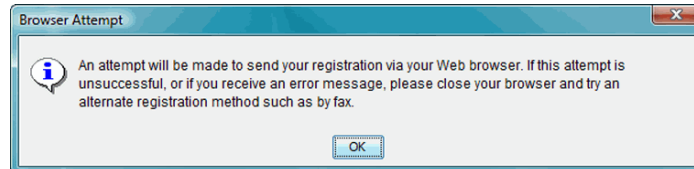
1. If the computer is connected to the Internet, select **Web Browser** as both the **Registration Method** and **License Delivery** method to send and receive information via your web browser. Click **Next** to continue.



2. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.



3. Click **OK** when the following message appears to send the information via your web browser.



4. Your web browser opens a screen listing two ways to save the license information.
 - To save the information automatically in one step, click the **Install License File** on this machine link. When the download/security warning dialog box appears, select either **Run** or **Open** to save the file in the correct directory. If you use Windows, warning messages may appear. These messages appear routinely and are intended to keep your computer secure. Click **Run** if any additional messages appear.
 - To manually save the file in the necessary directory, click the **Retrieve License File** link. Text similar to the following appears in your browser:

```
# Here is the BASIS product license file you requested.
#
# Please save this page as "C:\TEMP\BASIS BBJ License.txt".
# If "C:\TEMP" does not exist, then please create it and save
# this page there. After you have done this, please run the
# "Install a BASIS License" program from your program folder
# to complete the installation of this license.
#
# DO NOT MODIFY THIS FILE
#
SERVER this_host COMPOSITE=C3597D001706
VENDOR basis
FEATURE BBJ basis 10 permanent 1 44429487975E VENDOR_STRING=EFW \
HOSTID=ANY ck=108 SN=BBX000001
```

Save the file as instructed. If the **\temp** directory does not exist, create it and save the .txt file in that directory.

5. When you are prompted to register for another license, click **No**. Then click **Next** on the Registration Notification screen.

6. The BASIS License Installation screen appears. Continue with “Install the BASIS License” on page 3-30 to install the license file.

**Send by
E-mail /
Receive by
E-mail**

1. To send and receive license information via e-mail, select **E-mail** as both the **Registration Method** and **License Delivery** method, then enter your e-mail address and click **Next** to continue.

License Registration and Delivery Methods

BASIS Product Suite

Automatic Licensing

☐ Register and install a license automatically

Registration Method

How do you want to send your license information to BASIS?

☐ Web Browser

☒ E-mail To:

☐ Other

License Delivery Method

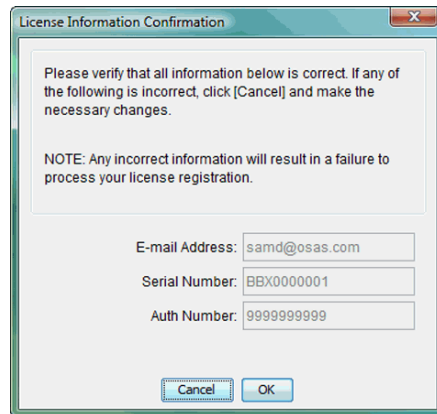
How do you want BASIS to deliver your permanent license?

☐ Web Browser

☒ E-mail Address:

Exit Skip < Back Next >

2. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.



License Information Confirmation

Please verify that all information below is correct. If any of the following is incorrect, click [Cancel] and make the necessary changes.


NOTE: Any incorrect information will result in a failure to process your license registration.

E-mail Address:

Serial Number:

Auth Number:

3. When the Emergency Contact Information screen appears, enter information about the person to contact in case a problem should arise during delivery and click **OK** to continue.



Emergency Contact Information

Please enter a name and phone number to expedite the delivery of a permanent license file in the unlikely event that problems occur during the license registration process.

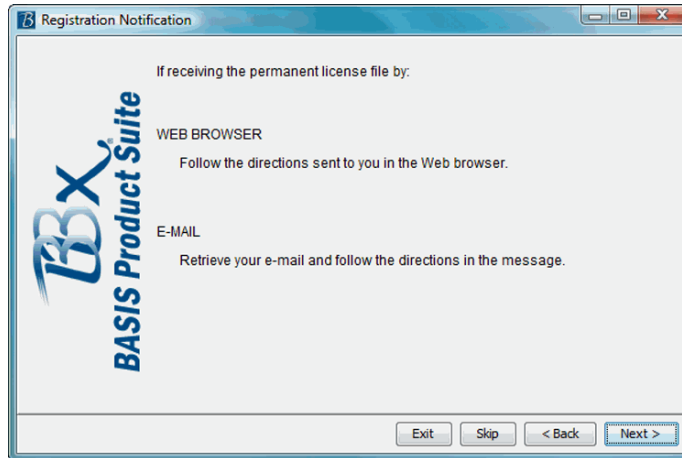
First Name:

Last Name:

Phone:

4. A message appears after the e-mail is sent to BASIS successfully. Click **OK**.
5. When you are prompted to register for another license, click **No**.

6. When the Registration Notification screen appears, read the instructions on the screen and click **Next** to continue.

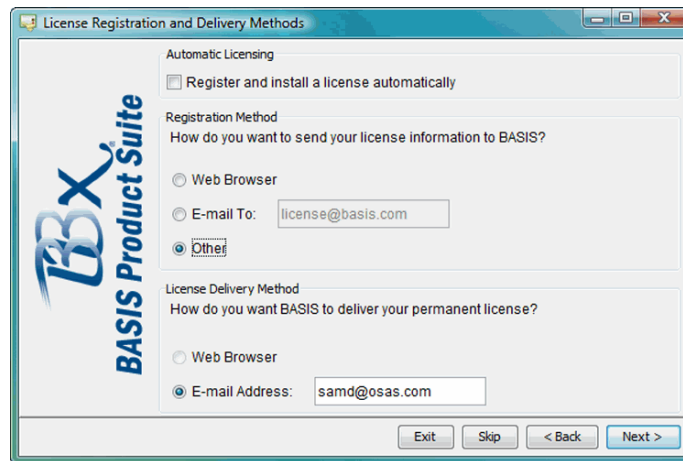


7. The BASIS License Installation screen appears. Continue with "Install the BASIS License" on page 3-30 to install the license file.

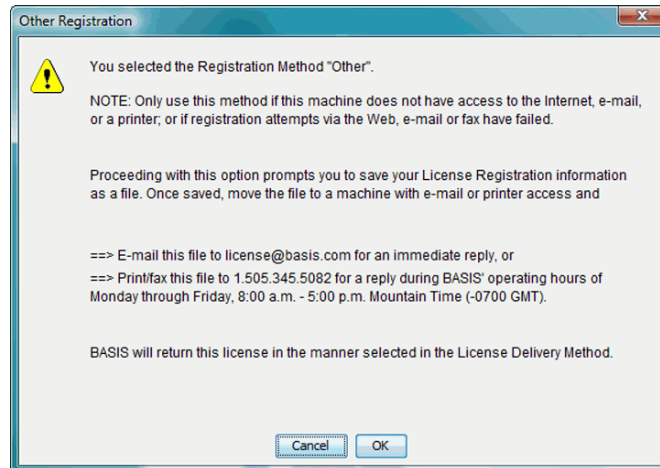
**Send by
Other /
Receive by
E-mail**

Use the **Other** option if the computer you are working on is not connected to the Internet or does not have e-mail access.

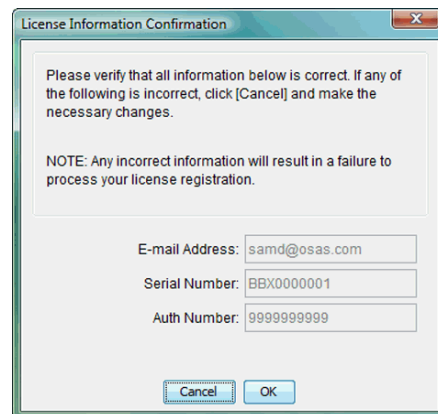
1. Select **Other** as the **Registration Method** and **E-mail Address** as the **License Delivery Method**. Click **Next** to continue.



2. A warning message appears. Read the message carefully and click **OK**.



3. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.

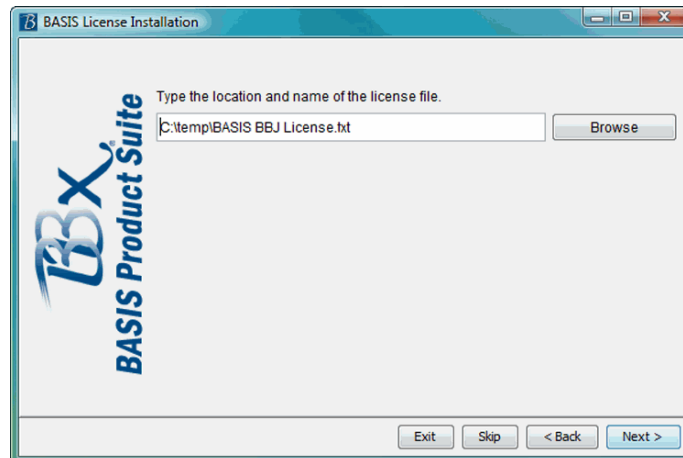


4. When the Save dialog box appears, save the license file onto the appropriate media or network drive by selecting the destination and clicking **Save**.
5. Send the file to BASIS. You can do this from a computer with e-mail access, attach the file from the media or network drive to an e-mail message and send it to BASIS.
6. After you receive the e-mail from BASIS, return to the original computer and click **No** when you are prompted to install another license.
7. When the Registration Notification screen appears, click **Next** to continue.
8. The BASIS License Installation screen appears. Continue with "Install the BASIS License" on page 3-30 to install the license file.

Install the BASIS License

If you used a method other than the automatic licensing method to register the BASIS license, you need to install the BASIS license so that OSAS functions correctly.

1. When the BASIS License Information screen appears after you register the license, enter your license information.

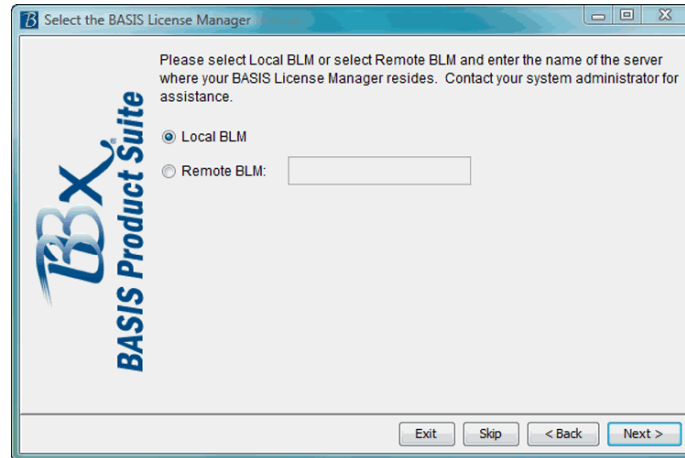


Enter the directory location of the license file you saved during registration. You can also click **Browse** to navigate to the directory in which you saved the file.

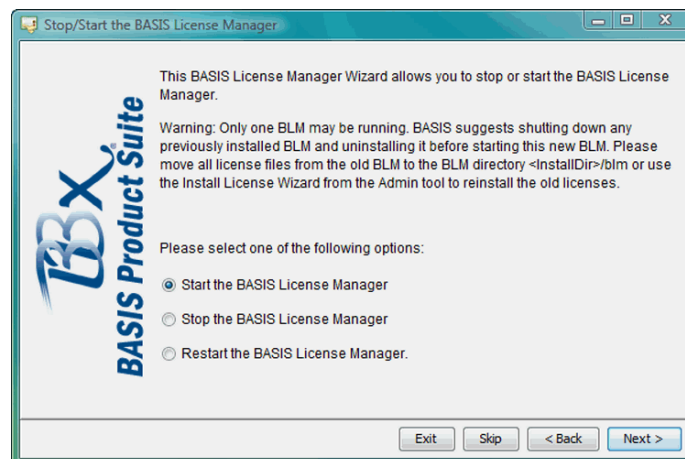
Click **Next** to continue.

2. The installation successful message appears after the license is installed successfully. This message also asks whether you want to install another license. Click **No** to continue.
3. The Installation Complete screen appears. Your license file is installed. Click **Next** to continue.

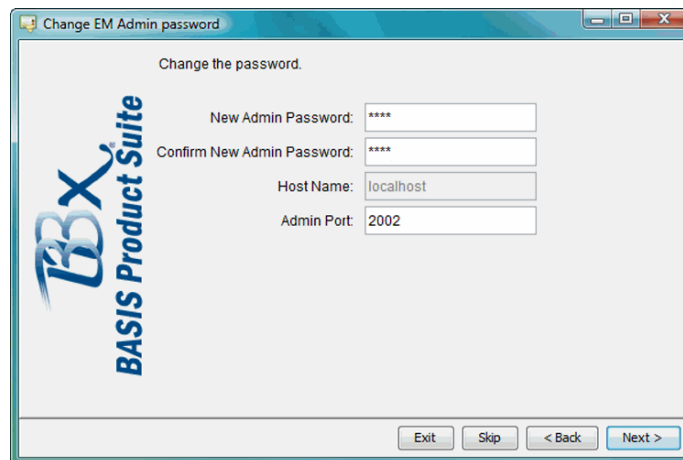
4. When the Select the BASIS License Manager screen appears, enter **localhost** as the location of the BLM and click **Next** to continue.



5. When the "BASIS License Manager installation successful" message appears, click **OK**.
6. If you used a method other than the Automatic Licensing method to register your license, the Start/Stop the BASIS License Manager screen appears. Select **Start the BASIS License Manager** and click **Next** to continue.



7. A message appears when the BLM starts successfully. Click **OK** to continue.
8. When the Change EM Admin Password screen appears, enter a new password to use as the default password for the BBJ Enterprise Manager admin user and click **Next** to continue.



During installation, the wizard installs all BBJ components, including the BBJ Enterprise Manager, an administrative program you can use to optimize how BBJ works. Enterprise Manager is initially installed with an **admin** user, which is given the password **admin123**. Change this password to increase your system's security.

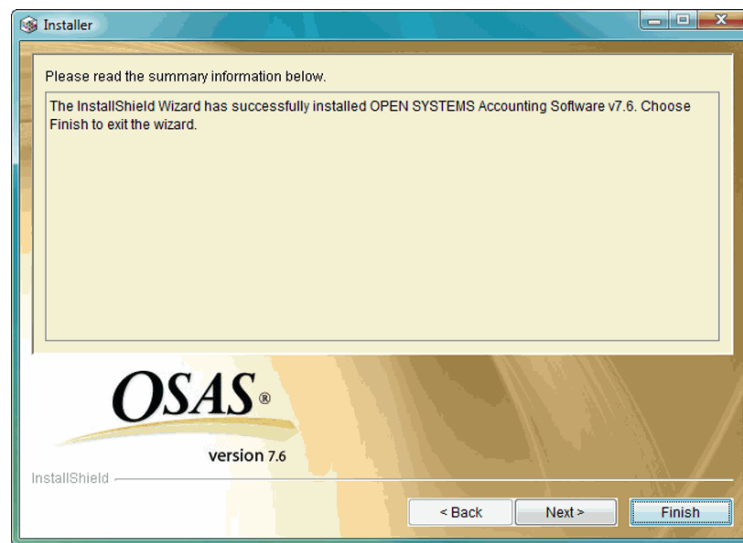
Make a note of the new password in a safe location for your reference later when working with Enterprise Manager.

If you want to keep the default **admin123** password, enter it into the two password boxes on the screen.

9. A message appears when the password for Enterprise Manager is changed successfully. Click **OK** to continue.

After you complete BASIS license registration and installation, the installation program automatically installs the remaining components and the OSAS applications you selected.

10. If you are installing OSAS on Windows XP with Service Pack 2, a warning message may appear stating that the Windows Firewall has temporarily blocked the BBJ Thin Client Proxy Server. Click **Unblock** to allow the thin client server to function correctly.
11. After the OSAS applications are installed, the “installation successful” message appears. Click **Finish** to exit the installation program.



To complete the installation, you need to launch OSAS, enter your company information, and set up Resource Manager. See “Finish the Installation” on page 3-36 for more information.

12. If you use Windows, change the access group on the user account you set up for BBJ Services from **Administrator** to **User** to secure your system and prevent unauthorized access.

After changing the access group for the BBJ user account, make sure that user still has full permissions for the directory in which you installed OSAS. Check the directory’s properties and give this user full access, if needed.

Set up the *.rhosts* File

On Linux, UNIX, or Mac OS X servers, you need to set up the **.rhosts** file so that OSAS can communicate with and allow access from client workstations for greater security. There is no additional file setup on a combined Windows server.

Linux, UNIX, and Mac OS X servers use this file to determine whether a computer has access to the server based on the user name the computer is using to log in. If the computer's machine name is not listed in the **.rhosts** file for the user name it is using, the server denies that machine access.

The **.rhosts** file is commonly stored in these directories, depending on the operating system you use (UNIX systems use a variety of locations; the one noted below is an example only):

OS	Directory	Example
Linux	/home/<user name>	/home/NeilP
UNIX	/u/<user name>	/u/NeilP
Mac OS X	/Users/<user name>	/Users/NeilP

If you use multiple user names, this file must be located in the user directory for each user that connects to the OSAS server.

Follow these steps to edit the **.rhosts** file on Linux, UNIX, or Mac OS X:

1. Use a text editor to open and edit the **.rhosts** file in the home directory for the user that connects to the OSAS server.

On Mac OS X, open a terminal and use vi to edit the file. To open a terminal, select **Utilities** from the **Go** menu available under the Finder. When the Utilities screen opens, double-click the Terminal icon.

In all systems, enter these commands at the prompt to open the file with vi. (The example below uses the Linux user directory convention; remember to change to the correct user directory for your operating system.)

```
# cd /home/<user name>
# vi .rhosts
```

2. When the file opens, add the machine name for each workstation that connects to the server using this user name, followed by a plus sign (+), as in this sample:

```
accounting-dell +  
sales-a64 +  
osas-mac +
```

3. Save your changes and close the file.
4. If you use multiple user names, repeat these steps for the **.rhosts** file in each user directory you use.

Finish the Installation

To complete the OSAS installation, you can now either install the OSAS thin client on each workstation that connects to the data/application server, or launch the new OSAS installation to set up your company record, access codes and users, and client workstation defaults.

To install the OSAS thin client on workstations, move to the first workstation and then turn to “Thin Client Installation” on page 3-85.

To set up Resource Manager, launch the new OSAS installation. On Windows, double-click the OSAS shortcut, or select **OSAS 7.6** from the **OSAS** program group on the **Start** menu. On Linux or UNIX, enter **osas** at the command prompt. On Mac OS X, double-click **OPEN SYSTEMS Accounting Software** on the Applications menu. You access the Applications menu by pressing **Apple+Shift+A** from anywhere in Finder.

The Company Information screen automatically appears the first time you launch OSAS.

Company Information

Commands Edit Modes Other Help

Company ID: H

Name: Builders Supply

Address 1: 4301 Dean Lakes Blvd.

Address 2:

City: Shakopee

State: MN

Zip: 55379

Country: US U.S.A.

Site: 999999

Phone: (952)496-2465

Fax: (952)496-2495

Logo File: COMPANY_LOGO.GIF

E-mail Address: Webmaster@builderssupply.com

Web Site: www.BuilderSupply.com

Images must be stored in the OSAS Documents folder. Company H 09/07/2010 Terminal T000 INS

Enter your company's ID (up to three characters) and press **Enter**—the remaining fields on this screen are available only after you enter the **Company ID**. Enter the company's related information as prompted and click **OK** to continue. When the cursor returns to the **Company ID** field, press **F7** to exit to the OSAS main menu. Refer to the Resource Manager guide for more information on the **Company Information** function.

After setting up the company record, see page 6-15 for information on the steps you need to complete to set up Resource Manager.

Installing the Data Server

Follow these steps to install the OSAS data server on its own computer in a three-tier environment. You must perform the installation while physically at the server.

1. In Windows, BBj runs as a service under a user account. If you are installing OSAS on Windows, set up a new user account for BBj and give it Administrator rights. Record the user name and password you assign to this account; you'll enter them later during the installation.

After you complete the installation, reset this account's access group from **Administrator** to **User** to secure your system against unauthorized access.

2. Make sure you have downloaded and installed the correct Java Runtime Environment (JRE) for your system. OSAS on BBj will not work without the JRE. See page 1-4 for more information.
3. If you use Windows, restart the operating system and log in as the user account you created above. If you use Linux or UNIX, log in as root.
4. If you are installing OSAS on Linux or UNIX, set the JAVA_HOME environment variable so that the installation program can locate the JRE. Enter this command at the prompt (substituting the directory in which you installed Java; the path used below is only an example):

```
# export JAVA_HOME=/opt/java
```

Enter only the home directory in which you installed Java; the installation program automatically adds any other directories it needs to the path name.

In Windows and Mac OS X, the installation program automatically detects the JRE, so no additional steps are necessary.

5. Insert the installation DVD into your DVD-ROM drive and start the wizard.

- In Windows, the OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.
- In Linux or UNIX, mount the DVD-ROM to a drive that exists on your system, and change to the DVD directory. Enter these commands at the prompt:

```
# mount /dev/cdrom /mnt/cdrom
# cd /mnt/cdrom/
```

In the above example, the **/mnt/cdrom** mount directory must exist before you can mount the DVD-ROM.

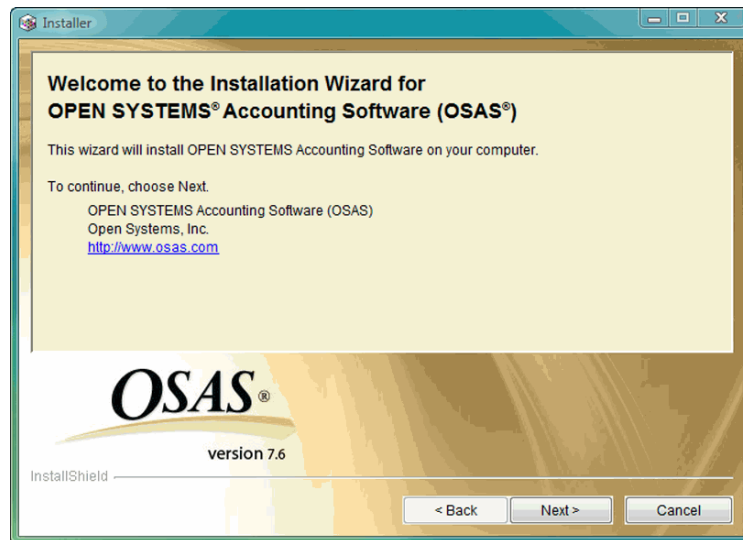
When the listing of files on the DVD appears, enter the installation script, **# ./osasinstall.sh**, at the prompt.

- In Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

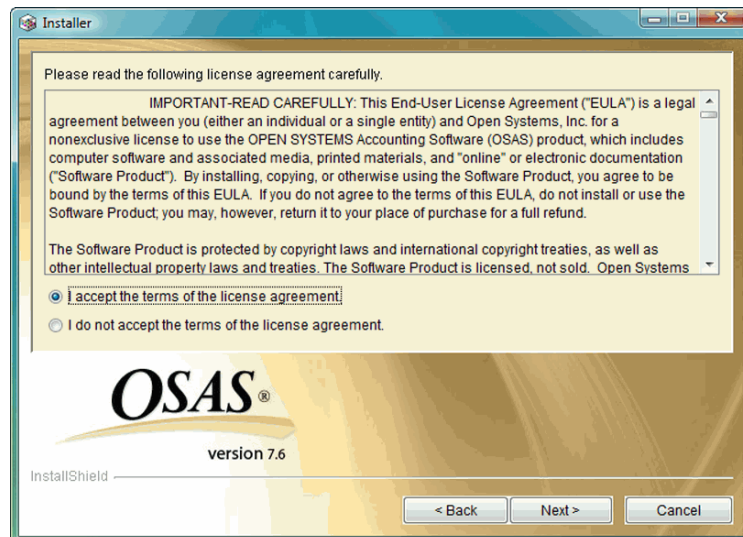
```
Mac OS X      cd /Volumes
               cd OSASv76_Beta
               umask 0
```

Enter the installation script, **# ./osasinstall.sh**, at the prompt.

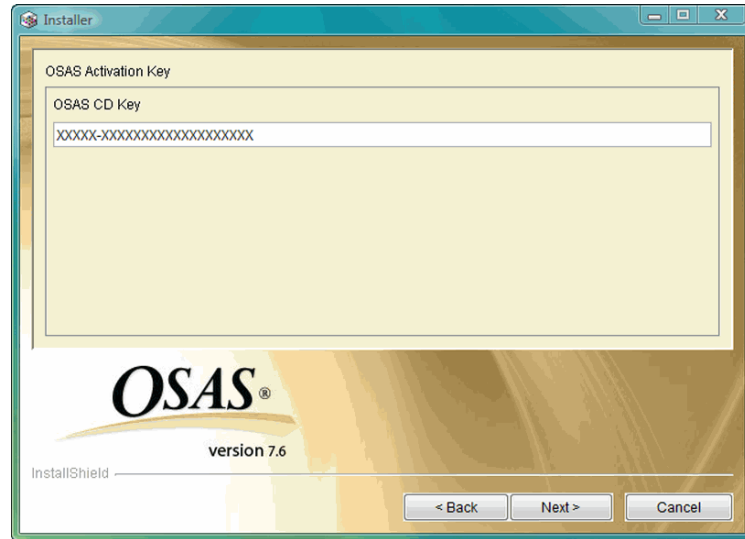
6. When the Welcome screen appears, click **Next** to begin the install.



7. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

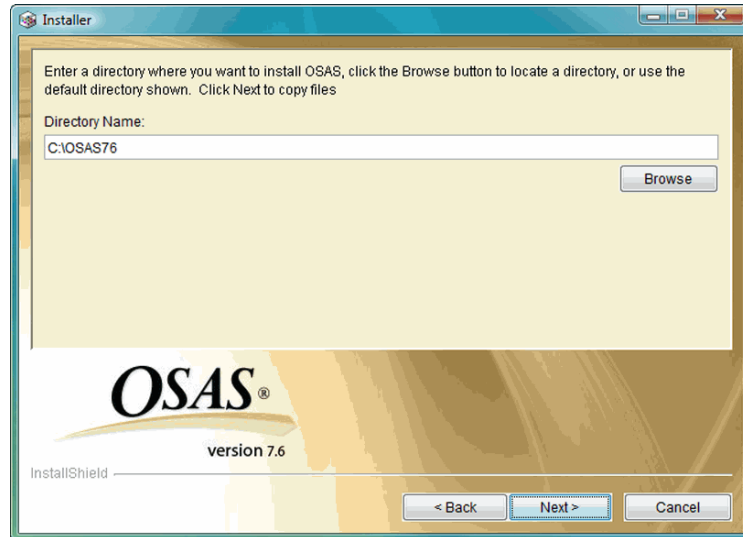


8. Enter your OSAS activation key exactly as it appears on the License Registration form. Please note—the key is case-sensitive.



Click **Next** to continue.

9. Change the directory path in which to install OSAS, if you like. You can also click **Browse** to navigate to this directory and enter the path automatically.

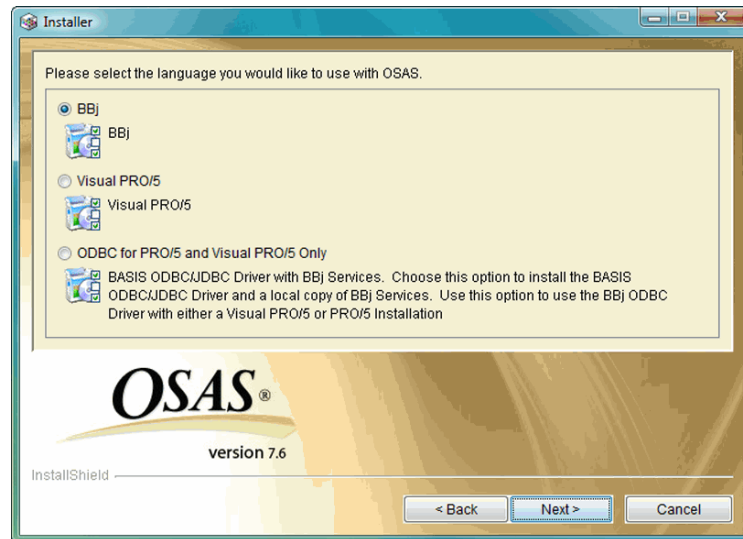


Note: Do not use spaces in the path name during installation. OSAS will not function correctly if you use a path name that includes spaces. Instead, omit spaces or replace them with underline characters. For example, rather than using the pathname *OSAS v76*, omit the space and use *OSASv76* instead.

Enter the actual physical path; do not use mapped drives.

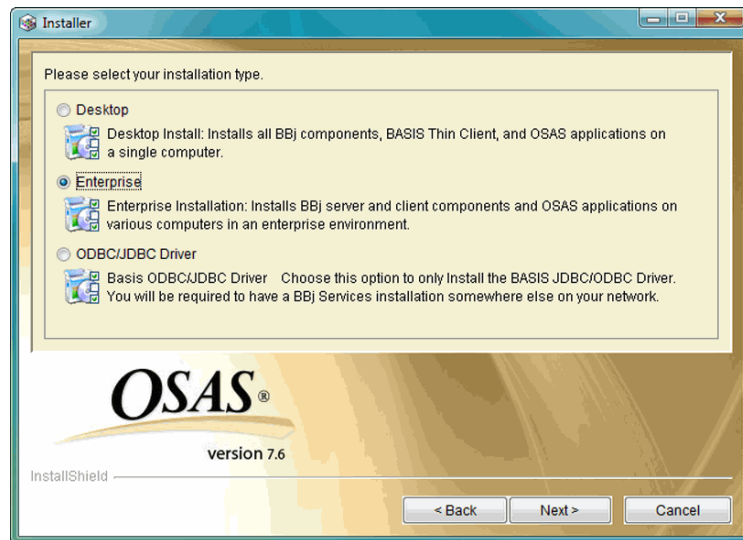
Click **Next** after specifying the installation directory to continue.

10. If you are installing OSAS on Windows, select the language platform on which to install OSAS. Select **BBj** and click **Next** to continue.

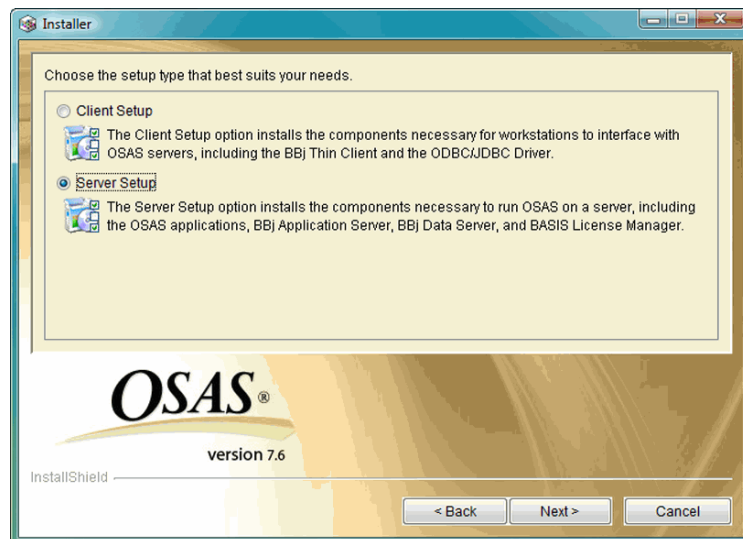


If you are installing OSAS on Linux, UNIX, or Mac OS X, this screen does not appear. The system automatically assumes you are installing OSAS on BBj when you use the installation program on these operating systems.

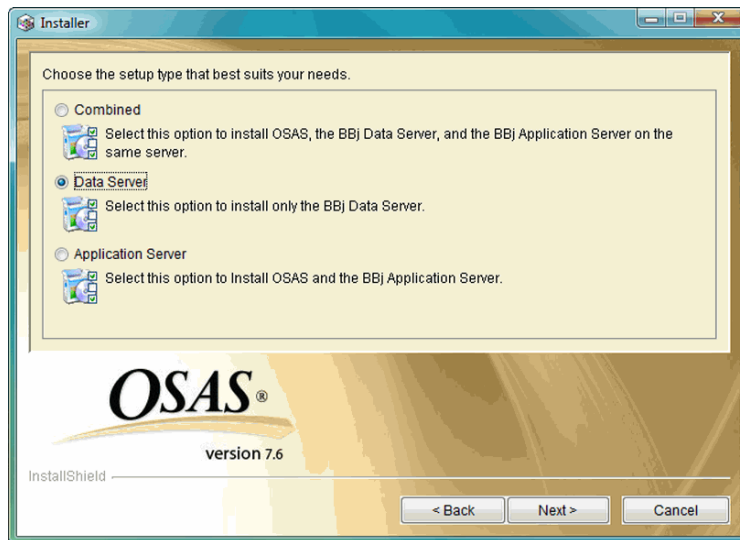
11. Select **Enterprise** as the installation type and click **Next** to continue.



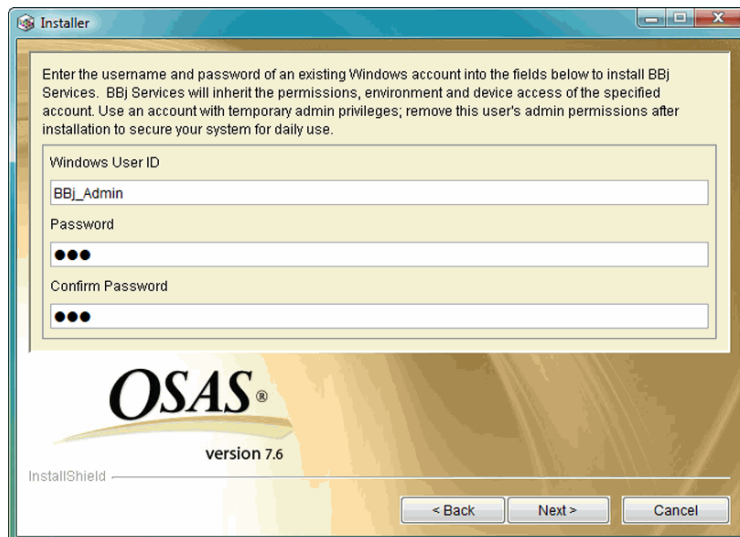
12. Select **Server Setup** as the setup type and click **Next** to continue.



13. Select **Data Server** and click **Next** to continue.

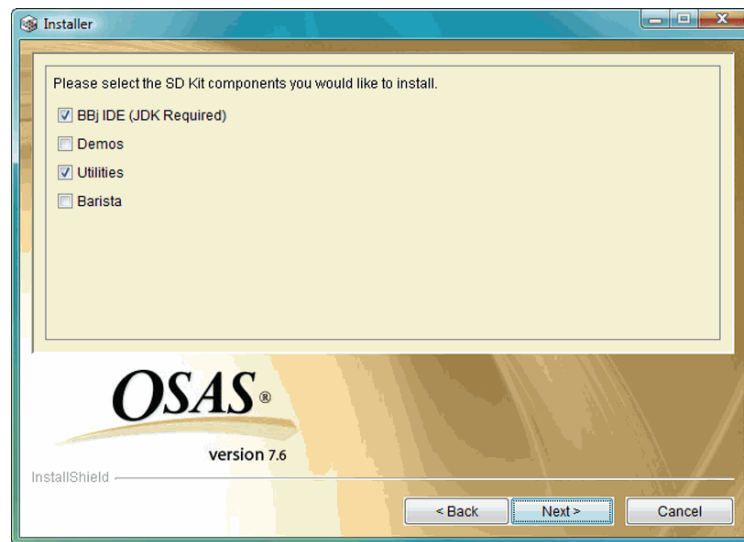


14. If you are installing OSAS on Windows, enter the user name and password of the user account to use for BBj Services and click **Next** to continue.

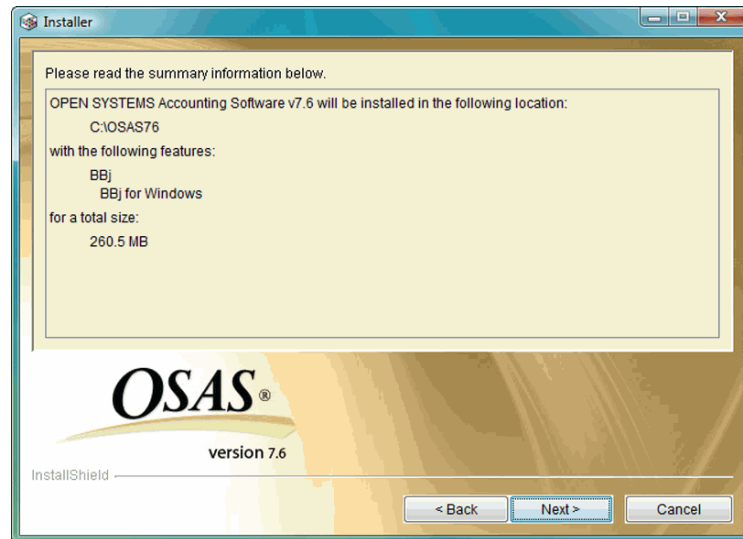


This screen does not appear if you are installing OSAS on Linux, UNIX, or Mac OS X.

15. If you have purchased the OSAS Software Developer's Kit (SDK), select the SDK components you would like to install, and click **Next**.



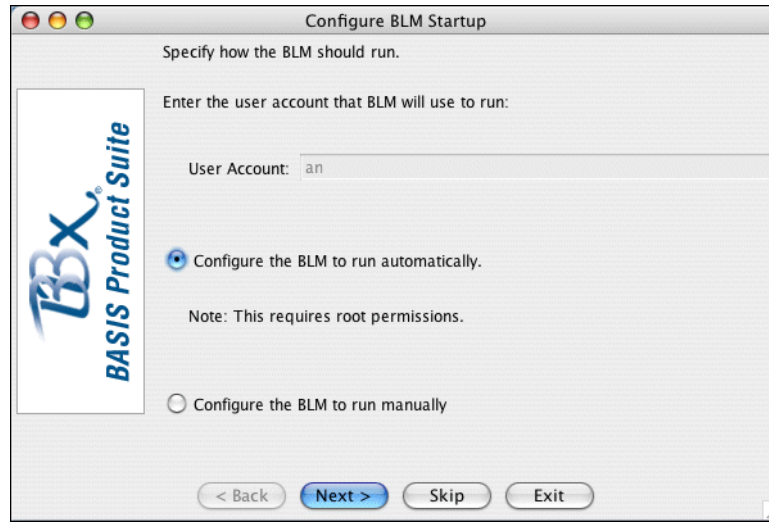
16. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.



If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

17. If you are installing OSAS on Windows XP with Service Pack 2, a warning message may appear stating that the Windows Firewall has temporarily blocked BBj Services. Click **Unblock** to allow BBj Services to function correctly.

18. If you are installing OSAS on Mac OS X, the Configure BLM Startup screen appears.



Select **Configure the BLM to run automatically** and click **Next** to continue. When the Authenticate dialog box appears, enter your password and click **OK**.



These screens do not appear if you use Linux, UNIX, or Windows.

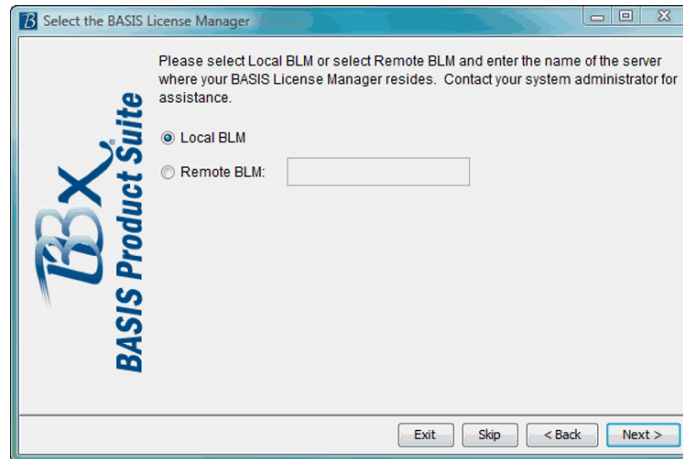
19. If you are installing OSAS on Mac OS X, the Configure BBJ Services Startup screen appears.



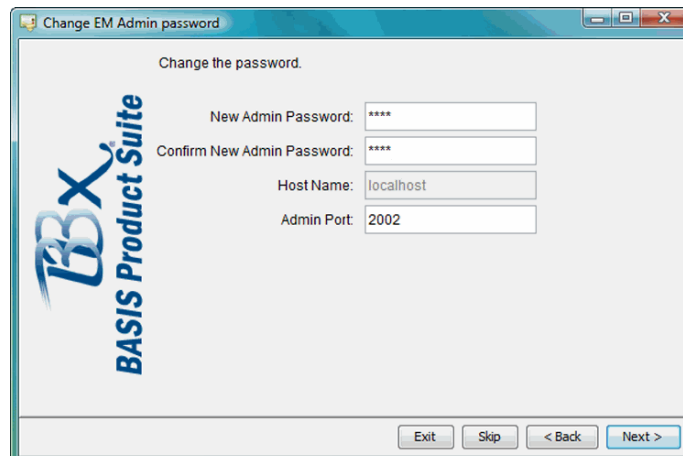
Select **Configure BBJ Services to run automatically** and click **Next** to continue.

This screen does not appear if you use Linux, UNIX, or Windows.

20. When the Select the BASIS License Manager screen appears, enter the machine name of the computer on which the BLM is installed and click **Next** to continue.



21. When the "BASIS License Manager installation successful" message appears, click **OK**.
22. When the Change EM Admin Password screen appears, enter a new password to use as the default password for the BBJ Enterprise Manager admin user and click **Next** to continue.

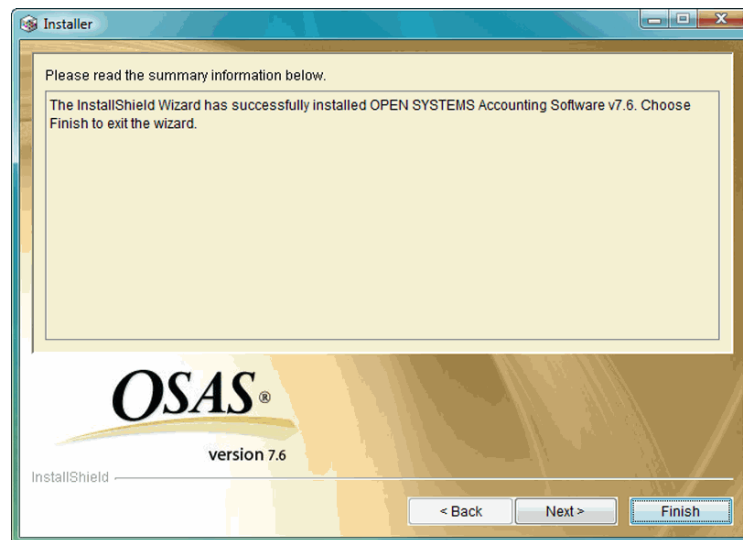


During installation, the wizard installs all BBj components, including the BBj Enterprise Manager, an administrative program you can use to optimize how BBj works. Enterprise Manager is initially installed with an **admin** user, which is given the password **admin123**. Change this password to increase your system's security.

Make a note of the new password in a safe location for your reference later when working with Enterprise Manager.

If you want to keep the default **admin123** password, enter it into the two password boxes on the screen.

23. A message appears when the password for Enterprise Manager is changed successfully. Click **OK** to continue.
24. When the "installation successful" message appears, click **Finish** to exit the installation wizard.



25. If you use Windows, change the access group on the user account you set up for BBj Services from **Administrator** to **User** to secure your system and prevent unauthorized access.

After changing the access group for the BBJ user account, make sure that user still has full permissions for the directory in which you installed OSAS. Check the directory's properties and give this user full access, if needed.

Edit the .rhosts file

Linux, UNIX, and Mac OS X data servers use the **.rhosts** file to determine whether a computer (the application server, in this case) has access to the server based on the user name the computer is using to log in. If the computer's machine name is not listed in the **.rhosts** file for the user name it is using to log in, the server denies that machine access. Windows data servers do not use this file.

The **.rhosts** file is commonly stored in the directories listed in the table on the next page, depending on the operating system you use (UNIX systems use a variety of locations; the one noted in the table is an example only).

OS	Directory	Example
Linux	/home/<user name>	/home/NeilP
UNIX	/u/<user name>	/u/NeilP
Mac OS X	/Users/<user name>	/Users/NeilP

If you use multiple user names, this file must be located in the user directory for each user that connects to the OSAS server.

Follow these steps to edit the **.rhosts** file on Linux, UNIX, and Mac OS X:

1. Use a text editor to open and edit the **.rhosts** file in the home directory for the user that connects to the OSAS server.

On Mac OS X, open a terminal and use **vi** to edit the file. To open a terminal, select **Utilities** from the **Go** menu available under the Finder. When the Utilities screen opens, double-click the Terminal icon.

In all systems, enter these commands at the prompt to open the file with **vi**. (The example below uses the Linux user directory convention; remember to change to the correct user directory for your operating system.)

```
# cd /home/<user name>
# vi .rhosts
```

2. When the file opens, add the machine name for each workstation that connects to the server using this user name, followed by a plus sign (+), as in this sample:

```
accounting-dell +  
sales-a64 +  
osas-mac +
```

3. Save your changes and close the file.
4. If you use multiple user names, repeat these steps to add the appropriate machine name to the **.rhosts** file in each user directory you use.

The OSAS data server is now installed. Next, move to a new server and turn to page 3-55 to install the OSAS application server.

Application Server Installation

Follow the steps in this section to install the OSAS application server on its own computer in a three-tier environment. When you install the OSAS application server, you'll progress through these stages (each stage is broken down into its individual steps in this section):

1. Start the installation wizard.
2. Register and install a BASIS license.
3. Set up server files.
4. Finish the installation.

Note: You must perform the installation while physically at the server.

Start the Installation Wizard

1. If you used a previous version of OSAS, stop and uninstall the current BASIS License Manager before you install the new version.
2. In Windows, BBj runs as a service under a user account. If you are installing OSAS on Windows, set up a new user account for BBj and give it Administrator rights. Record the user name and password you assign to this account; you'll enter them later during the installation.

After you complete the installation, reset this account's access group from **Administrator** to **User** to secure your system against unauthorized access.

3. Make sure you have downloaded and installed the correct Java Runtime Environment (JRE) for your system. OSAS on BBj will not work without the JRE. See page 1-4 for more information.
4. If you use Windows, restart the operating system and log in as the user account you created above. If you use Linux or UNIX, log in as root.

5. If you are installing OSAS on Linux or UNIX, set the `JAVA_HOME` environment variable so that the installation program can locate the JRE. Enter this command at the prompt (substituting the directory in which you installed Java; the path used below is only an example):

```
# export JAVA_HOME=/opt/java
```

Enter only the home directory in which you installed Java; the installation program automatically adds any other directories it needs to the path name.

In Windows and Mac OS X, the installation program automatically detects the JRE, so no additional steps are necessary.

6. Insert the installation DVD into your DVD-ROM drive and start the wizard.
 - In Windows, the OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive) , and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.
 - In Linux or UNIX, mount the DVD-ROM to a drive that exists on your system, and change to the DVD directory. Enter these commands at the prompt:

```
# mount /dev/cdrom /mnt/cdrom
# cd /mnt/cdrom/
```

In the above example, the `/mnt/cdrom` mount directory must exist before you can mount the DVD-ROM.

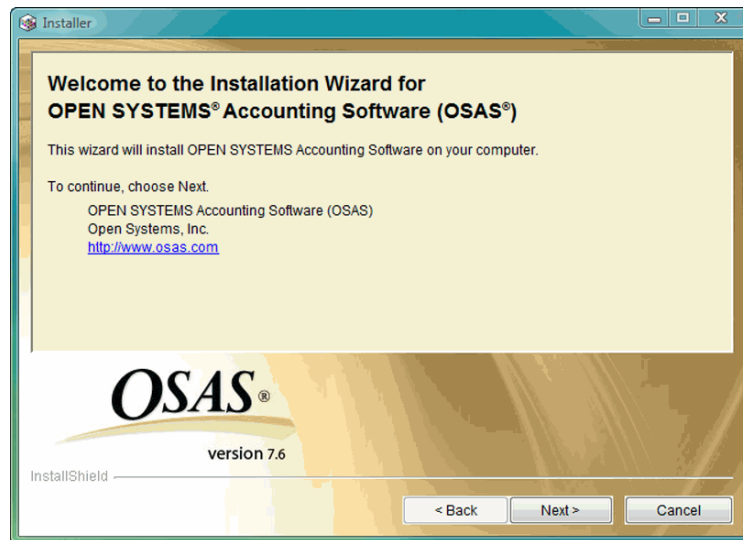
When the listing of files on the DVD appears, enter the installation script, `# ./osasinstall.sh`, at the prompt.

- In Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

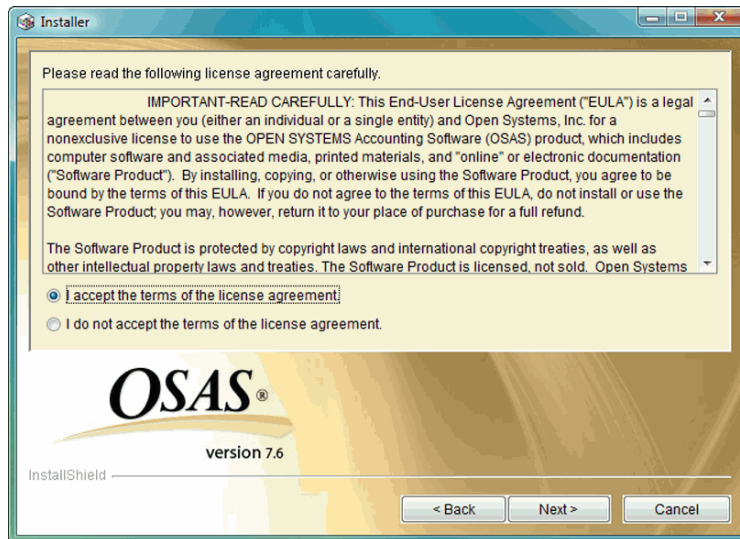
```
Mac OS X      cd /Volumes
               cd OSASv76_Beta
               umask 0
```

Enter the installation script, **# ./osasinstall.sh**, at the prompt.

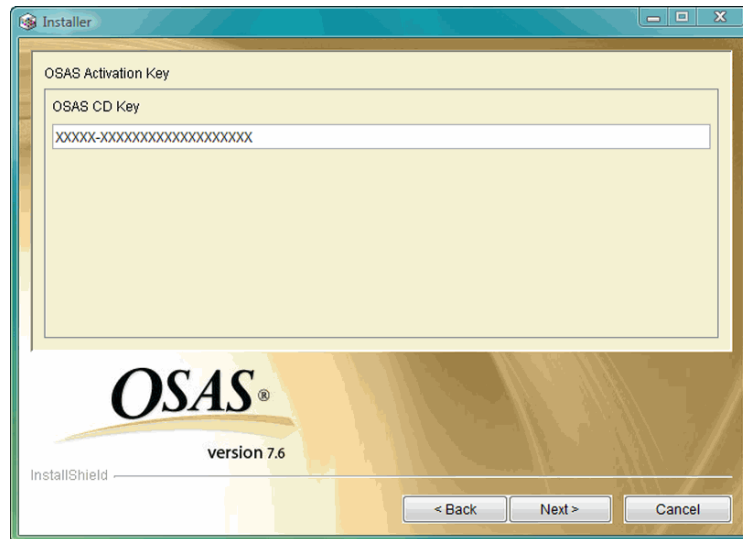
7. When the Welcome screen appears, click **Next** to begin the install.



8. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

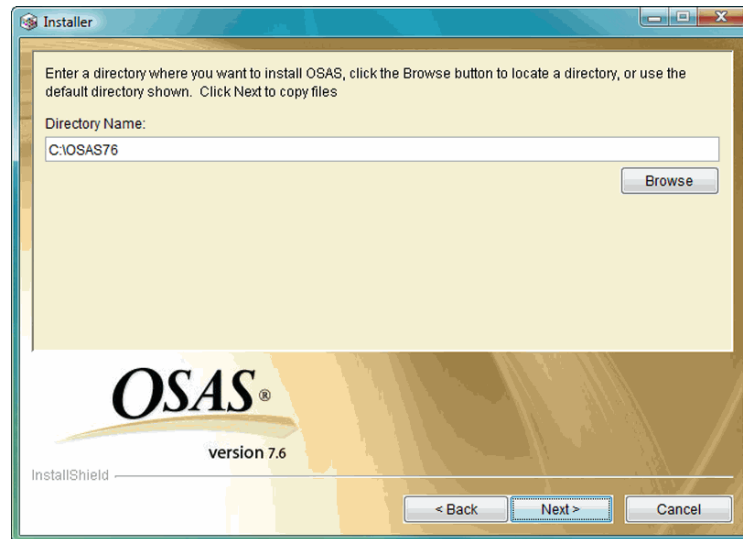


9. Enter your OSAS activation key exactly as it appears on the License Registration form. Please note—the key is case-sensitive.



Click **Next** to continue.

10. Change the directory path in which to install OSAS, if you like. You can also click **Browse** to navigate to this directory and enter the path automatically.

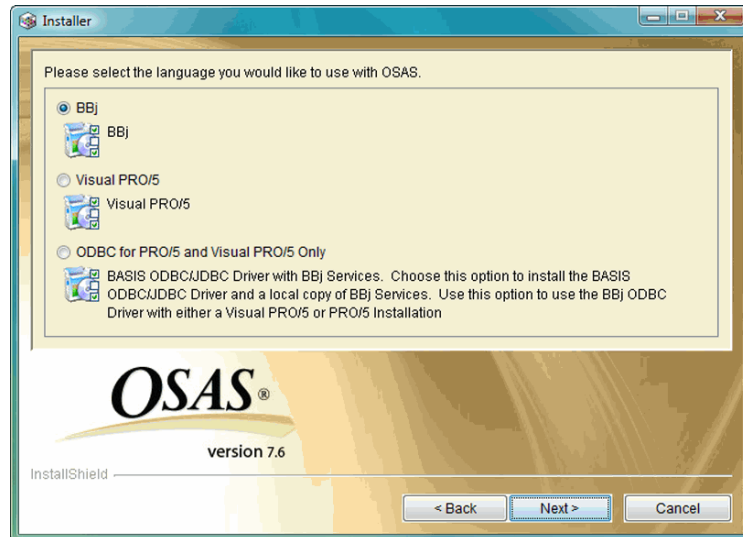


Note: Do not use spaces in the path name during installation. OSAS will not function correctly if you use a path name that includes spaces. Instead, omit spaces or replace them with underline characters. For example, rather than using the pathname *OSAS v76*, omit the space and use *OSASv76* instead.

Enter the actual physical path; do not use mapped drives.

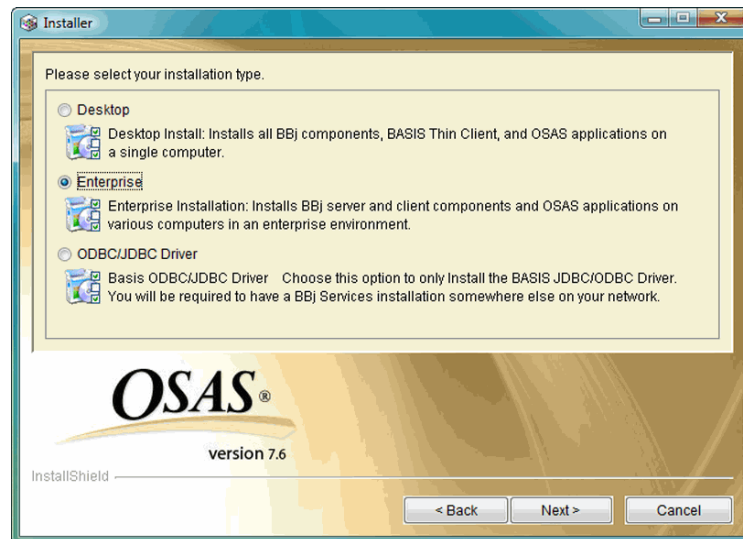
Click **Next** after specifying the installation directory to continue.

11. If you are installing OSAS on Windows, select the language platform on which to install OSAS. Select **BBj** and click **Next** to continue.

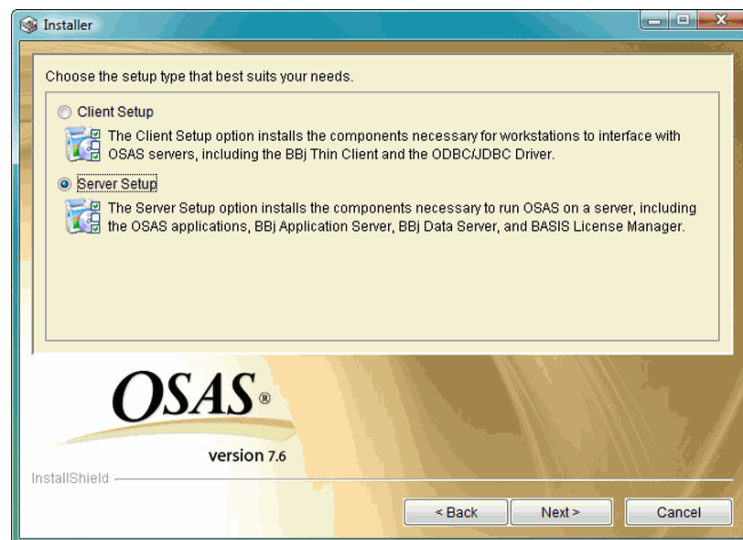


If you are installing OSAS on Linux, UNIX, or Mac OS X, this screen does not appear. The system automatically assumes you are installing OSAS on BBj when you use the installation program on these operating systems.

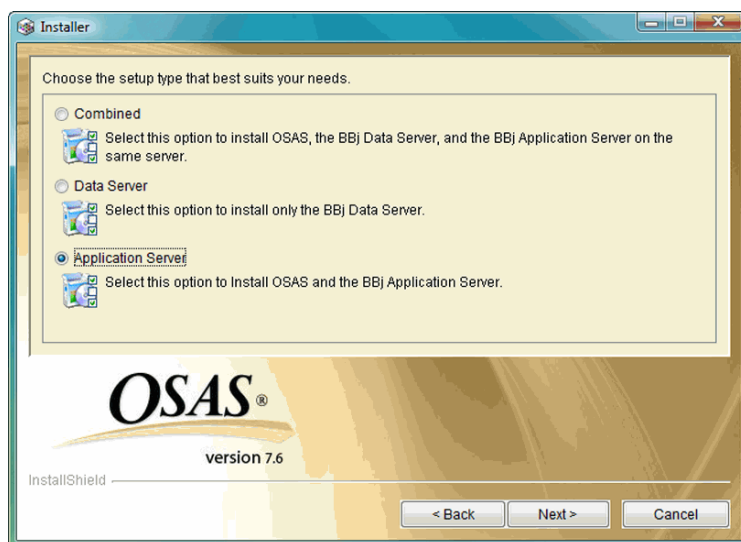
12. Select **Enterprise** as the installation type and click **Next** to continue.



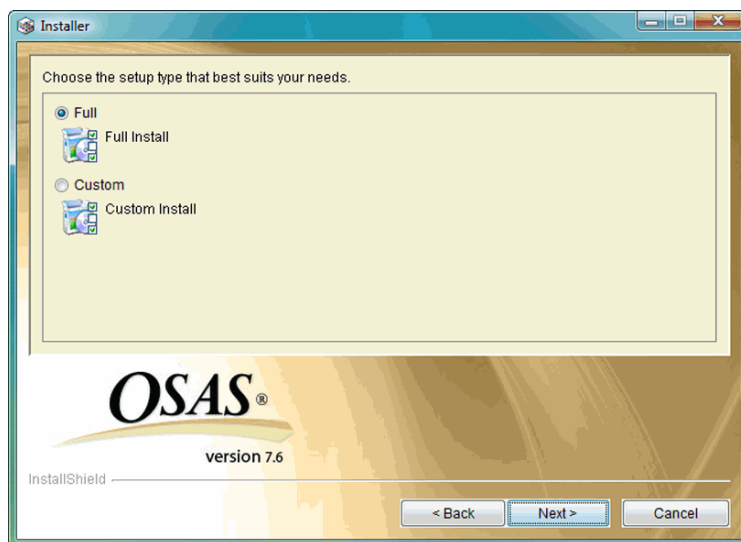
13. Select **Server Setup** as the setup type and click **Next** to continue.



14. Select **Application Server** and click **Next** to continue.

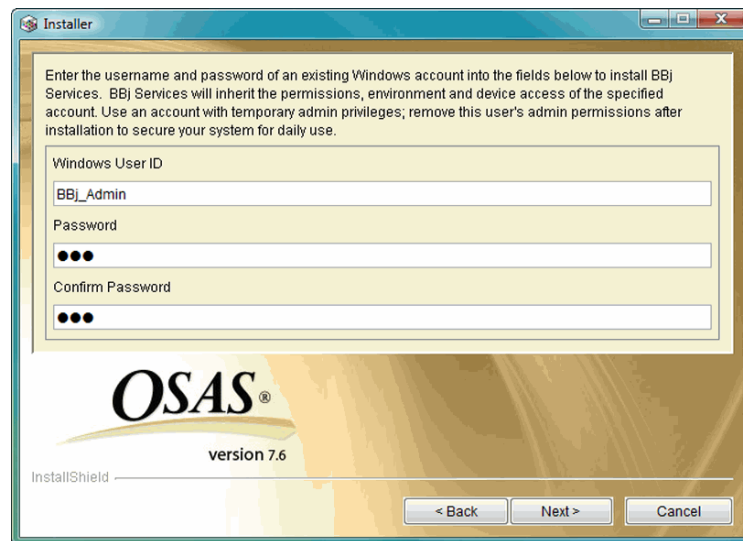


15. Select **Full** as the setup type and click **Next** to continue.



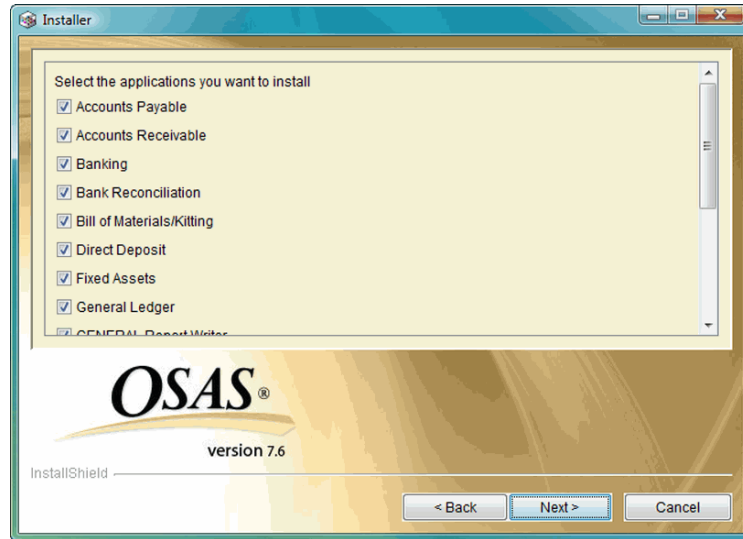
Select **Custom** only if you need to install or re-install specific components. When you select this option, a screen appears after you click **Next** so that you can select the components to install. See page 5-8 for more information.

16. If you are installing OSAS on Windows, enter the user name and password of the user account to use for BBJ Services and click **Next** to continue.



This screen does not appear if you are installing OSAS on Linux, UNIX, or Mac OS X.

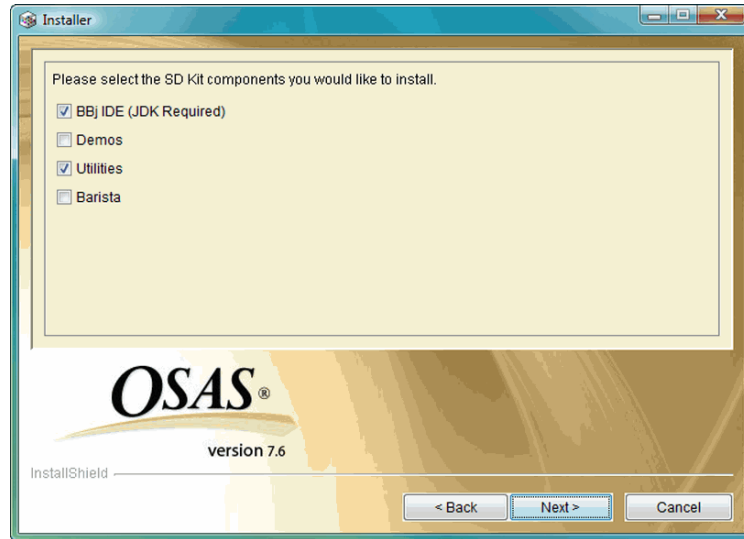
17. Select the OSAS applications and components to install and click **Next**. Your OSAS activation key determines which applications appear in the list.



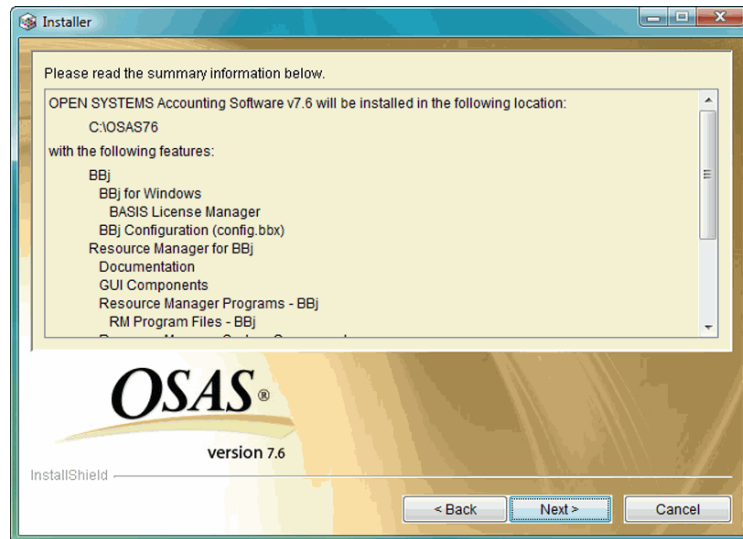
If you do not want to install an application, clear its check box. While installing applications here is most convenient, you can also use the **Install Applications** function in Resource Manager to install an application later.

If your OSAS activation key includes CJC, the installation program automatically selects the **Contractors' Job Cost** check box and clears the **Job Costing** check box. To avoid problems with processing, you must install one or the other, but not both at the same time. If you select both check boxes, a message appears when you click **Next**.

18. If you have purchased the OSAS Software Developer's Kit (SDK), select the SDK components you would like to install, and click **Next**.



19. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.

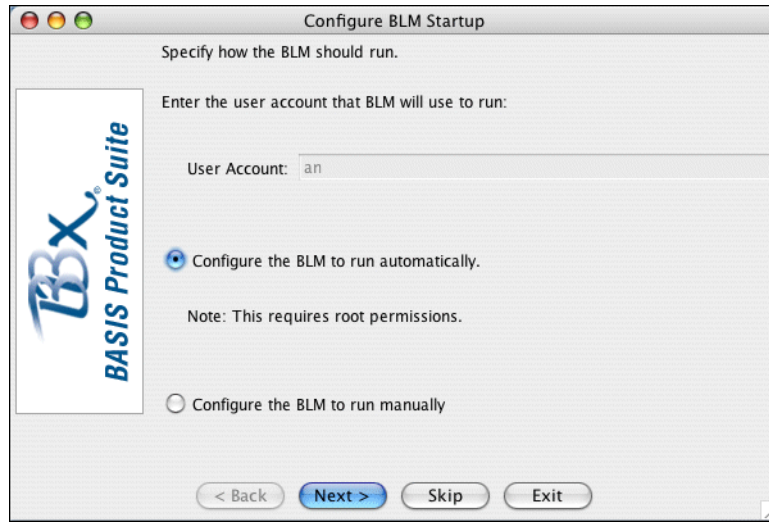


If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

Because the installation program automatically installs BBJ components and the BASIS License Manager (BLM) in addition to OSAS, installation may take several minutes. Any apparent “lag time” results from the process needed to install these extra components and installation will resume in a few moments.

20. If you are installing OSAS on Windows XP with Service Pack 2, a warning message may appear stating that the Windows Firewall has temporarily blocked BBJ Services. Click **Unblock** to allow BBJ Services to function correctly.

21. If you are installing OSAS on Mac OS X, the Configure BLM Startup screen appears.



Select **Configure the BLM to run automatically** and click **Next** to continue. When the Authenticate dialog box appears, enter your password and click **OK**.



These screens do not appear if you use Linux, UNIX, or Windows.

22. If you are installing OSAS on Mac OS X, the Configure BBJ Services Startup screen appears.



Select **Configure BBJ Services to run automatically** and click **Next** to continue.

This screen does not appear if you use Linux, UNIX, or Windows.

Register and Install a BASIS License

1. You if you have the User Account Control option enabled in Windows Vista or Windows 7, the BASIS UAC Configuration screen appears.



Select **Require elevation to administrator privileges**, then click **Next** to continue.

If you do not use User Account Control in Windows Vista or Windows 7, skip to step 2.

2. You must register and install a BASIS license before OSAS installation can complete. The Select License Option screen appears automatically during installation.

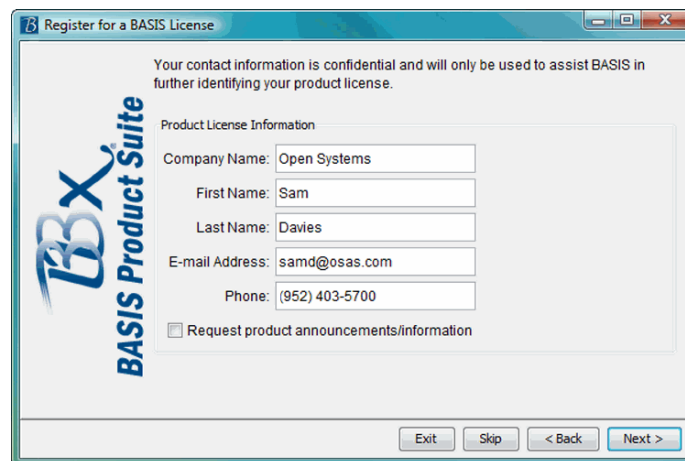


Select **Register for a license**, then click **Next** to continue.

If you already have a license you want to install, or if you use the BASIS License Manager in a client/server environment, select one of those options. If you select **Install a License**, skip to step 4 on page 3-74. If you choose **Select a BASIS License Manager**, enter the name of the server on which the BASIS License Manager is stored, click **Next**, then click **Finish**.

3. When the Register for a BASIS License screen appears, enter your contact information in the fields. These fields are required. Select the check box at the bottom of the screen if you would like to receive product information from BASIS; otherwise, leave the check box blank.

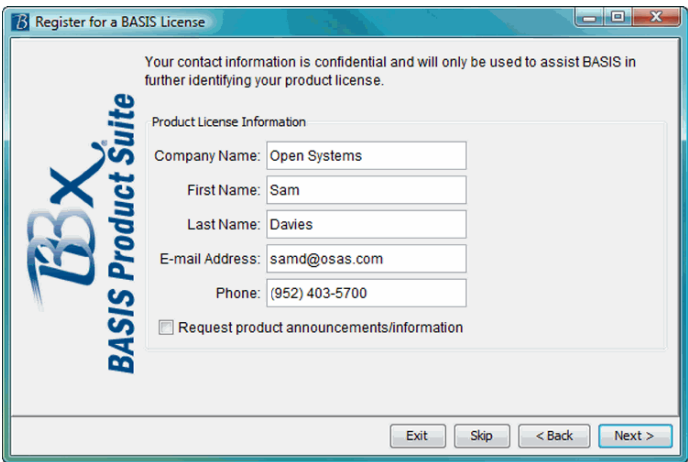
Click **Next** to continue.



4. Enter the **Serial Number** and **Auth Number** that are printed on the License Registration Form you received from Open Systems as part of your installation materials on the License Registration Info screen. If you elect to receive a 30-day license, these fields are automatically filled in for you and cannot be changed once you select the **Requesting a 30-day evaluation license** check box. The installation wizard determines the computer's **Host Name** and **Host ID**; if these fields are not already filled in, enter the **Host Name** and **Host ID** to use. Enter the **User Count** from the License Registration Form (this value is automatically set to **2** if you are registering a demo license).

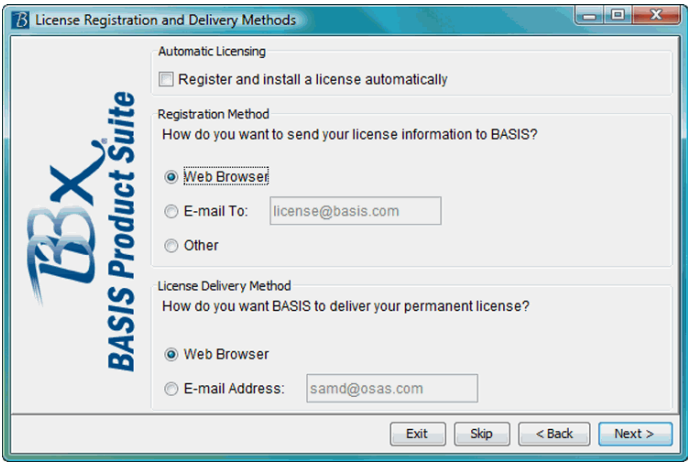
Select the **This is a notebook** computer check box to tie the **Host ID** to your computer's hard disk rather than to its network card if you are installing OSAS on a laptop or notebook computer. This step allows you to use OSAS when you are disconnected from the network.

Click **Next** to continue.



The dialog box is titled "Register for a BASIS License". It contains a disclaimer: "Your contact information is confidential and will only be used to assist BASIS in further identifying your product license." Below this is the "Product License Information" section with the following fields: Company Name (Open Systems), First Name (Sam), Last Name (Davies), E-mail Address (samd@osas.com), and Phone ((952) 403-5700). There is a checkbox for "Request product announcements/information" which is unchecked. At the bottom are buttons for Exit, Skip, < Back, and Next >.

5. When the License Registration and Delivery Methods screen appears, select the method to use to register your BASIS license. Turn to the appropriate page for more information.



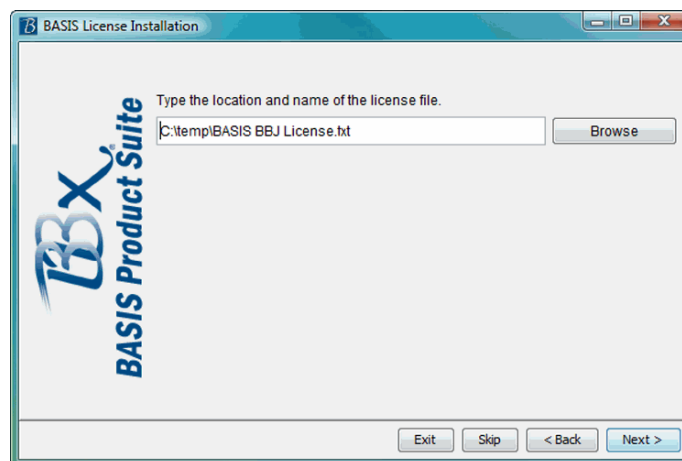
The dialog box is titled "License Registration and Delivery Methods". It has two main sections. The first is "Automatic Licensing" with a checkbox "Register and install a license automatically" which is unchecked. The second is "Registration Method" with the question "How do you want to send your license information to BASIS?". It has three radio buttons: "Web Browser" (selected), "E-mail To:" (with a text box containing license@basis.com), and "Other". The third section is "License Delivery Method" with the question "How do you want BASIS to deliver your permanent license?". It has two radio buttons: "Web Browser" (selected) and "E-mail Address:" (with a text box containing samd@osas.com). At the bottom are buttons for Exit, Skip, < Back, and Next >.

Method	Refer to
Automatic licensing	page 3-23
Send by Web Browser / Receive by Web Browser	page 3-24

Method	Refer to
Send by E-mail / Receive by E-mail	page 3-26
Send by Other / Receive by E-mail	page 3-29

Follow the instructions on the pages above for the method you selected to send and receive license information. When you finish, continue to the next step to install the license.

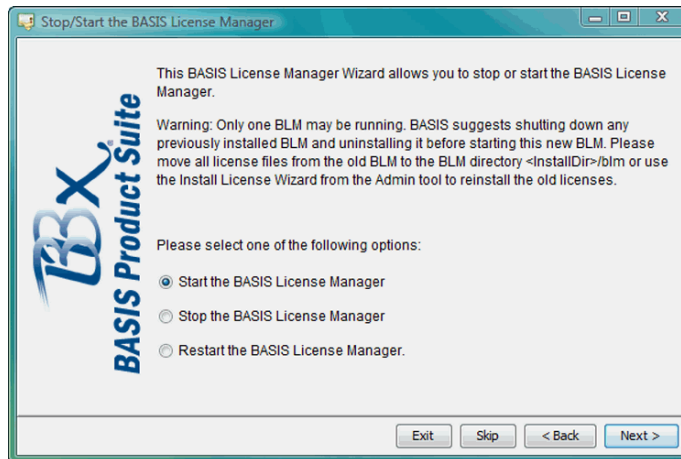
6. If you used a method other than the automatic licensing method to register the BASIS license, you need to install the BASIS license so that OSAS functions correctly. When the Registration Notification screen appears, click **Next**, then click **Yes** when prompted to install the license.
 - When the Install a BASIS License screen appears, select **Install a single-user BASIS license on this machine** and click **Next**.
 - When the BASIS License Information screen appears, enter your license information.



Enter the directory location of the license file you saved during registration. You can also click **Browse** to navigate to the directory in which you saved the file.

Click **Next** to continue.

7. The installation successful message appears after the license is installed successfully. This message also asks whether you want to install another license. Click **No** to continue.
8. If you used a method other than the automatic licensing method to register the BASIS license, the Start/Stop the BASIS License Manager screen appears. Select **Start the BASIS License Manager** and click **Next** to continue.



A message appears when the BLM starts successfully. Click **OK** to continue.

9. When the Change EM Admin Password screen appears, enter a new password to use as the default password for the BBJ Enterprise Manager admin user and click **Next** to continue.



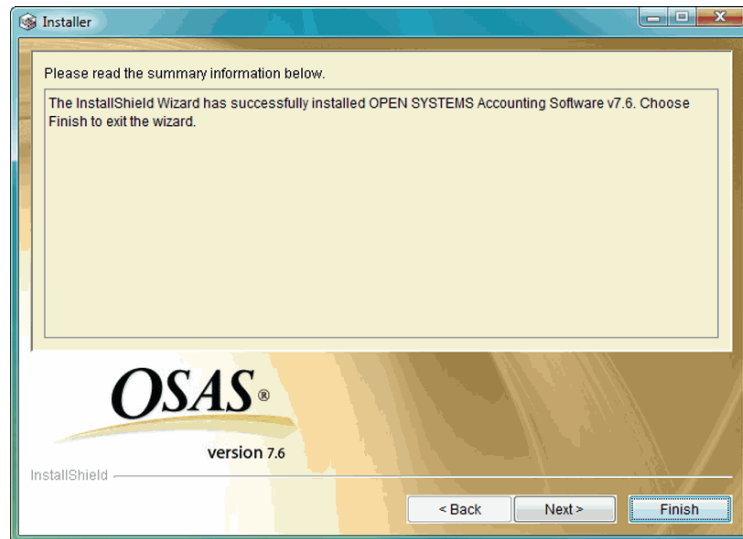
During installation, the wizard installs all BBJ components, including the BBJ Enterprise Manager, an administrative program you can use to optimize how BBJ works. Enterprise Manager is initially installed with an **admin** user, which is given the password **admin123**. Change this password to increase your system's security.

Make a note of the new password in a safe location for your reference later when working with Enterprise Manager.

If you want to keep the default **admin123** password, enter it into the two password boxes on the screen.

10. A message appears when the password for Enterprise Manager is changed successfully. Click **OK** to continue.
11. If you are installing OSAS on Windows XP with Service Pack 2, a warning message may appear during application installation stating that the Windows Firewall has temporarily blocked the Thin Client Proxy Server. Click **Unblock** to allow the thin client server to function correctly.

12. When the “installation successful” message appears, click **Finish** to exit the installation program.



13. If you use Windows, change the access group on the user account you set up for BBj Services from **Administrator** to **User** to secure your system and prevent unauthorized access.

After changing the access group for the BBj user account, make sure that user still has full permissions for the directory in which you installed OSAS. Check the directory's properties and give this user full access, if needed.

Set up Server Files

On Linux, UNIX, or Mac OS X application servers, you need to set up the **.rhosts** file so that OSAS can communicate with and allow access from client workstations for greater security. Windows application servers do not use this file.

In addition, you may need to edit the hosts file (on all application servers, regardless of operating system) if the DNS server on your network cannot resolve the data server's name into its IP address.

Edit the .rhosts file

Linux, UNIX, and Mac OS X data servers use the **.rhosts** file to determine whether a client workstation has access to the server based on the user name the computer is using to log in. If the computer's machine name is not listed in the **.rhosts** file for the user name it is using, the server denies that machine access. Windows application servers do not use this file.

The **.rhosts** file is commonly stored in these directories, depending on the operating system you use (UNIX systems use a variety of locations; the one noted below is an example only):

OS	Directory	Example
Linux	/home/<user name>	/home/NeilP
UNIX	/u/<user name>	/u/NeilP
Mac OS X	/Users/<user name>	/Users/NeilP

If you use multiple user names, this file must be located in the user directory for each user that connects to the OSAS server.

Follow these steps to edit the **.rhosts** file on Linux, UNIX, or Mac OS X:

1. Use a text editor to open and edit the **.rhosts** file in the home directory for the user that connects to the OSAS server.

On Mac OS X, open a terminal and use vi to edit the file. To open a terminal, select **Utilities** from the **Go** menu available under the Finder. When the Utilities screen opens, double-click the Terminal icon.

On all systems, enter these commands at the prompt to open the file with vi. (The example below uses the Linux user directory convention; remember to change to the correct user directory for your operating system.)

```
# cd /home/<user name>
# vi .rhosts
```

2. When the file opens, add the machine name for each workstation that connects to the server using this user name, followed by a plus sign (+), as in this sample:

```
accounting-dell +
sales-a64 +
osas-mac +
```

3. Save your changes and close the file.
4. If you use multiple user names, repeat these steps for the **.rhosts** file in each user directory you use.

Edit the *hosts* File

The **hosts** file lists the IP address and machine name of the computer that houses the data server so that the application server can locate and send it information. If the DNS server on your network can correctly resolve the data server's name into its IP address, you do not need to edit this file.

Before you modify this file, you need to know the IP address and machine name of the OSAS data server.

Follow these steps to edit the **hosts** file:

1. Use a text editor (like Notepad or vi) to open and edit the **hosts** file.

On Windows, this file is located in the **\\Windows\\system32\\drivers\\etc** directory.

On Linux, UNIX, or Mac OS X, this file is usually located in the **/etc** directory. Enter these commands at a terminal prompt to open the services file with vi:

```
# cd /etc
# vi hosts
```

To open a terminal on Mac OS X, select **Utilities** from the **Go** menu available under the Finder. When the Utilities screen opens, double-click the Terminal icon.

2. The current list of workstations that connect to the server appear (there may already be several entries). Add the data server's IP addresses and machine names, as in this sample:

```
127.0.0.1  Local host
200.99.5.1  osas_data
```

3. Save your changes and close the file.

Finish the Installation

The installation of the OSAS application server is complete. You can now either install the OSAS thin client on each workstation that connects to the application server, or launch the new installation to set up Resource Manager.

To install the OSAS thin client on workstations, move to the first workstation and then turn to “Thin Client Installation” on page 3-85.

To set up Resource Manager, launch the new OSAS installation. On Windows, double-click the OSAS shortcut, or select **OSAS 7.6** from the **OSAS** program group on the **Start** menu. On Linux or UNIX, enter **osas** at the command prompt. On Mac OS X, double-click **OPEN SYSTEMS Accounting Software** on the Applications menu. You access the Applications menu by pressing **Apple+Shift+A** from anywhere in Finder.

When you launch OSAS for the first time, you must:

- Set up at least one company record—the Company Information screen appears automatically the first time you launch OSAS.
- Use the **Directories** function (available on the Resource Manager **System Setup** menu) to make sure the correct location appears for the **Data** directory. This directory path lists the location in which your OSAS data files are stored.

Setting up Company Records

The Company Information screen automatically appears the first time you launch OSAS.

Enter your company's ID (up to three characters) and press **Enter**—the remaining fields on the screen are available only after you enter the **Company ID**. Enter the company's related information and click **OK** to continue.

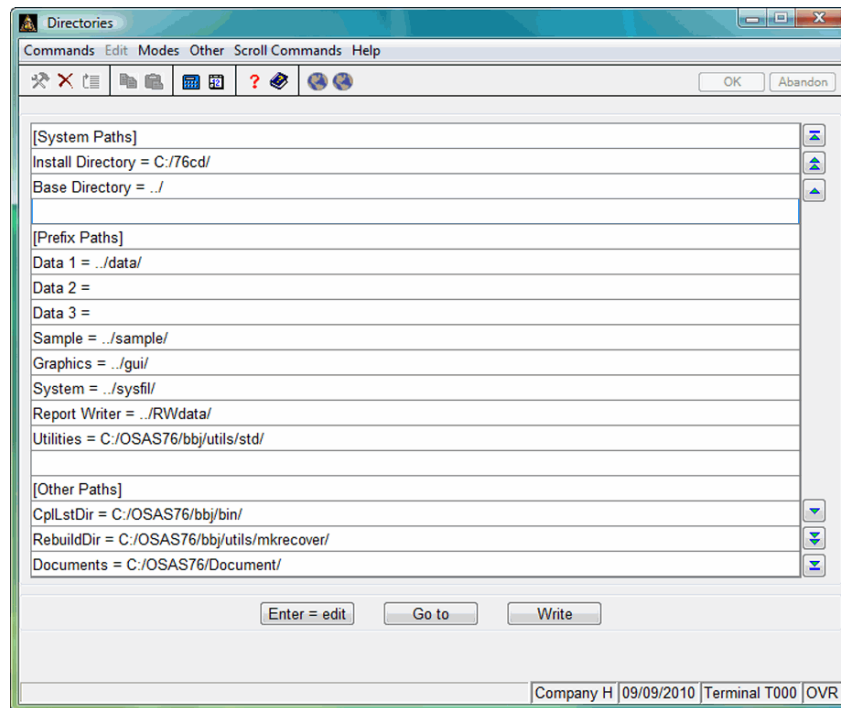
When the cursor returns to the **Company ID** field, enter another company ID and its related company information, or press **F7** to exit to the OSAS main menu. Refer to the Resource Manager guide for more information on the **Company Information** function.

Specifying Directory Paths

Use the **Directories** function on the Resource Manager **System Setup** menu to make sure OSAS uses the correct directory paths (especially for the **Data** path) for normal day-to-day processing. Alternately, you can also view and modify these directory paths by opening the **OSINFO.DOS** or **OSINFO.UNX** file with a text editor. This file is located in the **/osas/sysfil** directory.

The default path that is used for the **Data** directory is **/osas/data**, where **osas** is the location in which you installed OSAS. If your data server is located on a different computer than the application server, you need to modify this path to point to the correct directory on that server.

To check the directories that OSAS uses, select **Directories** from the Resource Manager **System Setup** menu (or open the OSINFO.xxx file directly in a text editor). The Directories screen appears and lists the directories OSAS uses.



Make sure that the correct locations are listed for the **Data 1**, **Data 2**, and **Data 3** directory paths. (Data paths 2 and 3 are used only if you need additional space.) To change these directory paths to use the BBj data server, use this convention:

/<tiger>C:/osas/data or
/<tiger, ssl>C:/osas/data if you use secure connections

Where **tiger** is the name of the computer on which the data server is installed, and **C:\osas\data** is the directory on that server in which you want to store your OSAS data files.

Note: When entering directory paths, enter the actual physical path to the directory on the server. Do not use mapped drives. Because BBj runs as a service, it cannot recognize mapped drives.

See Appendix D for more information on using secure connections with BBj.

If you change the paths for the **Data**, **Sample**, **System**, or **Report Writer** directories within the OSAS **Directories** function and write your changes, a message appears. Select the action that you want to take:

- To copy the existing data files on the application server to the new location on the data server, select **Copy**. This action leaves a copy of the files in the old location on the application server (which may quickly become outdated).
- To move the data files to the new location (without leaving a copy), select **Move**. This action does not delete the files from the old location until after every file has been copied to the new location successfully.

For example, if the process fails due to a power outage, only the files that were copied successfully before the outage occurred will be found in the new location. Since the process failed midway, all files are still retained in the old location. To finish the process, delete the files from the new location and try again.

- If this is the first time you have changed directory information, **do not** select **None** as doing so may accidentally delete directories.

Select **None** if you want to manually copy or move the files to the new location yourself. This action leaves all files in their original locations. Errors may result during OSAS processing if you do not copy or move the files to the new location manually.

If you edited the **OSINFO.DOS** or **OSINFO.UNX** file in a text editor, you'll need to copy the data files to the correct directories manually.

After you select the action to take and use the **Proceed (OK)** command to continue, OSAS restarts.

Refer to “Editing Directories” on page 6-4 or the Resource Manager guide for more information on specifying data servers in directory paths.

Thin Client Installation

Follow the steps in this section to install the client software on each workstation that connects to the data and application servers. You must perform this installation at each workstation that connects to the OSAS servers.

Note: If you previously installed BBj or BBj Services on a workstation, **do not** follow the instructions below to install the BBj thin client. Doing so can overwrite the paths used by the thin client and causes issues with component recognition. Instead, create a shortcut on the workstation and edit its target line to specify the information needed to connect to OSAS. See “Creating Shortcuts on Windows Clients” on page 3-97 for more information.

1. If you use Linux or UNIX, log in as root.
2. Make sure you have downloaded and installed the correct Java Runtime Environment (JRE) for your system. OSAS on BBj will not work without the JRE. See page 1-4 for more information.
3. If you are installing OSAS on Linux or UNIX, set the JAVA_HOME environment variable so that the installation program can locate the JRE. Enter this command at the prompt (substituting the directory in which you installed Java; the path used below is only an example):

```
# export JAVA_HOME=/opt/java
```

Enter only the home directory in which you installed Java; the installation program automatically adds any other directories it needs to the path name.

In Windows and Mac OS X, the installation program automatically detects the JRE, so no additional steps are necessary.

4. If it's present on the workstation, stop and uninstall the current BASIS License Manager. You'll use the BLM installed on the application server instead.

5. Insert the installation DVD into your DVD-ROM drive and start the wizard.

- In Windows, the OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.
- In Linux or UNIX, mount the DVD-ROM to a drive that exists on your system, and change to the DVD directory. Enter these commands at the prompt:

```
# mount /dev/cdrom /mnt/cdrom
# cd /mnt/cdrom/
```

In the above example, the **/mnt/cdrom** mount directory must exist before you can mount the DVD-ROM.

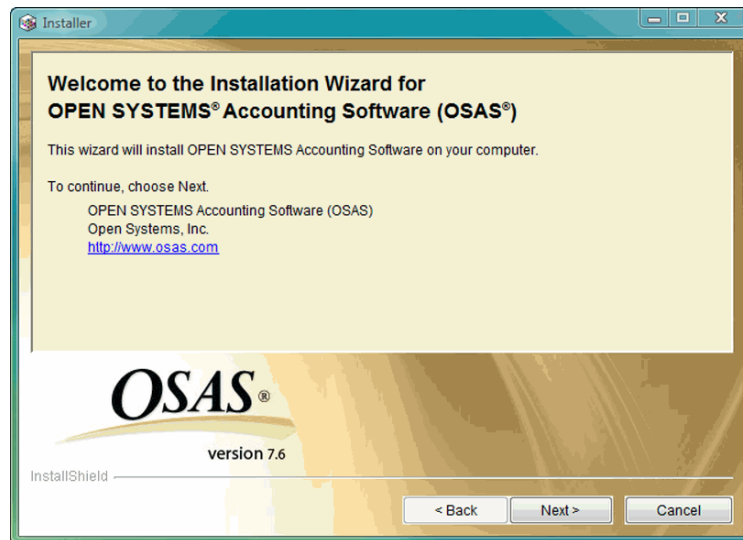
When the listing of files on the DVD appears, enter the installation script, **# ./osasinstall.sh**, at the prompt.

- In Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

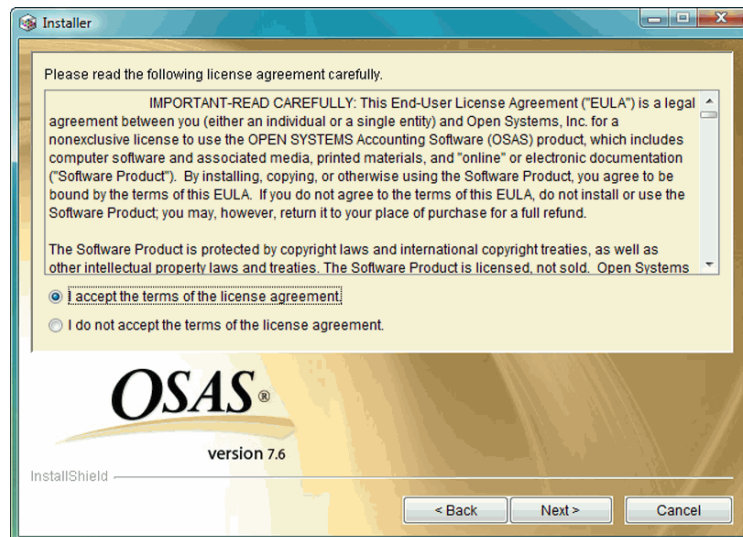
```
Mac OS X      cd /Volumes
               cd OSASv76_Beta
               umask 0
```

Enter the installation script, **# ./osasinstall.sh**, at the prompt.

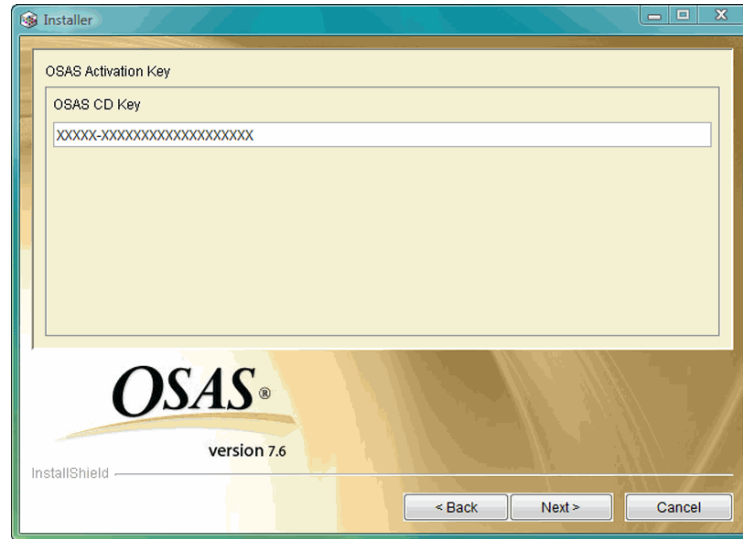
6. When the Welcome screen appears, click **Next** to begin the install.



7. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

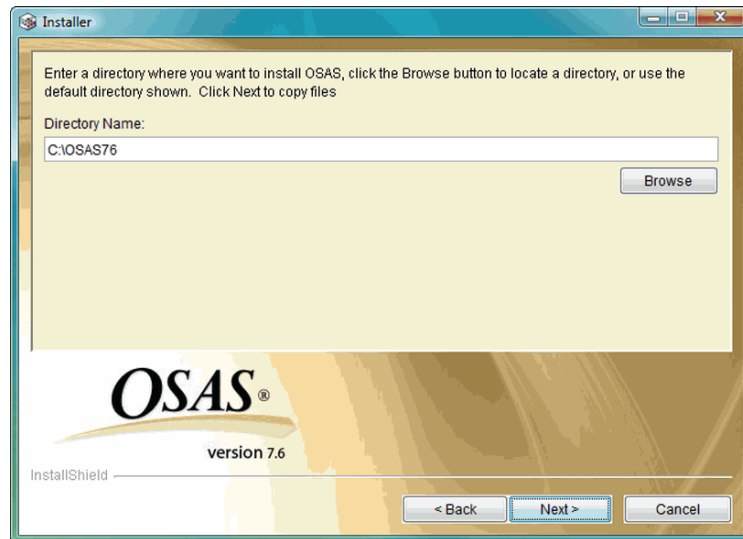


8. Enter your OSAS activation key exactly as it appears on the License Registration form. Please note—the key is case-sensitive.



Click **Next** to continue.

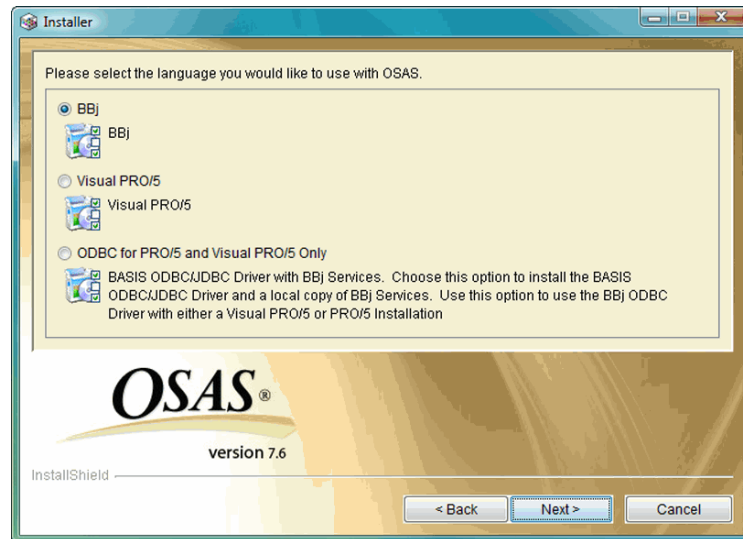
9. Change the directory path in which to install the OSAS thin client, if you like. You can also click **Browse** to navigate to this directory.



Note: Do not use spaces in the path name during installation. OSAS will not function correctly if you use a path name that includes spaces. Instead, omit spaces or replace them with underline characters. For example, rather than using the pathname *OSAS v76*, omit the space and use *OSASv76* instead.

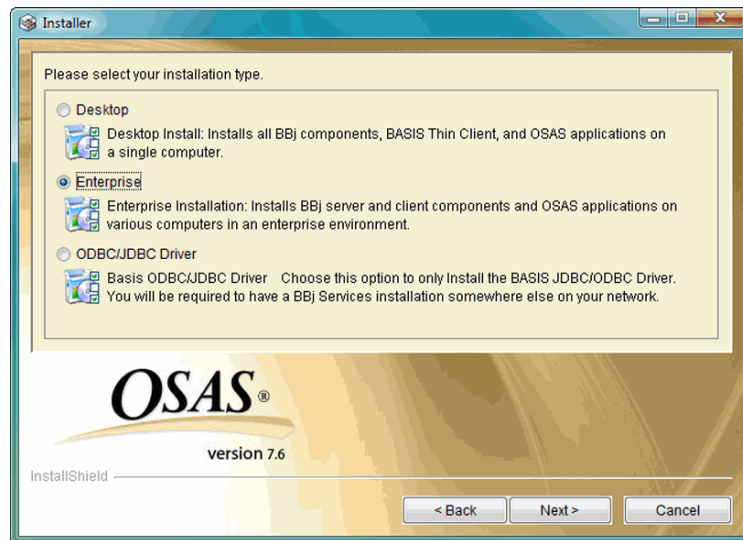
Click **Next** after specifying the installation directory to continue.

10. If you are installing OSAS on Windows, select the language platform on which to install OSAS. Select **BBj** and click **Next** to continue.

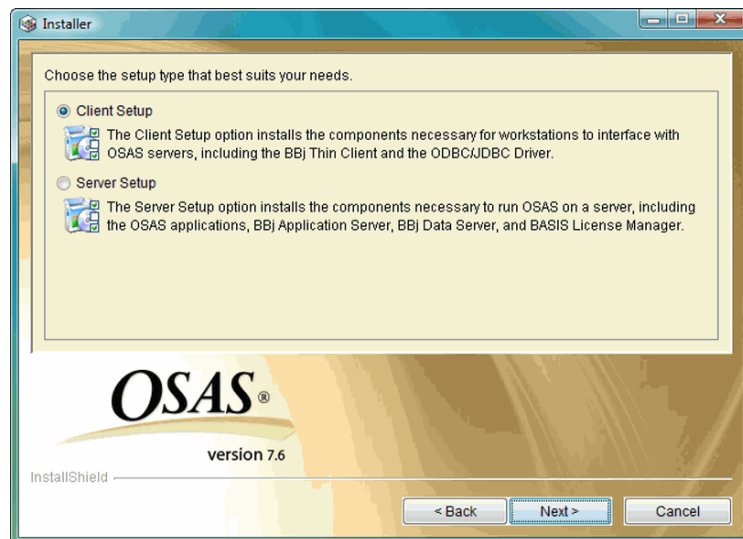


If you are installing OSAS on Linux, UNIX, or Mac OS X, this screen does not appear. The system automatically assumes you are installing OSAS on BBJ when you use the installation program on these operating systems.

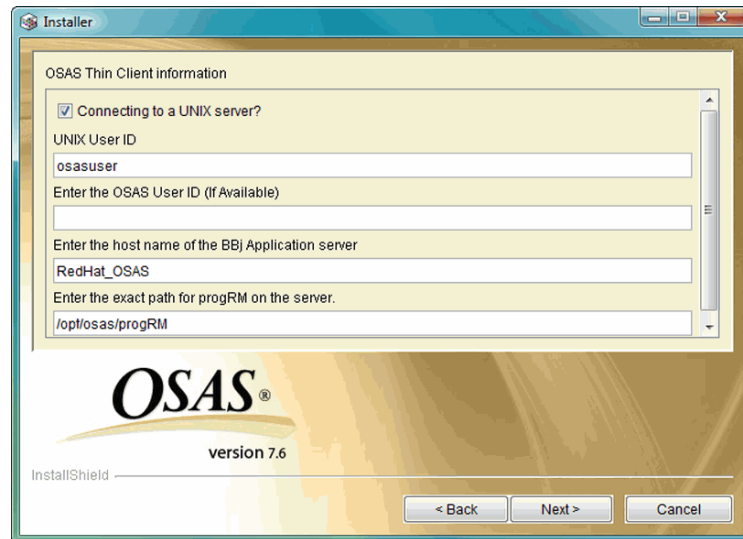
11. Select **Enterprise** as the installation type and click **Next** to continue.



12. Select **Client Setup** as the setup type and click **Next** to continue.



13. Enter the OSAS Thin Client information and click **Next** to continue.

The image shows a screenshot of the 'Installer' window for OSAS Thin Client information. The window has a title bar with 'Installer' and standard window controls. The main content area is titled 'OSAS Thin Client information'. It contains a checked checkbox labeled 'Connecting to a UNIX server?'. Below this are four text input fields: 'UNIX User ID' (containing 'osasuser'), 'Enter the OSAS User ID (if Available)' (empty), 'Enter the host name of the BBj Application server' (containing 'RedHat_OSAS'), and 'Enter the exact path for progRM on the server.' (containing '/opt/osas/progRM'). At the bottom of the window, there is the OSAS logo, the text 'version 7.6', and the 'InstallShield' logo. Navigation buttons '< Back', 'Next >', and 'Cancel' are located at the bottom right.

The information you enter here sets up the thin client so that it can access the data and application servers correctly and automatically creates an OSAS shortcut with the correct parameters.

- If you use a Linux, UNIX, or Mac OS X server as the application server, select the **Connecting to a UNIX server?** check box, then enter the **UNIX User ID** to use when accessing that server from this client workstation. If you use a Windows application server, clear the check box and leave the **UNIX User ID** box blank.

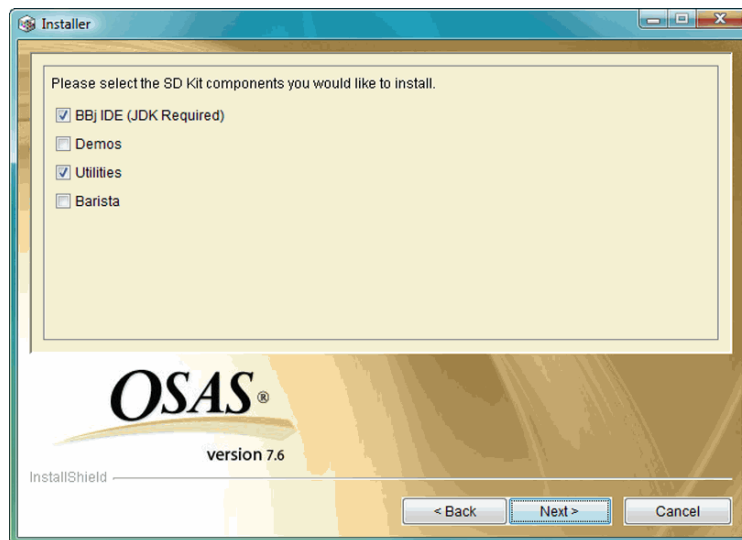
Selecting the check box adds the **-u** parameter and the user ID you entered to the OSAS shortcut's properties for the client workstation so that the workstation can connect to the server properly. If you select the check box, you must enter a user ID. If you clear the check box, the installation program does not add the **-u** parameter and user ID to the shortcut's properties. See page 3-98 for details about OSAS parameters.

- If you have set up OSAS users on the application server, enter the **OSAS User ID** to associate with this workstation. If you have not set up any users (or if you do not know these user IDs), leave this field blank.

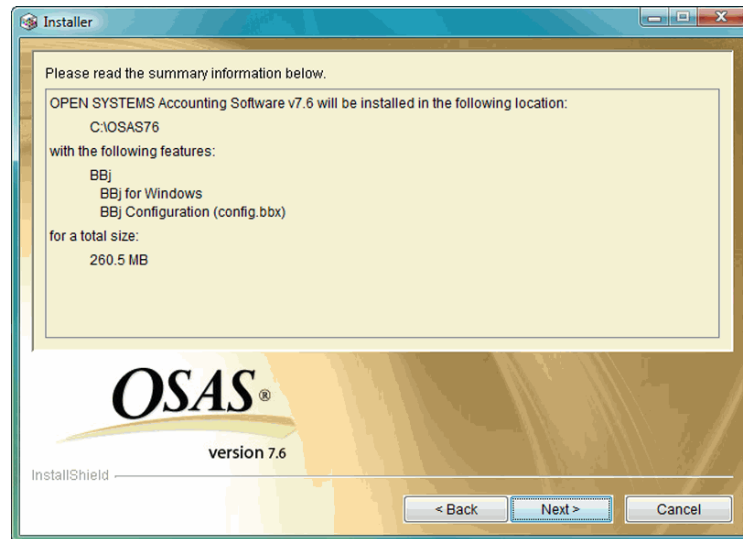
- Enter the host name of the application server.
- Enter the exact directory path to the **lprogRM** directory on the application server. This is the actual path as it appears on the server, not any virtual paths, mapped drives, or drive aliases you may have set up.

On a Windows server, an example of this path is **C:\Program Files\OSAS\lprogRM**.

14. If you have purchased the OSAS Software Developer's Kit (SDK), select the SDK components you would like to install, and click **Next**.



15. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.

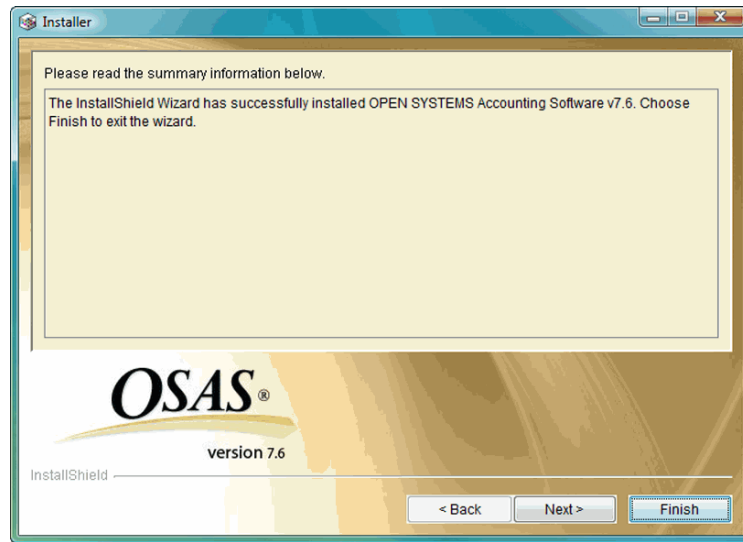


If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

Because the installation program automatically installs BBJ components in addition to OSAS, installation may take several minutes. Any apparent “lag time” results from the process needed to install these extra components and installation will resume in a few moments.

16. If you are installing OSAS on Windows XP with Service Pack 2, a warning message may appear stating that the Windows Firewall has temporarily blocked the Thin Client Proxy Service. Click **Unblock** to allow this service to function correctly.

17. When the “installation successful” message appears, click **Finish** to exit the installation program.



OSAS thin client installation is now complete. If you use Windows, double-click the OSAS icon or select **OSAS 7.6** from the **OSAS 7.6 Client** program group on the **Start** menu to launch OSAS. If you use Linux or UNIX, enter **osas** at the command prompt. If you use Mac OS X, double-click **OPEN SYSTEMS Accounting Software** on the Applications menu. You access the Applications menu by pressing **Apple+Shift+A** from anywhere in Finder.

If you did not set up a company record when you installed the OSAS application server, the Company Information screen automatically appears the first time you launch OSAS from a client computer. Enter your company's ID (up to three characters) and related information and click **OK** or press **Page Down** to save the new record. When the cursor returns to the **Company ID** field, press **F7** to close the screen and open the OSAS main menu. Refer to the Resource Manager guide if you need more information on the **Company Information** function.

If you set up the company during the application server installation, the OSAS main menu appears when you open OSAS on the client. Use the functions on the Resource Manager **Workstation Configuration** and **Company Information** menus to set up workstation defaults, users, and access codes for each client. Refer to “Setting Up Resource Manager” on page 6-15 and the Resource Manager guide for more information on these menus’ functions.

18. If you use Windows, change the access group on the user account you set up for BBJ Services from **Administrator** to **User** to secure your system and prevent unauthorized access.

After changing the access group for the BBJ user account, make sure that user still has full permissions for the directory in which you installed OSAS. Check the directory’s properties and give this user full access, if needed.

Editing the *hosts* File

If the DNS server on your network cannot resolve the data and application servers’ names into their IP addresses, you need to edit the **hosts** file on each client workstation so that OSAS works correctly.

Before you modify the **hosts** file, you need to know the IP addresses and machine names of the computers housing the OSAS data server and OSAS application server (remember, these servers may be on the same computer). Consult your IT specialist for help with these addresses and names, if necessary.

Follow these steps to edit a client workstations **hosts** file:

1. Locate the **hosts** file on the workstation.

On Windows XP workstations, the file should be located in the **\\WINNT\\system32\\drivers** directory. On Linux, UNIX, or Mac OS X workstations, the file should be located in the **/etc** directory.

2. Using a text editor, add the data and application servers’ IP addresses and machine names to the file, as in the example. Save the file when you finish.

```
127.0.0.1    localhost
200.98.0.5  AlexL
```

200.99.5.0 OSAS_data
200.99.5.1 OSAS_apps

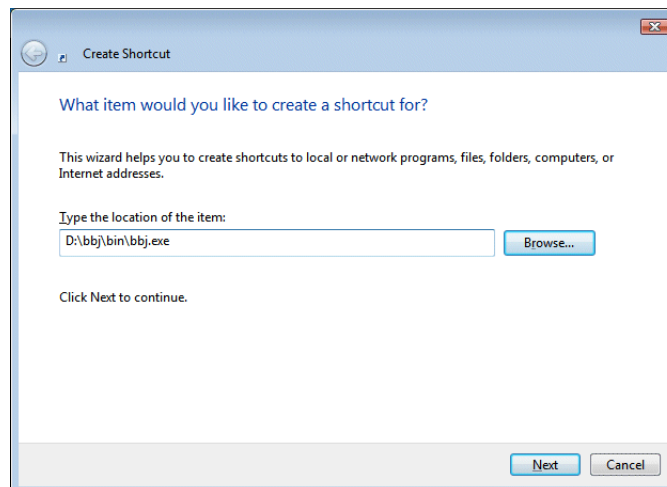
Note: The hosts file may already contain some entries; simply add the data and application server entries to the list. While every workstation must include the servers' IP addresses and names, including the information of other client workstations is optional.

Creating Shortcuts on Windows Clients

If you have already installed BBJ or BBJ Services on Windows client workstations, you should set up a shortcut to access OSAS instead of installing the thin client. Installing the thin client overwrites the paths used by BBJ Services and causes issues with component recognition.

Follow these steps to set up shortcuts on Windows client workstations:

1. Right-click on the client's desktop. When the menu appears, point to **New**, then select **Shortcut** from the submenu.
2. When the Create Shortcut screen appears, enter the information required to connect to the OSAS application server in the text box and click **Next** to continue.



**OSAS
Parameters**

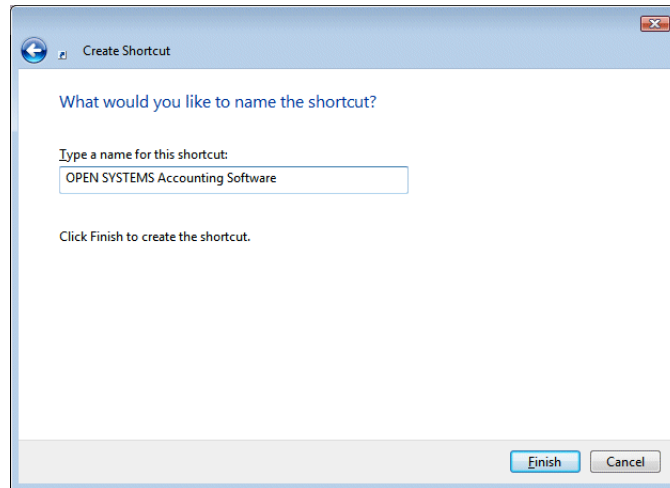
The path you enter here specifies the parameters to use to connect to OSAS on the application server along with the values to use for those parameters. An example of this path is

```
D:\bbj\bin\bbj.exe -RHACCOUNTING -WD\opt\osas\progRM  
-c\opt\osas\progRM\config.bbx -uOSAS -q RMSETUP -tT001 - -uSamD
```

Where:

- **D:\bbj\bin\bbj.exe** is the path to the **bbj.exe** file on the workstation.
- **-RHACCOUNTING** is the machine name of the remote host on which the OSAS application server is located. **-RH** is the remote host parameter, followed by the machine name of that host (**ACCOUNTING**).
- **-WD\opt\osas\progRM** specifies the working directory to use. The **-WD** parameter indicates that the path that follows is the working directory to use, and **\opt\osas\progRM** is the path to the \progRM directory on the application server.
- **-c\opt\osas\progRM\config.bbx** is the location of the config.bbx configuration file on the application server. Again, the **-c** parameter is followed by the path to this file on the application server.
- **-uOSAS** indicates the UNIX user ID to use to log into a Linux/UNIX data server. If you use Windows servers, do not include this parameter.
- **-q** is a parameter that keeps the OSAS splash screen from appearing. This parameter has no value.
- **RMSETUP** is the name of the program to run.
- **-tT001** is the terminal ID to use when logging in to OSAS. Include this parameter in the shortcut only if you want to log in with a specific terminal ID.
- The second **-uSamD** indicates the user name to use to log in to OSAS. This parameter is located after the separation dash because it is used by OSAS, not by BBj Services, to determine access and allow logins. If you have not yet set up OSAS user IDs, do not include this parameter.

3. Enter a name for the shortcut (such as OPEN SYSTEMS Accounting Software) and click **Finish** to create the shortcut.



4. When the icon is created, it's given a generic Windows icon. To change the shortcut's icon so that it uses the OSAS pyramid, do the following:
 - Right-click the shortcut and select **Properties** from the menu that appears.
 - When the shortcut's Properties dialog box appears, click **Change Icon**.
 - Click **OK** when the Change Icon message appears.
 - When the Change Icon dialog box appears and lists available icons, click **Browse** and navigate to the **\progRM** subdirectory of the directory in which you installed OSAS on the server.

Select the **WINOSAS.ICO** file and click **Open**.
 - Click **OK** to close the Change Icon dialog box.
 - Click **OK** to close the shortcut's Properties dialog box and complete the icon change.

Jetty Web Server Setup

If you use OSAS in an enterprise environment, you can set up a web server that allows client workstations to access OSAS through the Jetty Web Server client application. Jetty Web Server allows you to open and access an application over a network without requiring additional software. This type of configuration requires only that the client workstations you use have the JRE installed; you do not need to install any other software on the clients.

Due to security issues, this type of configuration functions best when used on a local area network (LAN) with a local webserver. You can use this configuration over a wide area network (WAN) to access OSAS via remote clients, but keep in mind that performance will depend on your network connections, setup, and latency.

When you set up OSAS in this sort of configuration, you proceed through these major stages (each stage is broken down into its individual steps in this section):

1. Set up the web server.
2. Set up shortcuts on the client workstations you use to access OSAS.

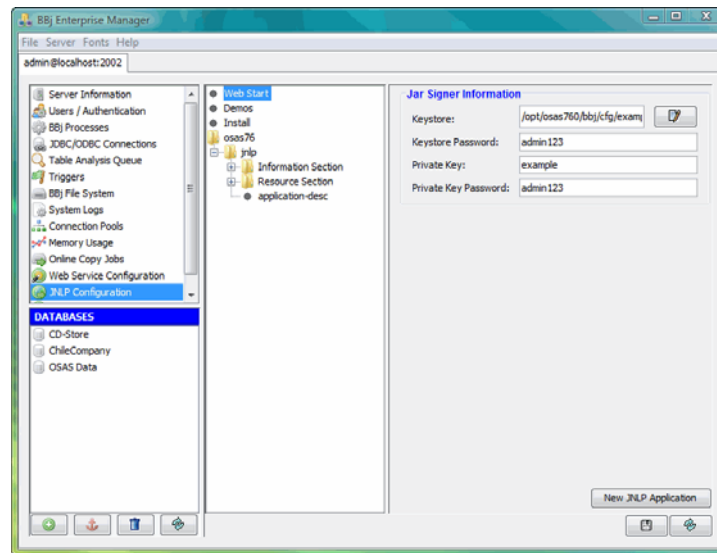
For information on setting up a webserver using the Java Web Start Setup method, see “Java Web Start Setup” on page G-1.

Set Up the Jetty Web Server

Follow these steps to set up your Jetty Web Server.

1. Open the **Enterprise Manager** on the web server.
2. Select the **JNLP Configuration** option from the left-hand menu.

- Click the **New JNLP Application** button to begin your configuration.

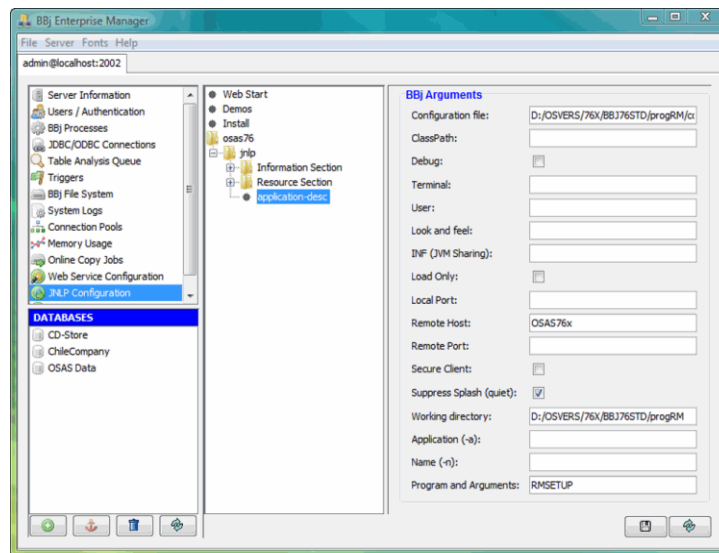


- Select the **newapp** folder, edit the **Application Name** field, then click the **Save** button. Do not use spaces or special characters when editing the application name. The example above uses **osas76** as the **Application Name**.
- Select the **application-desc** bullet point to view the **BBJ Arguments** screen.

Enter the following required information:

- Configuration File** - Enter the path to the config.bbx file, including the file name.
- Remote Host** - Enter the machine name or IP address of the server hosting the BBJ Service.
- Suppress Splash (quiet)** - Select the check box to avoid seeing the BBJ splash screen each time OSAS starts.

- **Working Directory** - Enter the path to reflect the directory from the server hosting BBJ Services to the progRM directory of your OSAS installation.
- **Program and Args** - Enter the path to **RMSETUP**.



6. Click the **Save** button to save the **BBJ Arguments** you entered in the step above.

To test your settings, restart your **BBJ Services**. Then select the **jnlp** folder and copy and paste the **JNLP url (href)** field into your web browser and direct it to the pasted address.

Set up Shortcuts on Client Workstations

To complete the setup, you need to set up the Web Start shortcuts on client workstations so that users can access OSAS on the web server. Follow these steps to set up a Web Start shortcut:

1. If necessary, download the JRE from www.java.sun.com and install it on each client workstation. All client workstations must have a JRE in order to access OSAS via Web Start.
2. Direct a web browser on the client to the .JNLP file on the server to launch OSAS through Web Start. An example of the address to use is

`http://osas.com/bbj/osas.jnlp`

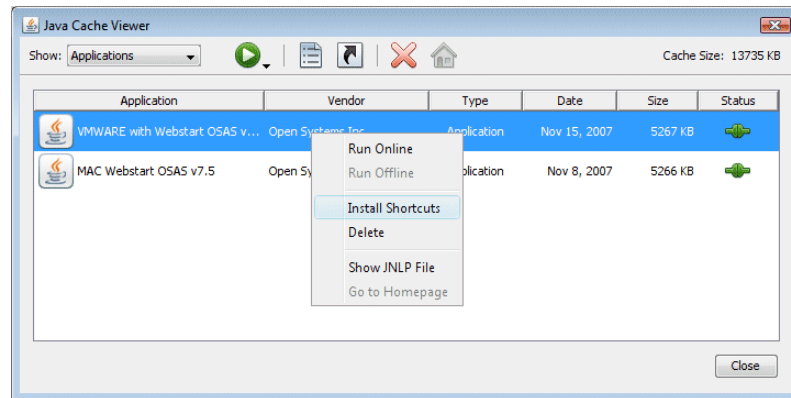
where **osas.com** is the web server's alias and **bbj** is the location in which the .JNLP file is located on the server.

3. The Java Web Start launcher appears and downloads the files it needs to run from the server. If the security warning appears during the download, click **Yes** to trust the signed application.

This warning appears if you have not yet received a secure certificate.

4. If you use Windows, a message may appear alerting you that the Windows Firewall has blocked the Java binary. Click **Unblock** to allow Web Start to function correctly.
5. After the OSAS main menu appears, close OSAS. During this first run, you downloaded the tool you need to create the Web Start shortcut. Continue to the next step to create the shortcut.
6. Use Windows Explorer to navigate to the directory in which you installed the JRE on the client. Open the **bin** directory and double-click the **javaws.exe** file to launch Web Start.

7. When the Java Application Cache Viewer screen appears, right-click the **OPEN SYSTEMS Accounting Software** listing and select **Install Shortcuts** from the menu that appears.



8. Close the Java Application Cache Viewer. The shortcut will be located on your desktop and uses the Java coffee cup icon.

CHAPTER 4

4

Windows Enterprise Installation	4-3
Linux/UNIX Enterprise Installation	4-53

OSAS PRO/5 Enterprise Installation

This chapter contains details on installing and setting up OSAS on the PRO/5 language for enterprise environments.

New, full installations are covered in this chapter. If you are upgrading from a version between 3.2 and 7.6, you must install 7.6 on a new path and then convert your data from the old path to the new path. See “Conversion” on page A-1 for conversion instructions.

These installation instructions assume that you have a basic knowledge of your operating system. If you are unfamiliar with your operating system, consult the operating system documentation before you begin.

Installing OSAS in a Mixed Environment

If you are installing OSAS in a pure Windows environment (using only Windows servers and client workstations) or in a pure Linux/UNIX environment, follow the instructions in the appropriate section in this chapter.

If you are installing OSAS in a mixed environment, using a Linux/UNIX data server, a Windows program file server, and both Linux/UNIX terminals and Windows workstations as clients, install the OSAS components in this order:

1. Install the BASIS License Manager (BLM). See page 4-4 for instructions on installing the BLM on Windows; turn to page 4-54 to install it on Linux/UNIX.

You can install the BLM on any server—on the Windows program file server, on the Linux/UNIX data server, or on a server that is completely unrelated to OSAS.

After installing the BLM, follow the additional instructions on page 4-8 and page 4-19 to register and install the BASIS license and start the BLM.

2. Install the Linux/UNIX data server. Turn to page 4-72 for instructions.

After installing the data server, follow the additional instructions to create the files the server requires and start the data server.

3. Install Resource Manager on Linux/UNIX. Turn to page 4-80 for instructions.
4. Set up any Linux/UNIX terminals. Consult your terminal emulation software documentation if you need help setting up these terminals.
5. Install Resource Manager for Windows on the Windows program file server. Turn to page 4-29 for instructions.
6. Install the Windows client workstations. Turn to page 4-36 for instructions.
7. Install the OSAS applications on the Windows program file server from a Windows client workstation. See page 4-48 for instructions.

Windows Enterprise Installation

Use the information in this section to install OSAS on the VPRO/5 language platform in a Windows enterprise environment. Because VPRO/5 uses different structure and interpreters than BBj, parts of this installation are manual rather than automatic.

When you install OSAS on VPRO/5 in a Windows enterprise environment, you first install the BLM and licenses on the server, then you install the data server and Resource Manager, and finally you install the Windows client workstations and file server and set up Resource Manager. After setting up Resource Manager (including installing and setting up applications) you can install the ODBC Driver to connect to OSAS data from external sources and finish the full OSAS installation. See “Deployment Options on PRO/5” on page 1-10 for details on using VPRO/5 with Windows in an enterprise environment.

To complete this installation, you’ll proceed through these stages (each stage is broken down into its individual steps in this section):

1. Install the BASIS License Manager (BLM).
2. Register the BASIS license.
3. Send and receive license information.
4. Install the BASIS license.
5. Install the data server.
6. Start the OSAS data server.
7. Install Resource Manager.
8. Set up client workstations.
9. Install OSAS applications.
10. Install the ODBC Driver (optional).

Note: You must perform the installation while physically at the server(s) you are using for OSAS. Likewise, you must also perform client workstation installations while physically at the workstations that connect to the OSAS servers.

**Windows
64-bit
Installation**

Before installing OSAS on a Windows 64-bit operating system, ensure the Environment Variables path points to the 64-bit installation of the JRE.

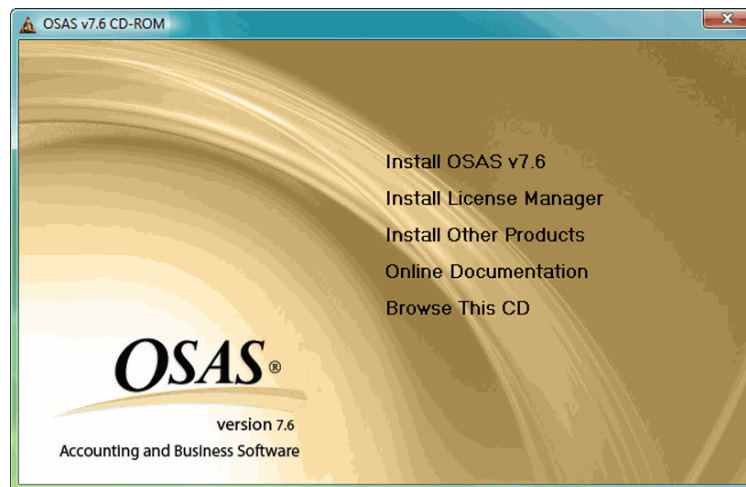
1. Enter **sysdm.cpl** at a **Run** prompt to open the System Properties window.
2. Select the **Advanced** tab.
3. Click the **Environment Variables** button.
4. Select the **Path Variable** from the **System variables** section and click the **Edit** button.
5. Add **;C:\Program Files\Java\jre6** to the end of the **Variable value**.
6. Click **OK** until the System Properties window closes.

Install the BASIS License Manager (BLM)

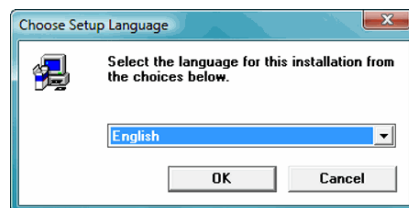
1. If you used a previous version of OSAS, stop and uninstall the current BASIS License Manager before you install the new version. You can use any existing BASIS licenses you have with the new BLM.
2. Insert the installation DVD into your DVD-ROM drive. The OSAS installation menu should appear automatically.

If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**.

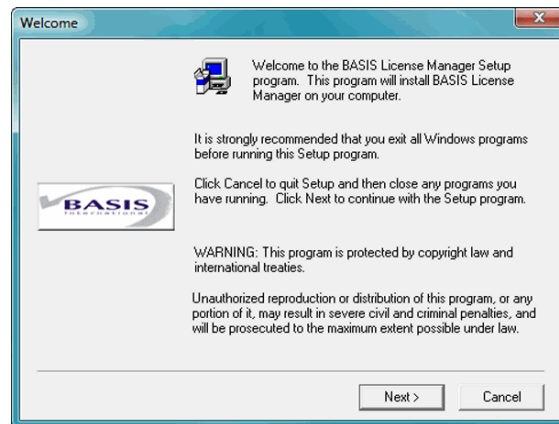
When the installation menu appears, double-click **Install License Manager**.



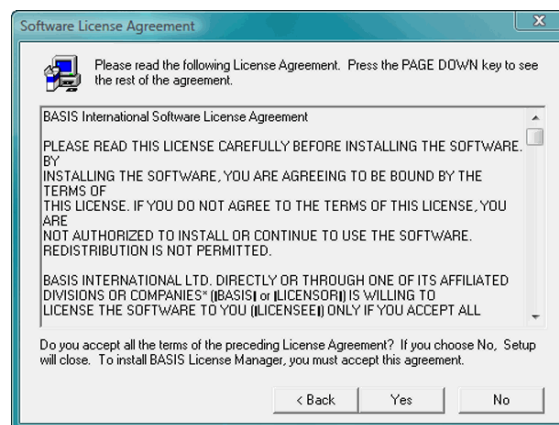
3. When the Choose Setup Language screen appears, select the language for the installation and click **OK** to continue.



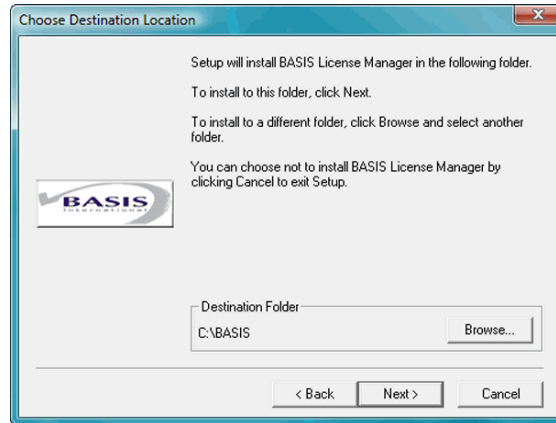
4. When the Welcome screen appears, click **Next** to continue.



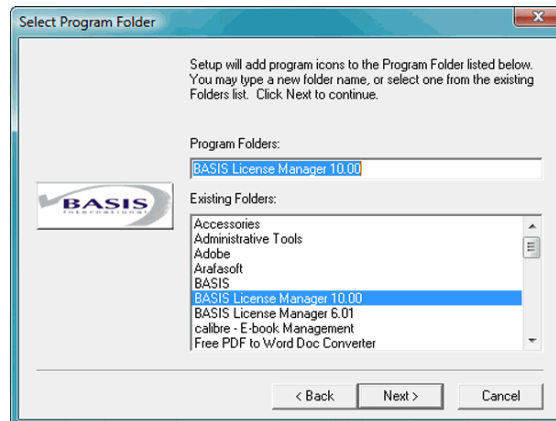
5. When the Software License Agreement screen appears, read the text of the license agreement carefully, then click **Yes** to agree to its terms and continue.



6. When the Choose Destination Location screen appears, click **Browse** to change the installation directory (if necessary), then click **Next** to continue.



7. When the Select Program Folder screen appears, change the new folder name or select a different folder in which to place the BLM program icons (if necessary), then click **Next** to continue.

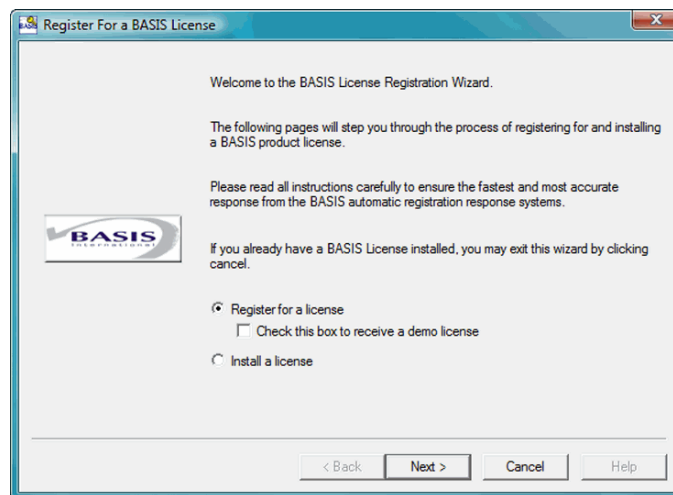


When you click **Next**, the installation program copies and installs the files for the BLM and creates the BLM folder and icon. It then prompts you to register the BASIS interpreter license.

Register the BASIS License

To register and install your interpreter license, use the license information, serial and authorization numbers, and keys on the registration forms you received with the media. Follow these steps to register your license:

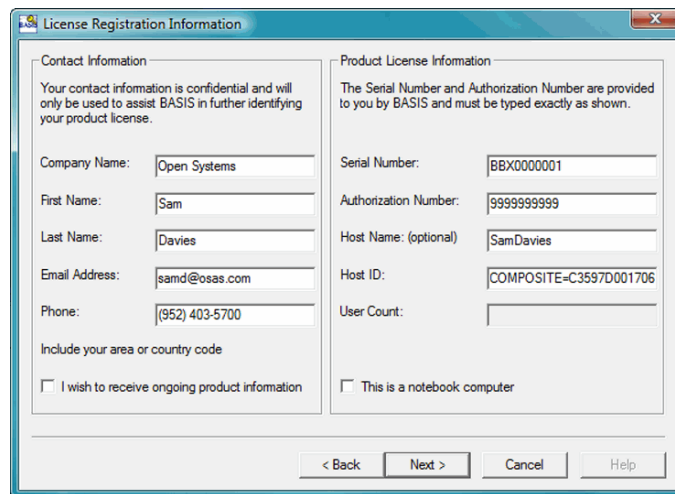
1. When the Register for a BASIS License screen appears, select **Register for a license** and click **Next** to continue.



If you do not yet have a license, select the check box to receive a demo license until your permanent license arrives.

If you have already registered your license, select **Install a license**, then skip to “Install the BASIS License” on page 4-19 to install the license.

2. When the License Registration Information screen appears, enter your contact information in the fields on the left side of the screen. These fields are required. Select the check box at the bottom of the screen if you would like to receive product information from BASIS; otherwise, leave the check box blank.

The image shows a Windows-style dialog box titled "License Registration Information". It is divided into two main sections: "Contact Information" on the left and "Product License Information" on the right. The "Contact Information" section contains fields for Company Name (Open Systems), First Name (Sam), Last Name (Davies), Email Address (samd@osas.com), and Phone ((952) 403-5700). Below these fields is a checkbox labeled "I wish to receive ongoing product information". The "Product License Information" section contains fields for Serial Number (BBX0000001), Authorization Number (999999999), Host Name (optional) (SamDavies), Host ID (COMPOSITE=C3597D001706), and User Count. Below these fields is a checkbox labeled "This is a notebook computer". At the bottom of the dialog box are four buttons: "< Back", "Next >", "Cancel", and "Help".

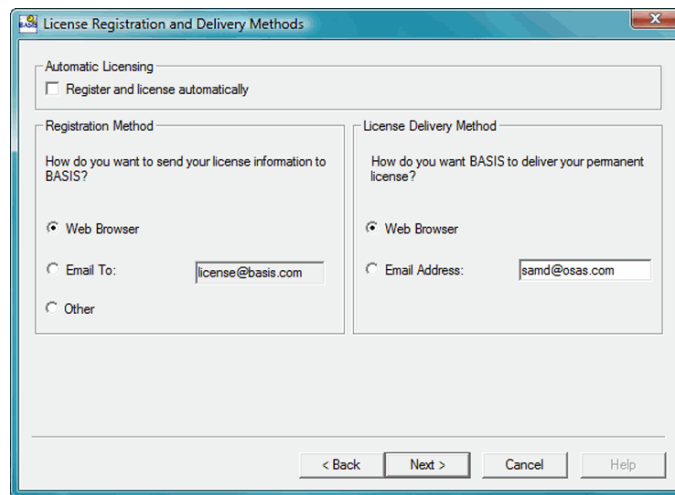
Enter the **Serial Number** and **Authorization Number** that are printed on the License Registration Form you received from Open Systems as part of your installation materials. If you elected to receive a demo license in the previous step, these fields are automatically filled in for you and cannot be changed. The installation wizard determines the computer's **Host Name** and **Host ID**; if these fields are not already filled in, enter the **Host Name** and **Host ID** to use. Enter the **User Count** from the License Registration Form (this field is unavailable if you are registering a demo license).

Select the **This is a notebook** computer check box at the bottom of the screen to tie the **Host ID** to your computer's hard disk rather than to its network card if you are installing OSAS on a laptop or notebook computer. This step allows you to use OSAS when you are disconnected from the network.

Click **Next** to continue.

Send and Receive License Information

Next, you must send your registration information to BASIS. When the License Registration and Delivery Methods screen appears, select the method to use to register your BASIS license. Turn to the appropriate page for more information.

The image shows a Windows-style dialog box titled "License Registration and Delivery Methods". It has a standard title bar with minimize, maximize, and close buttons. The dialog is divided into two main sections. The top section, "Automatic Licensing", contains a checkbox labeled "Register and license automatically". The bottom section is split into two panes. The left pane, "Registration Method", asks "How do you want to send your license information to BASIS?" and has three radio button options: "Web Browser" (which is selected), "Email To:" (with a text box containing "license@basis.com"), and "Other". The right pane, "License Delivery Method", asks "How do you want BASIS to deliver your permanent license?" and has two radio button options: "Web Browser" (selected) and "Email Address:" (with a text box containing "samd@osas.com"). At the bottom of the dialog are four buttons: "< Back", "Next >", "Cancel", and "Help".

Method

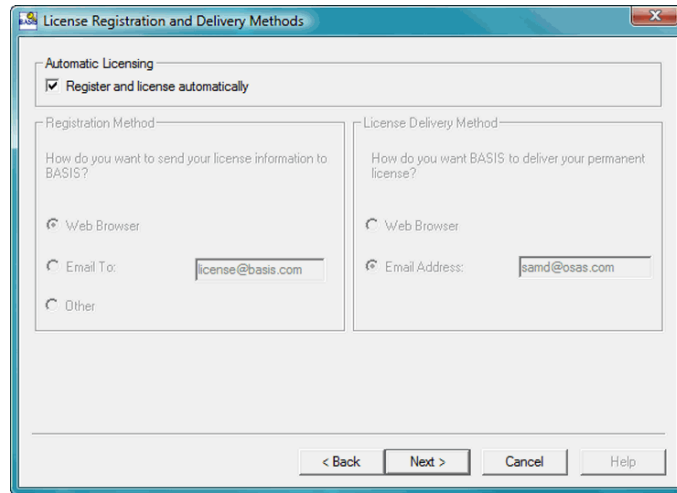
Automatic licensing
Send by Web Browser / Receive by Web Browser
Send by E-mail / Receive by E-mail
Send by Other / Receive by E-mail

Refer to

page 4-11
page 4-12
page 4-14
page 4-17

Automatic Licensing

1. If the computer is connected to the Internet, select the automatic licensing check box to send, receive, and install license information in one step. This method is the fastest, easiest way to register and install a license.



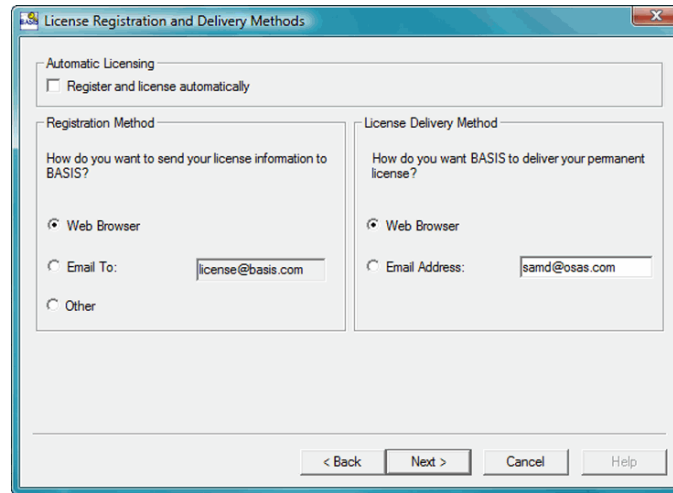
Click **Next** to send your information to BASIS. After receiving your information, BASIS sends the computer a license file and automatically installs it in the correct directory.

2. A message appears when the license file is installed. Click **OK** to continue.
3. A second message appears and asks whether you want to register another license. Click **No** to continue.
4. The “installation complete” screen appears. The BLM installation is now complete and your license file is registered and installed. Click **Finish** to exit the BLM installation program.

You need to reboot the computer to complete the installation. After rebooting, install the data server. Turn to “Install the Data Server” on page 4-21 for details.

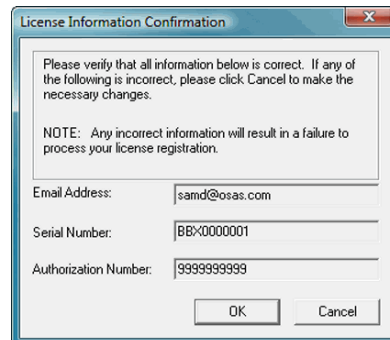
Send by Web Browser / Receive by Web Browser

1. If the computer is connected to the Internet, select **Web Browser** as both the **Registration Method** and **License Delivery Method** to send and receive information via your web browser. Click **Next** to continue.



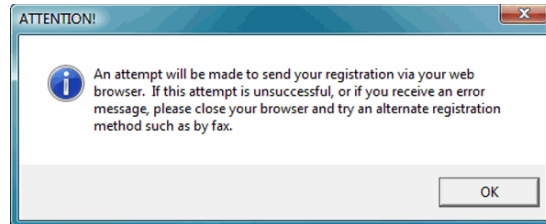
The dialog box titled "License Registration and Delivery Methods" contains two main sections. The "Automatic Licensing" section at the top has a checkbox labeled "Register and license automatically" which is unchecked. Below this, the "Registration Method" section asks "How do you want to send your license information to BASIS?" and has three radio button options: "Web Browser" (selected), "Email To:" (with a text field containing "license@basis.com"), and "Other". The "License Delivery Method" section asks "How do you want BASIS to deliver your permanent license?" and also has three radio button options: "Web Browser" (selected), "Email Address:" (with a text field containing "samd@osas.com"), and "Other". At the bottom of the dialog are four buttons: "< Back", "Next >", "Cancel", and "Help".

2. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.



The dialog box titled "License Information Confirmation" contains a text area with the message: "Please verify that all information below is correct. If any of the following is incorrect, please click Cancel to make the necessary changes." Below this is a "NOTE: Any incorrect information will result in a failure to process your license registration." At the bottom, there are three text fields: "Email Address:" with "samd@osas.com", "Serial Number:" with "BBX0000001", and "Authorization Number:" with "999999999". At the very bottom are "OK" and "Cancel" buttons.

3. Click **OK** when the following message appears to send the information via your web browser.



4. Your web browser opens a screen listing two ways to save the license information.
 - To save the information automatically in one step, click the **Install License File** on this machine link. When the download dialog box appears, select either the **Run** or **Open** option. BASIS then saves the file in the correct directory for you and notifies you when installation completes successfully. Close the browser and continue to the next step.
 - To manually save the file in the necessary directory, click the **Retrieve License File** link. Text similar to this appears in your browser:

```
# Here is the BASIS product license file you requested.
#
# Please save this page as "C:\TEMP\BASIS BBJ License.txt".
# If "C:\TEMP" does not exist, then please create it and save
# this page there. After you have done this, please run the
# "Install a BASIS License" program from your program folder
# to complete the installation of this license.
#
# DO NOT MODIFY THIS FILE
#
SERVER this_host COMPOSITE=C3597D001706
VENDOR basis
FEATURE BBJ basis 10 permanent 1 44429487975E VENDOR_STRING=EFW \
HOSTID=ANY ck=108 SN=BBX000001
```

Save the file as instructed. If the **\temp** directory does not exist, create it and save the .txt file in that directory.

5. When you are prompted to register for another license, click **No**. Then click **Next** on the Registration Notification screen.

6. When the Install a BASIS License message appears, click **Yes**.
7. The BASIS License Installation screen appears. Continue with “Install the BASIS License” on page 4-19 to install the license file.
1. To send and receive license information via e-mail, select **E-mail** as both the **Registration Method** and **License Delivery** method, then enter your e-mail address and click **Next** to continue.

**Send by
E-mail /
Receive by
E-mail**

License Registration and Delivery Methods

Automatic Licensing
☐ Register and license automatically

Registration Method
How do you want to send your license information to BASIS?

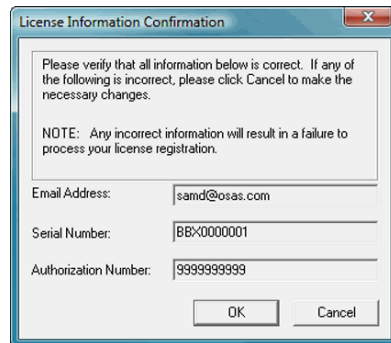
☐ Web Browser
☒ Email To:
☐ Other

License Delivery Method
How do you want BASIS to deliver your permanent license?

☐ Web Browser
☒ Email Address:

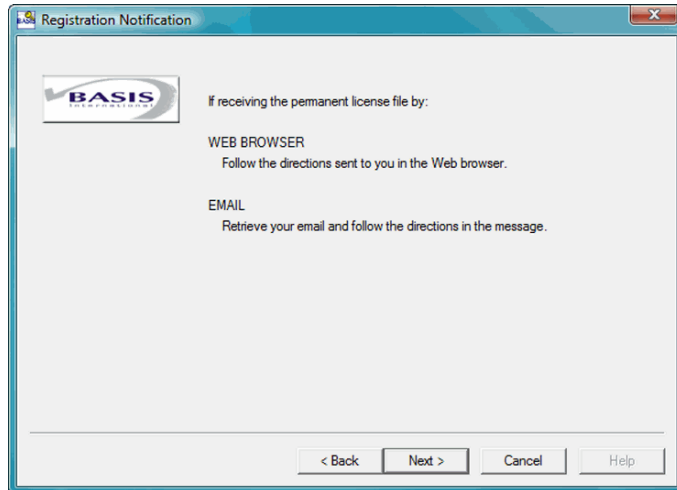
< Back Next > Cancel Help

2. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.



3. If you are using Windows XP with Service Pack 2, a message may appear stating that a program is attempting to send an e-mail message for you. This is a routine message that automatically appears to alert you about security risks. This e-mail message does not pose a security risk. Click **Yes** to continue.
4. A message appears after the e-mail is sent to BASIS successfully. Click **OK**.
5. When you are prompted to register for another license, click **No**.

6. When the Registration Notification screen appears, read the instructions on the screen and click **Next** to continue.

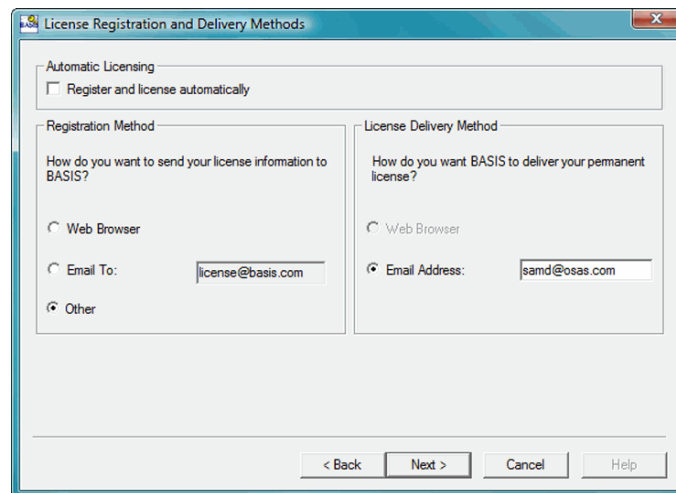


7. When the Install a BASIS License message appears, click **Yes**. Continue with "Install the BASIS License" on page 4-19 to install the license file.

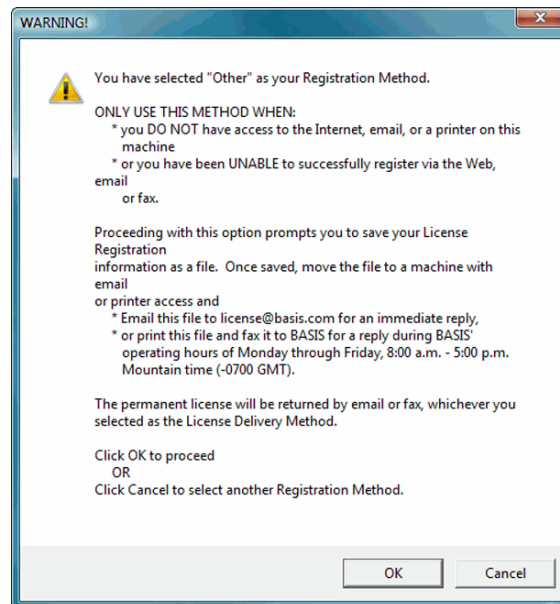
**Send by
Other /
Receive by
E-mail**

Use the **Other** option if the computer you are working on is not connected to the Internet or does not have e-mail access.

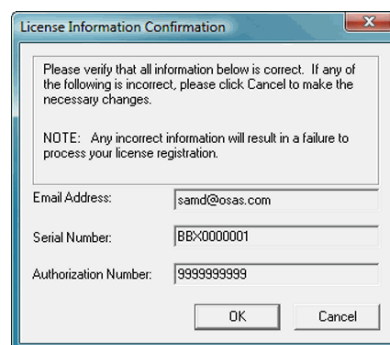
1. Select **Other** as the **Registration Method** and **E-mail Address** as the **License Delivery Method**. Click **Next** to continue.



2. A warning message appears. Read the message carefully and click **OK**.



3. Verify the information that appears in the confirmation screen. If any information is incorrect, click **Cancel** and correct the information on the License Registration Information screen. If the information is correct, click **OK** to continue.

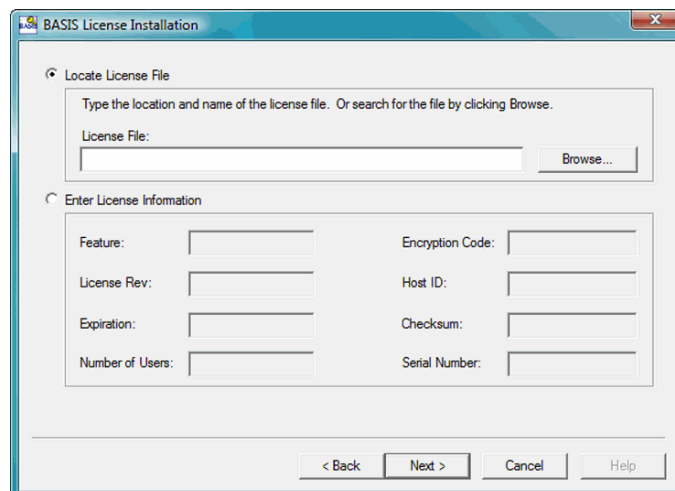


4. When the Save dialog box appears, save the license file onto the appropriate media or network drive by selecting the destination and clicking **Save**.
5. Send the file to BASIS. You can do this from a computer with e-mail access, attach the file from the media or network drive to an e-mail message and send it to BASIS.
6. After you receive the e-mail from BASIS, return to the original computer and click **No** when you are prompted to register for another license.
7. When the Registration Notification screen appears, click **Next** to continue.
8. When the Install a BASIS License message appears, click **Yes**. Continue with “Install the BASIS License” below to install the license file.

Install the BASIS License

If you used a method other than the automatic licensing method to register the BASIS license, you need to install the BASIS license so that OSAS functions correctly.

1. When the BASIS License Information screen appears after you register the license, enter your license information.



The image shows a Windows-style dialog box titled "BASIS License Installation". It has two radio buttons for selection: "Locate License File" (which is selected) and "Enter License Information".

Under "Locate License File", there is a text box labeled "License File:" and a "Browse..." button. Above the text box is the instruction: "Type the location and name of the license file. Or search for the file by clicking Browse."

Under "Enter License Information", there are six text boxes arranged in two columns:

- Feature:
- License Rev:
- Expiration:
- Number of Users:
- Encryption Code:
- Host ID:
- Checksum:
- Serial Number:

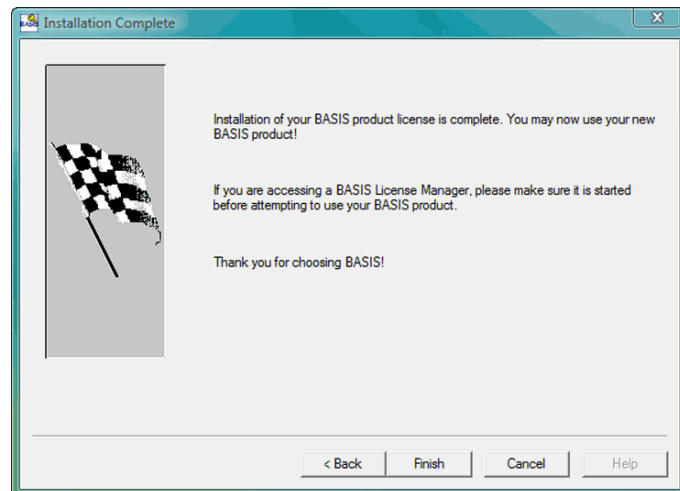
At the bottom of the dialog box are four buttons: "< Back", "Next >", "Cancel", and "Help".

If you saved a license file during registration, select **Locate License File** and enter the directory location of the file. You can also click **Browse** to navigate to the directory in which you saved the file.

If you have a hard copy of the license information, select **Enter License Information** and then enter the information from the hard copy into the fields on the lower half of the screen.

Click **Next** to continue.

2. The installation successful message appears after the license is installed successfully. This message also asks whether you want to install another license. Click **No** to continue.
3. The Installation Complete screen appears. BLM installation is now complete and your license file is installed. Click **Finish** to continue.



4. When the “Reboot Your Computer” message appears, click **OK**, then reboot the computer to complete the BLM installation.

Install the Data Server

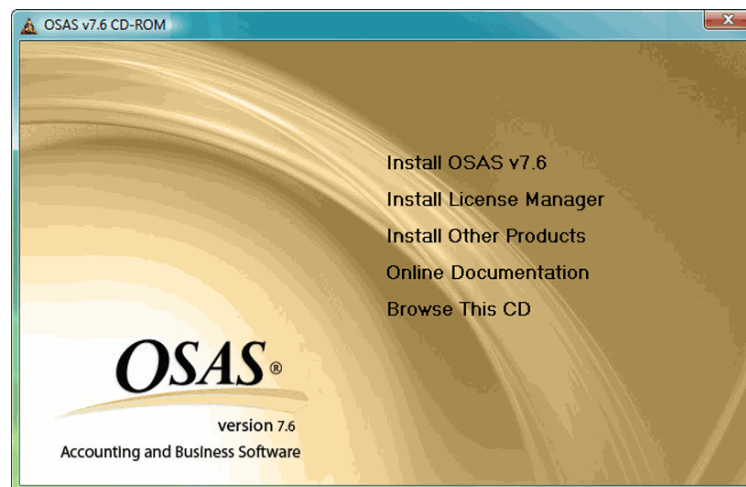
After installing the BLM and registering and installing your BASIS license, you need to install the Data Server. Remember that you need to perform the Data Server installation while physically at the server.

If you use a Linux/UNIX machine as your data server, turn to page 4-72 for instructions on installing the data server on Linux or UNIX.

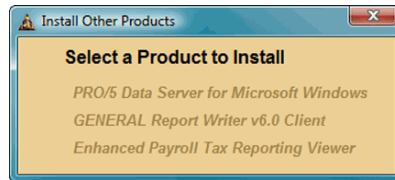
1. Insert the installation DVD into your DVD-ROM drive. The OSAS installation menu should appear automatically.

If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**.

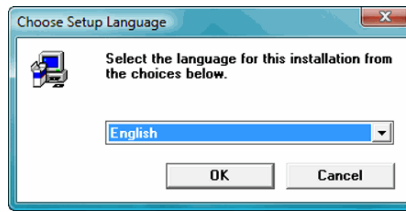
When the installation menu appears, click **Install Other Products**.



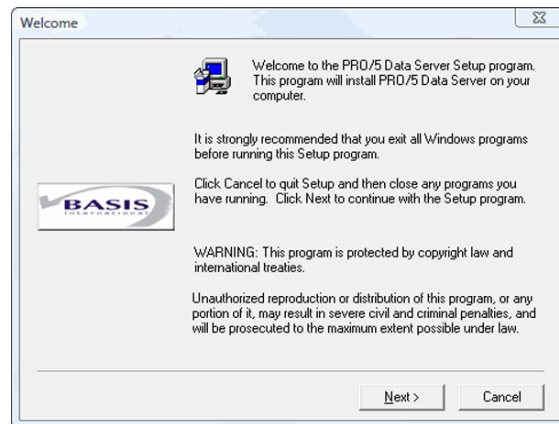
2. When the Select Products to Install dialog box appears, double-click **PRO/5 Data Server for Microsoft Windows** to launch the installation program.



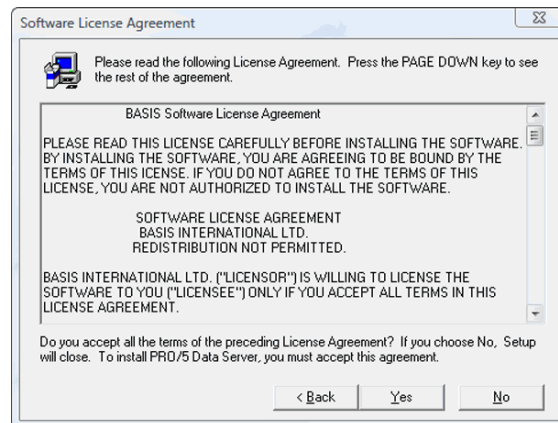
3. When the Choose Setup Language screen appears, select the language for the installation and click **OK** to continue.



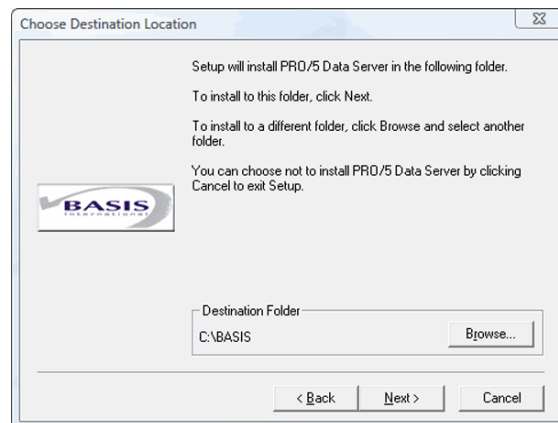
4. When the Welcome screen appears, click **Next** to continue.



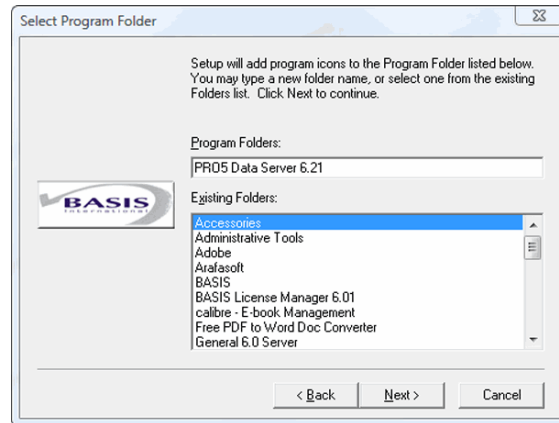
5. When the Software License Agreement screen appears, read the text of the license agreement carefully, then click **Yes** to agree to its terms and continue.



6. When the Choose Destination Location screen appears, click **Browse** to change the installation directory (if necessary), then click **Next** to continue.



7. When the Select Program Folder screen appears, change the new folder name or select a different folder in which to place the BLM program icons (if necessary), then click **Next** to continue.



When you click **Next**, the installation program copies and installs the files for the Data Server and creates the Data Server folder and icons.

8. When the installation completes successfully, a message appears reminding you to register and install the data server license. Click **OK** to continue.
9. When the Setup Complete screen appears, either clear the check box if you do not want to view the readme.txt file or leave it selected if you do want to view this file, then click **Finish** to exit the installation program.
10. Reboot the machine if you are prompted to do so.

Edit the *hosts* File

11. You must edit the **hosts** file to set up your server properly. Before you modify the file, you need to know the IP addresses and machine names of each workstation that connects to the data server.

- Use a text editor (like Notepad) to edit the file named

\\Windows\\system32\\drivers\\etc\\hosts

- The server's **hosts** file may already contain several entries. Add the workstation IP addresses and machine names, as in this sample:

127.0.0.1 Local host

200.99.5.1 NeilP

200.99.5.2 AlexL

- Save your changes and close the file.

**Edit the
services File**

12. Edit the **services** file so that the Data Server functions correctly. Follow these steps to edit the file:

- Use a text editor to edit the file named

\\Windows\\system32\\drivers\\etc\\services

- The **services** file contains many lines, usually arranged in numerical order by the port numbers in the second column. Insert a line where port 1100 would fall numerically and enter

pro5srv 1100/tcp #pro/5 dataserver service

- Save your changes and close the file.

**Edit the
config.bbx
File**

13. Editing the **config.bbx** file on the server is the final step in setting up the Data Server. Before you modify this file, determine which drives you will use to store your OSAS data. Then follow these steps to edit the file:

- Use a text editor to edit the file named

\\BASIS\\PRO5 Data Server\\config.bbx

- A sample of a typical config.bbx file is shown below.

**STBLEN=4096
CIBS=100
DEVS=100
FCBS=100
SETOPTS 00000020**

- Add the **STBLEN** line to your config.bbx file. The **STBLEN** value should be the number of workstations multiplied by 2048, with a maximum value of 32767. In the example below, two workstations are attached to the Data Server.

Then, add a **dsksyn** statement to the end of the file for each drive the Data Server will not access. For example, if your OSAS data is on drive C while you use drives A, B, and D for other purposes, enter **dsksyn** statements for drives A, B, and D. It's a good idea to add all drive letters (A–Z) that the server will not use, so that network drives mapped later are automatically excluded from access.

For example:

```
STBLEN=4096  
CIBS=100  
DEVS=100  
FCBS=100  
SETOPTS 00000020  
dsksyn a  
dsksyn b  
dsksyn d
```

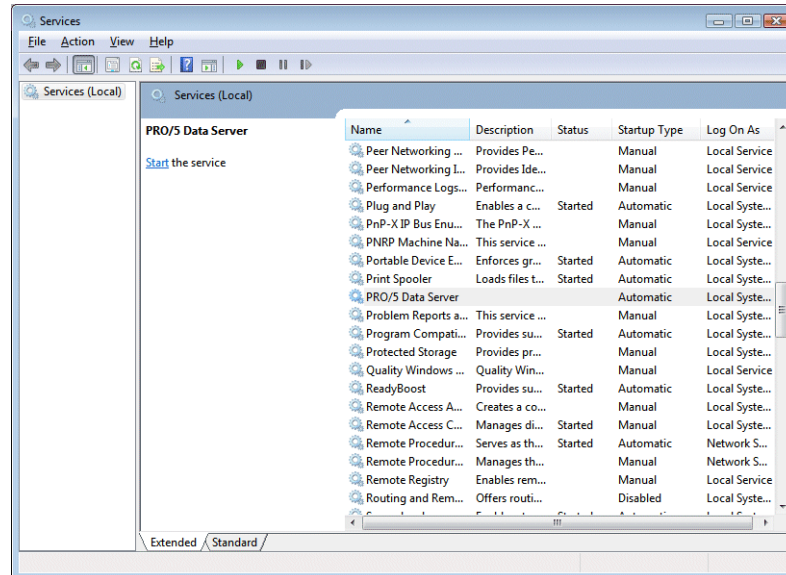
- Save your changes and close the file.

Start the OSAS Data Server

After installing the Data Server and editing the files it requires, you need to start it to make sure it's functioning correctly. You may also want to start and stop access to the Data Server at times to increase security. Follow these steps to start the Data Server:

1. Open the Windows Control Panel.
2. Double-click the **Administrative Tools** icon. In Windows Vista and Windows 7, the **Administrative Tools** icon can be found in the System and Maintenance menu of the Control Panel.
3. When the Administrative Tools opens, double-click the **Services** icon. The Services function gives you control over Data Server access without the network administrator being logged in constantly.

4. When the Services screen appears, double-click the **PRO/5 Data Server** entry.



5. When the PRO/5 Data Server Properties screen appears, click **Start** to manually start the Data Server. To manually stop the Data Server, click **Stop**.

The default entry in the **Startup Type** field is **Automatic**. Leave this value as it is to start the Data Server automatically when you reboot the server.

Click **OK** when you finish.

Data Server installation is now complete. Next, install the Resource Manager programs on your system. If you use Windows workstation along with a Windows Data Server, you must install Resource Manager on your Windows program file server, install your Windows client workstations, and then install OSAS applications to complete the installation.

If you use both Linux/UNIX and Windows workstations in combination with a Windows Data Server, you must install the Resource Manager programs and applications on both the Linux/UNIX server and on the Windows file server, then install the Windows workstations to complete the installation.

Install Resource Manager

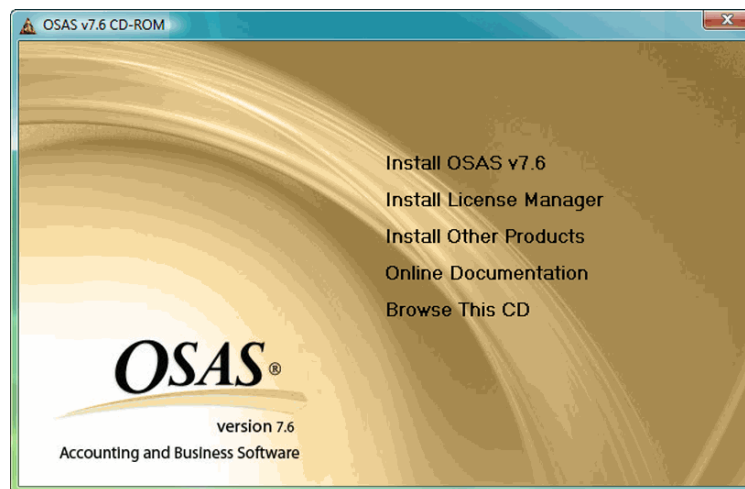
After installing the BLM and the data server, install Resource Manager on your Windows file server. When you install Resource Manager, install the software from a workstation onto a drive mapped to the server. Use the same drive letter for every workstation that accesses Resource Manager.

Follow these instructions to install Resource Manager on the file server:

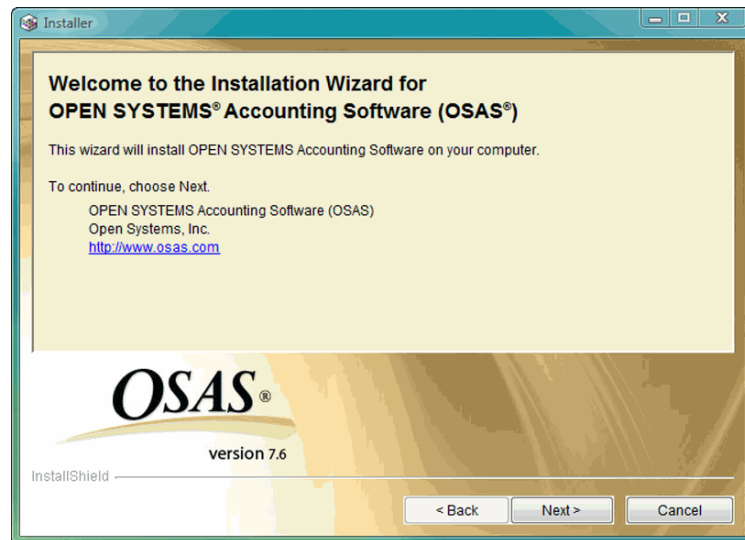
1. Insert the installation DVD into your DVD-ROM drive. The OSAS installation menu should appear automatically.

If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**.

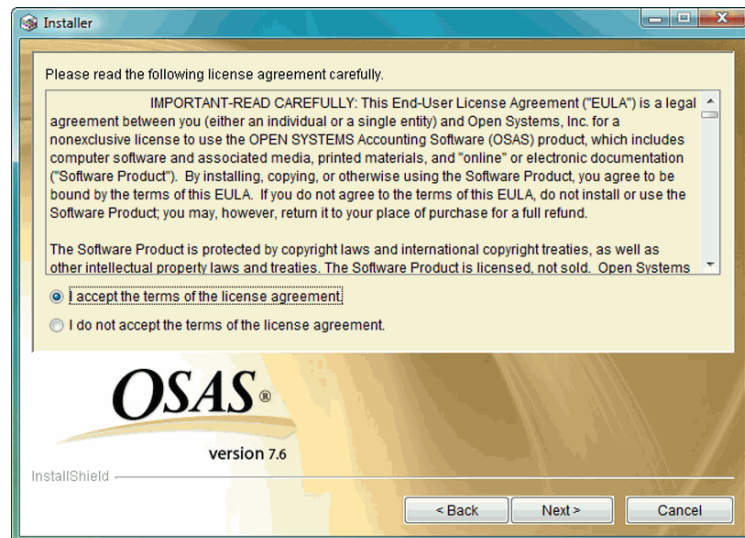
When the installation menu appears, double-click **Install OSAS v7.6**.



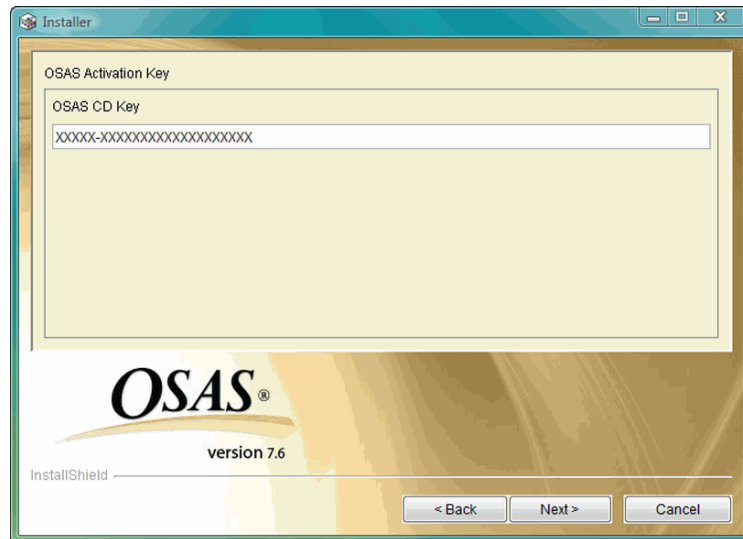
2. When the Welcome screen appears, click **Next** to begin the install.



3. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

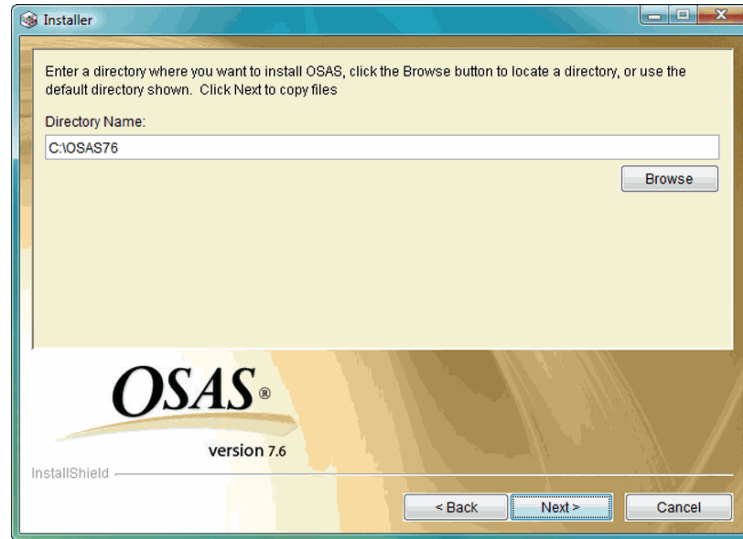


4. Enter your OSAS activation key exactly as it appears on the License Registration Form. Please note—the key is case-sensitive.



Click **Next** to continue.

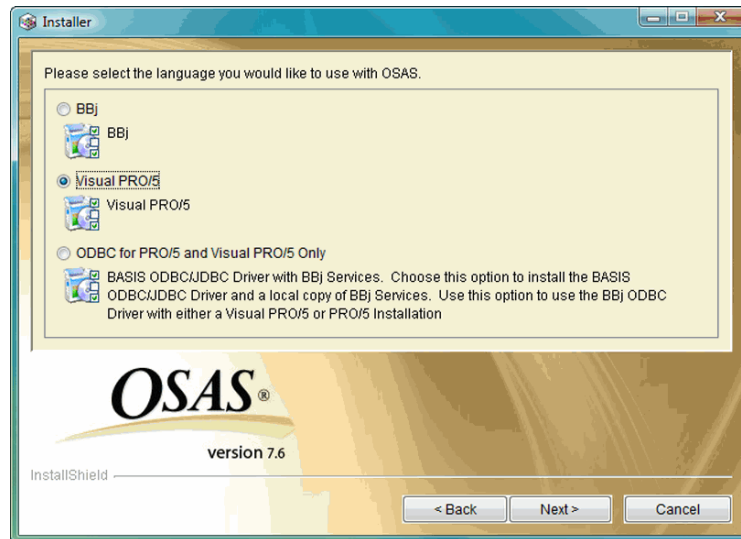
5. Change the directory path in which to install OSAS, if you like. You can also click **Browse** to navigate to a directory and enter the path.



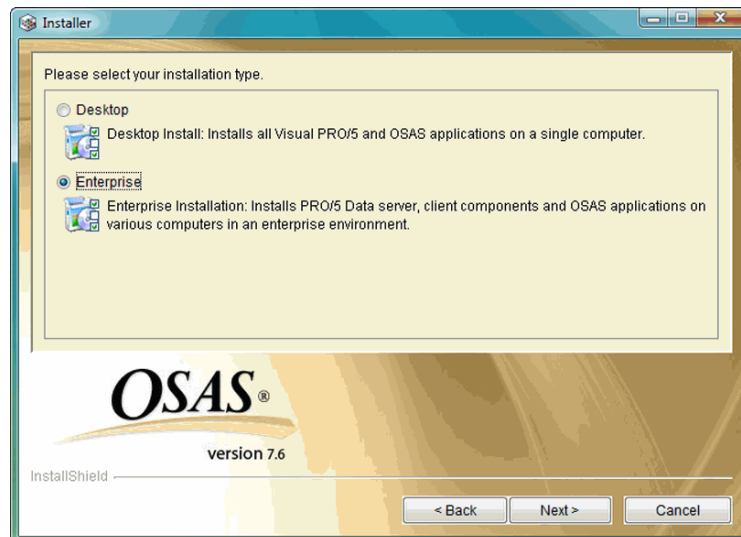
Note: Do not use spaces in the path name during installation. OSAS will not function correctly if you use a path name that includes spaces. Instead, omit spaces or replace them with underline characters. For example, rather than using the pathname *OSAS v76*, omit the space and use *OSASv76* instead.

Click **Next** after specifying the installation directory to continue.

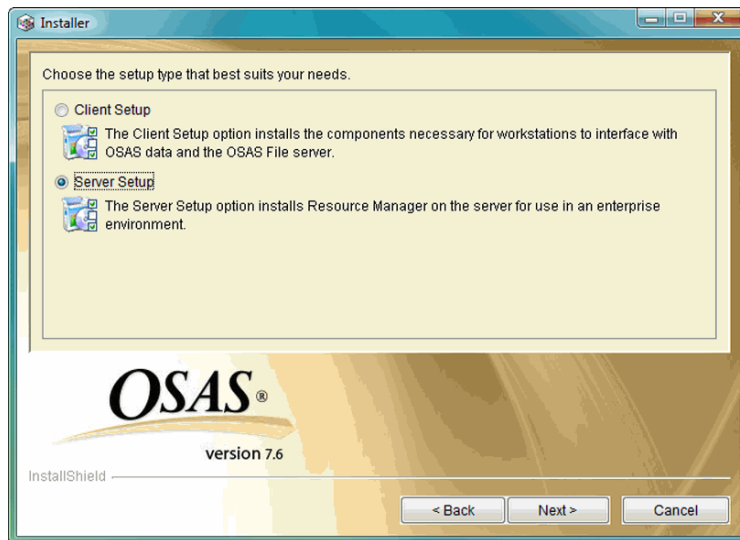
6. Select **Visual PRO/5** as language platform on which to install OSAS and click **Next** to continue.



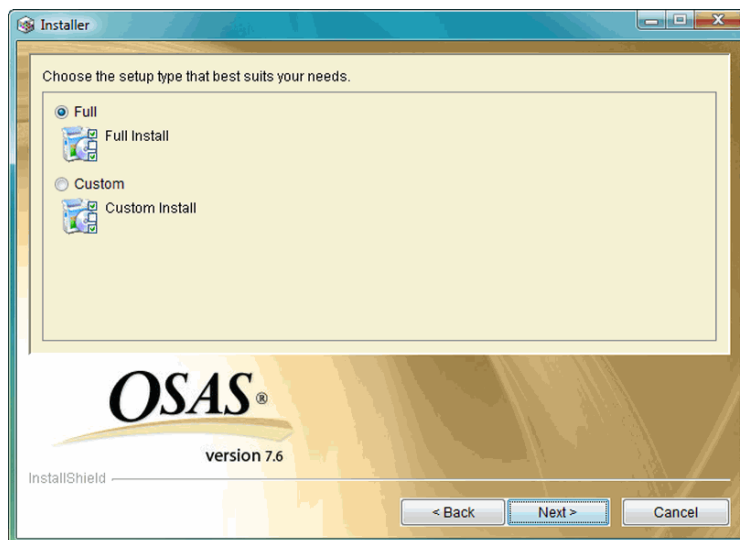
7. Select **Enterprise** as the installation type and click **Next** to continue.



8. Select **Server Setup** as the setup type and click **Next** to continue.

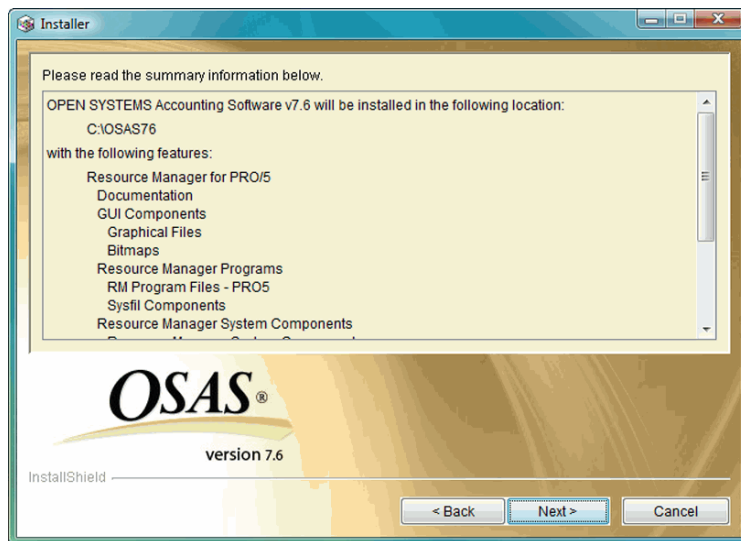


9. Select **Full** to install the full installation and click **Next** to continue.



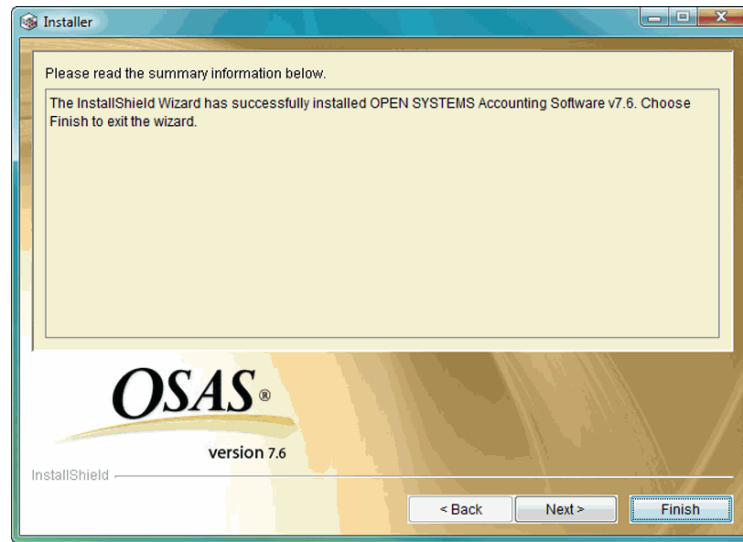
Select **Custom** only if you need to install or re-install specific components. When you select this option, a screen appears when you click **Next** where you can select the components to install. See page 5-33 for details.

10. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.



If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

11. When the “installation successful” message appears, click **Finish** to exit the installation program.



Resource Manager program file installation is now complete. After completing the Resource Manager installation, install the client workstations that connect to the OSAS servers, then install your OSAS applications from any workstation to the Windows program file server to complete the installation.

Set up Client Workstations

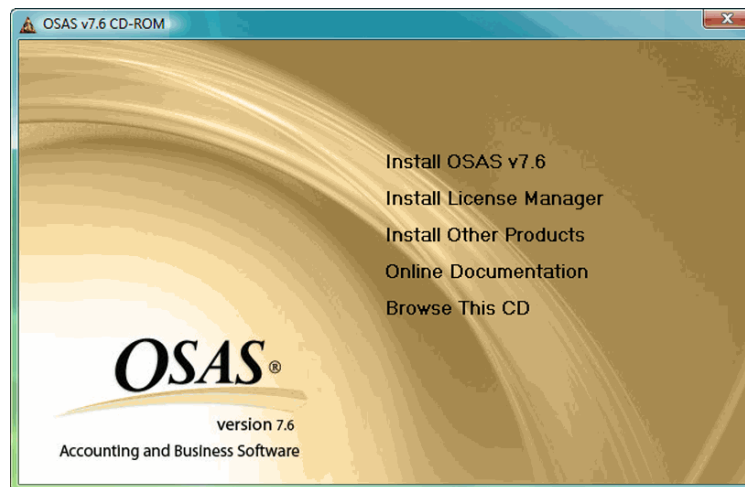
After installing Resource Manager on the program file server, you need to install and set up the client workstations that connect to the OSAS servers. You must install each client workstation while physically at the workstation.

Follow these steps to set up client workstations:

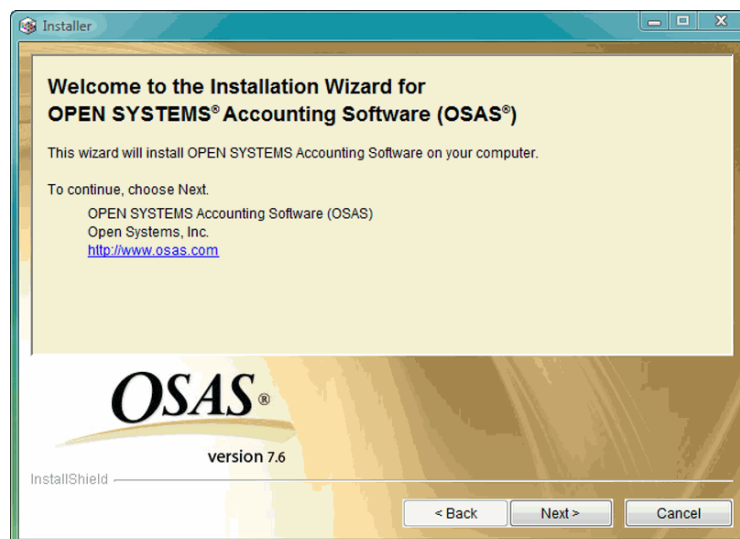
1. Move to the first workstation and insert the installation DVD into your DVD-ROM drive. The OSAS installation menu should appear automatically.

If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**.

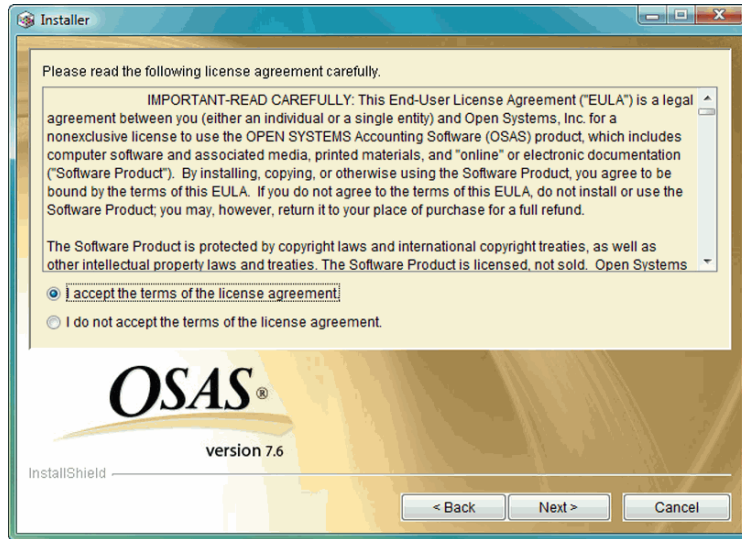
When the installation menu appears, double-click **Install OSAS v7.6**.



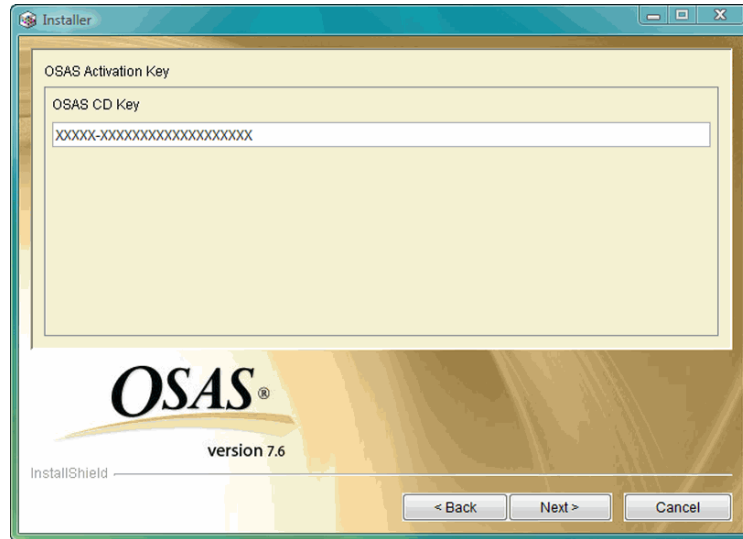
2. When the Welcome screen appears, click **Next** to begin the install.



3. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.



4. Enter your OSAS activation key exactly as it appears on the License Registration Form. Please note—the key is case-sensitive.

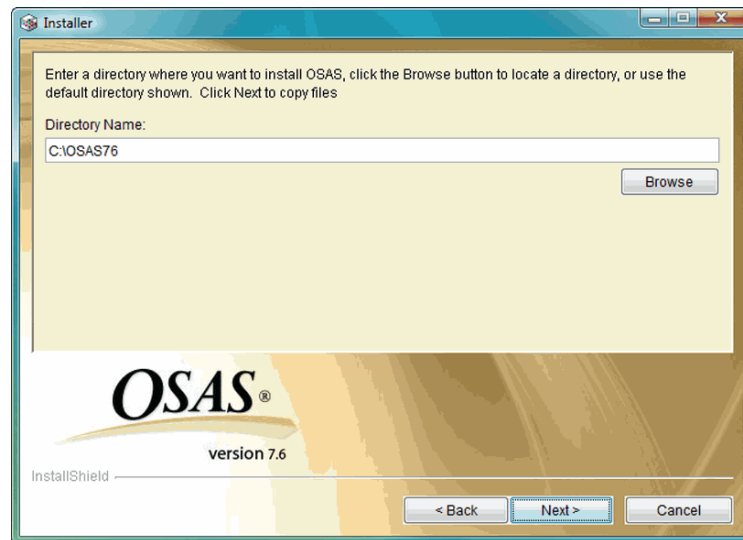


Click **Next** to continue.

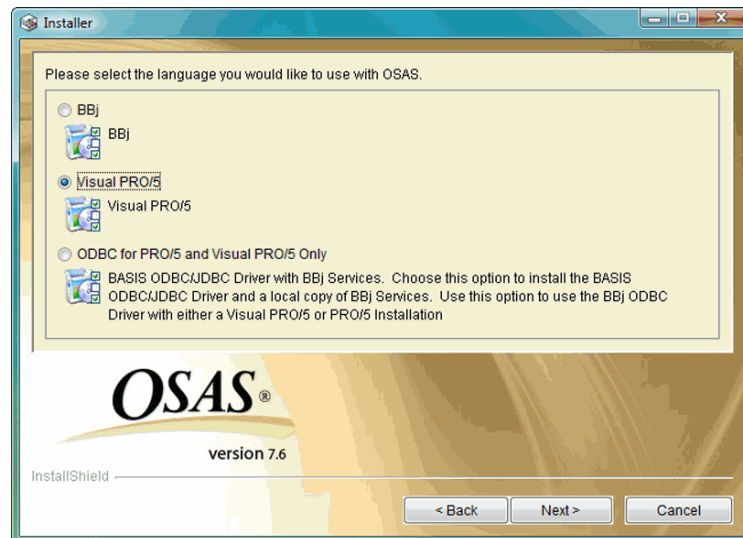
5. Change the directory path in which to install OSAS, if you like. You can also click **Browse** to navigate to a directory and enter the path.

Do not use spaces in the path name during installation. OSAS will not function correctly if you use a path name that includes spaces. Instead, omit spaces or replace them with underline characters. For example, rather than using the pathname *OSAS v76*, omit the space and use *OSASv76* instead.

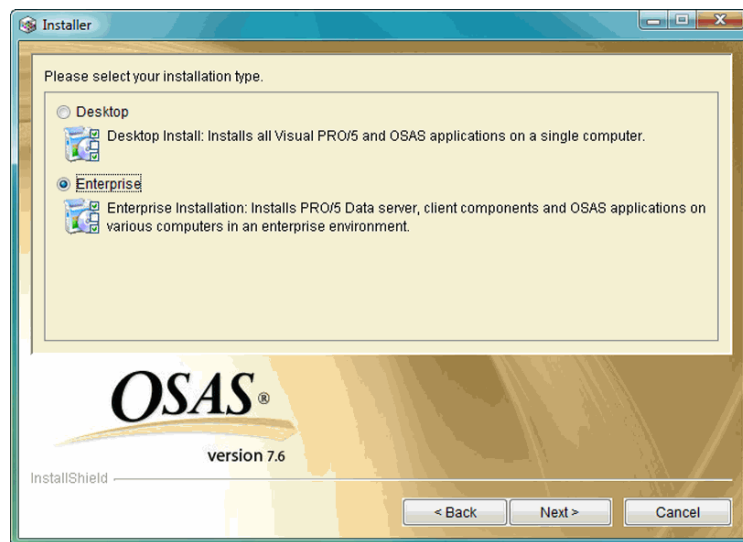
Click **Next** after specifying the installation directory to continue.



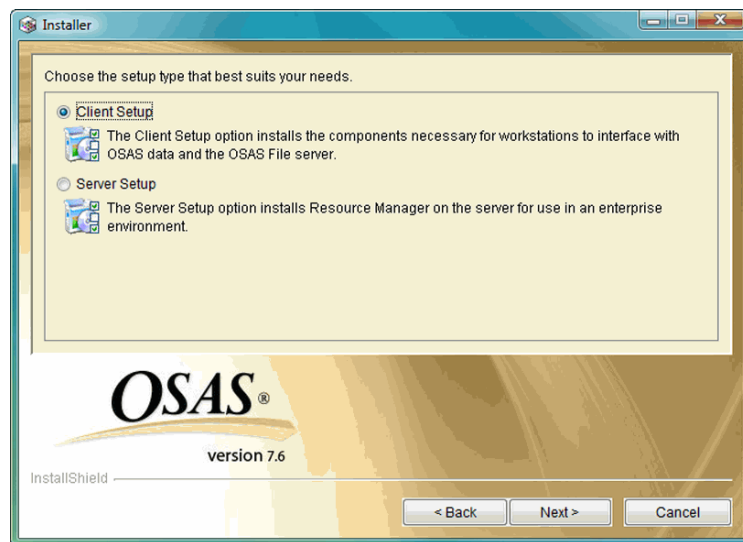
6. Select **Visual PRO/5** as language platform on which to install OSAS and click **Next** to continue.



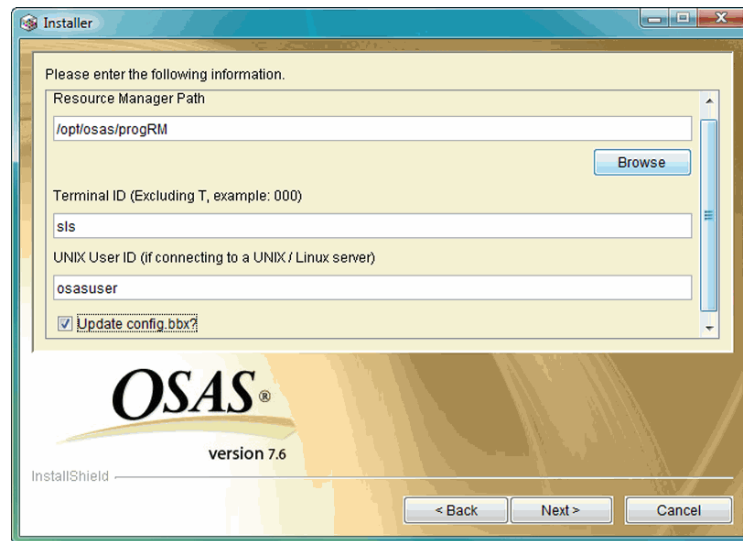
7. Select **Enterprise** as the installation type and click **Next** to continue.



8. Select **Client Setup** as the setup type and click **Next** to continue.



9. Next, enter the path to the Resource Manager programs on the file server, the terminal ID to use for this workstation, and the UNIX user ID to use to log into the data server (if you use a Linux/UNIX data server), then select whether to automatically update the config.bbx file on the file server.



Enter the following information:

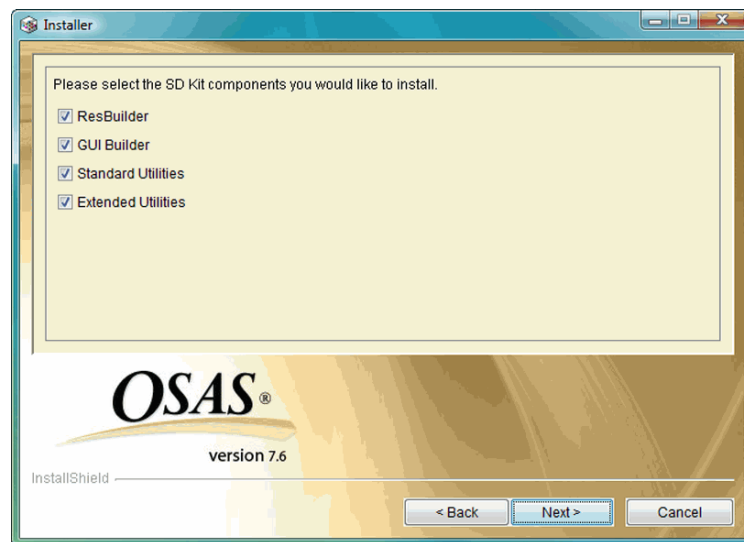
- In the **Resource Manager Path** field, enter the directory path to the Resource Manager **progRM** directory on the file server. This path must be to a drive mapped to the server. When you map drives, use the same drive letter for every workstation that accesses Resource Manager.
- In the **Terminal ID** field, enter the ID to assign to this workstation (for example, **003**). You can enter up to three characters. The system adds the “T” to the beginning of the terminal ID automatically.
- If you use a Linux/UNIX data server, select the **Connecting to a UNIX server?** check box, then enter the **UNIX User ID** that this workstation uses to connect to that server. Clear the check box and leave this UNIX User ID box blank if you use a Windows data server.

Selecting the check box adds the **-u** parameter and the user ID you entered to the OSAS shortcut's properties for the client workstation so that the workstation can connect to the server properly. If you select the check box, you must enter a user ID. If you clear the check box, the installation program does not add the **-u** parameter and user ID to the shortcut's properties. See page 3-98 for details about OSAS parameters.

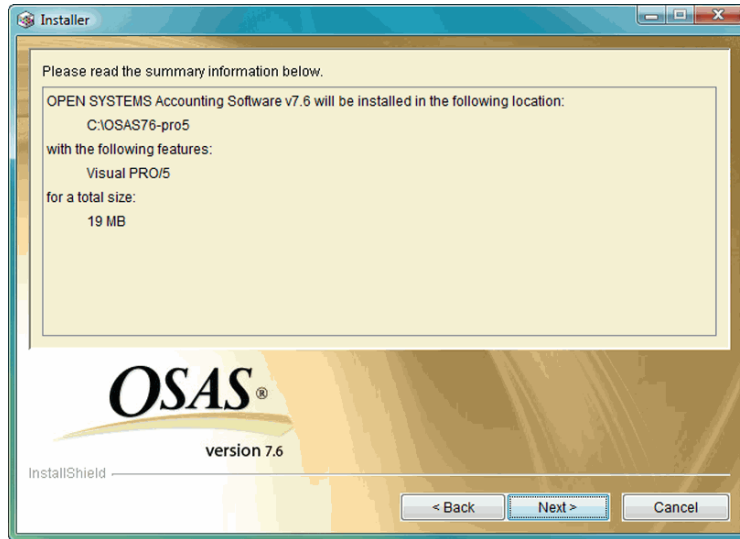
- Select the **Update config.bbx?** check box to automatically update the config.bbx file on the file server with the workstation's terminal device information you entered above. If you leave this check box blank, you'll need to manually update the config.bbx file later using the **Devices** function.

Click **Next** when you finish to continue.

10. If you have purchased the OSAS Software Developer's Kit (SDK), select the SDK components you would like to install, and click **Next**.

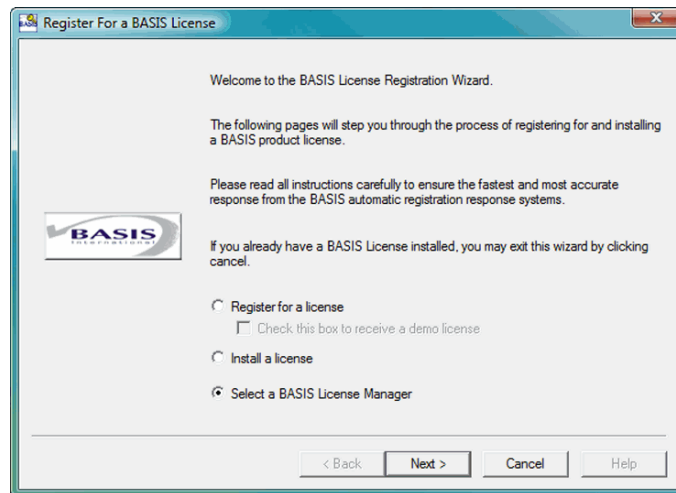


11. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.

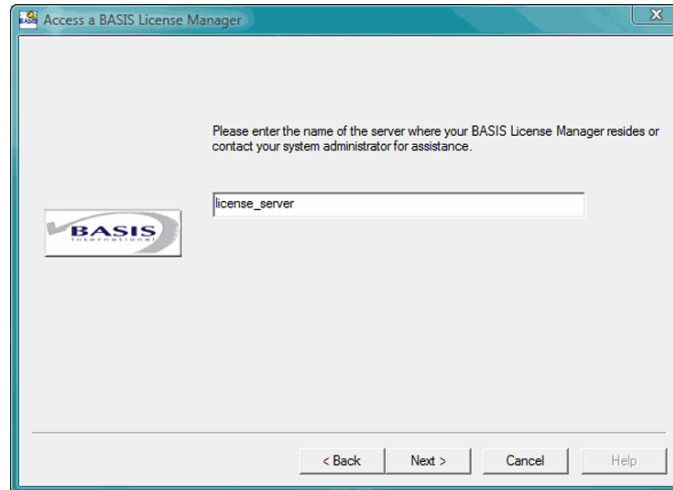


If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

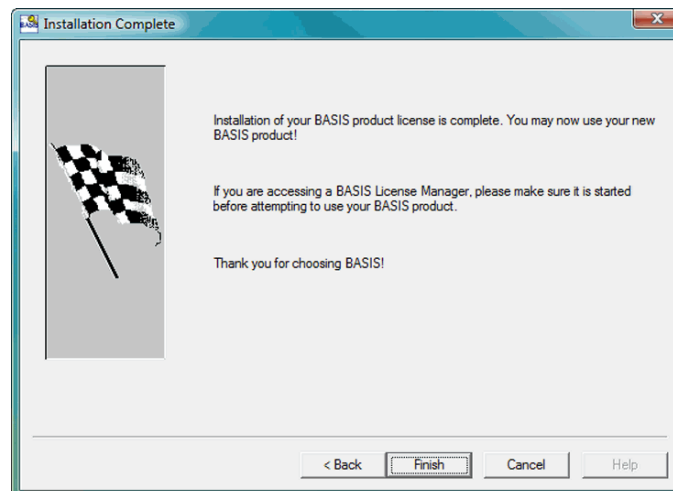
12. Next, you must point the workstation at the BLM so that OSAS can retrieve the license it needs to function correctly when this workstation logs in. When the Register for a BASIS License screen appears, choose **Select a BASIS License Manager** and click **Next**.



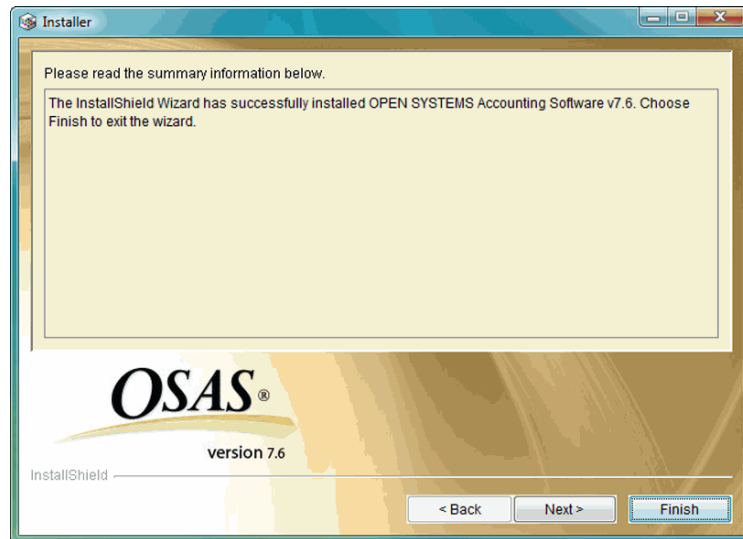
13. Enter the name of the server on which the BASIS License Manager is installed and click **Next** to continue.



14. When the Installation Successful message appears, click **OK**.
15. When the Installation Complete screen appears, click **Finish** to complete the license installation for the client workstation.



16. When the “installation successful” message appears, click **Finish** to exit the installation program.



**Edit the
hosts File**

17. Next, modify the **hosts** file on each workstation if the DNS server on your network cannot resolve machine names into their IP addresses so that the workstation can communicate with the Data Server and BASIS License Manager. You need to know the IP address and machine name of the computer(s) running the data server and BLM.

- Use a text editor (like Notepad) to edit the file named

\\Windows\\system32\\drivers\\etc\\hosts

- The workstation’s **hosts** file may already contain several entries. Add the Data Server and BLM IP addresses and machine names, as in this sample:

127.0.0.1 Local host
200.99.5.0 dataserver
200.99.5.1 license_server

Note: Every workstation must include the servers’ IP addresses. Including other workstations’ IP information is optional.

- Save your changes and close the file.

**Edit the
services File**

18. After editing the **hosts** file, edit the **services** file on the workstation so that the workstation can locate and use the Data Server service.

- Use a text editor to edit the file named

\\Windows\\system32\\drivers\\etc\\services

- The **services** file contains many lines, usually arranged in numerical order by the port numbers in the second column. Insert a line where port 1100 would fall numerically and enter

pro5srv 1100/tcp #pro/5 dataserver service

- Save your changes and close the file.

Client workstation installation is complete. Move to the next workstation that connects to the OSAS servers and repeat the process until all workstations are installed.

After installing the workstations, open OSAS on the last workstation and install the OSAS applications and set up each workstation. Workstation configuration settings are identified by terminal ID, allowing you to set up multiple workstation configuration files from a single workstation by specifying the terminal ID for each new configuration.

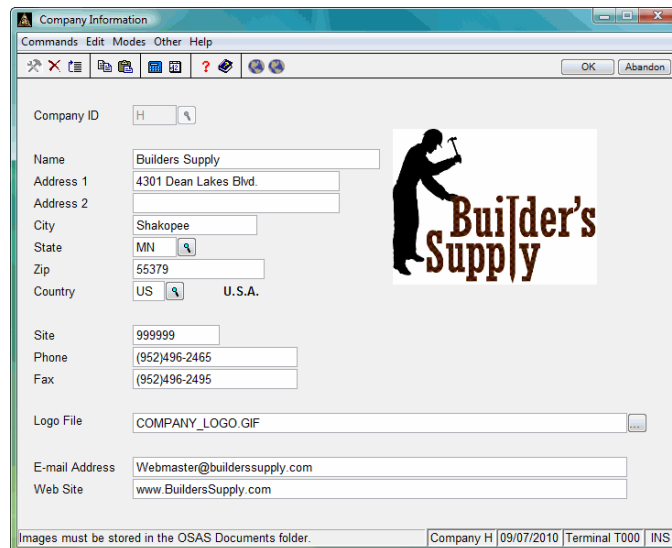
Install OSAS Applications

After installing client workstations, use the last workstation to install the OSAS applications. Before you install the applications, check the Resource Manager Directories function to make sure the correct directories are listed for the installation and data directories.

Follow these steps to install OSAS applications on the file server:

1. Launch the new OSAS installation. In Windows, double-click the OSAS shortcut, or select **OSAS 7.6** from the **OSAS** program group on the **Start** menu.

2. The first time you launch OSAS, you must create a company record in order for OSAS to run correctly. When the Company Information screen appears, enter your company's information.



Company Information

Commands Edit Modes Other Help

Company ID: H

Name: Builders Supply

Address 1: 4301 Dean Lakes Blvd.

Address 2:

City: Shakopee

State: MN

Zip: 55379

Country: US U.S.A.

Site: 999999

Phone: (952)496-2465

Fax: (952)496-2495

Logo File: COMPANY_LOGO.GIF

E-mail Address: Webmaster@builderssupply.com

Web Site: www.BuilderSupply.com

Images must be stored in the OSAS Documents folder. Company H 09/07/2010 Terminal T000 INS

Enter the company's ID (up to three characters) and press **Enter**—the remaining fields are available only after you enter the **Company ID**. Enter the company's related information as prompted and click **OK** or press **Page Down** to save the new company record. When the cursor returns to the **Company ID** field, press **F7** to close the screen and open the OSAS menu.

Consult the Resource Manager guide for more information on the **Company Information** function.

3. Edit the installation and data directories OSAS uses to make sure that applications are installed from the correct source and that data is stored in the correct locations on the data server.

To edit these directories within OSAS, select **Directories** from the Resource Manager **System Setup** menu. Press **Enter** to edit a directory, then click **Write** or press **W** to save your changes.

To change these paths to use the PRO/5 Data Server, use this convention:

Windows	<code>/<tiger, pro5srv>D:/osas/data</code>
Linux/UNIX	<code>/<tiger, pro5srv>/u/apps/osas/data</code>

Where **tiger** is the name of the server and **pro5srv** is the service name (as noted in the service file). Remember to substitute the correct directories.

When the “You have changed one or more paths” message appears, do one of the following:

- Select **Copy** if you want to copy files from the program file server to the appropriate locations on the data server for day-to-day use.
- Select **Move** to move the files currently stored on the program file server to the appropriate locations on the data server for day-to-day use. When you use this option, no files remain in their original directories.
- If this is the first time you have changed directories, **do not** select **None** as you may accidentally delete directories.

Use the **Proceed (OK)** command to take the selected action and restart OSAS.

See “Editing Directories” on page 6-4 or refer to the Resource Manager guide for more information.

You can also edit these directories outside OSAS, if necessary, by opening either the **OSINFO.DOS** or **OSINFO.UNX** (depending on your operating system) file directly in a text editor. These files are stored in the **\sysfil** directory. Keep in mind that when you edit these files in a text editor, you’ll need to copy the data files to the correct directories manually.

4. Select **Install Applications** from the Resource Manager **Installation** menu to install the OSAS applications. Edit your activation key, if necessary, then use the command buttons on the Install Applications screen to select the applications to install. When you finish, press **D** to begin the installation.

Turn to “Installing Applications” on page 6-6 for detailed instructions, if necessary.

OSAS installation is now complete. If you want to connect to your OSAS data from external sources (word processing, spreadsheet, or database software, for example), you should now install the optional ODBC driver to provide this connectivity.

Install the ODBC Driver (optional)

If you plan on accessing OSAS data from an external source (such as a word processing or spreadsheet software program), or you want to use any of the productivity reports included with OSAS, you need to install the ODBC driver on each workstation to complete the OSAS installation. Turn to “ODBC Driver for PRO/5 and VPRO/5” on page 8-11 for details.

Linux/UNIX Enterprise Installation

Use the information in this section to install OSAS on the PRO/5 language platform in a Linux or UNIX enterprise environment. Because OSAS on PRO/5 for Linux/UNIX cannot take advantage of the Visual PRO/5 interpreters for Windows, its install process is largely manual.

When you install OSAS on PRO/5 in a Linux or UNIX enterprise environment, you first install the BLM and licenses on the server, then you install the data server and Resource Manager, and finally you install the Windows program file server and client workstations (if used) and set up Resource Manager. See “Deployment Options on PRO/5” on page 1-10 for details on using PRO/5 with Linux or UNIX in an enterprise environment.

To complete this installation, you’ll proceed through these stages (each stage is broken down into its individual steps in this section):

1. Install the BASIS License Manager (BLM).
2. Register the BASIS license.
3. Send and receive license information.
4. Install the BASIS license.
5. Start the BLM.
6. Install the data server (if you use Windows client workstations).
7. Install Resource Manager.
8. Set up company information.

Note: You must perform the installation while physically at the server.

Install the BASIS License Manager (BLM)

The TCP/IP protocol is required on your network to use the BASIS License Manager. See “TCP/IP Information” on page C-1 for more information.

Note: As you follow these installation steps, do not anticipate commands. For example, if a prompt reads *Please wait*, do not press **Enter** until you are specifically directed to do so.

1. Log in as root and insert the OSAS installation DVD into the DVD-ROM drive. Then, set **umask 0** and mount the DVD-ROM drive to a path that exists on your system. For example, in the instructions below, the sample mount directory **/mnt/cdrom** must exist before you can mount the DVD-ROM drive. Follow the steps that pertain to your operating system:

Linux:	# umask 0 # mount /dev/cdrom /mnt/cdrom # cd /mnt/cdrom/UNIX/LINUXRM # ./CDINSTAL
SCO6	# umask 0 # mount /dev/cd0 /mnt/cdrom # cd /mnt/cdrom/UNIX/SCORM # ./CDINSTAL

2. After you enter the commands above, this prompt appears:

```
INSTALLATION PROCESS for: BASIS License Manager
```

```
Press Enter to continue or DEL (interrupt key) to quit the installation.
```

Press **Enter** to continue or **DEL** (the interrupt key) to quit the installation.

3. When the following prompt appears, press **Enter** to accept the default path or enter a different path.

```
Enter the pathname on which to install the BASIS License Manager  
or press Enter to accept the default (/usr/basis)
```

4. The BLM files are copied to the path you entered. When the copy process is complete, the following menu appears. Enter **BLM**.

```
BASIS Install Main Menu

From this menu you may go to the install menus for the following products:

BLM      Install BASIS License Manager

PRO5     Install PRO/5

DS       Install PRO/5 Data Server

EXIT     Exit installation

Please type BLM, PRO5, DS or EXIT: BLM
```

5. The BLM screen appears. Press **Enter** to continue.

```
BBBBBBBBB  LL      MM      MM
BB      BB  LL      MMMM  MMMM
BB      BB  LL      MM  MMMM  MM
BBBBBBBBB  LL      MM  MM  MM
BB      BB  LL      MM      MM
BB      BB  LL      MM      MM
BBBBBBBBB  LLLLLLLLLL  MM      MM

This installation procedure will assist you in installing and licensing
PRO/5 and PRO/5 Data Server for your particular configuration.

Please have your Serial Number(s) and Authorization Number(s) ready.
These numbers are provided by BASIS on the license registration form
sent with the product(s).

Enter to continue
```

**Create the
BLM Script**

6. The BASIS License Manager Install Menu appears. Enter **CREATE**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: CREATE
```

7. The following prompt appears. Press **Enter** to continue.

```
Create BasisRunLM

This installation automatically creates a Bourne shell script to start the
BASIS License Manager. The script can be installed automatically, at your
request, and invoked as part of this installation.

Enter to continue
```

8. The following prompt appears. Press **Enter** to continue.

```
This installation just created the following script to start your BASIS
License Manager:

/usr/basis/blmgr/BasisRunLM

To start the BASIS License Manager at system startup, invoke the above script
from the startup sequence as appropriate to your UNIX system. The next
section will ask if you want this script to install the BasisRunLM script
into your startup sequence.

Enter to continue
```


**Add the BLM
to the UNIX/
LINUX Startup
Sequence**

9. The BASIS License Manager Install Menu reappears. Enter **ADD**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: ADD
```

10. The Install BasisRunLM message appears.

```
Install BasisRunLM

The BASIS install created the script BasisRunLM. BasisRunLM starts the BASIS
License Manager from the BASIS install directory. PRO/5 requires a license
manager to be running. BasisRunLM can be placed in the appropriate startup
scripts for your UNIX system.

If desired, this script attempts to modify the file /etc/inittab.
It tries to append the following entry:

    brlm:2345:once:/usr/basis/blmgr/BasisRunLM; # start BASIS License Manager

This entry will invoke the BasisRunLM script in run levels 2, 3, and 4.

If you do not want this script to edit the /etc/inittab file, type N to
answer the next question. Otherwise, type Y. Typing Y requires root
privileges.

Do you want this script to edit the /etc/inittab file? (Y/N) Y
```

At the prompt, enter **Y**. Do not reboot your computer now. The BLM will be started automatically when you reboot the server.

11. The following prompt appears. Press **Enter** to continue.

```
Entry added to /etc/inittab file.  
Enter to continue
```

12. Continue with the instructions in the next section to register your license.

Register the BASIS License

To register and install your BASIS license, use the information on the License Registration Form you received with your software. Follow these instructions to register your BASIS license:

1. The BASIS License Manager Install Menu appears. Enter **REG**.

```
BASIS License Manager Install Menu  
  
REG      Register for BASIS product license  
INSTALL  Install BASIS product license  
CREATE   Create script to start BASIS License Manager  
ADD      Add BASIS License Manager to UNIX startup sequence  
START    Start the BASIS License Manager  
STOP     Stop the BASIS License Manager  
EXIT     Exit BASIS License Manager Install Menu  
  
Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: REG
```

2. The following message appears. Press **Enter** to continue.

```

Welcome to BASIS License Registration

The following questions will step you through the process of registering for
a BASIS product license. Please read all instructions carefully to ensure the
fastest and most accurate response from the BASIS automatic registration
response system.

Enter to continue
```

3. The Contact Information prompts appear. This information is required.

```

Contact Information

Your contact information is confidential and will only be used to assist
BASIS in further identifying your product license.

Please enter the value and press ENTER. If a previous entry has been made
for the field, press ENTER to retain this information.

Please enter Company: Open Systems
Please enter First Name: Sam
Please enter Last Name: Davies
Please enter Phone Number: 952-403-5700
```

Enter your contact information as prompted and press **Enter** to continue. If you would like to receive more product information from BASIS, enter **Y** when prompted.

4. The Product License Information prompts appear. Enter your serial and authorization numbers. Press **Enter** to accept the hostname that appears.

```
Product License Information

The Serial Number and Authorization Number are provided to you by BASIS and
must be typed exactly as shown.

The HostName provides you an easy method of identifying the host.


Please enter the value and press ENTER. If a previous entry has been made
for the field, press ENTER to retain this information.


Please enter Serial Number: OSH123456

Please enter License Authorization Number: 1234567890

Please enter Hostname: (<CR> for redhat_server)
```

5. The Contact and Product License Information Confirmation screen appears:

```
Contact and Product License Information Confirmation

Below is the contact and product license information you just entered.
Please review the information and verify that all fields are correct.
If correct, type Y to continue. If incorrect, type N and update the
fields that are incorrect.

#####
# Registration information follows
#####
Company:      Open Systems
Last Name:    Davies
First Name:   Sam
Phone Number: 952-403-5700
Serial Number: OSH123456
License Auth Num: 1234567890
Hostname:     redhat_server
Host ID:      00d0b721ceda
ProdInfo Email: No

Is this OK? [Y/N] Y
```

The **Host ID** field is filled in for you and you cannot change it. Enter **Y** and continue with the next section to send the license information.

Send and Receive License Information

Choose the method by which you want to send the registration information to BASIS. Then follow the instructions on the corresponding pages.

Method	Refer To
Send by E-Mail / Receive by E-Mail	page 4-61
Send by Other / Receive by E-Mail	page 4-66

Send by E-Mail / Receive by E-Mail

To use the e-mail option, your server must support outgoing Internet e-mail. If it doesn't, choose another method. Follow these steps to send and receive your license registration information by e-mail:

1. When the Registration Method menu appears, enter **EMAIL**.

```
Registration Method

How do you want to send your license information to BASIS?

EMAIL    (To: license@basis.com)
OTHER
EXIT     (exit the install script)

Please type EMAIL, OTHER or EXIT and press ENTER: EMAIL
```

2. The License Delivery message and menu appears. Enter **EMAIL**.

```
License Delivery Method

BASIS will return your permanent license via the method selected below. If
EMAIL is selected, an email address must be entered. To skip an optional field,
press ENTER. To clear an optional field, enter a dash '-'.

How do you want BASIS to deliver your permanent license?

EMAIL Address
EXIT (exit the install script)

Please type EMAIL or EXIT and press ENTER: EMAIL
```

3. Enter your e-mail address.

```
Please enter Email Address: samd@osas.com
```

4. The License Information Confirmation screen appears. If the information on the screen is correct, enter **Y** to continue. If you entered information in error, enter **N** and enter the correct information.

```
License Information Confirmation

Please verify that all information below is correct. If any of the following
is incorrect, please type N to update the fields that are incorrect.

NOTE: Any incorrect information will result in a failure to process your
registration for a BASIS license.

Email Address:      sam@osas.com
Serial Number:     OSH123456
License Auth Num:  1234567890

Is this OK? [Y/N] Y
```

5. When the e-mail has been sent, the following prompt appears. (If the prompt does not appear, skip to step 9 below.) Press **Enter** to continue.

```
Your license request has been sent via email to license@basis.com.  
  
Enter to continue
```

6. The following screen appears. Enter **N** to continue.

```
The permanent license information will be emailed to samd@osas.com.  
  
Would you like to register for another BASIS license? (Y/N) N
```

7. The BASIS License Registration Process screen appears. Press **Enter** to continue.

```
BASIS License Registration Process  
  
When BASIS receives the registration information, your permanent license file  
is generated and returned to you by the delivery method you previously  
selected in the registration dialog. This process should take no more than  
a few minutes.  
  
**** If after 30 minutes you still have not received the ****  
**** permanent license information, please contact BASIS ****  
**** Technical Support. ****  
  
If there is a delay in receiving your license number and you have tried the  
email delivery, including "Other," we recommend you install the  
temporary license printed at the bottom of the BASIS License Registration  
form until you receive the permanent license.  
  
Enter to continue
```

8. The BASIS License Manager Install Menu appears again. Skip to “Install the BASIS License” on page 4-69.

9. If the e-mail could not be sent, you must select a different method to register your license. The following prompts appear. Press **Enter** to continue.

```
./install: sendmail: not found

The sendmail program was not found in your current path.
Searching some common directories for the sendmail program ...

Unable to find sendmail program.

Please select OTHER for your Registration Method.

Enter to continue
```

10. The following prompt appears. Enter **Y** to continue.

```
Would you like to register for another BASIS license? [Y/N] Y
```

11. The Contact Information screen appears. Press **Enter** to accept each entry.

```
Contact Information

Your contact information is confidential and will only be used to assist
BASIS in further identifying your product license.

Please enter the value and press ENTER. If a previous entry has been made
for the field, press ENTER to retain this information.

Please enter Company: Open Systems

Please enter First Name: Sam

Please enter Last Name: Davies

Please enter Phone Number: 952-403-5700
```


12. The Product License Information screen appears. Press **Enter** for each entry.

```
Product License Information

The Serial Number and Authorization Number are provided to you by BASIS and
must be typed exactly as shown.

The HostName provides you an easy method of identifying the host.


Please enter the value and press ENTER. If a previous entry has been made
for the field, press ENTER to retain this information.


Please enter Serial Number: OSH123456

Please enter License Authorization Number: 1234567890

Please enter Hostname: (<CR> for redhat_server)
```

13. The confirmation screen appears. If the information is correct, enter **Y**. If you entered information in error, enter **N** and enter the correct information.

```
Contact and Product License Information Confirmation

Below is the contact and product license information you just entered.
Please review the information and verify that all fields are correct.
If correct, type Y to continue. If incorrect, type N and update the
fields that are incorrect.

#####
# Registration information follows
#####
Company:      Open Systems
Last Name:    Davies
First Name:   Sam
Phone Number: 952-403-5700
Serial Number: OSH123456
License Auth Num: 1234567890
Hostname:     redhat_server
Host ID:      00d0b721ceda
ProdInfo Email: No

Is this OK? [Y/N] Y
```

14. The Registration Method screen appears.

```
Registration Method

How do you want to send your license information to BASIS?

EMAIL      (To: license@basis.com)
OTHER
EXIT       (exit the install script)

Please type EMAIL, OTHER or EXIT and press ENTER:
```

**Send by Other/
Receive by
E-Mail**

Use the **Other** method only when the e-mail method is unavailable. This method produces a file containing the license registration information. You can then take the file to a system that has e-mail access to register the license.

Follow these steps to send and receive your license information using the **Other** method:

1. At the Registration Method screen, enter **OTHER**.

```
Registration Method

How do you want to send your license information to BASIS?

EMAIL      (To: license@basis.com)
OTHER
EXIT       (exit the install script)

Please type EMAIL, OTHER or EXIT and press ENTER: OTHER
```

2. The WARNING screen appears. Read the warning. Enter **Y** to continue.

```
WARNING

You have selected Other as your Registration Method.

ONLY USE THIS METHOD WHEN:
  * you DO NOT have access to email or a printer on this machine.
  * or you have been UNABLE to successfully register via email.

Proceeding with this option saves your License Registration information in
the file BasisLicRequest so you can move the file to a machine with email and
email this file to license@basis.com for an immediate reply.

The permanent license will be returned by email.

Is this OK? [Y/N] Y
```

3. The License Delivery Method screen appears. Enter **EMAIL** as the delivery method.

```
License Delivery Method

BASIS will return your permanent license via the method selected below. If
EMAIL is selected, an email address must be entered. To skip an optional field,
press ENTER. To clear an optional field, enter a dash '-'.

How do you want BASIS to deliver your permanent license?

  EMAIL Address
  EXIT (exit the install script)

Please type EMAIL or EXIT and press ENTER:
```

4. The following screen appears. Entered **EMAIL** and enter your e-mail address.

```
Please enter Email Address:
```

5. The License Information Confirmation screen appears. Enter **Y** if the information is correct. If you entered information in error, enter **N** and enter the correct information.

License Information Confirmation

Please verify that all information below is correct. If any of the following is incorrect, please type N to update the fields that are incorrect.

NOTE: Any incorrect information will result in a failure to process your registration for a BASIS license.

Email Address:
Serial Number: OSH123456
License Auth Num: 1234567890

Is this OK? [Y/N] Y

6. The following screen appears. The license file is saved to the directory in which you installed the BLM (the default directory is **/usr/basis**). Press **Enter** to continue.

Your license request has been saved in the file

BasisLicReq4_26967.txt

To receive your permanent license, email the license request file to

license@basis.com

Enter to continue

7. One of these two screens appears, depending on how you elected to receive your license. Enter **N** to continue.

```
The permanent license information will be emailed to samd@osas.com.
```

```
Would you like to register for another BASIS license? (Y/N) N
```

8. The BASIS License Registration Process screen appears. Press **Enter** to continue.

```
BASIS License Registration Process
```

```
When BASIS receives the registration information, your permanent license file
is generated and returned to you by the delivery method you previously
selected in the registration dialog. This process should take no more than
a few minutes.
```

```
**** If after 30 minutes you still have not received the ****
**** permanent license information, please contact BASIS ****
**** Technical Support. ****
```

```
If there is a delay in receiving your license number and you have tried the
email delivery, including "Other," we recommend you install the
temporary license printed at the bottom of the BASIS License Registration
form until you receive the permanent license.
```

```
Enter to continue
```

9. The BASIS License Manager Install Menu reappears. When you receive the information from BASIS, see the “Install the BASIS License” section below.

Install the BASIS License

When you receive the license information, you must install the license before you can start the License Server.

**Invoke the
Install
Procedure**

1. At the BASIS License Manager Install Menu, enter **INSTALL**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: INSTALL
```

2. If you received your license by e-mail, continue to the steps below to install the license.

**Install a
License
Received by
E-Mail**

3. The BASIS License Installation screen appears. You should have copied the license file to the directory in which you installed the BLM (the default directory is **/usr/basis**).

Enter the path and the file name of the file that you received via e-mail. When you save the license file that you received by e-mail, make sure that the file name does not have any spaces in it.

```
BASIS License Installation

If you have an electronic version of the license file, please enter the
complete path of the license file and press ENTER. Otherwise, press ENTER
to type the license information manually.

License File:
```

4. The following screen appears. Press **Enter** to continue.

```
The BASIS product license file has been successfully installed.

Enter to continue
```

5. The following prompt appears. Enter **N** to continue.

```
Do you want to install another license on this machine? [Y/N] N
```

6. The License Installation Complete screen appears.

```
License Installation Complete

Installation of your BASIS product license is complete.

If you are accessing a BASIS License Manager, please make sure it is started
before attempting to use your BASIS product.

Thank you for choosing BASIS!

Enter to continue
```

Note: If you are reinstalling a license or increasing your user counts on a pre-existing system, you must stop and then restart the BLM for the new license to take effect (see “Starting and Stopping the BASIS License Manager” on page 7-7 for more information).

Start the BLM

1. The BASIS License Manager Install Menu appears. Enter **START**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: START
```

2. The following prompt appears. Press **Enter** to continue.

```
Starting BASIS License Manager using ./BasisRunLM ...  
  
Starting License Manager Daemon  
  
Enter to continue
```

3. The BASIS License Manager Install Menu reappears. Enter **EXIT** to continue. When the BASIS Install Main Menu appears, enter **EXIT** again. When the Finished BASIS Install screen appears, press **Enter** to continue. The Resource Manager Installation screen automatically appears.

If you are using a Linux/UNIX Resource Manager and applications with Linux/UNIX client terminals, skip to page 4-80 to install Resource Manager.

If you are using the Linux/UNIX server with Windows client workstations (in addition to any Linux/UNIX clients), press the **Delete** key to exit the Resource Manager installation process. Then, continue to the next section to install the Data Server.

Install the Data Server

1. If you are not already, log in to the server as root. You must be physically at the server; you cannot install the data server from a terminal.
2. If the **/usr/basis** directory does not already exist, create it. Enter this command at the prompt:

```
# mkdir /usr/basis
```

3. Insert the OSAS installation DVD into the DVD-ROM drive, if necessary. Then, set **umask 0**, mount the DVD-ROM drive to a path that exists on your system, and change to the **/usr/basis** directory. In the instructions below, the sample mount directory **/mnt/cdrom** must exist before you can mount the DVD-ROM drive. Follow the steps that pertain to your operating system:

```
Linux:      # umask 0  
            # mount /dev/cdrom /mnt/cdrom  
            # cd /usr/basis
```



```
SCO6      # umask 0
           # mount /dev/cd0 /mnt/cdrom
           # cd /usr/basis
```

4. Enter one of these commands to copy the files to the **/usr/basis** directory:

```
Linux 32-bit  # cp /mnt/cdrom/BASIS/DATASRV/LINUX/32BIT/
              12455621.Z
Linux 64-bit  # cp /mnt/cdrom/BASIS/DATASRV/LINUX/64BIT/
              62455621.Z
SCO6         # cp /mnt/cdrom/BASIS/DATASRV/SCO/32BIT/
              12045621.Z
```

5. After copying the **.Z** file, uncompress it using one of these commands:

```
Linux 32-bit  # gzip -d 12455621.Z
Linux 64-bit  # gzip -d 62455621.Z
SCO6         # uncompress 12045621.Z
```

6. To expand the Data Server files, enter one of these commands using the installation device you defined. (If the command does not work, consult your operating system reference materials).

```
Linux 32-bit  # tar xvf 12455621
Linux 64-bit  # tar xvf 62455621
SCO6         # tar xvf 12045621
```

7. Enter this command to start the installation program:

```
# ./install
```

The next few screens give you information that you need before you start installation. If you want to stop installation during the next few steps, press the **Delete** key. When you are ready to begin again, enter **./install**.

8. When the BASIS Install main menu appears, enter **DS**,

```

BASIS Install Main Menu

From this menu you may go to the install menus for the following products:

BLM      Install BASIS License Manager

PRO5     Install PRO/5

DS       Install PRO/5 Data Server

EXIT     Exit installation

Please type BLM, PRO5, DS or EXIT: DS

```

9. The PRO/5 Data Server welcome screen appears. Press **Enter** to continue.

```

PPPPPPPP  RRRRRRRR  0000000  // 55555555 (R)
PP  PP    RR  RR    00  00    // 55
PP  PP    RR  RR    00  00    // 55
PPPPPPPP  RRRRRRRR  00  00    // 555555
PP        RR  RR    00  00    //      55
PP        RR  RR    00  00    // 55  55
PP        RR  RR    0000000  // 555555

PRO/5 Data Server
Copyright 1999 BASIS International Ltd.

Thank you for your purchase of PRO/5 Data Server

This installation procedure will assist you in installing PRO/5 Data Server
for your particular configuration.

Note: for assistance with registration and installation of BASIS product
      licenses please refer to BASIS License Manager Installation.

Enter to continue

```

10. When the license prompt appears, enter **Y** to continue.

```

LL          IIIIIIII  CCCCCC  EEEEEEEE  NN    NN  SSSSSSSS  EEEEEEEE
LL          II      CC    CC  CC          NNN  NN  SS          EE
LL          II      CC          EE          NN N  NN  SS          EE
LL          II      CC          EEEEE     NN N  NN  SSSSSSSS  EEEEE
LL          II      CC          EE          NN N  NN          SS  EE
LL          II      CC    CC  EE          NN  NNN          SS  EE
LLLLLLLLLL  IIIIIIII  CCCCCC  EEEEEEEE  NN    NN  SSSSSSSS  EEEEEEEE

PLEASE READ THE SOFTWARE LICENSE AGREEMENT CONTAINED IN THE license.txt FILE
CAREFULLY BEFORE PROCEEDING WITH THE INSTALLATION.

BY INSTALLING THE SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS
LICENSE. IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE, YOU ARE NOT
AUTHORIZED TO INSTALL THIS SOFTWARE

Do you accept all of the terms of the License Agreement? If so, type Y to
proceed with the installation. If not, type N, and the installation will
exit.

Is this OK? [Y/N]Y

```

11. When the BASIS PRO/5 Data Server installation menu appears, enter **INSTALL**.

```

BASIS PRO/5 Data Server Install Menu

INSTALL      Install PRO/5 Data Server

EXIT         Exit BASIS PRO/5 Data Server Install Menu

Please type INSTALL or EXIT: INSTALL

```

12. The following screen appears quickly. When it does, the **INSTALL** process is making sure that the appropriate files are in the correct directories. It does not copy any files at this time. Press **Enter** to continue.

```
BASIS PRO/5 Data Server Install Complete

Your PRO/5 Data Server is installed. In order to run successfully, you will
need a config.bbx file for use by the PRO/5 Data Server. An existing PRO/5
config.bbx may suffice for this purpose. Otherwise, please see your manual
set for creating a config.bbx file.

Enter to continue
```

13. The BASIS PRO/5 Data Server installation menu reappears. Enter **EXIT**.

```
BASIS PRO/5 Data Server Install Menu

INSTALL      Install PRO/5 Data Server
EXIT         Exit BASIS PRO/5 Data Server Install Menu

Please type INSTALL or EXIT: EXIT
```

14. When the BASIS Install main menu reappears, enter **EXIT**,

```
BASIS Install Main Menu

From this menu you may go to the install menus for the following products:

BLM      Install BASIS License Manager
PRO5     Install PRO/5
DS       Install PRO/5 Data Server
EXIT     Exit installation

Please type BLM, PRO5, DS or EXIT: EXIT
```

15. When the “Finished...” prompt appears, press **Enter**.

```
Finished BASIS Install Main Menu

Thank you for choosing BASIS.

Enter to continue
```

**Create the
config.bbx
File**

16. Create a config.bbx file for the Data Server. To do this, change to the directory where the data server resides and create a file using these commands:

```
# cd pro5ds
# vi config.bbx
```

A typical config.bbx file contains these entries. You may need to change the parameters depending on your operating system.

```
STBLEN=10240
CIBS=100
DEVS=100
FCBS=100
SETOPTS 00000020
```

The value of STBLEN should be the number of workstations multiplied by the number 2048 with a maximum value of 32767. In the sample above, five workstations are attached to the Data Server.

17. Create a start script file for the Data Server. To do so, enter

```
# vi start
```

and add these lines to the script:

```
umask 0
./pro5.server
```

Then save your changes.

18. Make the script executable with full read/write permissions by entering this command:

```
# chmod 777 start
```

**Edit the
services File**

19. Edit the **services** file on the server by entering these commands:

```
# cd /etc  
# vi services
```

The **services** file contains many lines, organized in numerical order by the port numbers in the second column. Insert a line where port 1100 falls numerically and enter this line, then save your changes.

```
pro5srv    1100/tcp    #pro/5 dataserer service
```

**Edit the hosts
File**

20. Before modifying the **hosts** file on the server, you need to know the IP address and machine name of each workstation that you want to connect to the Data Server. Then, add that workstation information to the server **hosts** file by entering these commands:

```
# cd /etc  
# vi hosts
```

The current list of workstations appears. You must list all computers that will access the Data Server. For example:

```
127.0.0.1  Local host  
200.99.5.1  NeilP  
200.99.5.2  AlexL  
414.19.6.8  data server
```

**Create the
hosts.equiv
File**

21. To create or edit the **hosts.equiv** file on the server, enter these commands:

```
# cd /etc  
# vi hosts.equiv
```

The file must include each workstation's user login name and machine name. For example:

```
NeilP  
NeilP.platt.com  
AlexL  
AlexL.syrinx.com
```

22. Start the Data Server by entering these commands:

```
# cd /usr/basis/pro5ds
# ./start
```

If you reboot your server, you must restart the Data Server process by entering the commands above.

To stop the Data Server, you must kill the Data Server's process. Before you stop the Data Server, first make sure no one is using OSAS. Then determine the Data Server's process ID using these commands:

UNIX	# ps -ef grep pro5.server
Linux	# ps aux grep pro5.server

After determining the process ID, use the **kill** command to stop the Data Server process. Enter this command:

```
# kill -2 <processID>
```

You may have to use a higher kill priority to kill the process. Consult your operating system manual if necessary.

23. If you use only Linux/UNIX terminals (or workstations with terminal emulation) to connect to the server, install Resource Manager and OSAS applications to complete the installation. Continue to page 4-80 to install Resource Manager for Linux/UNIX.

If you use Windows workstations to connect to the data server, you must install Resource Manager for Windows on your program file server, install the Windows workstations, and install the OSAS applications to complete the installation. Turn to "Install Resource Manager" on page 4-29 to install RM for Windows, then see page 4-36 to install the Windows clients.

If you use both Linux/UNIX terminals and Windows workstations, you must first install Resource Manager and OSAS applications on the UNIX server. Continue to the next section to install Resource Manager on UNIX. Then, turn to page 4-29 to install Resource Manager for Windows on your program file server. Next, turn to page 4-36 to install the Windows workstations, then turn to page 4-48 to install the OSAS applications for Windows.

Install Resource Manager

Workstation and Printer Setup

Each workstation has a PRO/5 terminal device name. OSAS identifies workstations by their device names, which is then used to determine the workstation's terminal ID. You set up terminal IDs and printer devices after you install Resource Manager.

Printers can be set up as shared or local. A shared printer can be used by any user on the system, can be connected to the central processing unit (CPU) or to any terminal, and can be direct, spooled, or both. A local printer can be used by only one terminal, can be connected to the CPU or to any terminal, and can be direct, spooled, or both. To use the same printer as both a spooled and a direct printer, you must define two output devices—one that routes the output to the spooler and one that routes the output directly to the printer.

If a system has two printers—for example, one for reports and one for Accounts Receivable forms—one printer can be shared, spooled, and connected to the CPU because it does not matter whose report is printed first. But because the accounts receivable clerk needs to control form alignment, the other printer can be local and direct.

Usually shared printers should be connected to the CPU. While shared printers can be connected to any terminal, sending a report to a slave printer, which is connected directly to the terminal, usually makes the terminal unavailable to others until the job is finished.

Direct Printers

When you set up the operating system, you gave each shared printer a name or number. Since a UNIX/Linux device name refers to the port the printer is attached to and Resource Manager identifies shared printers by their device names, you must now give each shared printer a device name. Give the primary printer the device name **LP**. Other printer names, which can have four characters (for example, **Pnnn**), must start with the letter **P** and be in full uppercase letters.

Each workstation has its own set of printer names, so several workstations might have a local printer named **Pnnn**. Workstations that share printers also share the names of those printers, and local printers must be named accordingly. For example, if several workstations share printer **Pnnn**, this name is used by each workstation and you must use a different name for local printers.

For both shared and local printers, you must specify the ports to which the printers are attached. For a parallel printer, the port is **/dev/lpn** or **/dev/plpn** (**n** is the port number); for a serial printer, the port is **/dev/tty**.

Make a list of the type and model number for each printer. (When you define the printers, you can select the type from an inquiry window.) If your printer is not listed, check the printer manual to see if it uses the same control codes as one of those in the list.

Note: See Appendix B for more information about UNIX devices.

Installing Resource Manager

Follow these steps to install Resource Manager.

1. After you complete the BLM installation, the following screen appears. Press **Enter** to continue.

```
INSTALLATION PROCESS for:

Resource Manager 7.60          Copyright (c) 1985 - 2010
Open Systems Holdings Corp.     All rights reserved.

Press Enter to continue or DEL (interrupt key) to quit the installation.
```

2. The following prompt appears. Press **Enter** to accept the default path or enter a different path.

```
Enter the pathname on which to install Resource Manager
or press Enter to accept the default (/opt/OSAS/progRM)
```

3. The following screen appears. Enter **2** (other) to continue.

```
Please choose your computer from the menu below.
If your computer is not one of the choices shown, choose Other.

1. Personal Computer with 3.5 in. diskette drive
2. Other
2
```

4. The following prompts appear. Press **Enter** at each command prompt to accept the defaults. Then verify the appropriate tar command for your operating system when prompted. For SCO6, the tar command is normally **/usr/bin/tar**. For Linux, the tar command is normally **/bin/tar**.

```
Computer Type:      Personal Computer with 3.5 in. drive
Enter new value or press ENTER for default:

Floppy device for installation: /dev/fd0
Enter new value or press ENTER for default:

Command for Floppy Backup:
Enter new value or press ENTER for default:

Command for Floppy Restore:
Enter new value or press ENTER for default:

Command for Tape Backup:
Enter new value or press ENTER for default:

Command for Tape Restore:
Enter new value or press ENTER for default:

tar Command:       /bin/tar
Enter new value or press ENTER for default:
```

Do not press **Enter** at the following screen or you will miss the PRO/5 Installation screen, after which you will see FLEX lm error messages.

Next, the installation process uncompresses some files. When it is finished, this message appears. Do not press **Enter**.

```
Please wait - copying installation files.
```

5. After a few moments, the following screen appears. Enter the name of the server that is running the BLM.

```
PRO/5 Installation

Please enter the name of the server where your BASIS License Manager resides
or contact your system administrator for assistance.

redhat_server
```

Note: Do not press **Enter** on the following screen. The screen will be replaced by the terminal type screen when the interpreter has been activated.

6. The following screen appears. Do not press **Enter**. Rather, wait until the activation is done.

```
Please wait while your executable is updated ...

** PRO/5 has been activated.
Activate done
```

7. When the activation is complete, the Terminal Type screen appears. Depending on your operating system, you may need to change the terminal type from the default value so that your function keys will work properly:

Operating System	Default Value	Recommended Value
Linux	linux	linux
SCO6	ansi	ansico

8. When the Multiuser Configuration screen appears, a message tells you that the system is building a terminal list. When it is finished, enter the number of OSAS workstations and shared printers on the system.

Define Shared Printers

9. After you have defined your network, select a printer alias and press **Enter** to edit it; the Devices - Printer screen appears.

- Enter the device name (**LP**, **Pnnn**, etc.).
- Enter the system device name. For example, the first parallel port is usually **/dev/lp0**, the second is **/dev/lp1**, and so on.
- Enter the printer device type.
- Move to the device mode (code required to operate the device) you want to edit and press **Enter**.

If you are sharing a printer that is not spooled, enter the name of a file to use as a lock file. You must use a different lock file name for each shared printer that is not spooled. (This is a BASIS convention, not a UNIX function.) Enter only existing directories.

- When you finish editing device modes, use the **Done (D)** command to save your entries. Repeat these steps until you have defined all the shared printers.

Define Workstations

10. When you finish defining shared printers, define your workstations by selecting a terminal alias and pressing **Enter** to edit it. The Devices - Terminal screen appears and lists the device name. The device name for workstation 1, which is where you are installing the software, is **T1**. Workstation 2 is **T2**, and so on.
 - Enter the system device name.
 - Enter the terminal device type.
 - Move to the device mode (code required to operate the device) you want to edit and press **Enter**.
 - After you answer the last prompt, press **D** to save your entries.
11. Enter the number of local printers you want to use with OSAS. (Do not include the shared printer you defined earlier.)

Define Local Printers

12. After you enter the number of local printers on the Devices - Terminal screen, the Local Printers screen appears. For each local printer, follow these steps:
 - Enter the device name (**LP**, or **Pnnn**, and so on). Remember, workstations that share printers also share the names of those printers, and local printers must be named accordingly. For example, if several workstations share printer **Pnnn**, you cannot use that name for a local printer at any workstation.
 - Enter the system device name. For example, the first parallel port is usually **/dev/lp0**, the second is **/dev/lp1**, and so on.
 - Enter the device type.
 - Move to the device mode (code required to operate the device) you want to edit and press **Enter**.

- When you are finished editing device modes, use the **Done (D)** command to save your entries. Repeat these steps until all the local printers are defined.

13. When you have defined all the workstations and local printers, the Multiuser Configuration screen appears. Use the **Proceed (OK)** command to continue with the installation.

If you omitted something during installation, or if you add more devices to the system later, use the **Devices** function to change or add device information.

**Edit
Directories**

14. Edit the names of the directories where you want to keep the OSAS programs and data files.
15. When you finish, use the **Proceed (OK)** command to save your changes and begin copying the rest of the Resource Manager files into the appropriate directories. Press **Enter** when instructed to do so.

Set up Company Information

When the Resource Manager files have been copied to the hard disk, the Company Information screen appears.

OSAS T000
Settings Edit Print Help

Company Information

Company ID H

Name Builders Supply

Address 1 4301 Dean Lakes Blvd.

Address 2

City Shakopee

State MN

Zip 55379

Country US U.S.A.

Site 999999

Phone (952) 496-2465

Fax (952) 496-2495

Logo File SAMPLOGO.GIF

E-mail Address Webmaster@builders_supply.com

Web Site www.builders_supply.com

Company H Map Verify

Enter your company's information, then press **Page Down** to save the information. When the cursor returns to the **Company ID** field, press **F7** to exit to the OSAS main menu.

OSAS installation is now complete. Before you can begin using OSAS on a daily basis, you must set up Resource Manager (including any other companies you use), install and set up OSAS applications, and plan a backup schedule. See page 6-15 for information on setting up Resource Manager. See page 6-3 for information on installing applications. Finally, refer to the appropriate application guide for information on setting up that application.

Section III

OSAS Installation Guide

OSAS Administration

CHAPTER 5

5

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Reinstallation

Use the instructions in this chapter to reinstall OSAS (including its components and Resource Manager) over an existing 7.6 installation. For instructions on installing OSAS 7.6 for the first time, refer to chapter 2, 3, or 4, depending on your environment, operating system, and the language platform you want to use.

If you are upgrading from a previous version of OSAS, you must install 7.6 in a new directory path, then use the **Data File Conversion** function to convert your data files from the old path to the new. Turn to “Conversion” on page A-1 for conversion instructions.

If you need to reinstall only Resource Manager or other OSAS application components (that is, you do not need to reinstall the BBj or VPRO/5 interpreter as well), use the **Install Applications** function within OSAS. See page 6-9 for more information.

These instructions assume that you have basic knowledge about your operating system. If you are unfamiliar with your operating system, consult the operating system’s documentation and reference materials before you begin.

Reinstalling the BBJ Interpreter

Reinstalling the BBJ interpreter is a two-step process: first, you must remove the BASIS components, then you reinstall these components along with any Resource Manager components that are damaged or that aren't functioning as expected.

You must perform this reinstallation while physically at the computer on which OSAS is installed (on the application server, a desktop installation, or a thin client, for example; the data server rarely needs reinstallation).

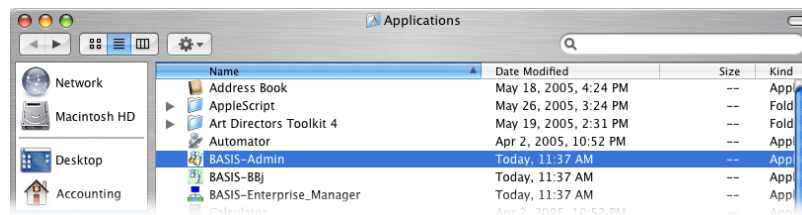
Follow these steps to reinstall the BBJ interpreter:

1. Launch the BBJ Administration Wizard to stop BBJ Services and the BLM (if present on this computer).

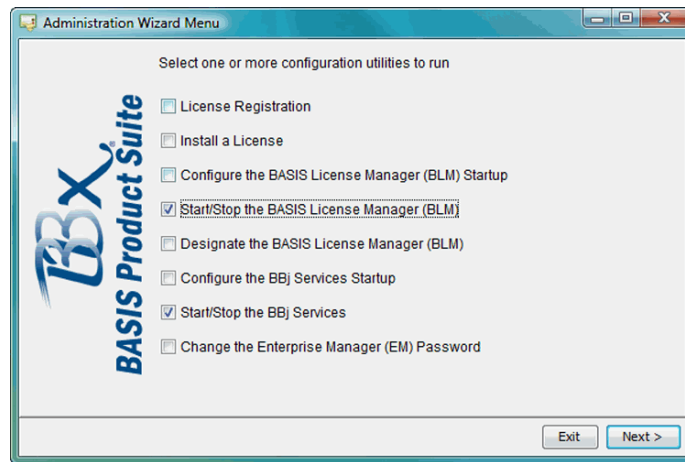
On Windows, click **Start**, select the **BASIS** program group, point to the **BBJ** submenu, then select **Admin** to launch the Administration Wizard.

On Linux or UNIX, enter `cd /opt/osas/bbj/bin` at the prompt to change to the /bin directory (if you installed OSAS in a different location, substitute that location), then enter `.admin` at the prompt to launch the wizard.

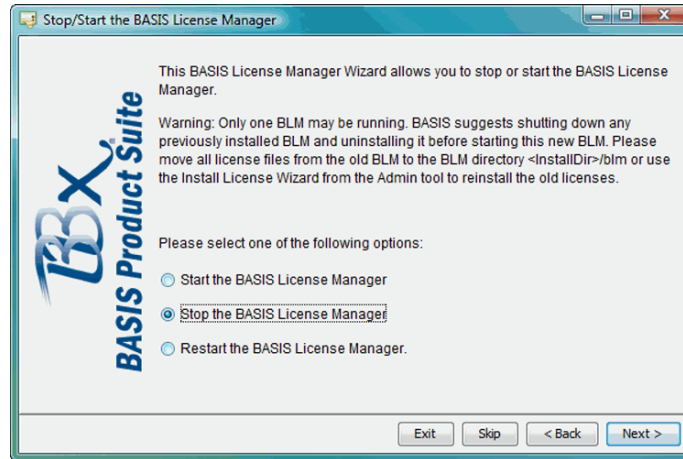
On Mac OS X, double-click **BASIS-Admin** on the Applications menu to launch the wizard. You access the Applications menu by pressing **Apple+Shift+A** from anywhere in Finder.



2. When the Administration Wizard screen appears, select **Start/Stop the BASIS License Manager (BLM) Wizard** (if the BLM is present on this computer; if it is not, do not select this option) and **Start/Stop the BBj Services Wizard** and click **Next** to continue.



3. When the Stop/Start the BASIS License Manager screen appears, select **Stop the BASIS License Manager** and click **Next**.



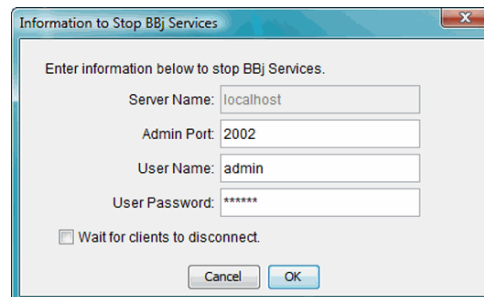
If the BLM is not present on this computer, skip to step 5.

4. A message appears when the BLM stops successfully. Click **OK** to continue.

5. When the Start/Stop BBj Services screen appears, select **Stop BBj Services** and click **Next** to continue.



6. When the Information to Stop BBj Services screen appears, enter the user name and password to use to stop BBj Services, then click **OK**.



Check the **Server Name** and **Port** to make sure these values are correct. Select the check box if you want to wait for any client machines connected to the server to disconnect before stopping the services. If no other computers connect to this machine, leave the check box blank.

7. A message appears when BBj Services stops successfully. Click **OK**.

8. When the Wizard Process Complete screen appears, click **Finish** to exit the Administration Wizard.
9. If you are uninstalling BBJ on Linux or UNIX, set the JAVA_HOME environment variable so that the uninstaller can locate the JRE. Enter this command at the prompt (substituting the directory in which you installed Java; the path used below is only an example):

```
# export JAVA_HOME=/opt/java
```

Enter only the home directory in which you installed Java; the installation program automatically adds any other directories it needs to the path name.

In Windows and Mac OS X, the uninstaller automatically detects the JRE, so no additional steps are necessary.

10. Start the OSAS uninstaller.

On Windows XP, open the Control Panel and double-click **Add or Remove Programs**. When the program listing appears, select **OPEN SYSTEMS Accounting Software v7.6** and click **Change/Remove** to launch the uninstaller.

On Windows Vista and Windows 7, open the Control Panel and double-click **Programs and Features**. When the program listing appears, select **OPEN SYSTEMS Accounting Software v7.6** to launch the uninstaller.

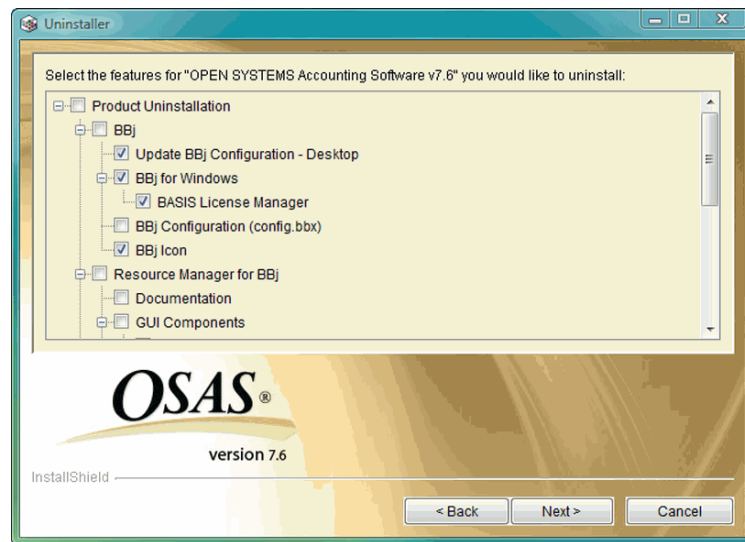
On Linux or UNIX, change to the **/osas/_uninst** directory within the directory in which you installed OSAS, then launch the uninstaller. Enter these commands at the prompt (remember to substitute the correct directories as necessary):

```
# cd /usr/osas/_uninst
# ./uninstaller.sh
```

On Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

```
cd /Applications/OSAS760/_uninst
./uninstaller.sh
```

11. When the Welcome screen appears, click **Next**.
12. Select the components to uninstall. Select the check boxes next to the components to uninstall, clear the check boxes next to the components you want to keep. Click **Next** when you finish.



Make sure the BBJ component check boxes are all selected, except the **BBj Configuration (config.bbx)** option. In most cases, clear the check boxes for all the remaining components—you select the components to reinstall or to leave alone when you use the OSAS installation wizard to reinstall OSAS components. You do not have to uninstall OSAS components first before you reinstall or repair them.

13. When the summary screen appears, review the list of components you have selected to uninstall, then click **Next** to begin the uninstallation process.

If you notice any mistakes, click **Back** to return to the selection screen to make corrections.

14. A message appears when the components you selected are uninstalled successfully. Click **Finish** to exit the wizard.

15. If you use Windows, change the rights of the user account you set up for BBJ Services to **Administrator**. This is a temporary change that allows BBJ Services to reinstall correctly. You'll change these rights back at the end of the reinstallation to secure your system.
16. If you use Windows, restart the operating system and log in as the user account you created for BBJ Services. If you use Linux or UNIX, log in as root.
17. Insert the installation DVD into your DVD-ROM drive.
 - In Windows, the OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.
 - In Linux or UNIX, mount the DVD-ROM to a drive that exists on your system, and change to the DVD directory. Enter these commands:

```
# mount /dev/cdrom /mnt/cdrom
# cd /mnt/cdrom/
```

In the above example, the **/mnt/cdrom** mount directory must exist before you can mount the DVD-ROM.

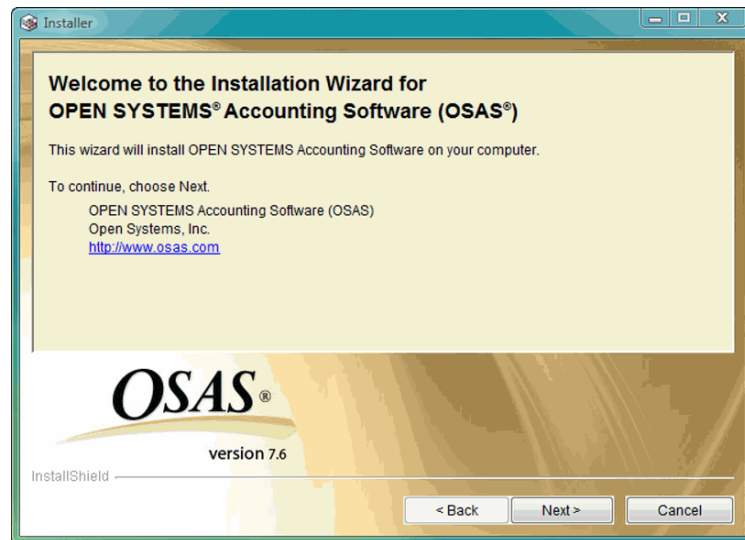
When the listing of files on the DVD appears, enter the installation script, **# ./osasinstall.sh**, at the prompt.

- In Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

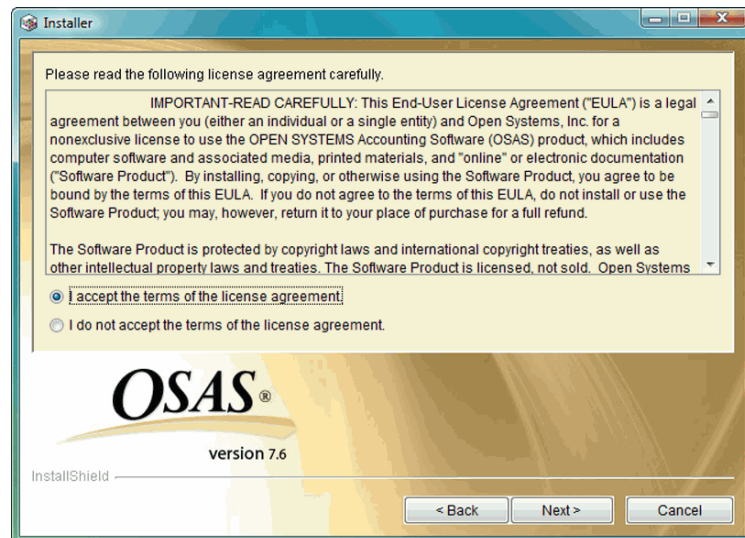
```
Mac OS X      cd /Volumes
               cd OSASv76_Beta
               umask 0
```

Enter the installation script, **# ./osasinstall.sh**, at the prompt.

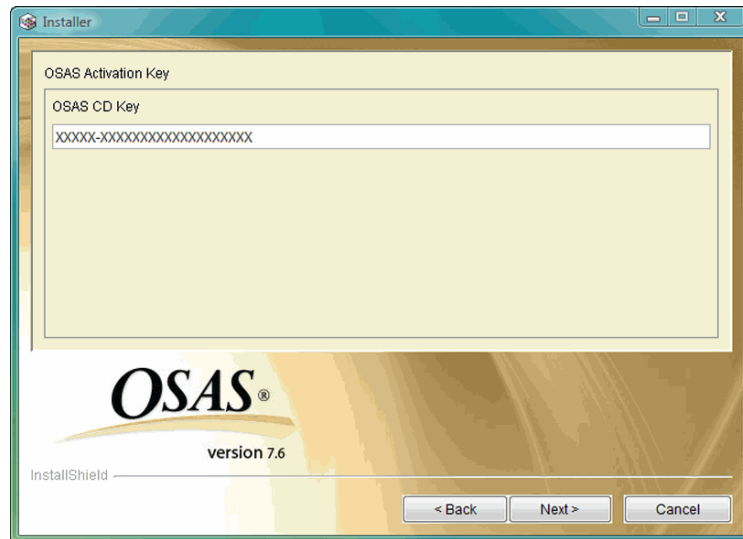
18. When the Welcome screen appears, click **Next** to begin the install.



19. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

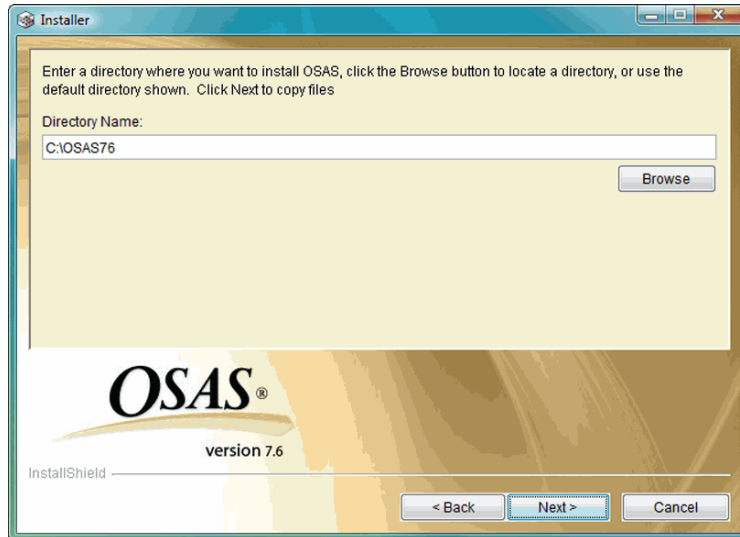


20. Enter your OSAS activation key exactly as it appears on the License Registration Form. Please note—the key is case-sensitive.

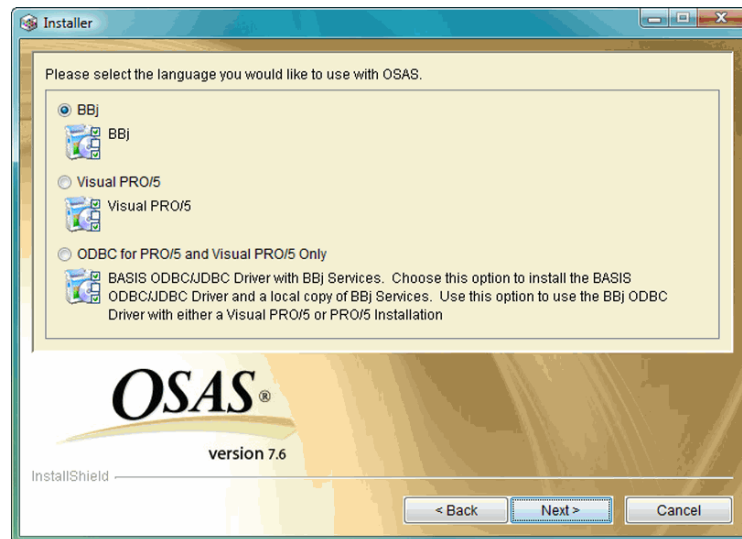


Click **Next** to continue.

21. Select the directory path in which you originally installed OSAS and click **Next**. You can also click **Browse** to navigate to this directory and enter the path automatically.

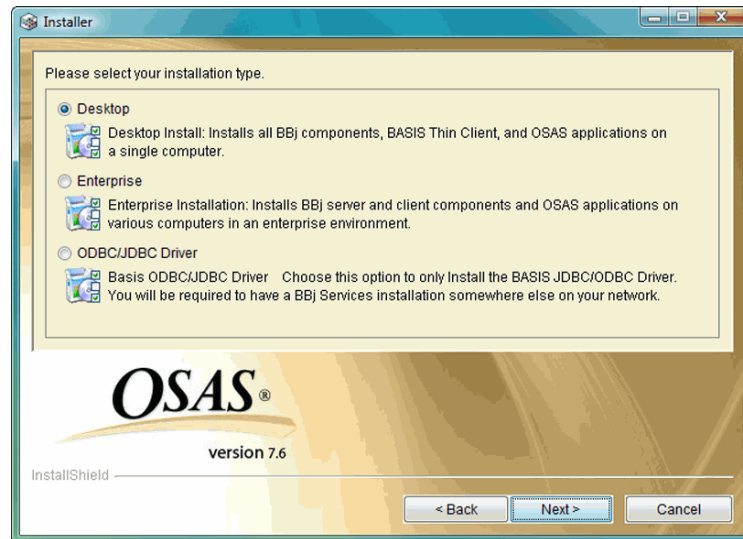


22. If you are installing OSAS on Windows, select the language platform on which to install OSAS. Select **BBj** and click **Next** to continue.



This screen does not appear if you use Linux, UNIX, or Mac OS X.

23. Select the type of the original installation (**Desktop** or **Enterprise**) and click **Next** to continue.

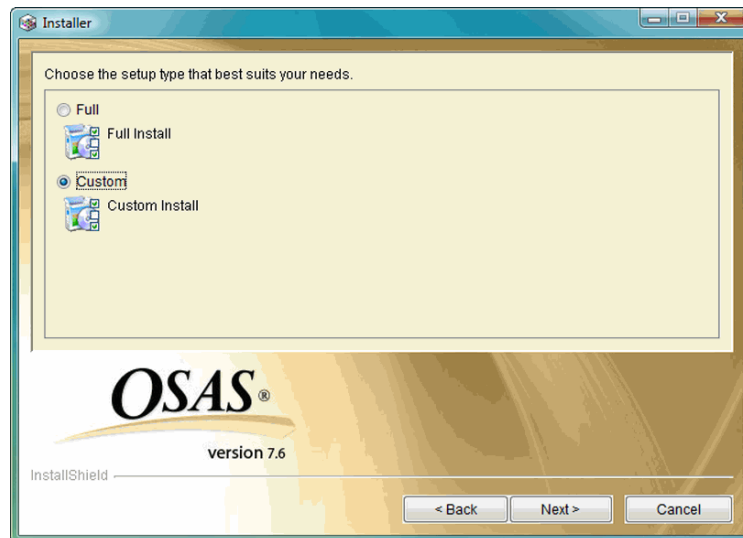


If you select **Enterprise**, additional screens appear where you select the setup type (client or server) and server type to install (combined, data server only, or application server only).

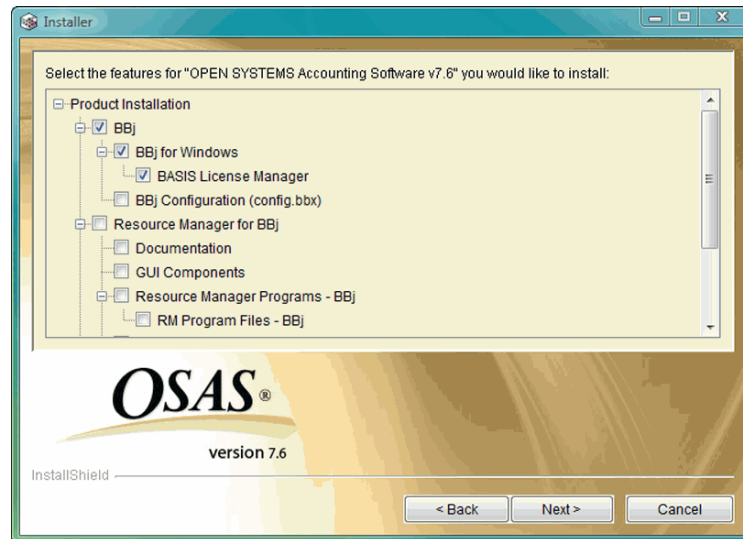
Keep in mind that if you are reinstalling the data server or a thin-client, you are reinstalling only BASIS components on that machine—there are no additional OSAS components to reinstall on these setups. In other words, the **Custom** OSAS installation option that you use to reinstall OSAS components appears only when you reinstall a desktop installation, a combined data and application server, or the application server.

24. If you selected the **Client Setup** Enterprise setup type option, enter the OSAS thin client information to use to access the data and application server. See page 3-92 for details on the information you need to enter. When you finish, skip to step 29.

25. If you selected the **Desktop** installation type or the **Combined** or **Application Server** Enterprise setup type option, the Full or Custom installation options appear. Select **Custom** and click **Next** to continue.



26. Select the BBJ and OSAS features to reinstall. Make sure you clear the **Resource Manager Data** check box to avoid overwriting your data files.



Make sure you select the BBJ check box to reinstall BBJ Services.

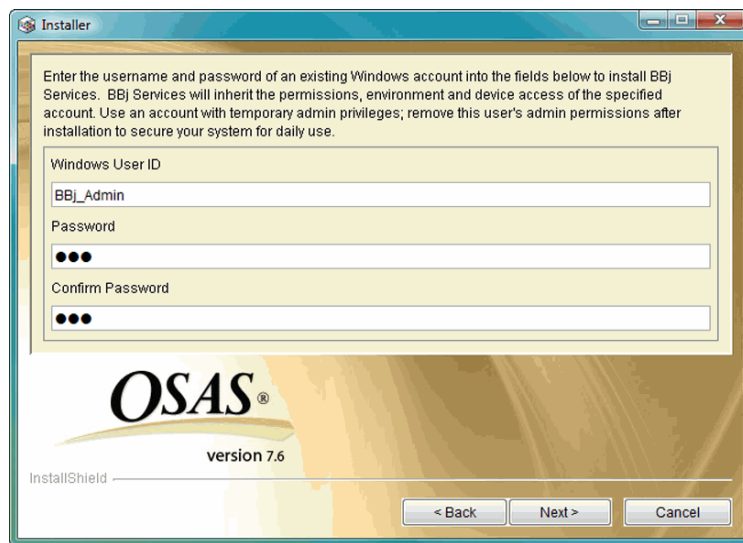
Note: Clear the **Resource Manager System Components**, **Resource Manager Data**, **Data Dictionary Files**, and **BBj Configuration (config.bbx)** check boxes so that you do not overwrite (and thus delete) your OSAS system setup files (in the \sysfil directory), data files, \RWdata data dictionary files, and the config.bbx file.

Use the other Resource Manager check boxes as needed to reinstall the OSAS .PDF application guides, graphical interface files, Resource Manager programs, and sample data files. If these components were working correctly, you do not need to reinstall them and can clear these check boxes.

- Select **Documentation** to reinstall all files in the \Document directory.
- Select **GUI Components** to reinstall all files in the \gui directory.
- Select **RM Program Files-BBj** to reinstall files in the \progRM directory.
- Select **Sample Data** to reinstall files in the \sample directory.

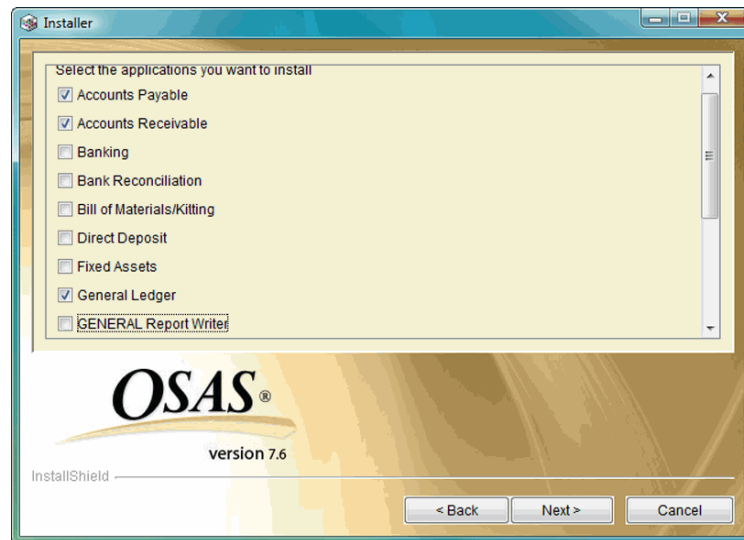
To reinstall all OSAS application program files in the \progXX directories, select the **Applications** check box at the bottom of the list. To repair specific application components, use the **Install Applications** function within OSAS instead to reinstall only those components. See page 6-9 for details.

27. If you use Windows, enter the Windows user ID and password to use for BBj Services.



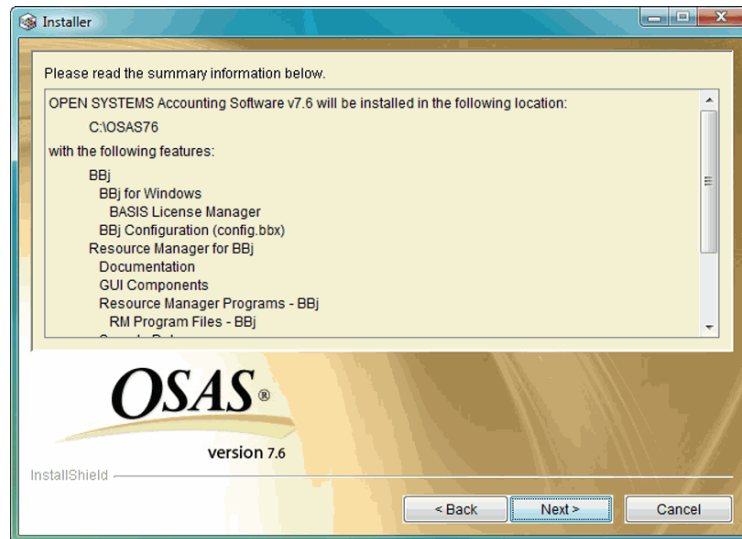
This screen does not appear if you use Linux, UNIX, or Mac OS X.

28. If you selected the Applications check box above, select the applications to reinstall. Clear the check box if you do not want to reinstall that application. Click **Next** to continue.



Note: If your OSAS activation key includes CJC, a message appears after you click **Next** if you select both the **Contractors' Job Cost** and **Job Costing** check boxes. To avoid problems with processing, you must install or re-install one or the other, but not both at the same time.

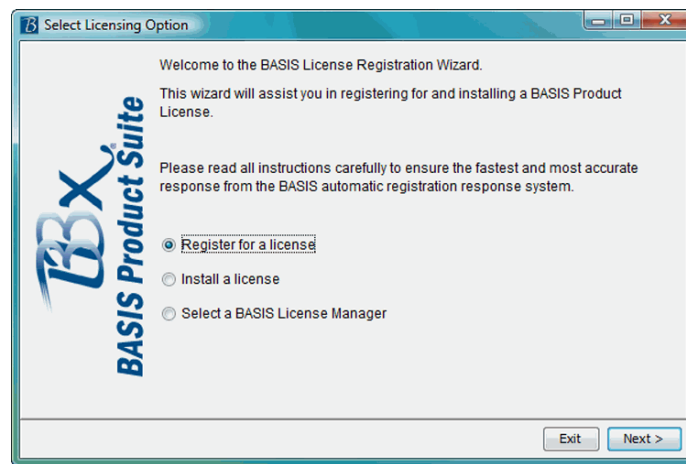
29. When the summary screen appears, check the list of components that will be reinstalled. If the list is correct, click **Next** to begin the reinstallation process.



If you notice any mistakes, click **Back** to return to previous screens to select the components to reinstall.

30. If you are reinstalling BBj Services on a desktop installation, on a combined application/data server, or on the application server, you must install your BASIS license or point BBj Services at the BLM in order for OSAS to work correctly.

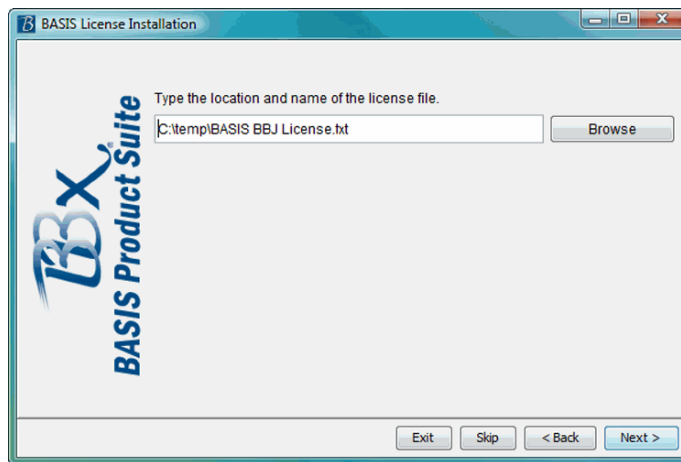
When the Register for a BASIS License screen appears, select the method to use to register and install your license.



- Select **Install a License** to reinstall your existing license file and click **Next** to continue. Then continue with step 31.
- Select **Select a BASIS License Manager** to point the installation at your existing BLM (located on an external server) and click **Next** to continue. Then skip to step 32.

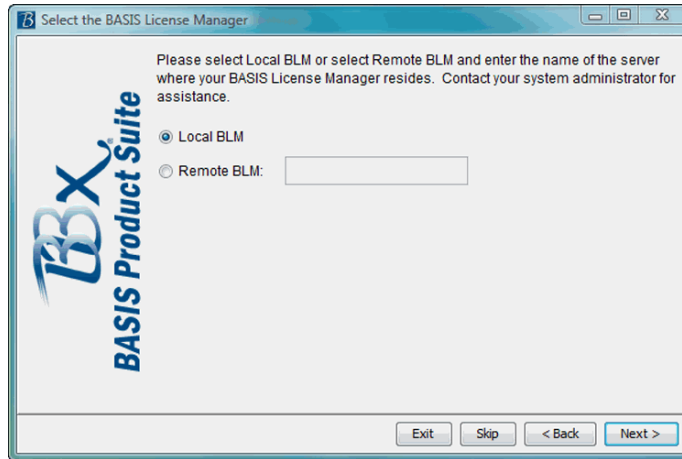
31. If you selected **Install a License** above, a message appears stating that you can complete the installation only if you have already received and registered a BASIS License. Click **Yes** to continue.

When the Install a BASIS License screen appears, enter the path to the directory in which your license file is stored, or click **Browse** to navigate this directory and enter it automatically.



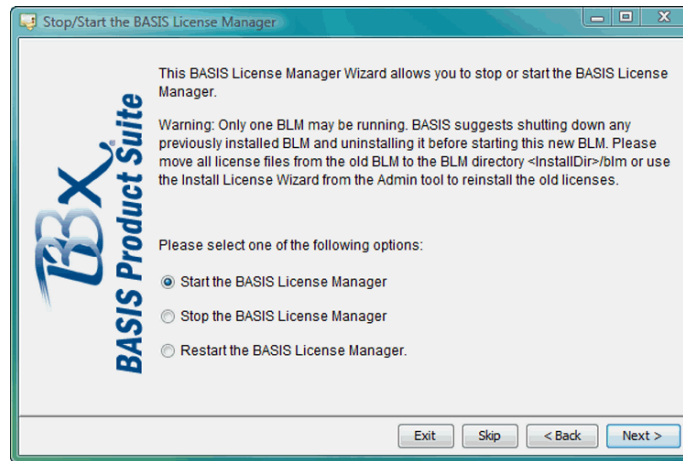
A message appears after you click **Next** to alert you that your license has been installed successfully and asks whether you want to install another. Click **No** to continue, then proceed to step 33.

32. If you selected **Select a BASIS License Manager** above, enter the name of the server on which the BLM is located and click **Next** to continue.



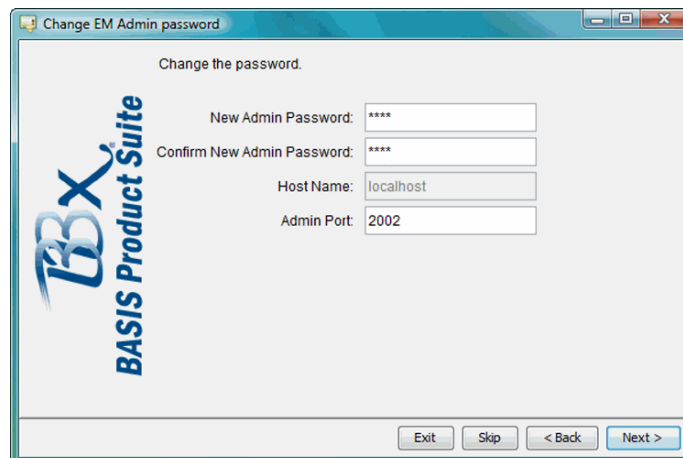
The "BASIS License Manager installation successful" message appears after you click **Next**. Click **OK** to continue.

33. If the Start/Stop the BASIS License Manager screen appears, select **Start the BASIS License Manager** and click **Next** to continue.



A message appears when the BLM starts successfully. Click **OK** to continue.

34. When the Change EM Admin Password screen appears, enter a new password to use as the default password for the BBJ Enterprise Manager admin user and click **Next** to continue.



During installation, the wizard installs all BBJ components, including the BBJ Enterprise Manager, an administrative program you can use to optimize how BBJ works. Enterprise Manager is initially installed with an **admin** user, which is given the password **admin123**. Change this password to increase your system's security.

Make a note of the new password in a safe location for your reference later when working with Enterprise Manager.

If you want to keep the default **admin123** password, enter it into the two password boxes on the screen.

35. A message appears when the password for Enterprise Manager is changed successfully. Click **OK** to continue.
36. After you complete BASIS license registration and installation, the installation program automatically installs the remaining components and the OSAS applications you selected.
37. When all OSAS components have been reinstalled successfully, a message appears. Click **Finish** to exit the installation program.
38. If you use Windows, change the access group on the user account you set up for BBJ Services from **Administrator** to **User** to secure your system and prevent unauthorized access.

After changing the access group for the BBJ user account, make sure that user still has full permissions for the directory in which you installed OSAS. Check the directory's properties and give this user full access, if needed.

Reinstallation is now complete. Start OSAS and check your data files to make sure that no information is missing and that all functions respond as they should.

Reinstalling the VPRO/5 Interpreter (Windows)

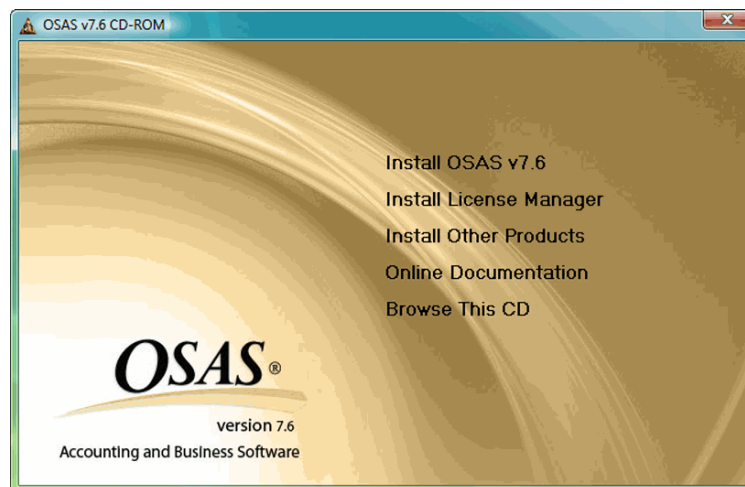
Unlike reinstalling the BBj interpreter, you do not need to uninstall any components before you reinstall the VPRO/5 (Visual PRO/5) interpreter on Windows. You can reinstall the VPRO/5 interpreter along with any OSAS components overtop the existing ones while retaining those that work correctly.

You must reinstall the VPRO/5 interpreter from the same workstation you used to install Resource Manager originally. Also, you must reinstall from Windows using the OSAS DVD—not from within OSAS.

The instructions in this chapter deal only with reinstalling VPRO/5. If you need to reinstall the BASIS License Manager (BLM), turn to Chapter 7.

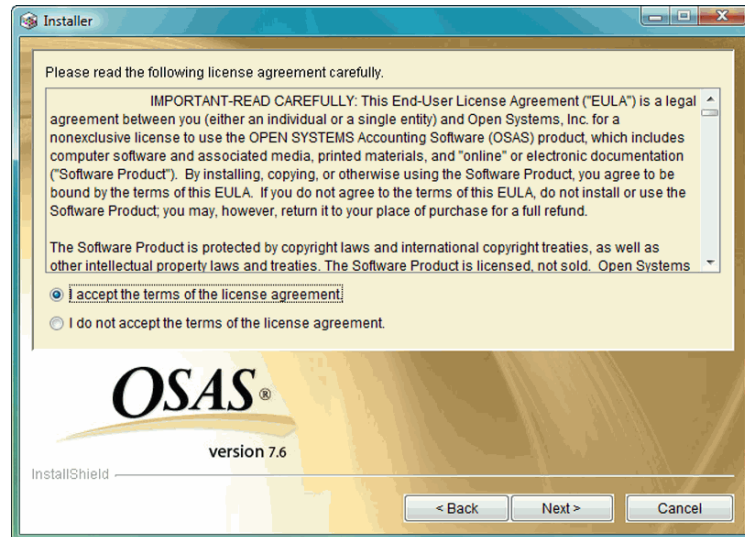
Follow these instructions to reinstall the VPRO/5 interpreter on Windows:

1. Start Windows and log in as an administrator.
2. Insert the installation DVD into your DVD-ROM drive. The OSAS installation menu should appear automatically.

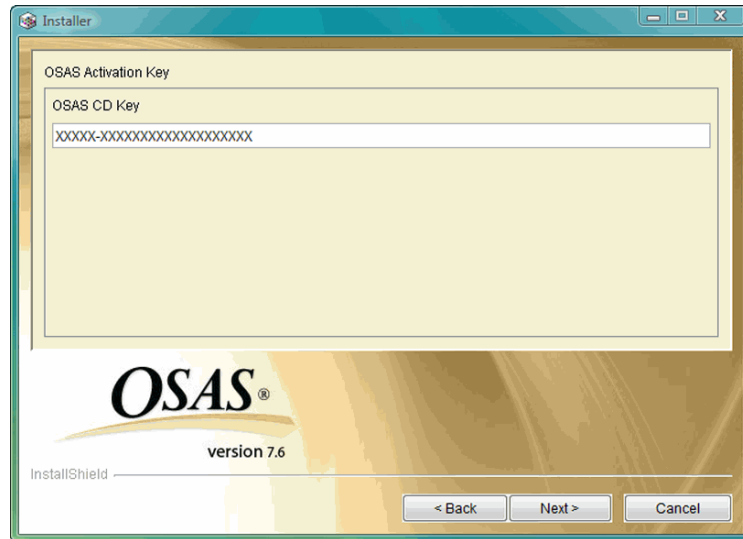


If the OSAS installation menu does not appear automatically, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**.

3. When the installation menu appears, double-click **Install OSAS v7.5** to start the installation program.
4. When the Welcome screen appears, click **Next** to begin the install.
5. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

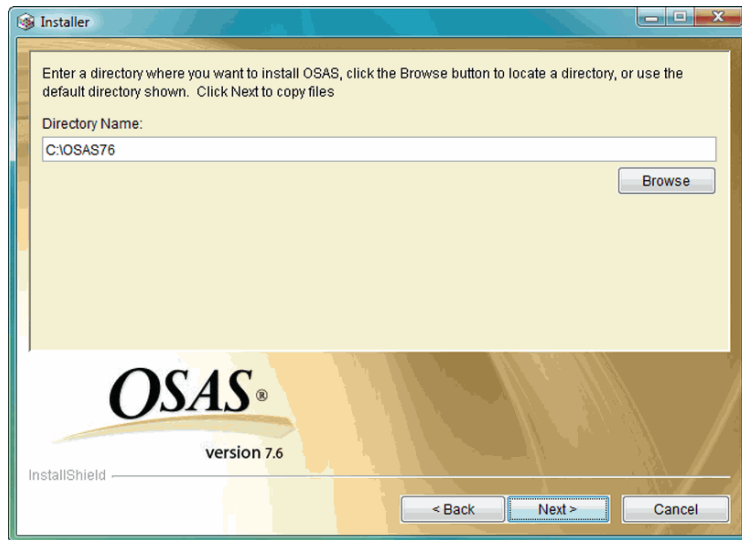


6. Enter your OSAS activation key exactly as it appears on the License Registration Form. Please note—the key is case sensitive.

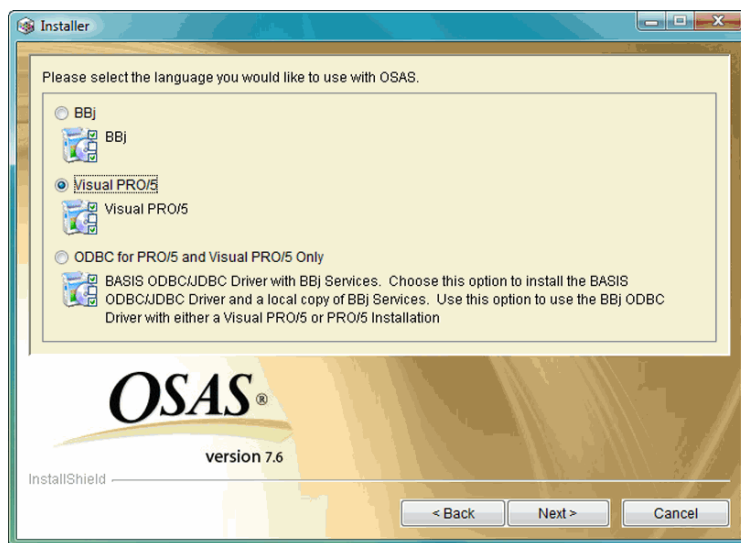


Click **Next** to continue.

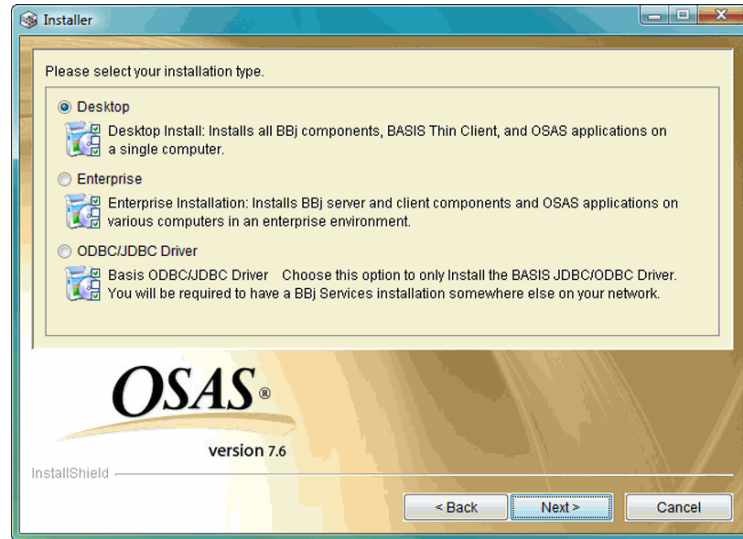
7. Select the directory path in which you originally installed OSAS and click **Next**. You can also click **Browse** to navigate to this directory and enter the path automatically.



8. Select **Visual PRO/5** as language platform on which to install OSAS and click **Next** to continue.

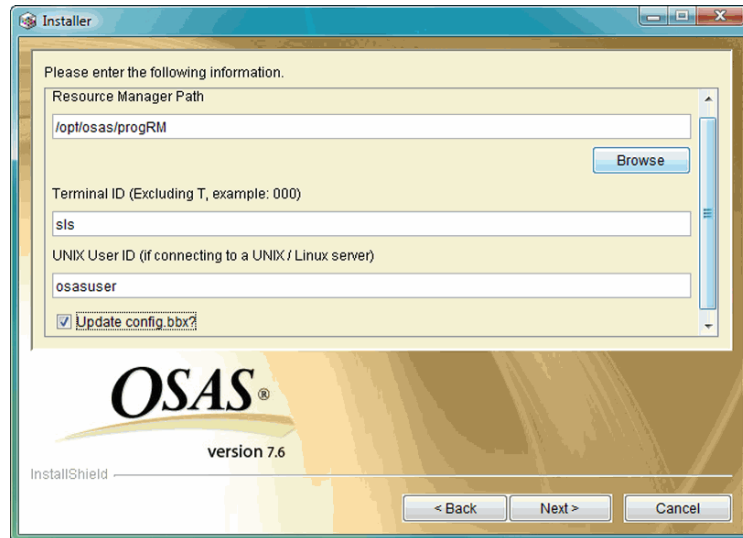


9. Select the original installation's type (**Desktop** or **Enterprise**) and click **Next** to continue.



If you select **Enterprise**, a second screen appears where you select the setup type (client or server).

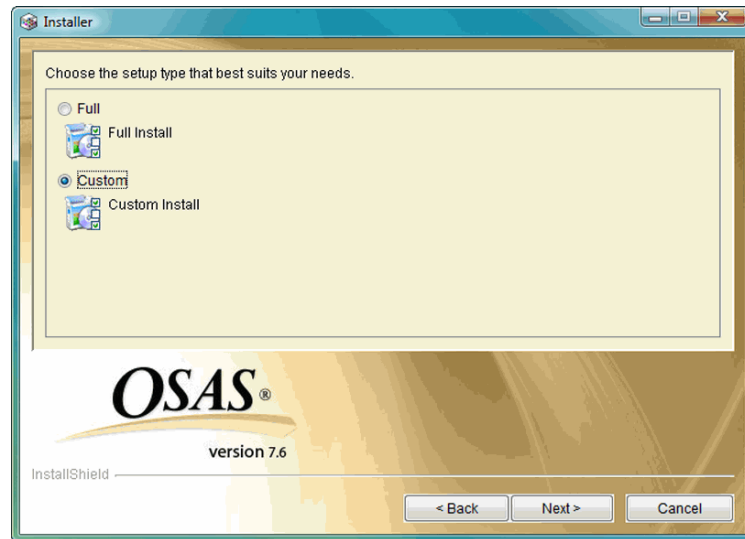
10. If you selected the **Client Setup** Enterprise setup type option, you need to enter information about the servers this workstation connects to when the screen below appears to reinstall the client workstation.



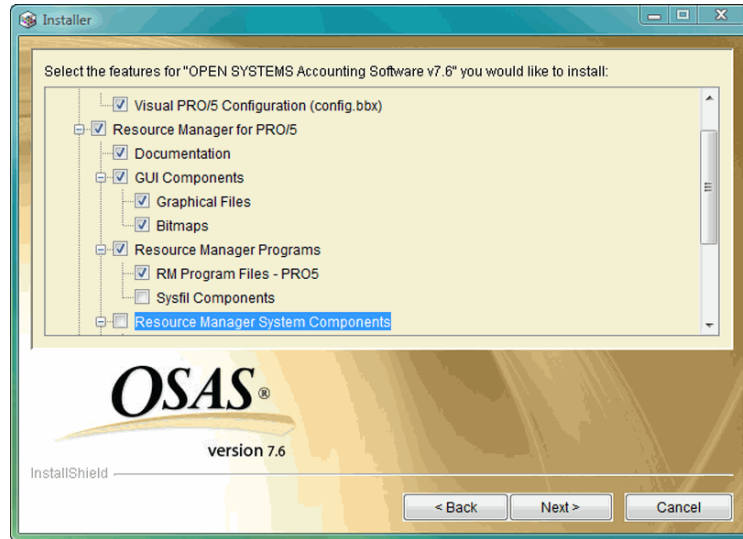
Enter the following information and click **Next**, then skip to step 14.

- In the **Resource Manager Path** field, enter the directory path to the Resource Manager **\progRM** directory on the file server. This path must be to a drive mapped to the server. When you map drives, use the same drive letter for every workstation that accesses Resource Manager.
- In the **Terminal ID** field, enter the ID to assign to this workstation (for example, **003**). You can enter up to three characters. The system adds the "T" to the beginning of the terminal ID automatically.
- If you use a Linux/UNIX data server, enter the **UNIX User ID** that this workstation uses to connect to that server. Leave this field blank if you use a Windows data server.

- Select the **Update config.bbx?** check box to automatically update the config.bbx file on the file server with this workstation's terminal device information. If you leave this check box blank, you need to manually update the config.bbx file later using the **Devices** function.
11. If you selected the **Desktop** installation type or the **Server Setup** Enterprise setup type, the Full or Custom installation options appear. Select **Custom** and click **Next** to continue.



12. Be sure to select the Visual PRO/5 check boxes for re-installation. If you do not want to reinstall any other features, clear those check boxes.



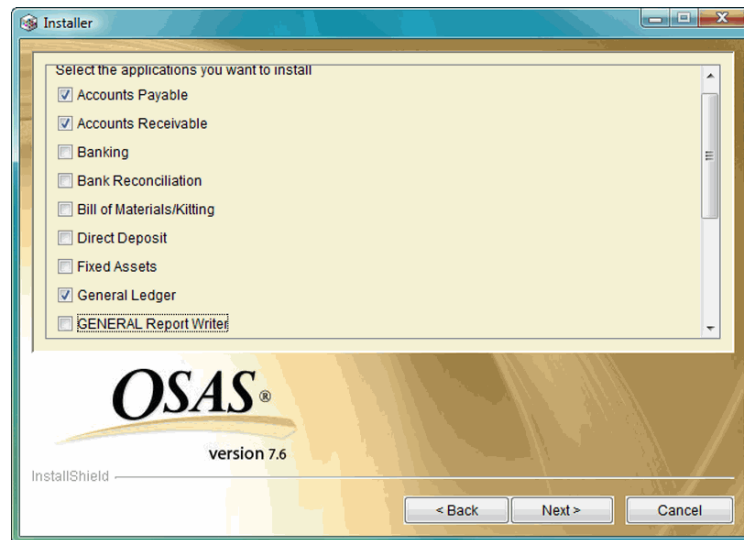
Note: Clear the **Sysfil Components**, **Resource Manager System Components** (all check boxes), **Resource Manager Data**, and **Data Dictionary Files** check boxes so that you do not overwrite (and thus delete) your OSAS system setup files, data files, and \RWdata data dictionary files.

Use the other Resource Manager check boxes as needed to reinstall the OSAS .PDF application guides, graphical interface files, Resource Manager programs, and sample data files. If these components were working correctly, you do not need to reinstall them and can clear these check boxes.

- Select **Documentation** to reinstall all files in the \Document directory.
- Select **GUI Components** to reinstall all files in the \gui directory.
- Select **RM Program Files-PRO5** to reinstall files in the \progRM directory.
- Select **Sample Data** to reinstall files in the \sample directory.

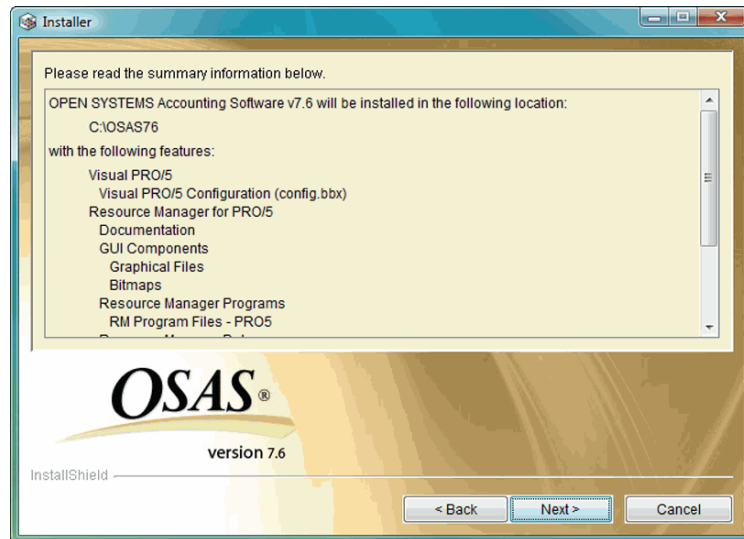
To reinstall all OSAS application program files in the \progXX directories on desktop installations, select the **Applications** check box at the bottom of the list. If you need to repair specific application components or reinstall applications on the file server, use the **Install Applications** function within OSAS instead to reinstall only those components. See page 6-9 for details.

13. If you selected the Applications check box in the previous step, select the applications to reinstall. Clear the check box if you do not want to reinstall that application. Click **Next** to continue.



This screen does not appear if you are reinstalling Resource Manager on the program file server. To reinstall applications on the program file server, use the **Install Applications** function within OSAS from a client workstation.

14. When the summary screen appears, check the list of components that will be reinstalled. If the list is correct, click **Next** to begin the reinstallation process.



If you notice any mistakes, click **Back** to return to previous screens to select the components to reinstall.

15. When all selected components have been reinstalled successfully, a message appears. Click **Finish** to exit the installation program.

Reinstalling the PRO/5 Interpreter (Linux/UNIX)

While physically at the main Linux or UNIX console, follow these steps to reinstall the Linux/UNIX PRO/5 interpreter:

1. Log in as root and enter the root password.
2. Set user permissions masking and change to the root directory by entering these commands at the prompt:

```
# umask 0  
# cd /
```

3. Insert the OSAS installation DVD into the DVD-ROM drive and mount it to a path that exists on your system. For example, in the table below, the sample mount directory **/mnt/cdrom** must exist before you can mount the DVD-ROM drive. Enter this command (as appropriate for your operating system) at the prompt:

Linux:	# mount /dev/cdrom /mnt/cdrom
SCO6	# mount /dev/cd0 /mnt/cdrom

4. Enter these commands to create and change to a /tmp/OSAS directory:

```
# cd /tmp  
# mkdir OSAS  
# cd OSAS
```

5. Copy the Resource Manager .tar file for your operating system from the DVD to your hard drive using one of the commands below:

Linux:	# cp /mnt/cdrom/UNIX/LINUXRM/RM.TAR
SCO6	# cp /mnt/cdrom/UNIX/SCO6RM/RM.TAR

6. Extract the files from the Resource Manager .TAR file by entering this command at the prompt. (If this command does not work, consult your operating system manuals.)

SCO6 and **# tar xvf RM.TAR**
Linux:

7. Make sure that no one else is using OSAS. If anyone is using OSAS, the interpreter will not be updated correctly.
8. Copy the pro5* files from the /tmp/OSAS directory to the /progRM directory of your existing OSAS installation by entering this command (remember to substitute the correct directory):

cp pro5* /usr/OSAS/progRM

9. Change to the /progRM directory and copy pro5b to pro5 by entering these commands (again, remember to substitute the correct directory, if necessary):

cd /usr/OSAS/progRM
cp pro5b pro5

10. Enter the command to start the activation process:

./activate

11. The PRO/5 Installation screen appears. Enter the machine name of the server on which the BLM is running.

<p style="text-align: center;">PRO/5 Installation</p> <p>Please enter the name of the server where your BASIS License Manager resides or contact your system administrator for assistance.</p> <p>redhat_server</p>

12. The following screen appears. Do not press **Enter**. Rather, wait until the activation finishes.

```
Please wait while your executable is updated ...  
  
** PRO/5 has been activated.  
Activate done
```

When the screen closes, the interpreter has been activated and the system prompt appears. You can now continue with normal operations.

Converting from Desktop to Enterprise

You can convert a desktop installation (on a single computer) to an enterprise installation (where one server is accessed from several client workstations). The procedures to convert from desktop to enterprise differ slightly based on whether you use OSAS on BBJ or on PRO/5 (VPRO/5 for Windows).

You can also “convert” a PRO/5 installation to a BBJ installation. However, the easiest way to convert a PRO/5 installation to a BBJ installation is to back up your data files, then reinstall OSAS using the BBJ language. See “Converting from PRO/5 to BBJ” on page 5-45 for details.

BBJ Installations

BBJ runs differently depending on whether you use the Desktop or Server installation. On a desktop, BBJ Services runs from the system tray under the user account you used to install OSAS initially, meaning that BBJ Services stops and restarts as that user logs on and off. On a server, BBJ Services runs as a service from a dedicated account without interruptions.

Because of this difference, the easiest way to convert a BBJ desktop installation to an enterprise environment is to back up your data files, then perform a complete enterprise installation. When you finish, you use the **Directories** function to specify the location of your data files to complete the conversion.

Note: You need to obtain a multiuser license or increase the user count of an existing license in order to allow multiple connections (as in those from client workstations) to OSAS. Consult your software provider for details.

Follow these steps to convert a BBJ desktop installation to an enterprise installation:

1. Back up your data files and BASIS license files by copying them to a safe location.
2. Use the OSAS uninstaller to remove the current BBJ Services (and any OSAS components, if you want) from the desktop. Follow steps 1–14 starting on page 5-3 to remove BBJ Services from the desktop.

3. Determine your server setup.

If you will be using a combined data/application server, turn to page 3-3 and follow the instructions there to install the server.

If you will be using separate data and application servers, turn to page 3-39 to install the data server, then move to the application server and turn to page 3-55 to install the application server.

4. Move to the first client workstation and turn to page 3-85 to install the thin client that connects to OSAS.

Alternately, you can also connect clients to OSAS using Java Web Start and a web server. See page 3-101 for details.

5. Repeat the above step for each client that connects to OSAS.
6. Edit the **Data** directories OSAS uses so that they point to the correct file path for your data files.

You can either use the Resource Manager **Directories** function to edit these paths (see page 6-4), or you can open the OSINFO.DOS or OSINFO.UNX (as appropriate for your operating system) with a text editor.

PRO/5 Installations

Because the data and application servers are separate when you use PRO/5, converting a desktop PRO/5 installation to an enterprise configuration involves a few more steps. In this process, you install the BASIS License Manager, install the PRO/5 data server, install the client software on client workstations, then use the Resource Manager **Directories** function to move your data files to the data server. In this configuration, the desktop installation becomes the new file server.

You can also convert desktop PRO/5 installations to enterprise installations by using mapped drives and installing terminals. However, this configuration bypasses the data server and can result in decreased performance and data corruption. Refer to page 2-35 and page 2-49 for details on this type of setup.

Note: In either configuration, you need to obtain a multiuser license in order to allow multiple connections (as in those from client workstations) to OSAS. Consult your software provider for details on getting a multiuser license.

Follow these steps to convert a PRO/5 desktop installation to an enterprise one:

1. If it's not already present, install the BLM and register and install your multiuser license. Refer to page 4-4, page 4-8, page 4-10, and page 4-19 for instructions.

If the BLM is already present on your system, you need only to install the new license to update the user count. See page 7-7 for details.

2. Install and start the OSAS data server. Refer to the instructions on page 4-21 and page 4-27 to install the data server on Windows.

You can install the data server either on the same computer as the original OSAS installation or on another server, regardless of the operating system it uses. If you want to use the data server on a Linux or UNIX server, follow the instructions on page 4-72 to install the data server on a computer that uses one of these operating systems.

3. Move to the first client workstation and turn to page 4-36 to install the software the client needs to connect to OSAS.
4. Repeat step 3 for each client workstation.
5. On the last workstation, launch OSAS and select **Directories** from the Resource Manager **System Setup** menu, then change the **Data** paths to the location on the data server that you want to use to store your data files. Click **Write** (or press **W**) to save your changes.

When the message appears, select the action you want to take on your existing files. Select **Move** to move them from the old location to the new; or select **Copy** to copy them to the new location, leaving a copy of the originals in the old location. Do not select **None**.

See page 6-4 for more information on using the **Directories** function to edit the data file path, use data server pathing, or move your data files to the new location automatically.

Converting from PRO/5 to BBj

Just as you can convert a desktop installation to an enterprise configuration, you can also “convert” a PRO/5 installation to BBj. However, this process is not so much a conversion as it is a re-installation—the easiest way to convert from PRO/5 to BBj is to back up your data files, uninstall the current PRO/5 installation, then install a new BBj installation.

Note: If your programs are modified, **do not** follow the steps below. Instead, contact your Open Systems software provider or Open Systems Technical Support for help converting from PRO/5 to BBj.

Follow these steps to convert from PRO/5 to BBj:

1. Copy your data files to a safe location on your hard drive or network.
2. If it's present, uninstall and remove the current BASIS License Manager (BLM).
3. Uninstall and remove the current OSAS PRO/5 installation.

You can leave the current PRO/5 installation alone, if you like, provided that you install OSAS on BBj in a new directory location. If you do not remove the PRO/5 installation, be sure to update all shortcuts on client workstations after installation so that they use the new BBj install.

4. Install OSAS on BBj. Refer to the instructions in Chapter 2 to install OSAS on BBj on a single desktop; or use the instructions in Chapter 4 to install OSAS on BBj in an enterprise environment.

When you register and install your BASIS license, you can point the installation to an existing BLM (if you have one located on another computer on your network), or you can install your existing license (the one you copied in step 1).

CHAPTER 6

6

Installing Applications	6-3
Removing Applications	6-13
Setting Up Resource Manager	6-15

Installing Applications

The OSAS 7.6 installation wizard is designed to be as simple and as automated as possible, allowing you to install Resource Manager and OSAS applications at the same time and in the correct order. However, if you did not install applications when you initially installed OSAS, or you installed OSAS on PRO/5 on Linux, UNIX, or on a Windows server, use the **Install Applications** function to install these base applications.

You can also use the **Install Applications** function to re-install applications (including RM) or specific application components, or to install OSAS updates.

If you need to remove an application, use the **Remove Applications** function.

Use the information in this section to install an application, re-install applications or application components, and remove applications from the OSAS system.

Installing Applications

Use the **Install Applications** function to install or re-install applications (including Resource Manager), to update existing applications with new versions, or to install OSAS updates. This function installs from the path defined in the Resource Manager **Directories** function.

For applications in which the order of installation is important (Accounts Receivable and Sales Order, for example), this function automatically installs applications in the correct order and warns you when you also need to install complementary applications if they are not already present on your system.

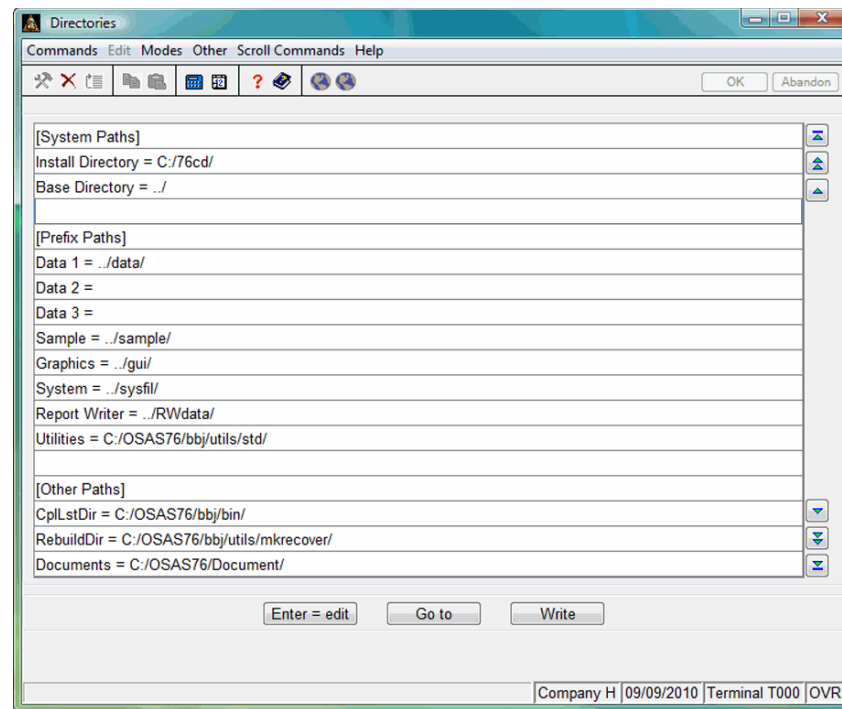
Turn to page 6-6 for details on installing applications.

Note: Before you install applications or updates, you must first identify the installation path for the DVD drive or update directory in the **Directories** function. In Windows, enter the drive letter of the DVD-ROM drive or the directory to which you copied the update as the installation path. In Linux or UNIX, enter the DVD-ROM root directory (for example, **/mnt/cdrom**) or the directory to which you copied the update. Turn to page 6-4 for information on the directory paths you need to pay close attention to.

Editing Directories

OSAS installs applications, accesses programs, and stores data in the directories noted in the **Directories** function. To edit the installation and data directories so that OSAS installs from the correct location and writes data to the correct directories, follow these steps:

1. Select **Directories** from the Resource Manager **System Setup** menu.



2. When the Directories screen appears, press **Enter** to edit the selected directory:
 - In the **Install Directory** path, enter the directory of the DVD-ROM drive on the workstation from which you will be installing applications.

- If you use OSAS in an enterprise environment, make sure the **Data**, **Sample**, **Graphics**, **System**, and **Report Writer** paths contain the correct file paths to the /data, /data2 and /data3 (if used), /sample, /gui, /sysfil, and /RWdata directories on the data server. These paths are used to access data during the day-to-day operation of OSAS.

Using BBj Data Server Pathing

To use a BBj Data Server in your path names, include the server name (followed by **ssl** if you use secure connections—see page D-5) in angle brackets, followed by the drive letter (for Windows data servers) or the volume designation (for Linux, UNIX, or Mac OS X) and directory paths. For example, if your server name is *tiger*:

Windows	/<tiger>D:/osas/data
Linux/UNIX	/<tiger>/u/apps/osas/data
Mac OS X	/<tiger>/u/applications/osas/data

Note: When entering directory paths in OSAS on BBj, enter the actual physical path to the directory on the server. Do not use mapped drives. Because BBj runs as a service, it cannot recognize mapped drives.

Using PRO/5 Data Server Pathing

To use a PRO/5 Data Server in paths, include the server name and service name (always **pro5srv** as noted in the **services** file) separated by a comma and enclosed in angle brackets. This is followed by a drive letter (for Windows data servers) or the volume designation (for Linux/UNIX or Novell data servers). For example, if your server name is *tiger*:

Windows	/<tiger, pro5srv>D:/osas/data
Linux/UNIX	/<tiger, pro5srv>/u/apps/osas/data

- Leave the **Base Directory**, **Resource Manager**, **Utilities**, and **[Other Paths]** directories as they are.
3. When you finish, click **Write** or press **W** to save your changes. When the Write Changes message appears, select **Yes**.
 4. If you changed any data paths, a second message appears. This message asks you what action you want to take because of the path change.

- Select **Copy** to copy files from the original location to the new location. This action leaves a copy of the files in the original location, although these files are no longer used and will quickly become outdated.
- Select **Move** to move the files to the new location. When you select this action, no files remain in the original location.
- Select **None** to take no action. You then need to copy any needed files to the appropriate directories manually. **Do not** select **None** if this is the first time you are changing directories.

If you use a mixed Linux/UNIX and Windows PRO/5 enterprise environment, you may not want to copy or move files on the Windows server to the Linux/UNIX Data Server as doing so overwrites existing files created when you installed the Linux/UNIX Resource Manager.

**Editing
Directories
outside OSAS**

OSAS stores directory information in the OSINFO.DOS or OSINFO.UNX file located in the **\sysfil** directory. The file that is present in that directory depends on the operating system you use. This file is a text file that you can open and edit with any text editor (such as Notepad or vi).

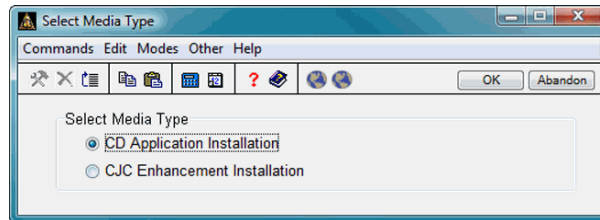
Note: If you edit this file manually and change any directories it contains, you also must copy the corresponding files to those directories manually to avoid errors in processing.

Installing Applications

Follow these instructions to install an application:

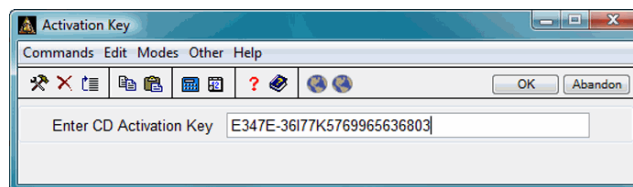
1. Select **Install Applications** from the Resource Manager **Installation and Configuration** menu.

2. If you are installing from a DVD-ROM, the Select Media Type prompt appears.



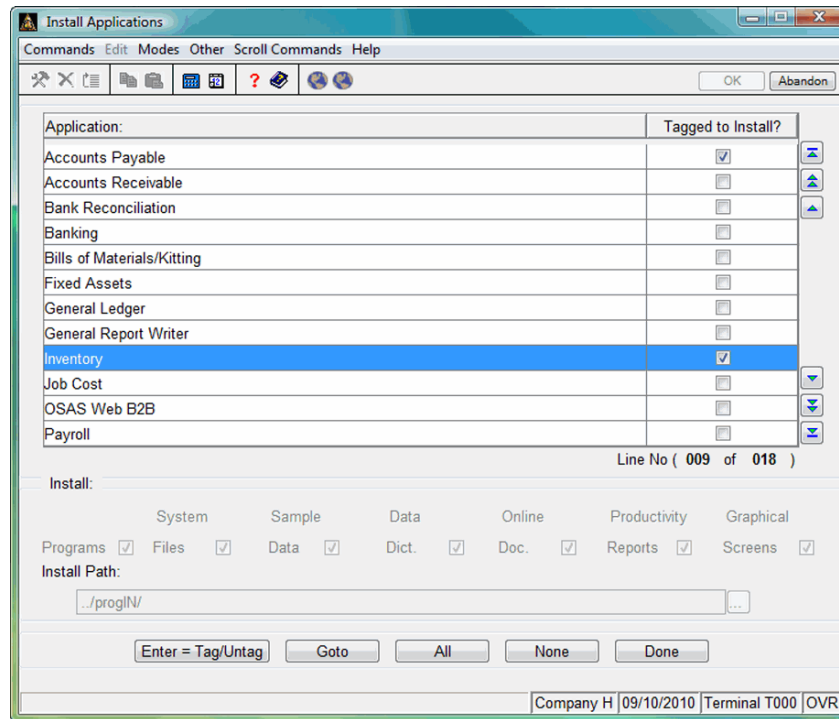
If you are installing base applications, select **CD Application Installation**. If you are installing CJC, select **CJC Enhancement Installation**. CJC uses a slightly different installation routine than base applications, and OSAS requires you to specify which method to use before you can continue. Use the **Proceed (OK)** command to continue.

3. When the Activation Key screen appears, verify the activation key that appears or enter a new one, then use the **Proceed (OK)** command to continue.



The activation key controls which applications you can install.

4. When the Install Applications screen appears, select the applications you want to install and the directories in which to install them.



Use the commands at the bottom of the screen to select applications:

- Press **Enter** to tag the selected application for installation. If an application is tagged but you do not want to install it, press **Enter** again to untag the application.

After you press **Enter** to tag individual applications, the system jumps to the directory path field at the bottom of the screen. (The application components are skipped because OSAS assumes you want to install all components the first time you install an application.) Change the directory in which the application will be installed, if necessary, then press **Page Down** to return to the application listing.

- Press **G** to jump to a specific application. This command is available only if there is more than one screen of applications.
- Press **A** to tag all applications for installation. When you use this command, OSAS installs applications in default directories.

If you want to install applications in directories other than the ones OSAS uses by default, you must tag applications individually.

- Press **N** to untag all applications.
 - Press **D** when you finish to begin the install.
5. After you select the applications to install, press **D** to begin the installation process. OSAS copies and extracts files as necessary and restarts when the installation process completes.
 6. Set up the new applications. Refer to your application guides for details.

Reinstalling Applications (including Resource Manager)

Follow these steps to reinstall an application (including Resource Manager):

1. Verify that the correct installation path appears in the **Directories** function.
2. Follow steps 1-4 in the previous section to select the application to reinstall.

If you press **Enter** to tag an application to reinstall, the system jumps to the component options at the bottom of the screen rather than to the directory path field. Applications are reinstalled in the same directories in which they were originally installed.

Select the check box (or enter **Y** in text mode) for the components you want to reinstall, clear it (or enter **N**) for those you do not. After making your selections, press **Page Down** to return to the application listing.

- Select **Programs** to reinstall all application programs (those in the **\progXX** directory) and all common programs (those in **\progRM**).

- Select **System Files** to reinstall all files in the **\sysfil** directory, which includes files shared between live and sample data (such as inquiry window definitions, help files, and menu files).
- Select **Sample Data** to reinstall all data files and information for the sample Builder's Supply company provided to help you familiarize yourself with OSAS before using your own live data.
- Select **Data Dict.** to reinstall application data dictionary files used by the ODBC Kit and data dictionary files and stock reports used by the General Report Writer application.
- Select **Online Doc.** to reinstall the application manual .PDF files.
- Select **Productivity Reports** to reinstall the application's productivity reports. These Microsoft Excel reports connect directly to OSAS data and allow you to use spreadsheet tools to manipulate the information.
- Select **Graphical Screens** to reinstall the .BRC files (in Visual PRO/5) or .ARC files (in BBj) used by OSAS graphical screens.

If you press **A** to reinstall all applications, OSAS automatically reinstalls all application components as well.

3. After selecting the applications to install, press **D** to begin the reinstallation process. OSAS copies, extracts, and removes files as necessary and restarts when the process completes.

Installing Updates

Follow these steps to install OSAS updates:

1. Download the .ZIP update file to a directory (for example, c:/temp).

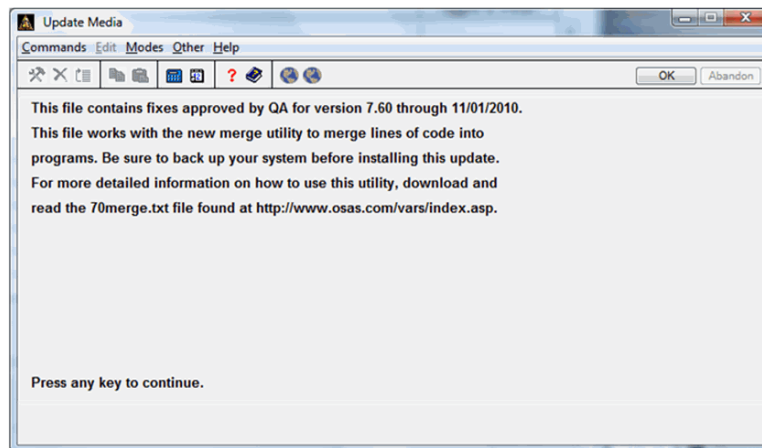
Note: Install only one .ZIP update file at a time.

2. Use the **UnZip** utility included with OSAS or another zip extraction utility (WinZip, for example) to extract the files from the .zip file you downloaded.

3. Select **Directories** from the **Installation and Configuration** menu. When the Directories screen appears, enter the directory in which you downloaded and extracted the update files in the **Install** path. Use the **Proceed (OK)** command to save the change and return to the main menu.

After installing the update, you can change this path back to the original.

4. Select **Install Applications** from the **Installation and Configuration** menu to install the update. A message similar to this one appears.



5. When the Install Applications screen appears, use the commands to select the applications and components to which to apply the update.
6. Press **D** to install the update. OSAS copies, extracts, and removes files as necessary and restarts when the update completes.

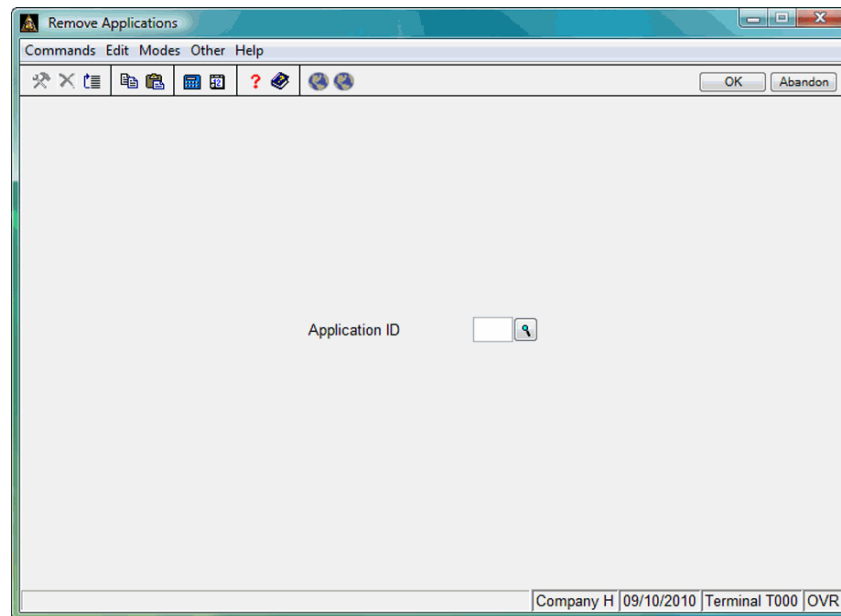
Removing Applications

Use the **Remove Applications** function to remove any application except Resource Manager from the system.

Note: This function removes the entire application from your system, including your data files. If you want to save your data files, back them up, copy them to a new directory, or do not use this function to remove the application.

Follow these steps to remove an application:

1. Select **Remove Applications** from the **Installation and Configuration** menu. The Remove Applications screen appears.



Inquiry

2. Enter the two character code for the application you want to remove and press **Enter**.
3. Because removing application removes all data files for that application as well, the system prompts you for verification before processing continues. When the verification message(s) appears, verify that you want to remove the specified application and use the **Proceed (OK)** command to continue.

After you verify the application's removal, OSAS removes the application from the system and returns you to the main menu.

Setting Up Resource Manager

After you install Resource Manager and set up the initial company information, the OSAS main menu appears. From the main menu, you must install your applications, configure the options for those applications, create data files, and set up your company's tax information. Refer to the Resource Manager guide and OSAS application guides for more information on the functions described below.

Here is a list of recommended steps you should use to complete your OSAS installation:

1. Install applications, if necessary.

If you did not install applications during OSAS installation, install them using the **Install Applications** function (see page 6-3 for more information). When you use this function, OSAS automatically installs applications in the correct order when installation order is important.

2. Check and correct the directory paths OSAS uses (if necessary).

Use the **Directories** function on the **Installation and Configuration** menu to view and edit the directories OSAS uses to store data, if needed. See "Editing Directories" on page 6-4 or refer to the Resource Manager guide for more information.

3. Create or convert data files.

For new installations of OSAS to function properly, use the **Data File Creation** function to create the data files that store the data for each company. The applications you install do not appear on the main menu until you create their data files.

If you are upgrading from an earlier version of Resource Manager, use the **Data File Conversion** function to convert those data files for use with the current version.

4. Set up additional companies.

Use the **Company Information** function to set up information about any other companies you use with OSAS.

5. Use the Resource Manager **Options and Interfaces** function to specify how Resource Manager communicates with other applications.

Option	Description
Interface to General Ledger?	If you want to be able to look up and validate the General Ledger account numbers you enter in Resource Manager, toggle this selection to YES .
Automatically check reminders on startup of OSAS?	If you want Resource Manager to check for unread reminders and display them when you start OSAS, toggle this option to YES .
Track user login activity?	Set this option to YES to keep a log file of users who log into OSAS and their terminal ID.
Do you want the system to assign automatic archive names?	OSAS automatically generates sequential file names for every file archived. Unless you keep track of archive names, you should set this option to YES .
Do you want to keep Print Manager report history?	Print Manager generates a log file for the report files you print. Set this option to YES to keep this log.
Display Print Manager control lists for:	Select ALL to list all files saved by Print Manager, USER ID to list all Print Manager files created by a particular user ID, or TERM ID to list all Print Manager files created by a particular term ID.
Keep field level Roles for EIS?	EIS allows you to set role-based permissions for particular fields. Select Yes to allow the system to import roles set up in Resource Manager to EIS field level. Select No if you do not want to use roles in EIS.
Keep value files history for EIS?	By toggling to YES , EIS will create a history file to track which fields are accessed.
Keep E-Mail History?	Toggle to YES to save e-mail message history (such as addresses, date, and subject) in the OSEL file. OSAS uses this file to print the E-Mail History Report.
Hide menu entries when access is denied?	Select YES if you want to keep functions that are excluded from a user's access code from appearing on the menu; otherwise, select NO .
Bank Account and Credit Card Number display	Choose Last 4 , Hide All , or Show All to define how bank account and credit card numbers are displayed.

Option	Description
Allow viewing of encrypted files in View File Contents?	Choose YES to allow viewing of encrypted files in the View File Contents function; choose NO to deny access.
Send E-Mails Immediately?	Select NO to save emails in the email queue before sending. Select YES to send emails immediately.
Use Report Defaults?	Select YES to use the report defaults function when producing a report. Select NO to produce reports without using the defaults function.
Prohibit Period Locking with Transactions on File?	Select YES to stop the period locking process if transactions are on file. Select NO to allow period locking regardless of transaction status.
Prohibit Application Posting/Processing for Locked Periods?	Select YES to stop applications from posting or processing transactions of periods that have been locked. Select NO to allow period transactions regardless of period locking status.
Use separate check numbers for Accounts Payable/Payroll?	Select YES to use separate check numbers for Accounts Payable/Purchase Order and Payroll accounts.
Use separate voucher numbers for Accounts Payable/Payroll?	Select YES to use separate check voucher numbers for Accounts Payable/Purchase Order and Payroll accounts.

6. Set up **Roles** (optional) from the **Installation and Configuration** menu.

Use the Resource Manager **Roles** function to control who can access application functions to protect your files from unauthorized access.

7. Set up **Users** from the **Installation and Configuration** menu.

Use the Resource Manager **Users** function to set up user IDs for the employees that are allowed to use OSAS.

8. Set up **Accounting Periods** from the **Company Setup** menu.

9. Use the functions on the Resource Manager **Sales Tax Reporting** menu to specify your tax information.

The following information should be converted with you data: **Tax Classes**, **Tax Location**, and **Tax Groups**.

10. Use the functions on the **User Setup** menu to set up your terminal ID (optional), establish the defaults settings you want to use with OSAS, verify or add the device settings for your system, and set up the file types, colors, and keyboard mappings you use. Work through the functions as appropriate for your setup—some apply only if you use text screens.

For more information on installing terminals, see “Install Terminals” on page F-1.

11. On the **System File Utilities** menu, customize the menu as necessary using the **Menus** functions.
12. Use the **Form Codes** and **Form Printers** functions, on the **Company Setup** menu, to set up codes for the forms you print multiple times and send those forms to specific printers.
13. Set up the following using the **Installation and Configuration** menu:
 - If you want to e-mail selected reports to others, use the **E-Mail Setup** function to enter information about your e-mail system.
 - Use the **User-Defined Field Setup** function to set up the customized fields your business uses. You can add user-defined fields to the Accounts Payable, Accounts Receivable, Payroll, and Job Cost applications.
14. Verify the information you have set up.

Use the appropriate functions on the **Master File Lists** menu to print lists of the information you have set up to verify that this information is correct. File these lists for your records and for later reference.

CHAPTER 7

7

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BASIS License Manager

The BASIS License Manager (BLM) manages and distributes the licenses that are required for OSAS to run. When you start OSAS, the BLM determines that a license is needed and distributes a license to your workstation.

The BLM (and a corresponding license) is required for OSAS. On Linux and UNIX systems, the BLM must be installed on each server running OSAS. On Windows, the BLM may be installed on the server running OSAS or you can point OSAS to the server where the BLM and license is located.

The BLM runs on the TCP/IP and IPX/SPX protocols. These protocols must be enabled on your workstation or network for the BLM (and OSAS) to function properly.

Use the information in this section to re-register or re-install a BASIS license for the OSAS system, or for details about increasing the user count of your license so that OSAS can grow along with your business. You'll also find information on how to stop and start the BLM when necessary.

Installing the BLM

The BLM and the required license are installed automatically when you choose a full install of OSAS on BBj. If the BLM is already installed, you can elect whether to install the BLM when you install OSAS on BBj by using the custom installation option. Likewise, use the custom installation option to reinstall the BLM, if necessary.

You install (or reinstall) the BLM manually when you install OSAS on PRO/5. Refer to page 4-4 for instructions on installing the BLM on Windows for OSAS on VPRO/5, or to page 4-54 for instructions on installing the BLM on UNIX/Linux for OSAS on PRO/5. You can reinstall the BLM over the top of an existing installation.

Reregistering/Reinstalling BASIS Licenses

Use the information in this section to reregister or reinstall a BASIS license. If you use Windows, the procedure is the same regardless of the language platform you use. If you use Linux or UNIX, the procedures differ slightly depending on whether you use BBj on a system with graphical capabilities, BBj on a non-graphical Linux or UNIX system, or PRO/5 on a Linux or UNIX system.

Windows

To reregister or reinstall a BASIS license on Windows, follow these steps while physically at the computer on which you installed the BLM:

1. If you use OSAS on BBj, select the **BASIS** program group from the **Start** menu, point to the **BBj** submenu, then select **Admin** to launch the Administration Wizard.

If you use OSAS on VPRO/5, select the **OSAS v7.6** program group from the **Start** menu, then select **Install a Basis License** to launch the BASIS license registration tool.

2. If you use OSAS on BBj, select **License Registration Wizard** when the Administration Wizard screen appears and click **Next** to continue.
3. Turn to page 2-18 and follow the steps to reregister and reinstall the license.

Linux/UNIX

OSAS on BBj Follow these steps to reregister and reinstall a BASIS license for OSAS on BBj:

1. Log in as root and enter the correct password.
2. Change to the **/osas/bbj/bin** directory. Enter **cd /opt/osas/bbj/bin** at the prompt (if you installed OSAS in a different location, substitute that location).

3. Run the BBj Administration Wizard by typing **.admin** at the prompt.
4. When the Administration Wizard prompts appear, select **License Registration wizard**, then select **Next** or press **Enter** to continue.

```
Administration Wizard

Available utility wizards are listed below.
Please select the wizards you wish to run:

[X] License Registration wizard
    [ ] Requesting a 30-day evaluation license.

[ ] License Install wizard

[ ] Select the BASIS License Manager wizard

[ ] Start/Stop the BBj Services wizard

[ ] Start/Stop the BASIS License Manager (BLM) wizard

[ ] Automatic start (inittab) of BBj Services and BLM wizard
```

5. The License Registration Information screen appears. Turn to page 2-18 and follow the steps there to enter, send, receive, and reregister the license (although these steps use graphical screens, the procedure is the same).
6. When you finish registering license information (and see the “registration successful” message), select **Finish**.
7. Open the BBj Administration Wizard again by typing **.admin** at the prompt.
8. When the Administration Wizard screen appears, select **License Install Wizard**, then select **Next** to continue.
9. The BASIS License Installation screen appears. Turn to page 2-24 and follow the steps there to enter the license file location (or the license information) and reinstall the license.

**OSAS on
PRO/5**

If you use OSAS on PRO/5 on Linux or UNIX, follow these steps to reregister and reinstall a BASIS license:

1. Log in as the root user and enter the correct password.
2. Change to the directory where the BLM is installed (the default path is **/usr/basis**). Enter these commands at the system prompt:

```
# cd /usr/basis
# ./install
```

3. The BASIS Install Main Menu appears. Enter **BLM** to continue.

```

BASIS Install Main Menu

From this menu you may go to the install menus for the following products:

      BLM      Install BASIS License Manager

      PRO5     Install PRO/5

      DS       Install PRO/5 Data Server

      EXIT     Exit installation

Please type BLM, PRO5, DS or EXIT: BLM

```

4. The following screen appears. Press **Enter** to continue.

```

BBBBBBBBB  LL      MM      MM
BB      BB  LL      MMMM  MMMM
BB      BB  LL      MM  MMMM  MM
BBBBBBBBB  LL      MM      MM  MM
BB      BB  LL      MM      MM
BB      BB  LL      MM      MM
BBBBBBBBB  LLLLLLLLLL  MM      MM

This installation procedure will assist you in installing and licensing
PRO/5 and PRO/5 Data Server for your particular configuration.

Please have your Serial Number(s) and Authorization Number(s) ready.
These numbers are provided by BASIS on the license registration form
sent with the product(s).

Enter to continue

```

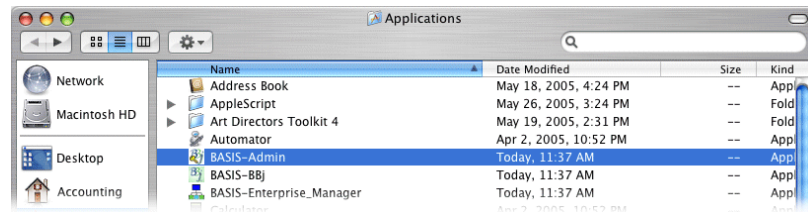
5. The BASIS License Manager Install Menu appears. Continue registering and reinstalling the new license by following the instructions under “Register the BASIS License” on page 2-54.

Note: After you reregister and reinstall the new license, you must stop and then restart the BLM for the new license to take affect (see “Stopping and Starting the BLM” on page 7-7 for instructions).

Mac OS X

Follow these steps to reregister and reinstall a BASIS license for OSAS on BBj on Mac OS X:

1. Double-click **BASIS-Admin** on the Applications menu to launch the wizard. You access the Applications menu by pressing **Apple+Shift+A** from anywhere in Finder.



2. When the Administration Wizard screen appears, select **License Registration Wizard** and click **Next** to continue.
3. Turn to page 2-18 and follow the steps there to reregister and reinstall your license.

Increasing User Counts

To increase the user count of your BASIS license, you must obtain a new BASIS license that is valid for the new user count you want to use with OSAS. After you receive the new license, you need to register and install that license for your interpreters.

License file names begin with the number of users for which they were created. For example, a 10-user interpreter license file might be called 10BBJOSH123456.lic.

Follow these steps to increase user counts by installing a new license.

1. Turn to “Reregistering/Reinstalling BASIS Licenses” on page 7-3 and follow the instructions for your system and language platform to register and install the new license file.
2. Starting and Stopping the BASIS License Manager

When you reboot the computer on which you installed the BLM, the BLM starts running automatically. To stop and then restart the BLM, follow the steps below that correspond to the language you use with OSAS (BBj or PRO/5). Instructions for BBj are below; see page 7-10 for instructions for PRO/5.

BBj

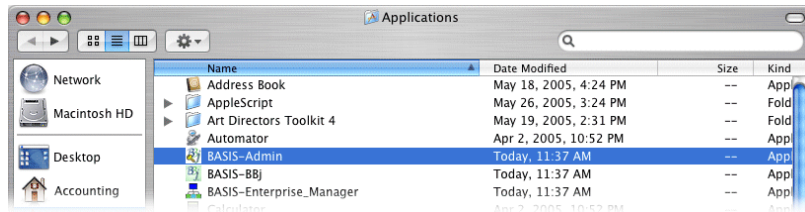
To preserve the security of the BLM, you may want to start and stop the BLM access at times. Follow these steps to stop and start the BLM for BBj:

1. Launch the BBj Administration Wizard.

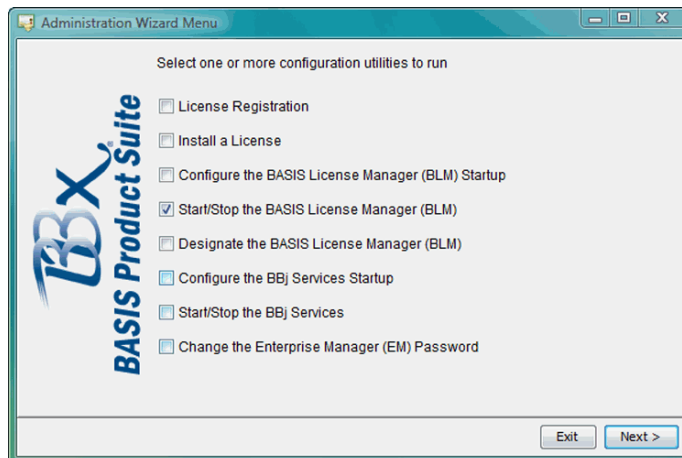
If you use Windows, open the **Start** menu, point to the **BASIS** program group, point to the **BBj** menu, then select **Admin** when the menu appears.

If you use Linux/UNIX, change to the **/osas/bbj/bin** directory. Enter **cd /opt/osas/bbj/bin** at the prompt (if you installed OSAS in a different location, remember to substitute that location). Then, run the BBj Administration Wizard by typing **.admin** at the prompt.

If you use Mac OS X, double-click **BASIS-Admin** on the Applications menu to launch the wizard. You access the Applications menu by pressing **Apple+Shift+A** from anywhere in Finder.

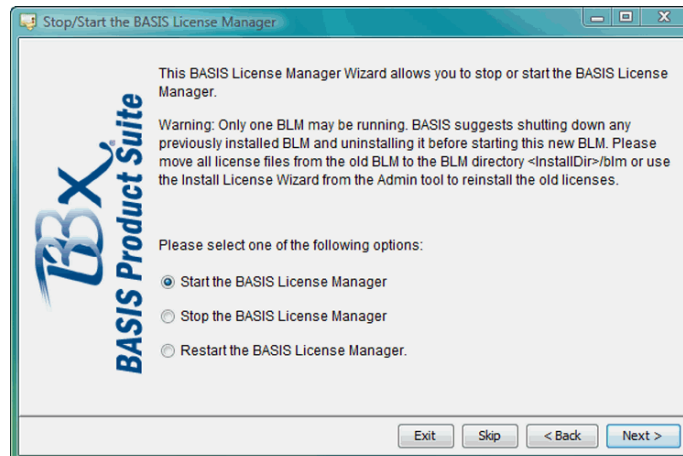


2. When the Administration Wizard screen appears, select **Start/Stop the BASIS License Manager (BLM) wizard**, then select **Next** or press **Enter** to continue.



The example screen shown above is for Windows; the Linux/UNIX and Mac OS X versions may contain additional options. If you use non-graphical Linux or UNIX, all Administration Wizard prompts are identical.

3. When the Stop/Start the BASIS License Manager prompts appear, select the action you want to take, then select **Next** or press **Enter** to continue.



4. A message appears when the BLM is started or stopped successfully. Select **OK** to continue.
5. The Wizard Process Complete screen appears. Select **Finish** to exit the Administration Wizard.
6. If you stopped the BLM, repeat these steps to start the BLM.

PRO/5

Windows

To preserve the security of the BLM, you may want to start and stop the BLM access at times. The Services function gives you control over BLM access without having the network administrator logged in constantly. To stop or start the BLM for PRO/5 on Windows, follow these steps:

1. Open the **Control Panel**, then double-click the **Administrative tools** icon. When the Administrative Tools screen opens, double-click **Services**.
2. Double-click **BASIS License Manager** to open its Properties screen.
3. To manually stop the BLM, click **Stop**. To manually start it, click **Start**.

To start the BLM automatically when the computer is rebooted, select **Automatic** in the **Startup Type** box and click **OK** to save your changes.

Linux/UNIX on PRO/5

To stop and restart the BLM for PRO/5 on Linux/UNIX, perform these steps while at the main Linux or UNIX console.

1. Log in as root (in multiuser mode) and enter the password.
2. Change to the directory where the BLM was installed (the default path is **/usr/basis**). Enter these commands at the prompt (substituting the correct path, if necessary):

```
# cd /usr/basis
# ./install
```

3. The BASIS Install Main Menu appears. Enter **BLM**.

```

BASIS Install Main Menu

From this menu you may go to the install menus for the following products:

BLM      Install BASIS License Manager

PRO5     Install PRO/5

DS       Install PRO/5 Data Server

EXIT     Exit installation

Please type BLM, PRO5, DS or EXIT: BLM
```

4. The following screen appears. Press **Enter** to continue.

```

BBBBBBBBB  LL          MM      MM
BB      BB  LL          MMMM  MMMM
BB      BB  LL          MM  MMMM MM
BBBBBBBBB  LL          MM  MM  MM
BB      BB  LL          MM      MM
BB      BB  LL          MM      MM
BBBBBBBBB  LLLLLLLLLL  MM      MM

This installation procedure will assist you in installing and licensing
PRO/5 and PRO/5 Data Server for your particular configuration.

Please have your Serial Number(s) and Authorization Number(s) ready.
These numbers are provided by BASIS on the license registration form
sent with the product(s).

Enter to continue
```

5. The BASIS License Manager Install Menu appears. Enter **STOP**.

```
BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: STOP
```

6. The following screen appears. Enter **Y** to continue.

```
lmutil - Copyright (C) 1989-1999 Globetrotter Software, Inc.

Port@Host      Vendors
1) 2700@redhat_server basis

Are you sure (y/n)? Y
```

7. A message indicating that the License Server is shut down appears and then the BASIS License Manager Install Menu appears. Wait a few moments and then enter **START**.

```
FLEXlm License Server shut down

                BASIS License Manager Install Menu

REG      Register for BASIS product license
INSTALL  Install BASIS product license
CREATE   Create script to start BASIS License Manager
ADD      Add BASIS License Manager to UNIX startup sequence
START    Start the BASIS License Manager
STOP     Stop the BASIS License Manager
EXIT     Exit BASIS License Manager Install Menu

Please type REG, INSTALL, CREATE, ADD, START, STOP or EXIT: START
```

8. A screen appears to notify you that the BLM is starting up. Press **Enter** to continue.

```
Starting BASIS License Manager using ./BasisRunLM ...

Starting License Manager Daemon

Enter to continue
```

9. The BASIS License Manager Install Menu appears. Enter **EXIT**.
10. The BASIS Install Main Menu appears. Enter **EXIT**.
11. The Finished BASIS Install Main Menu appears. Press **Enter** and continue with normal operations.

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ODBC/JDBC Connectivity

If you use BBj, OSAS 7.6 includes the ODBC and JDBC drivers that let you connect to OSAS data from any ODBC-compliant (such as Microsoft® Windows® software) or JDBC-compliant (such as programs developed for Java®, like OpenOffice.org) application, such as spreadsheets, reporting software, word processing applications, or external databases. The easiest way to connect to OSAS data is by opening one of the productivity reports, also included with each OSAS 7.6 application.

If you use PRO/5, the OSAS 7.6 media allows you to install the ODBC driver with BBj services to let you connect to OSAS data from an ODBC-compliant software or to open the OSAS Productivity reports.

When you install BBj, the ODBC and JDBC drivers are installed automatically as part of BBj. You can install these drivers separately, if necessary. If you use PRO/5, you must install the ODBC driver in a separate step. After installing the drivers, you need to set them up by entering information in the BBj Enterprise Manager (for BBj) or by editing the config.tpm file (for PRO/5).

Use the information in this chapter to set up the BBj Enterprise manager or reinstall the ODBC/JDBC driver for BBj, and to install and manage the ODBC driver with BBj services for use with PRO/5.

Licenses

The ODBC or JDBC driver requires a license to make the connection to retrieve OSAS data. If you use BBj, this license is included in your BASIS license user pool. If all licenses are in use, the driver cannot connect.

If you are a PRO/5 user who is using the ODBC/JDBC driver with BBj services, this license is included in your BASIS license user pool. If all licenses are in use, the driver cannot connect.

ODBC/JDBC Driver for BBj

The ODBC/JDBC driver for OSAS on BBj is installed automatically as part of the OSAS installation. This driver helps you connect to your OSAS data from two different source types: the ODBC portion of the driver manages connections and requests from ODBC-compliant software (such as Microsoft® Windows® products); while the JDBC portion manages those from JDBC-compliant software (such as office productivity packages developed for Java®, like OpenOffice.org®).

The license the ODBC/JDBC driver requires is included in the BASIS license user pool you registered and installed when you installed OSAS on BBj. When you use the driver, it retrieves the license it needs to make a connection from your existing user pool. If all licenses are in use, the driver cannot connect.

Installing the ODBC/JDBC Driver

The ODBC/JDBC driver is installed automatically when you install a full installation of OSAS. However, you can also install the driver separately if you're working with a workstation that used the custom installation option or if the driver has not been installed on the workstation.

Follow these steps to install the ODBC/JDBC driver on BBj:

1. Insert the installation DVD into your DVD-ROM drive and start the wizard.
 - In Windows, the OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.

- In Linux or UNIX, mount the DVD-ROM to a drive that exists on your system, and change to the DVD directory. Enter these commands at the prompt:

```
# mount /dev/cdrom /mnt/cdrom
# cd /mnt/cdrom/
```

In the above example, the **/mnt/cdrom** mount directory must exist before you can mount the DVD-ROM.

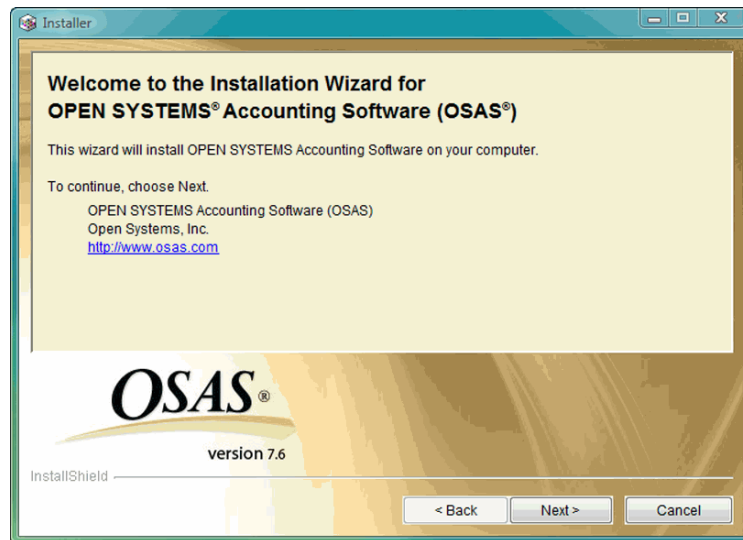
When the listing of files on the DVD appears, enter the installation script, **# ./osasinstall.sh**, at the prompt.

- In Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

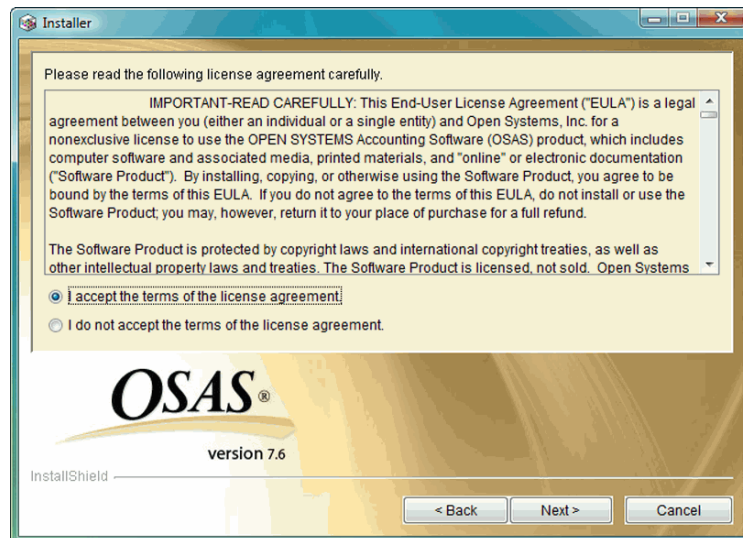
```
Mac OS X      cd /Volumes
               cd OSASv76_Beta
               umask 0
```

Enter the installation script, **# ./osasinstall.sh**, at the prompt.

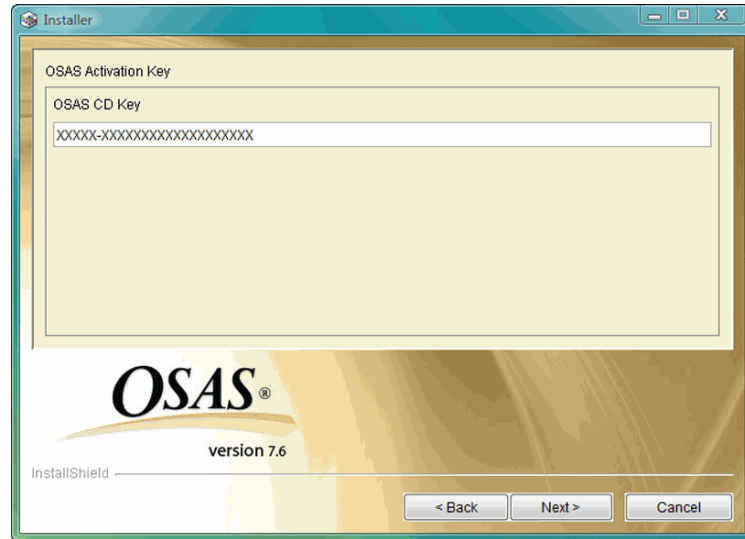
2. When the Welcome screen appears, click **Next** to begin the install.



3. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

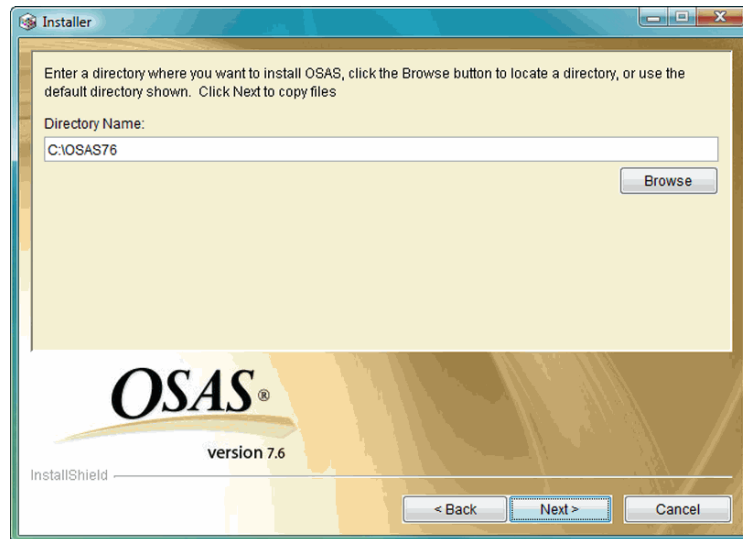


4. Enter your OSAS activation key exactly as it appears on the License Registration form. Please note—the key is case-sensitive.



Click **Next** to continue.

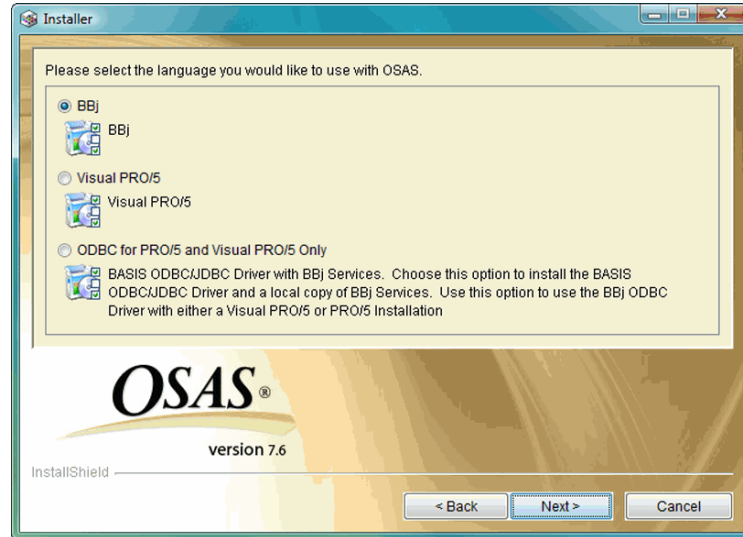
5. Change the directory path in which to install the driver, if you like. You can click **Browse** to navigate to this directory and enter the path automatically.



Note: Do not use spaces in the path name during installation. Instead, omit spaces or replace them with underline characters. For example, rather than using the pathname *OSAS v76*, omit the space and use *OSASv76* instead.

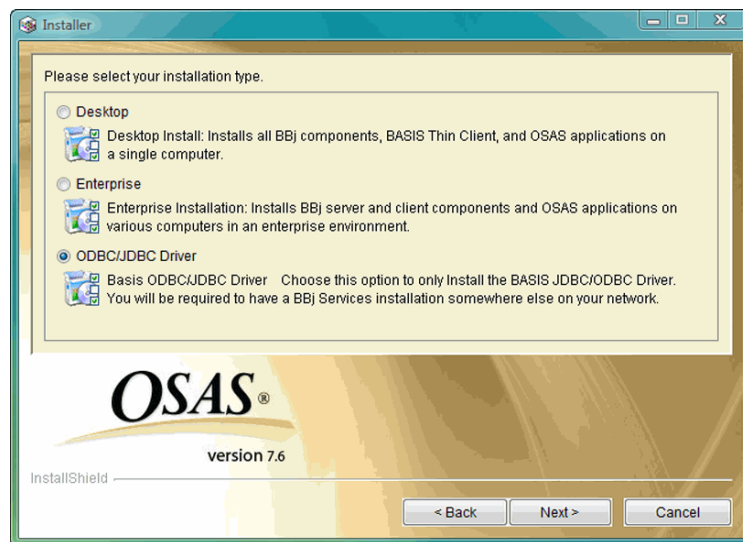
Click **Next** after specifying the installation directory to continue.

6. If you are installing the driver on Windows, select the BBj as the language platform and click **Next** to continue.

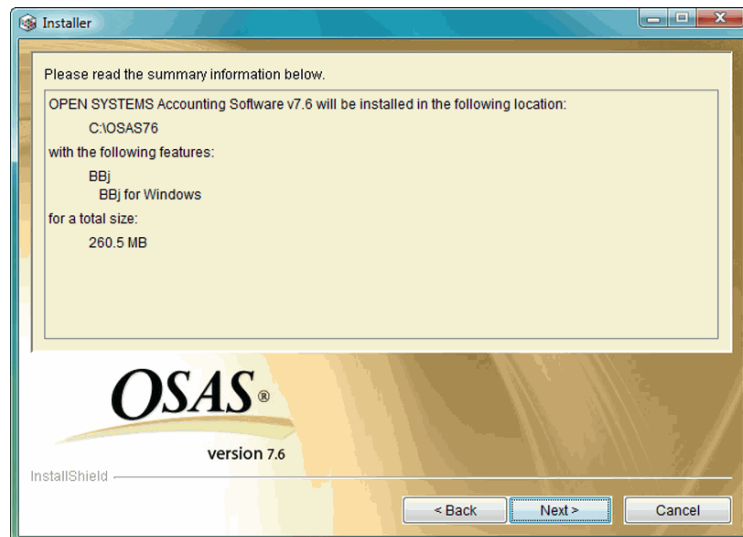


If you are installing the driver on Linux, UNIX, or Mac OS X, this screen does not appear. The system assumes you are using BBj when you use the installation program with these operating systems.

7. Select **ODBC/JDBC Driver** as the installation type and click **Next**.

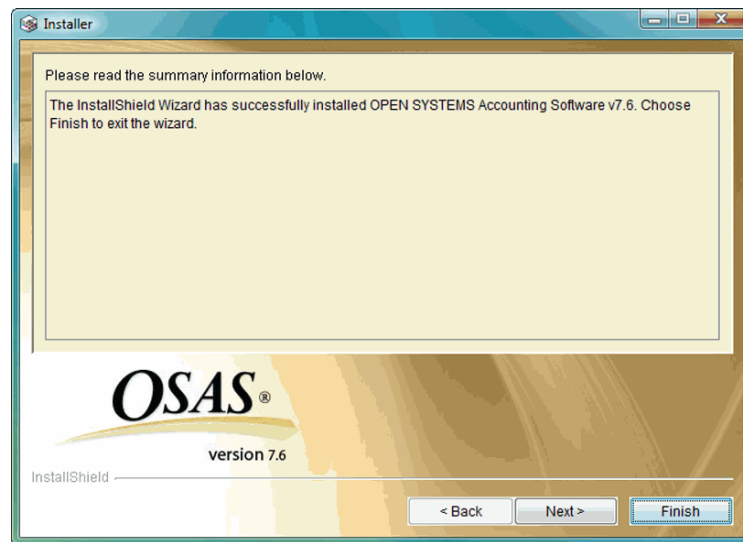


8. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.



If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

9. When the “installation successful” message appears, click **Finish** to complete the installation.



Driver installation is now complete. If you use Windows, you need to set up a data source name (DSN) in order to use the driver with ODBC-compliant software to connect to OSAS data. See page 8-25 for information on setting up a DSN. If you use Linux/UNIX, consult your software manuals or help files for information on using the driver to connect to OSAS data.

Before attempting to connect to OSAS data via the ODBC/JDBC driver, make sure that the OSAS database has been set up and configured in the BBj Enterprise Manager. Turn to “Configuring the BBj Enterprise Manager” on page 8-19 for details.

ODBC Driver for PRO/5 and VPRO/5

The ODBC driver for PRO/5 VPRO/5 is not installed automatically when you install OSAS on VPRO/5 for Windows. With the OSAS 7.6 release, you can select whether to install the ODBC driver that works with BBJ, along with the BBJ Services. After installing the ODBC/JDBC driver and BBJ Services, proceed to the instructions for setting up the BBJ Enterprise manager. Once the setup is complete, you can use any of the productivity reports included with OSAS or connect to OSAS data from external ODBC-compliant software.

Installing the ODBC/JDBC Driver

Follow these steps to install the ODBC/JDBC driver with BBJ services:

1. Insert the installation DVD into your DVD-ROM drive and start the wizard.
 - In Windows, the OSAS installation menu should appear automatically. If it does not, select **Run** from the **Start** menu, type **E:\autorun** (remember to substitute the correct drive letter for your DVD drive), and press **Enter**. When the installation menu appears, double-click **Install OSAS v7.6** to start the installation program.
 - In Linux or UNIX, mount the DVD-ROM to a drive that exists on your system, and change to the DVD directory. Enter these commands at the prompt:

Linux	<pre># mount /dev/cdrom /mnt/cdrom # cd /mnt/cdrom/</pre>
SCO6	<pre># mount -o fperm=777 /dev/cdrom/cdrom1 /mnt/ cdrom # cd /mnt/cdrom</pre>

In the above examples, the **/mnt/cdrom** mount directory must exist before you can mount the DVD-ROM.

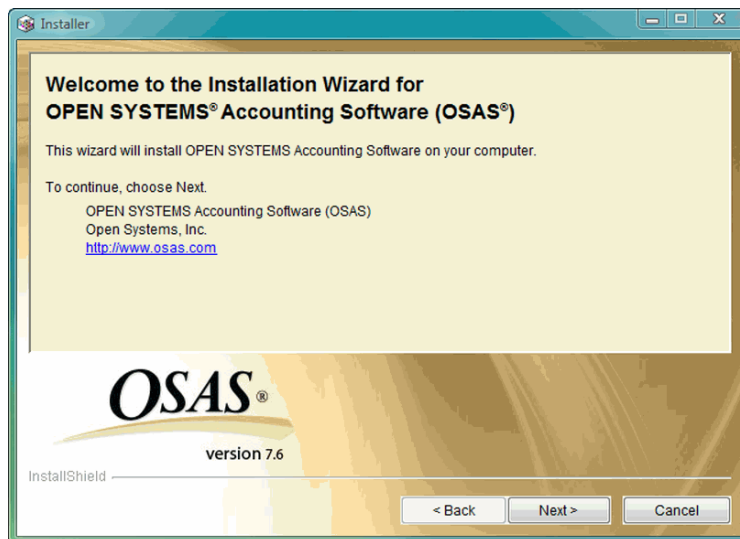
When the listing of files on the DVD appears, enter the installation script, # **.osasinstall.sh**, at the prompt.

- In Mac OS X, the DVD-ROM automatically mounts. Enter these commands at the prompt:

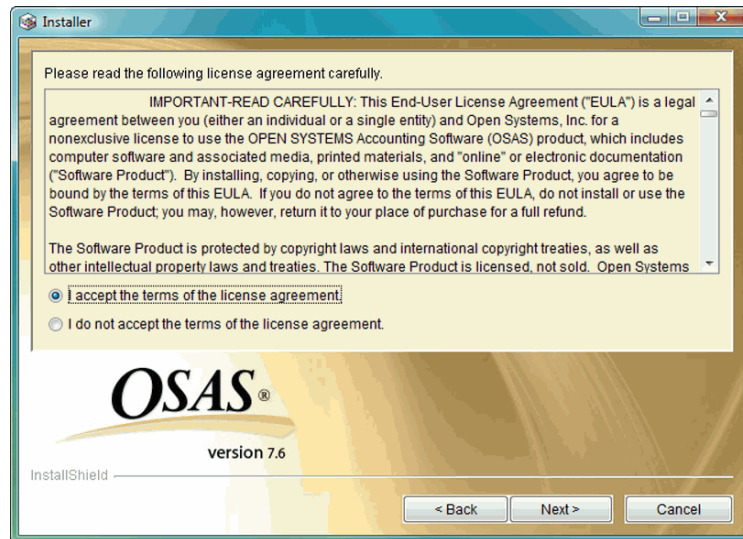
```
Mac OS X      cd /Volumes
               cd OSASv76_Beta
               umask 0
```

Enter the installation script, # **.osasinstall.sh**, at the prompt.

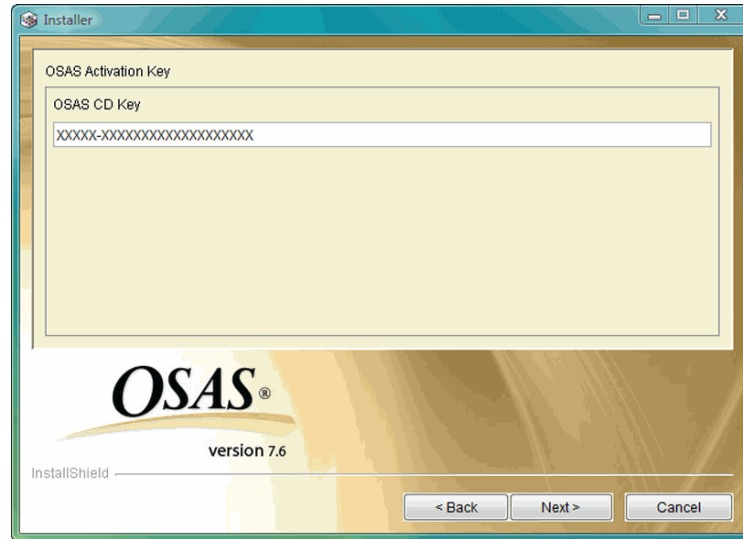
2. When the Welcome screen appears, click **Next** to begin the install.



3. Read the license agreement carefully, then select the **I accept...** option. Click **Next** to continue.

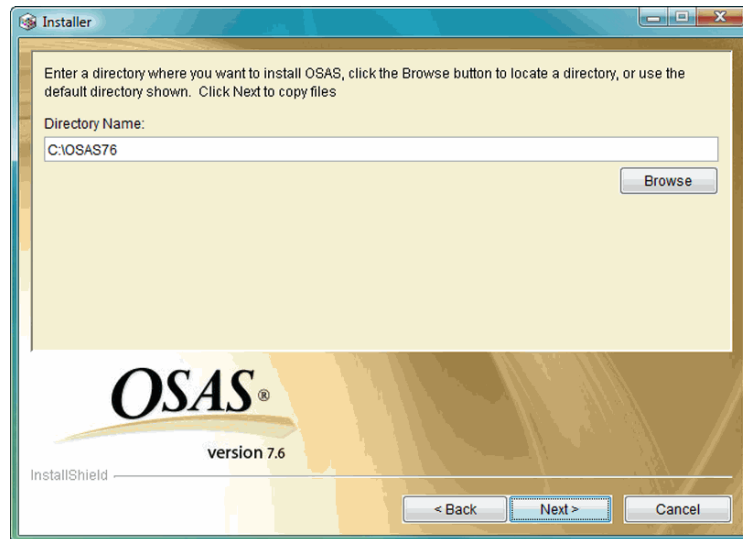


4. Enter your OSAS activation key exactly as it appears on the License Registration form. Please note—the key is case-sensitive.



Click **Next** to continue.

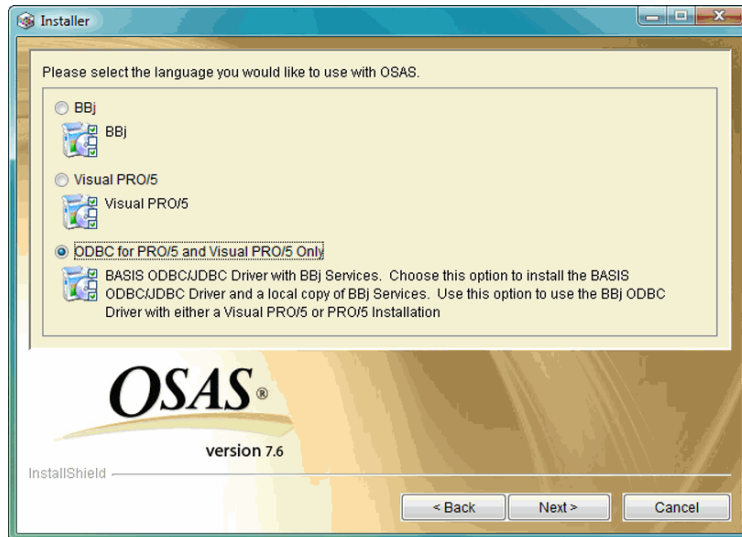
5. Change the directory path in which to install the driver, if you like. You can click **Browse** to navigate to this directory and enter the path automatically.



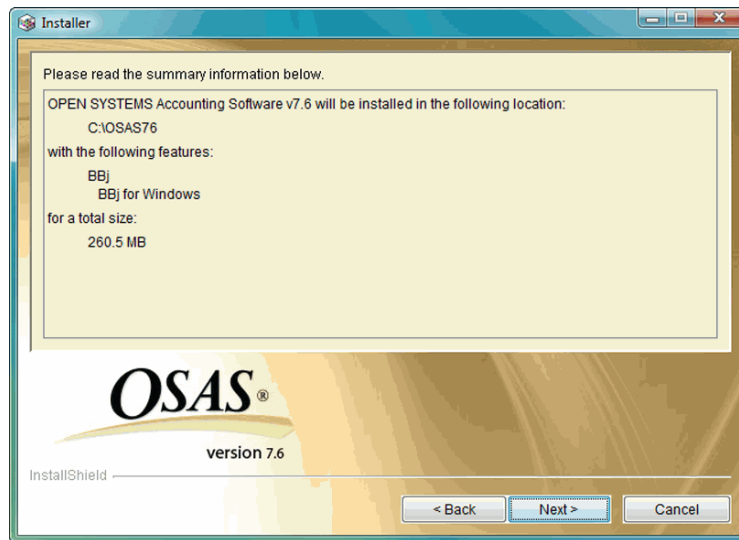
Note: Do not use spaces in the path name during installation. Instead, omit spaces or replace them with underline characters. For example, rather than using the pathname *OSAS v76*, omit the space and use *OSASv76* instead.

Click **Next** after specifying the installation directory to continue.

6. Select the “ODBC for PRO/5 and Visual PRO/5 Only” option and click **Next** to continue.

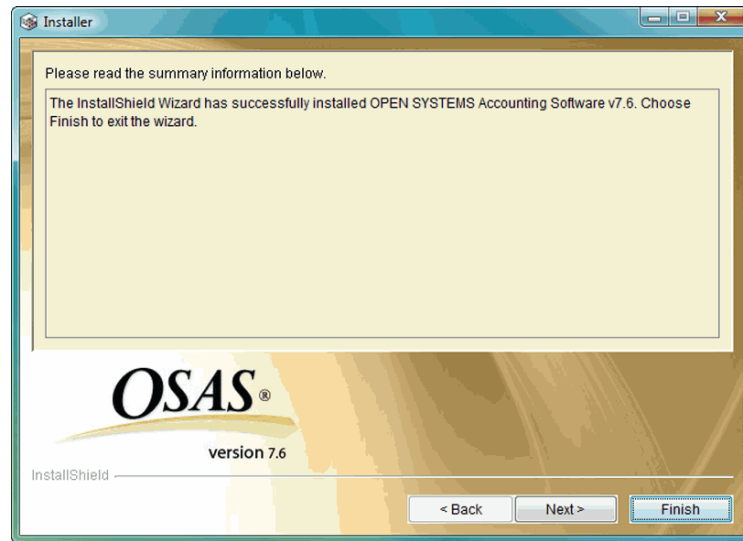


7. The summary screen lists the selections you've made for this installation. Confirm these selections and click **Next** to begin the installation process.



If you notice any mistakes, click **Back** until you return to the appropriate screen in the wizard to make your corrections.

8. When the “installation successful” message appears, click **Finish** to complete the installation.



Driver installation is now complete. If you use Windows, you need to set up a data source name (DSN) in order to use the driver with ODBC-compliant software to connect to OSAS data. See page 8-25 for information on setting up a DSN. If you use Linux/UNIX, consult your software manuals or help files for information on using the driver to connect to OSAS data.

Before attempting to connect to OSAS data via the ODBC/JDBC driver, make sure that the OSAS database has been set up and configured in the BBj Enterprise Manager. Turn to “Configuring the BBj Enterprise Manager” on page 8-19 for details.

Configuring the BBj Enterprise Manager

Before you can use the ODBC/JDBC driver to connect to OSAS data from an external, ODBC-compliant source (such as Microsoft Excel®), you must enter configuration information for the OSAS database in the BBj Enterprise Manager.

Follow these steps to configure an OSAS database in the BBj Enterprise Manager so that the BBj ODBC driver can connect correctly:

1. Start the BBj Enterprise Manager.

If you use Windows, click **Start**, select **BASIS** from the Programs menu, point to **BBj**, then select **BBj Enterprise Manager** from the submenu that appears.

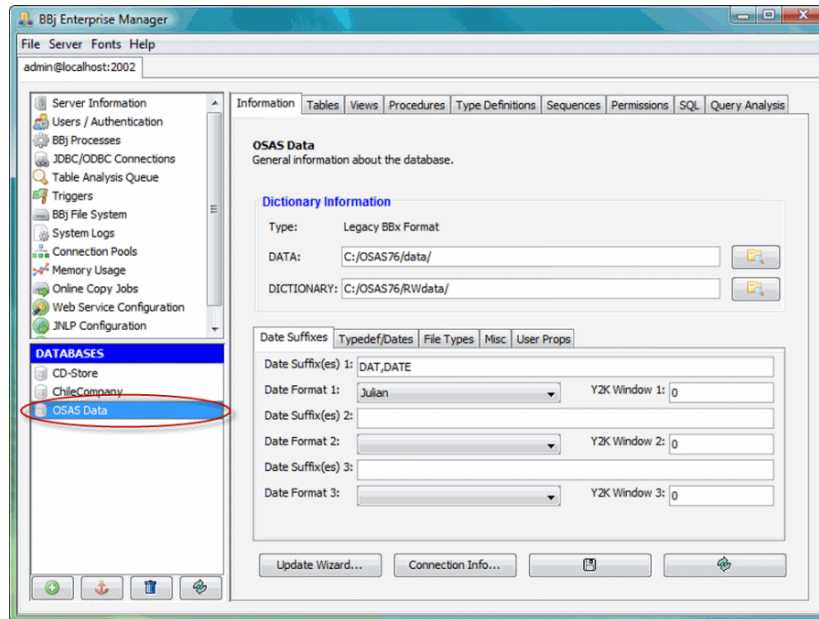
If you use Linux or UNIX, enter **cd /opt/osas/bbj/bin** at the prompt (if you installed OSAS in a different location, substitute that location) to change to the **/bin** directory, then enter **./bbjenterprisemanager** to start the Enterprise Manager.

If you use Mac OS X, double-click **BASIS-Enterprise_Manager** on the Applications menu. You access this menu by pressing **Apple+Shift+A** from anywhere in Finder.

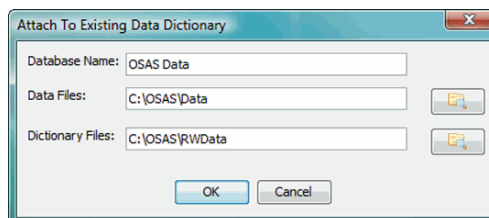
2. Log in to the BBJ Enterprise Server. Enter **admin** as the username and the password for the admin user that you selected when you installed OSAS on BBJ.



3. In the **Databases** section of the BBJ Enterprise Manager screen, locate and click the **OSAS Data** database.



4. If the OSAS Data database is not listed, you need to attach to an existing dictionary to create the database, follow these steps:
 - Click the red anchor sign below the **Databases** section. When the **Attach to existing dictionary** screen appears, enter a **Database Name** (OSAS Data, for example), the directory path to the OSAS company **Data Files** (such as C:\OSAS\data\), and the directory path to the OSAS data **Dictionary Files** (such as C:\OSAS\RWdata).

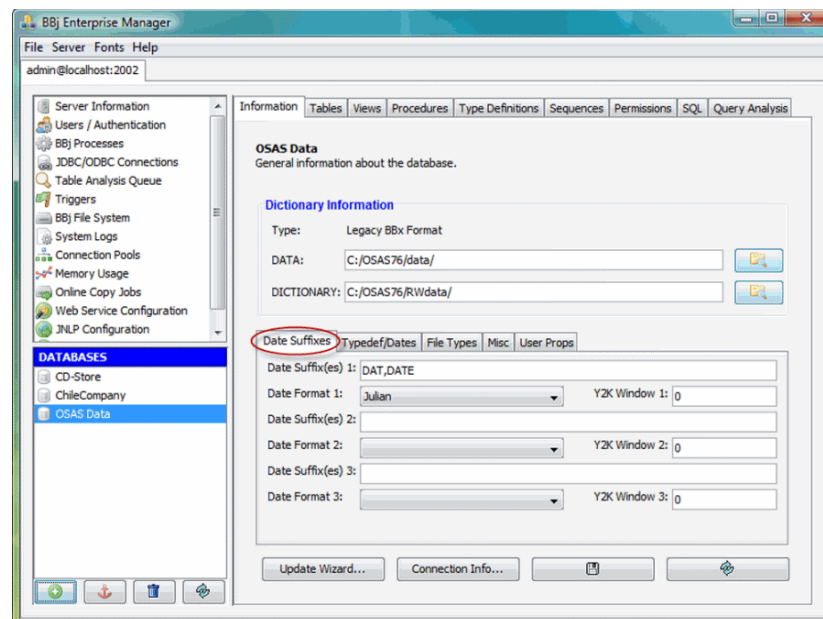


- Click **OK** to create the OSAS database.
5. When you have clicked on or created the OSAS Data database, you can proceed with the configuration.

On the main **Information** tab, click the **User Props** tab and make sure that the **CID** and **SYSFIL** entries exist with the correct company ID and OSAS system file directory path to use. Make sure to add **GLY** and **PLY** entries.

Date Suffixes	Typedef/Dates	File Types	Misc	User Props
Property	Value			
CID	H			
SYSFIL	C:/OSAS76/sysfil/			
GLY				
PLY				

6. Enter **DAT,DATE** into the **Date Suffix** field and set the **Date Format** to **Julian** on the **Information** page's **Date Suffixes** tab.



Note: We recommend that you select **Deny All** in the **Permissions** tab to increase security by requiring users to enter a user name and password before connecting to OSAS Data. If you set this to other values, unauthorized users may be able to access and view sensitive data.

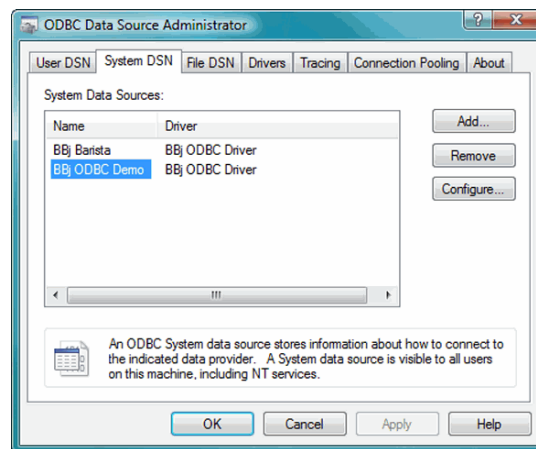
7. Ensure the **Advisory Locking** check box on the **Information** page's **Misc** tab is selected.

Setting up a Data Source Name (DSN)

Before you can use the ODBC/JDBC driver on Windows workstations, you need to set up a data source name (DSN). This DSN stores information about how to connect to a specified data provider (such as the OSAS Data database) so that the ODBC-compliant software program can use the driver to retrieve data.

Follow these steps to set up a DSN:

1. Open the Windows Control Panel and double-click the **Administrative Tools** icon (in Windows Vista and Windows 7, this can be found in the **Control Panel Home** menu under **System and Maintenance**).
2. When the Administrative Tools screen appears, double-click the **Data Sources (ODBC)** icon.
3. When the ODBC Data Source Administrator screen appears, select the appropriate tab for the type of DSN you want to create.



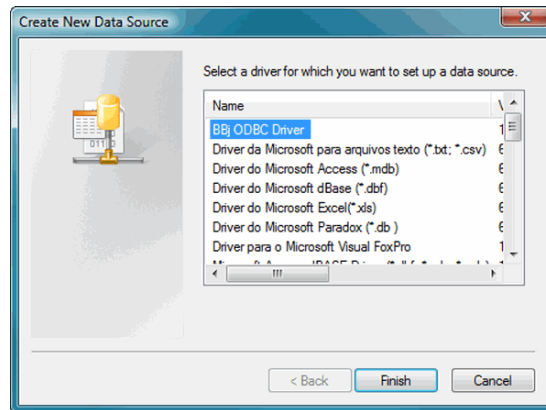
The tabs correspond to the DSN types that you can set up, which differ in the levels of security they offer.

- Select the **User DSN** tab to set up a DSN that is tied to a specific user on the current machine. When you create a user DSN, only the user who created the DSN can use it, and only on the computer on which it was created. Create a user DSN if several people use a computer, but you want to grant access to OSAS data only to specific users.
- Select the **System DSN** tab to set up a DSN that is tied to the computer, but not to any users. When you create a system DSN, all users of the computer can use it to connect to OSAS data. Create a system DSN if you have one computer that is dedicated to OSAS and want to grant access to OSAS data to all users of that computer.
- Select the **File DSN** tab to save data source information in a file. File DSNs can be shared by all users who have the same drivers installed. Because the information is stored in a file, it can be used by anyone who has access to the directory in which it is stored.

In the example above, we selected the **System DSN** tab.

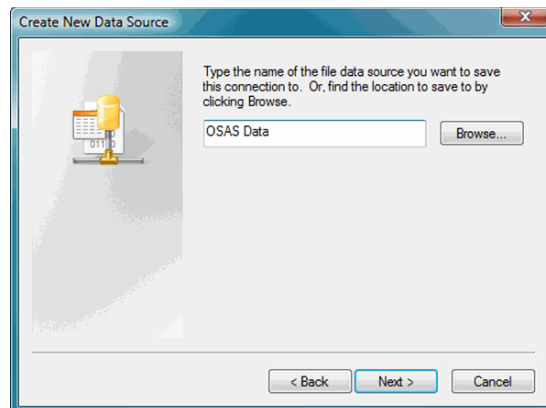
4. Click **Add** to add a new DSN.

5. When the Create New Data Source screen appears, select the **BBj ODBC Driver** entry.



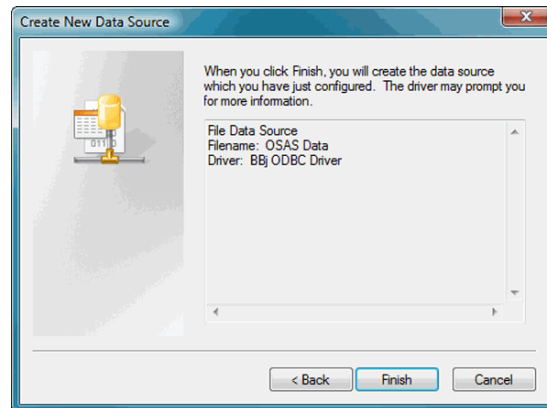
If you're creating a user or system DSN, click **Finish**, then skip to step 8. If you're creating a file DSN, click **Next** and then continue with the next step.

6. If you are creating a file DSN, enter a name for this DSN and click **Next**.



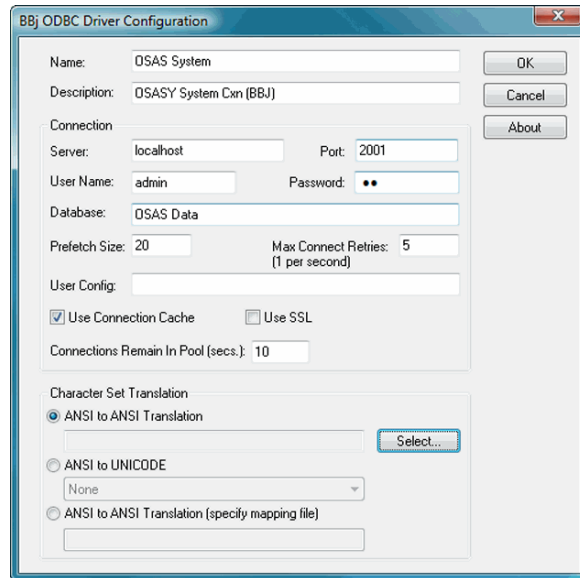
Note: The name you enter must match the name of the OSAS database as configured in the BBj Enterprise Manager.

7. When the summary information appears, review the information and click **Finish** to create the data source.



If any information is not correct, click **Back** to return to the previous screens to edit the incorrect information.

8. If you're creating a user or system DSN, enter the configuration information used by the driver to connect to the OSAS database as managed by the BBj Enterprise Manager.



The image shows the 'BBj ODBC Driver Configuration' dialog box. It contains the following fields and options:

- Name:** OSAS System
- Description:** OSAS System Cxn (BBj)
- Connection:**
 - Server:** localhost
 - Port:** 2001
 - User Name:** admin
 - Password:** (masked with dots)
 - Database:** OSAS Data
- Prefetch Size:** 20
- Max Connect Retries:** 5 (1 per second)
- User Config:** (empty field)
- ☒ Use Connection Cache
- ☐ Use SSL
- Connections Remain In Pool (secs.):** 10
- Character Set Translation:**
 - ☒ ANSI to ANSI Translation
 - ☐ ANSI to UNICODE
 - ☐ ANSI to ANSI Translation (specify mapping file)

Buttons: OK, Cancel, About, and a 'Select...' button next to the 'ANSI to UNICODE' option.

Enter this configuration information (you can leave the other fields blank):

- Enter a **Description** for the DSN connection.
- In the **Server** and **Port** boxes, enter the name of the data server that houses the OSAS data and the port on which it is located.
- Enter the **User Name** and **Password** to use to connect to the data. The user name and password you enter here must be for a user you have set up in the BBj Enterprise Manager. Alternately, you can leave these boxes blank to prompt the user to enter a user name and password before a connection is established to the OSAS data.
- Enter the **Database** to connect to. This name must match the name of the OSAS database as configured in the BBj Enterprise Manager.

9. You are returned to the ODBC Data Source Administrator screen, and the new DSN appears in the list. Click **OK** to finish the DSN setup.

APPENDIX A

A

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Conversion from 3.2x, 4.0x, and 4.1x	A-2
Conversion from 4.5x/4.6x	A-3
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Conversion

You must install OSAS Resource Manager version 7.6 on a different path from the one in which versions 3.2x through 6.xx were installed. You must then convert your data files from your old path to the new path. See chapter 2 and chapter 3 for installation instructions.

Note: if you are upgrading your server installation from 7.0x using BBj, then you must follow the instructions in the readme file on the installation DVD.

Before you convert an application's files, verify the version number from which you are converting. You can convert data from version 3.2, 3.3, 4.0x, 4.1x, 4.5x, 4.6, 5.0x, 5.1x, 5.2, 6.xx, 7.0x, or 7.5x. Enter the complete version number. For example, if you are using version 4.06, enter 4.06, not 4.0. If you want to convert from a version earlier than 3.2, contact a client support representative. The **Data File Conversion** function cannot convert the information from those versions.

When you are ready to convert files, use the **Data File Conversion** function on the RM **Company Setup** menu.

Before you begin any conversion process, always backup your OSAS files.

Note: Because tables are also converted when you convert data files, any changes made (including those in **Options and Interfaces**) since the initial set up may be lost. Check table settings and verify your options and interfaces selections after converting all companies. If you need to reconvert a company, either reset your options after conversion or back up the **xxTB** files before converting.

Consider Your Setup

Before you try to convert your version of Resource Manager to the current version, consider the exact setup of your system. Modifications to your system might be lost if you install a newer version of a program or update a file. If you are not sure whether your system is ready for conversion, consult your reseller.

Contractor's Job Cost File Conversion

If you use Contractor's Job Cost, the **APFORMX** and **CJFORMX** (where **X** is a number between 0 and 9) are not considered to be data files and thus, are not converted when you use the **Data File Conversion** function. To use these files in the new version, you must either set them up again in the new installation or copy the files manually from the old directory to the new **\sysfil** directory.

Conversion from 3.2x, 4.0x, and 4.1x

Convert your application data files in this order (skipping the applications you do not use): General Ledger, Sales Order and/or Accounts Receivable, Purchase Order and/or Accounts Payable, Inventory, Bill of Materials/Kitting, and then any other applications. If you do not have Accounts Receivable or Sales Order, you must create Resource Manager files and build tax information before you convert your other applications.

You can convert data files across multiple versions in one process. However, to convert from version 4.1 to 7.6 in one process and retain source files, you must have enough available disk space for eight copies of your files. For example, if you have 100 megabytes of Accounts Receivable data, you need at least 600 megabytes of available disk space to store source files for versions 4.1, 4.5, 5.0, 5.1, 6.1, 6.5, 7.0, and 7.5. To save disk space, convert each application, check the results, and purge directories (source files for older versions) as you go, or answer **YES** to the **Erase Source Files** prompt to automatically erase the source files.

Expect the conversion processes to require several hours, depending on the amount of data and the number of versions you are converting. Some applications require responses during the conversion. Periodically check the workstation and answer any questions that appear. For instructions on converting, see “Converting to Version 7.6” on page A-6.

Conversion from 4.5x/4.6x

Convert your application data files in this order (skipping the applications you do not use): Resource Manager, General Ledger, Sales Order and/or Accounts Receivable, Purchase Order and/or Accounts Payable, Inventory, Bill of Materials/Kitting, and then any other applications. If you do not have Accounts Receivable or Sales Order, you must build tax information in Resource Manager before you convert the other applications.

You can convert data files across multiple versions in one process. However, to convert from version 4.5 to 7.6 in one process and retain source files, you must have enough available disk space for **seven** copies of your files. For example, if you have 100 megabytes of Accounts Receivable data, you need at least 500 megabytes of available disk space to store source files for versions 4.5, 5.0, 5.16, 6.1, 6.5, 7.0, and 7.5.

To save disk space, convert each application, check the results, and purge directories (source files for older versions) as you go, or answer **YES** to **Erase Source Files** which automatically erases the source files.

Expect the conversion processes to require several hours, depending on the amount of data you are converting. Back up your data files before you start. Some applications require responses during the conversion. Periodically check the workstation and answer any questions that appear.

For instructions on converting, see “Converting to Version 7.6” on page A-6.

Conversion from 5.0x/5.1x/5.2x/6.xx/7.0x/7.5x

Convert your application data files in the order below (skipping the applications you do not use). See “Converting to Version 7.6” on page A-6 for instructions.

- Resource Manager
- General Ledger
- Accounts Receivable and/or Sales Order
- Accounts Payable and/or Purchase Order
- Inventory
- Bills of Materials/Kitting
- any other applications

Resource Manager System File Conversion

After you have converted the application data files listed above, you have the option of either setting up your new Resource Manager system files or converting the old system files.

You can convert the system files that store workstation defaults and keyboard and color definitions, forms reorder information, application forms codes and printers, access codes, and company information from your old installation.

If you do not want to convert these files, refer to page 6-15 and the Resource Manager guide for instructions on setting up Resource Manager system files.

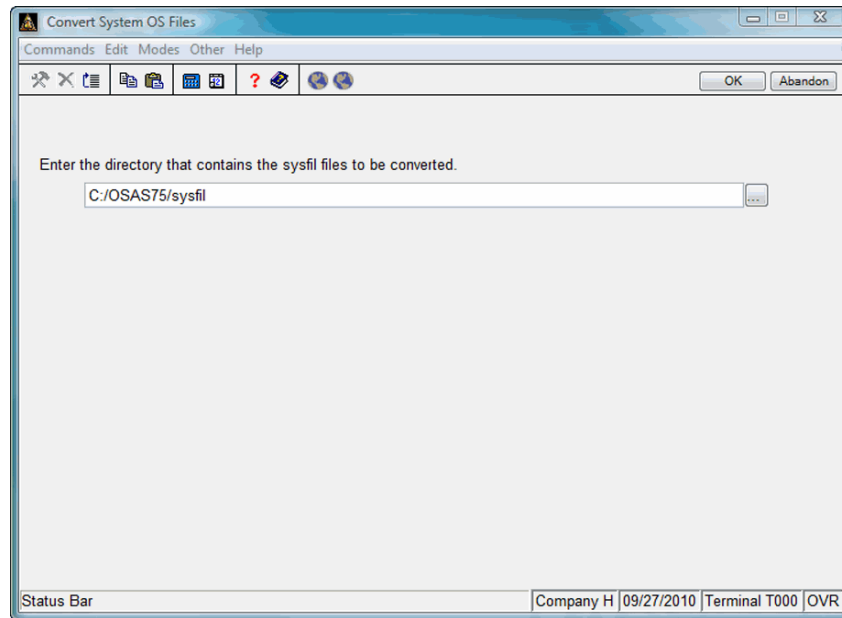
RMOSCNVT is a program which converts data files that are not converted with standard conversion programs (such as company information, access codes, form printers, and workstation defaults).

To convert the system files, follow these steps.

1. Open the **Help Screen List** function from the **Resource Manager > System File Utilities > File Lists** menu.

NOTE: The function specified (Help Screens List) is an area that doesn't open up any of the files RMOSCNVT is trying to convert and therefore enables you to avoid the issue of attempting to overwrite a locked/in-use file.

2. Select **Other > Call a BASIC Program** from the menu.
3. Enter **RMOSCNVT** in the **Program** field.
4. Press **Page Down** to run the conversion program. The Convert System OS Files screen appears:



5. Enter the version from which you are converting.
6. Enter the directory where the system files that you want to convert are located.

7. Enter the directory where the data files that you want to convert are located.
8. If you want the source files removed after they are converted, select the check box (or enter **Y** in text mode); if not, clear the check box (or enter **N** in text mode).
9. Press **Down Page** to start the conversion process.

When conversion is complete, the **F7 to Exit** message appears. Use the **Exit (F7)** command to return to the menu.

Converting to Version 7.6

Select **Data File Conversion** from the Resource Manager **Company Setup** menu. The Data File Conversion screen appears.

Select directory on which to create files.

@ ../data/

Enter directory that contains the files to be converted.

C:/OSAS75/data/

Do you want source files erased after conversion? ☐

Do you want conversion to pause if a problem is found? ☒

Appl	Description	Version
GL	General Ledger	7.50
IN	Inventory	7.50
RM	Resource Manager	7.50

Appl	Description	Version
------	-------------	---------

Company H | 09/27/2010 | Terminal T000 | OVR

1. The system displays all valid OSAS data paths. Select the destination directory where your new data files will reside.
2. Enter the path (drive and directory) that contains the files to convert. You cannot enter the same path as the path you selected as the destination.
3. If you want source files to be erased after conversion, select the check box (or enter **Y** in text mode); if not, clear the check box (or enter **N**).
4. If you want the conversion process to pause if a problem occurs, select the check box (or enter **Y** in text mode); if not, clear the check box (or enter **N** in text mode). The system considers file corruption or evidence of data not converting correctly a problem.
5. Enter **RM** in the **Appl** column; **Resource Manager** appears.
6. Enter your earlier version number of Resource Manager, and press **Enter**. (You can determine the version by looking at the copyrights screen when you start your earlier version of OSAS, or in most versions, by using the **Information (Shift+F2)** command on the menu screen.)
7. If data files already exist for Resource Manager in the intended destination path, the **RM data files exist. Do you want this task to erase them?** prompt appears. If you want to erase the existing files and convert the files from the version in the source path, select **Yes** (or enter **Y** in text mode); if not, select **No** (or enter **N** in text mode). If you elect not to erase existing files, you must change your directory choices so that no conflict exists.
8. To convert, use the **Proceed (OK)** command.
9. The **Do you want a printout of error log after each application?** prompt appears. If you want the error log to be produced after files are converted for each application, select **Yes** (or enter **Y** in text mode); if you want the log to be produced after files for all applications are converted, select **No** (or enter **N** in text mode). If you are converting only one application, your answer to this prompt makes no difference.

10. If a problem occurs and you indicated that you want the system to pause when a problem occurs, a prompt alerts you. To stop the conversion process, select **Yes** (or enter **Y** in text mode). To let the conversion run its course and investigate later, select **No** (or enter **N** in text mode).
11. When the process is finished, the files are converted. Select the output device for the error log. After conversion finishes and the error log is produced, the main menu appears.

Other Conversion/Installation Hints

- A temporary directory is required for Inventory file lookups on Windows systems. This directory is usually **%temp%**. Make sure the **%temp%** directory is created and the **SET TEMP** command is in the AUTOEXEC.BAT file: **SET TEMP=C:\TEMP**. If an error 46 occurs, try creating the **%temp%** directory in your network drive: **SET TEMP=F:\TEMP**, where F is your network drive.
- Start your conversions with the maximum memory. File copies go faster.
- When copying files to the source directory, do not forget table files. They are not company-specific.
- Plan a consultation meeting to develop new codes and tables to make the most of the new features in this release.
- Pricing methods changed in version 5.10. Be sure you understand the new pricing structures when you convert your Inventory files from earlier versions.
- Allow at least a 50 percent increase in data file requirements for all modules when converting from versions before 5.00. The amount varies for each module. Payroll and Inventory may increase by 300 to 400 percent. Allow about 200 percent available space for each version. If you are converting through multiple versions, you may not want to save original files.
- Answering **NO** to the **Convert zero balance records for ARHS?** file prompt reduces the size of the **ARHSxxx** (Summary History) file.

Keep Current

Download corrections from www.osas.com as often as possible. Our website is our best means of providing you with access to the most current versions of our software.

APPENDIX B

B

Linux/UNIX Device Notes

One of the most common areas of concern when setting up OSAS on a system based on UNIX is device configuration, particularly of terminals and backup devices.

Terminal Setup

There are two ways to configure terminals: tell the system everything you know about each terminal, or supply a token and ask the operating system to supply the terminal-specific information.

In the first case you enter explicit codes to identify the terminal and enumerate its capabilities:

alias T1 /dev/tty01 ansico

T1 is the BB^x device name (which is immediately defined as a specific device, **/dev/tty01**), and **ansico** defines the capabilities of the terminal (for example, color or graphics).

The advantage of defining a terminal this way is that you can use all the features of the terminal for OSAS without interfering with the UNIX definition of the terminal. The disadvantage is that if you unplug a terminal and plug it in a different one, you may need to change the software.

In the second case you enter codes that enable the system to supply the terminal information:

alias T1 /dev/tty01 term

The word **term** refers to the UNIX-environment variable **TERM**. The advantage of defining a terminal this way is that it is simple. The disadvantage is that you are limited to using the types of terminal defined in the OSAS termcap file.

If the type of terminal you use is not included in the termcap file, you must edit it. Follow the instructions in the BASIS documentation that is included with Resource Manager.

T1 is the BB^x/BBj device name defined by the UNIX-environment variable **BBTERM**; **/dev/tty** identifies the system device name and must always be entered this way when using this method. If you use this method, you must install Resource Manager from a terminal with the device name **T1**. **BBTERM** should be set at the operating system to match the BB^x/BBj alias name:

alias T1 /dev/tty ansico

In summary, if the function keys do not work, the numeric pad is not recognized, or the graphic characters look odd, look at the BASIS documentation **first**. Make sure that the terminal is defined correctly before you do anything else.

Backup Devices

The UNIX script **rmcrbr** that comes with Resource Manager for UNIX will help you configure storage devices. This script is executed automatically during installation. If you want to reconfigure your backup devices later, use the **Other (F4)** command to execute the script manually.

To execute **rmcrbr**, select any Resource Manager menu that makes **/progRM** the current directory. Then use the **Other (F4)** command. When the **Other Commands** menu appears, select **Execute an Operating System Command**.

When the operating system prompt appears, enter **./rmcrbr**.

First you are asked for the computer name. Press **Enter** to accept the default for each line, or enter the new information.

Then you are asked to specify the install device name, diskette backup command, diskette restore command, and tape backup and restore commands.

Finally you are asked to enter the **tar** command for your system. Some versions of UNIX store **tar** in an unusual location—for example, in the **/etc** directory. Make sure that you have the correct **tar** command for your system.

When you finish, use the **Exit (F7)** command to leave the program.

Printer Setup

This section provides examples of setting up spooled printers, shared direct printers, and slave printers. The examples in this section are directly related to the `config.bbx` sample at the end of this section.

Move the prompt (**>**) to the alias line you want to use as a spooled printer. The system device name for the alias LP line is:

```
">lp -s -dokidata 2>/dev/null"
```

The system device for the alias P1 line is:

```
">lp -s -depson 2>/dev/null"
```

The **-d** is followed by the UNIX name for the printer. Use the **lpstat -t** command to show the UNIX name and the physical device name for your printers.

Move the prompt (**>**) to the alias line you want to be a shared direct printer. The system device name is:

```
/dev/lp1
```

The system device name for the alias P2 line is:

```
/dev/tty44
```

In each of the alias lines, a **LOCK=** parameter prevents print jobs from being printed at the same time. Only one print job is allowed to print to a shared direct printer through OSAS.

Move the prompt to the alias line that identifies the printer attached to the auxiliary port of the terminal. There are two alias P3 lines because both are within an “if” loop. This means that terminals T5 and T6 cannot see each other’s alias P3 line. The device name of the first alias P3 line is:

/dev/tty1a

The device name of the second alias P3 line is:

/dev/tty1b

The device name for the printers is usually the same as the terminal device name. The parameters SLON= and SLOFF= in the printer alias lines are slave on/off codes. Each terminal has its own codes, and the codes in the config.bbx file are in hex sequences.

Linux Printer Setup

This section provides examples of setting up spooled printers, shared direct printers, and slave printers. The examples in this section are directly related to the config.bbx sample (see page B-5). Move the prompt (>) to the alias line you want to use as a spooled printer.

Most operating systems use:

>lp -s -dokidata 2>/dev/null

The system device for the alias P1 line is:

>lp -s depson 2>dev/null

The **-d** is followed by the UNIX name for the printer. Use the **lpstat -t** command to show the UNIX name and the physical device name for your printers.

For Linux you would use:

>lpr -Pokidata 2>/dev/null

and

>lpr -Pepson 2>/dev/null

Use the **lpc status** command to show the UNIX name.

Sample config.bbx

A sample config.bbx file for the UNIX operating system is shown below. Use it as a guide to set up your printers.

```
stblen=2112
fcbs=70
handles=70
cibs=70
files=70
aliases=13
alias LP ">lp -s -dokidata 2>/dev/null" "Okidata spooled" CR...
alias P0 /dev/lp1 "Okidata direct" CR...LOCK=/usr/OSAS/LOCKP0
alias P1 ">lp -s -depson 2>/dev/null" "Epson spooled" CR...
alias P2 /dev/tty44 "Epson direct" CR...LOCK=/usr/OSAS/LOCKP2
alias PF $FILE "PRINT FILE" LF=0D0A
alias T1 /dev/tty01 ansico
alias T2 /dev/tty02 ansico
alias T3 /dev/tty03 ansico
alias T4 /dev/tty04 ansico
alias T5 /dev/tty1a term
if T5
alias P3 /dev/tty1a "Epson" CR...SLON=1218,SLOFF=14
end if
alias T6 /dev/tty1b wy60
if T6
alias P3 /dev/tty1b "Epson" CR...SLON=1B6423,SLOFF=14
end if
```


APPENDIX C

C

Additional Information

This appendix contains additional information about:

- ping the BLM server via TCP/IP protocols
- editing the hosts file
- correcting NETDDE.EXE errors

TCP/IP Information

You must be able to ping the BLM Server from any workstation by name and by IP address. You must also be able to ping any workstation from your BLM Server by name and by IP address. An example of the ping command follows:

```
> ping serverNT
```

```
> ping 207.11.110.98
```

Editing the *hosts* File

Editing the **hosts** file is an important step to setting up your server. Before modifying the hosts file on the machine running the BLM Server, you'll need to know the IP address and machine name of each workstation. Follow the steps below to edit the hosts file.

Editing the Windows Server *hosts* File

Follow these steps to edit the hosts file on a Windows server:

1. Use a text file editor to edit this file:

\\Windows\\system32\\drivers\\etc\\hosts

2. The server's **hosts** file may contain some entries already. Add workstation IP addresses and machine names, as in this sample:

```
127.0.0.1    Local host
200.99.5.1   NeilP
200.99.5.2   AlexL
```

3. Save your changes.

Editing the Workstation *hosts* File

Before you modify the **hosts** file on a workstation, you need to know the IP address and machine name of the computer where the BLM Server is running. Follow these steps to edit the workstation **hosts** file.

1. Locate the workstation's **hosts** file. Then use a text file editor to edit the appropriate file.
2. The workstation's **hosts** file may contain some entries already. Add the BLM server IP address and machine name, as in this sample:

```
127.0.0.1    Local host
200.99.5.0   dataserver
200.99.5.1   NeilP
200.99.5.2   AlexL
```

Note: Every workstation must include the server IP. Including other workstations' IP information is optional.

3. Save your changes.

**Editing the
UNIX/Linux
Server *hosts*
and
hosts.equiv
Files**

1. Before you modify the **hosts** file on a UNIX or Linux server running the BLM Server, you need to know the IP address and machine name of each workstation that you want to connect to the BLM Server. To add the workstation computers to the server **hosts** file, enter:

```
# cd /etc  
# vi hosts
```

The current list of workstations appears. You must list all computers that will access the BLM Server. For example:

```
127.0.0.1    Local host  
200.99.5.1   NeilP  
200.99.5.2   AlexL  
414.19.6.8   myserver
```

2. To edit the **hosts.equiv** file, enter

```
# cd /etc  
# vi hosts.equiv
```

The file must include each user's login name and machine name. For example:

```
NeilP  
NeilP.platt.com  
AlexL  
AlexL.syrinx.com
```


APPENDIX D

D

OSAS Security on BBJ

If your company uses OSAS on BBJ over a wide-area network (WAN) or over the internet, you can set up the data server, application server, and client workstations to use secure connections so that communications between these computers are encrypted to increase security.

Encrypting communications via secure connections is a two-step process. First, you set up the data server to encrypt its communications with the application server; then you add a parameter to the shortcut or command line clients use to log in to the application server to encrypt these communications.

Keep in mind that when you use secure connections, only the connection information (that is, the requests and responses sent from one machine to another) is encrypted. Secure connections do not encrypt data in OSAS data files.

Secure Connections between Servers

Follow these instructions to use secure connections between the OSAS BBJ data and application servers:

1. Start the BBJ Enterprise Manager.

If you use Windows, click **Start**, select **BASIS** from the Programs menu, point to **BBj**, then select **BBj Enterprise Manager** from the submenu that appears.

If you use Linux or UNIX, enter **cd /opt/osas/bbj/bin** at the prompt (if you installed OSAS in a different location, substitute that location) to change to the **/bin** directory, then enter **./bbjenterprisemanager**.

If you use Mac OS X, double-click **BASIS-Enterprise_Manager** on the Applications menu. You access this menu by pressing **Apple+Shift+A** from anywhere in Finder.

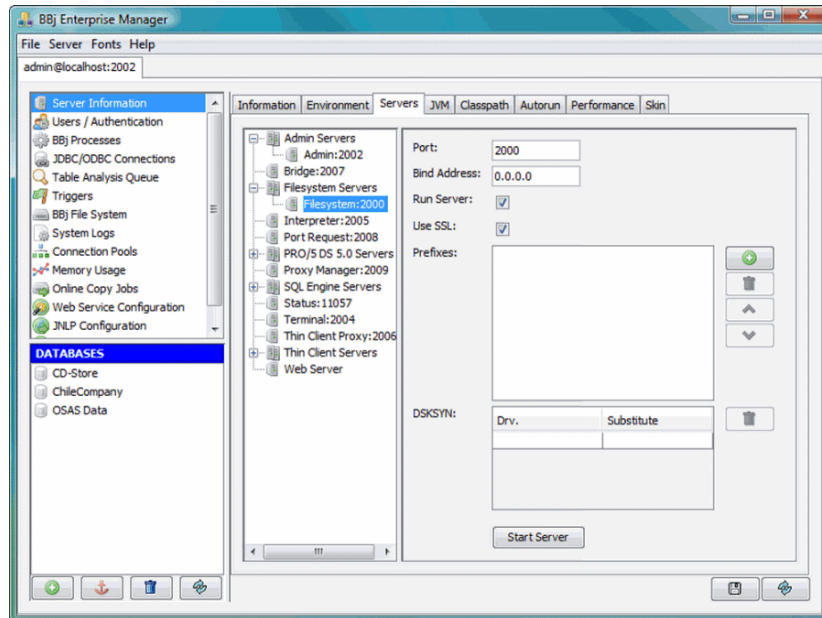
2. Enter the user name and password when the Server Login screen appears.



Enter **admin** as the username and the password for the admin user that you selected when you installed OSAS on BBj.

3. Select the **Servers** tab while having the Server Information option highlighted.
4. Click the plus sign (+) next to **Filesystem Servers** to expand it.
5. Click **Filesystem:2000** to view the settings for that port.

6. Select the **Use SSL** check box to use secure connections when connecting to that data server and click the **Save changes to server settings** button to save your changes.



7. Use the BBj Administration Wizard to stop and restart BBj Services on that data server so that your changes take effect.

On Windows, click **Start**, select **BASIS** from the Programs menu, point to **BBj**, then select **Admin** from the submenu that appears.

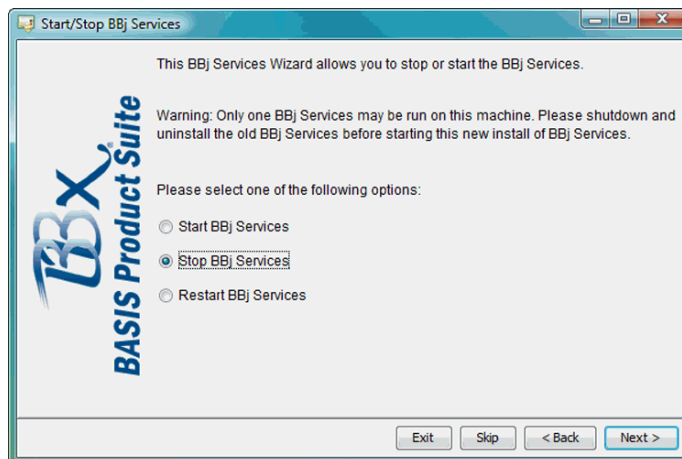
On Linux or UNIX, enter **cd /opt/osas/bbj/bin** at the prompt (if you installed OSAS in a different location, substitute that location) to change to the **/bin** directory, then enter **.admin** at the prompt to start the wizard.

On Mac OS X, double-click **BASIS-Admin** on the Applications menu to launch the wizard. You access the Applications menu by pressing **Apple+Shift+A** from anywhere in Finder.

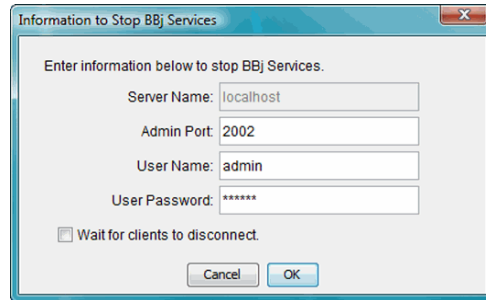
8. When the Administration Wizard screen appears, select **Start/Stop the BBj Services** and click **Next** to continue.



9. When the Start/Stop BBj Services screen appears, select **Stop BBj Services** and click **Next** to continue.



10. When the Information to Stop BBj Services screen appears, enter the user name and password to use to stop BBj Services, then click **OK**.



Check the **Server Name** and **Port** to make sure these values are correct. Select the check box if you want to wait for any client machines connected to the server to disconnect before stopping the services. If no other computers connect to this machine, leave the check box blank.

11. A message appears when BBj Services stop successfully. Click **OK**.
12. When the Wizard Process Complete screen appears, click **Finish**.
13. Repeat steps 7 through 12 to start BBj Services. When the Start/Stop BBj Services screen appears, select **Start BBj Services** and click **Next**.
14. Move to the application server and open the OSINFO.DOS or OSINFO.UNX file (according to the operating system you use) in a text editor. This file is stored in the **/sysfil** subdirectory of the directory in which you installed OSAS on the application server.
15. Edit the directory paths in the file to add **ssl** after the data server name in the path. For example, if your data server's name is *tiger*, an example of the new data directory path (including the **ssl** addition) would be

<tiger, ssl>/u/apps/osas/data

where **/u/apps/osas/data** is the data directory on the data server.

16. Save your changes and close the file.

Secure Connections from Client Workstations

You can also use secure connections on client workstations so that communications between the clients and the application server are encrypted for greater security. To use secure connections on client workstations, make sure each user logs into OSAS using the correct command line or shortcut parameters.

See “OSAS Parameters” on page 3-98 for descriptions of the various parameters you can use to log in to OSAS.

Windows Shortcuts

On Windows, modify the OSAS shortcut properties on each client workstation that connects to OSAS. Add **-SC** to the string of parameters **before** the separation dash in the **Target** box and save your changes.

Linux/UNIX Command Line

On Linux or UNIX, add **-SC** to the command you use to log in to OSAS (for example, **osas -t T001 -c B -a apple -SC**).

Mac OS X Script

On Mac OS X, open the **osas.command** file in the **/applications/osas/progRM** directory with a text editor, then add **-SC** to the command line used to log in to OSAS (after the **RMSETUP** entry, for example).

To open **osas.command** in a text file, press and hold the **Ctrl** key as you click the file. When the menu appears, point to **Open With**, then select **Other** from the submenu. When the Choose Application screen appears, select a text editor (such as TextEdit) and click **Open** to open the file.

Save your changes when you finish and close the file.

Breaking to BASIC using Secure Connections

By default, BBj Services on the application server is set up such that you cannot break to BASIC when you use secure connections. However, you can use the Enterprise Manager to change this default setting so that you can break to BASIC while using secure connections.

Follow these steps to change the **Disallow Console** setting for BBj Services on the application server so that you can use secure connections and still break to BASIC if necessary:

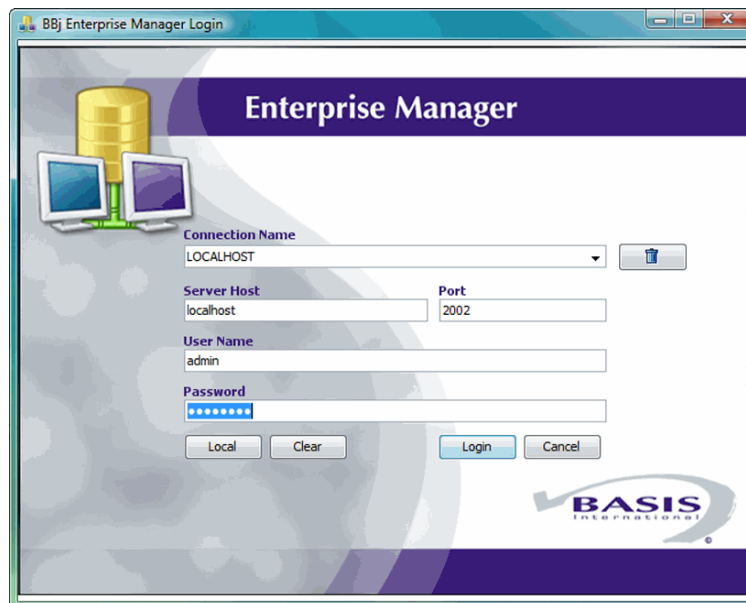
1. Start the BBj Enterprise Manager.

If you use Windows, click **Start**, select **BASIS** from the Programs menu, point to **BBj**, then select **BBj Enterprise Manager** from the submenu that appears.

If you use Linux or UNIX, enter **cd /opt/osas/bbj/bin** at the prompt (if you installed OSAS in a different location, substitute that location) to change to the **/bin** directory, then enter **./bbjenterprisemanager**.

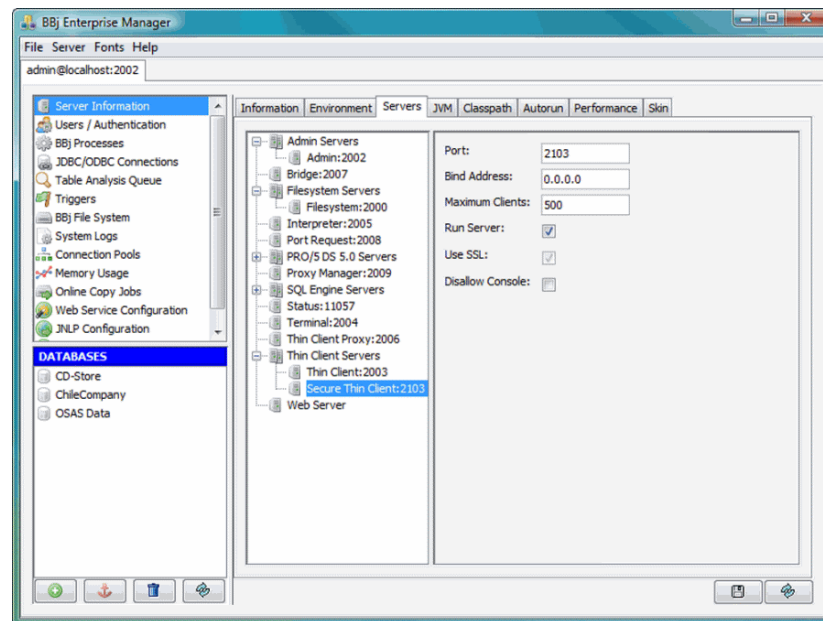
If you use Mac OS X, double-click **BASIS-Enterprise_Manager** on the Applications menu. You access this menu by pressing **Apple+Shift+A** from anywhere in Finder.

2. Enter the user name and password when the Server Login screen appears.



Enter **admin** as the user name and the password for the admin user that you selected when you installed OSAS on BBj.

3. Select the **Servers** tab while having the Server Information option highlighted.
4. Click the plus sign (+) next to **Thin Client Servers** to expand the listing.
5. Click **Secure Thin Client: 2103** to view settings for that port.



6. Clear the **Disallow Console** check box to allow clients to use a console screen to break to BASIC while using secure connections.

If you do not want to allow clients to break to BASIC, select the **Disallow Console** check box (if it is cleared).

7. Click **OK** to save your changes.
8. Stop and restart BBj Services on the application server so that your changes take effect. Refer to steps 7 through 13 starting on page D-3 for details, if necessary.

APPENDIX E

E

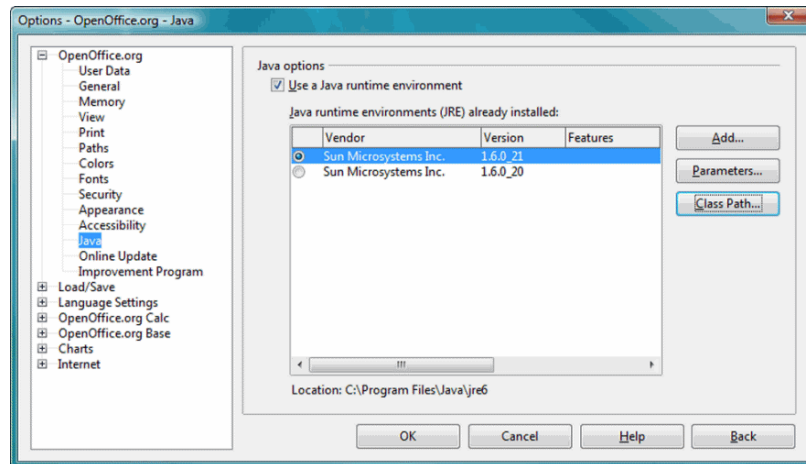
Using the ODBC/JDBC Driver with OpenOffice.org

You use the JDBC portion of the combined BBJ ODBC/JDBC driver to connect to OSAS data from Java-based, JDBC-compliant software applications (such as OpenOffice.org). You can find instructions on how to connect to OSAS data from OpenOffice.org below; consult the reference materials and online help for other software packages for details on using the JDBC driver with these applications.

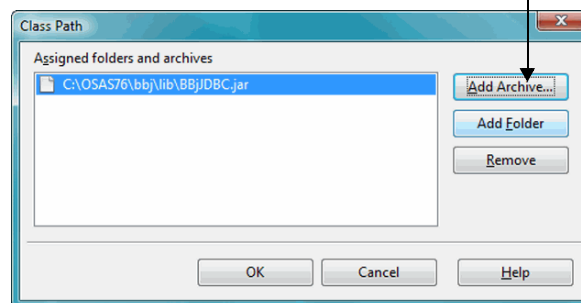
Follow these steps to use the BBJ JDBC driver with OpenOffice.org's Calc spreadsheet program to access OSAS data. These steps have been tested with OpenOffice.org 3.2; newer versions may need slight modifications.

1. If you don't already have it installed, download the OpenOffice.org productivity package from www.openoffice.org and install it.
2. Launch the Calc spreadsheet program.
3. Select **Options** from the **Tools** menu.

4. When the Options screen appears, click **Java** under the **OpenOffice.org** heading on the left side of the screen.



5. Select the JRE that you want to use with OpenOffice.org, then click **Class Path**.
6. When the Class Path screen appears, click **Add Archive**.

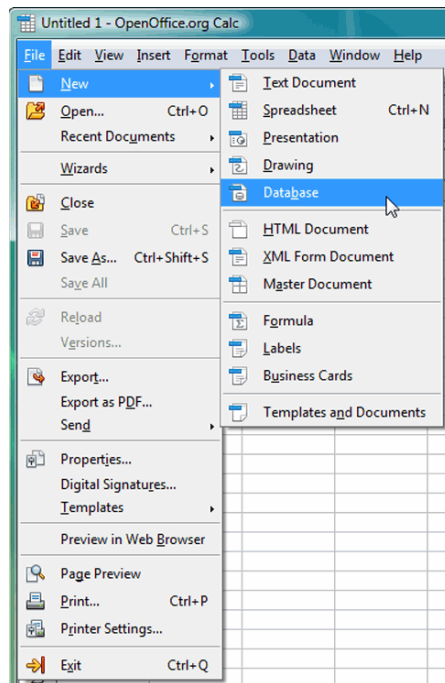


7. When the Select Archives screen opens, navigate to the **/bbj/lib** directory in your OSAS installation and select the **BBjJDBC.jar** file, then click **Open**. Alternately, you can type the directory path and file name directly into the **File Name** box. An example of this directory path is

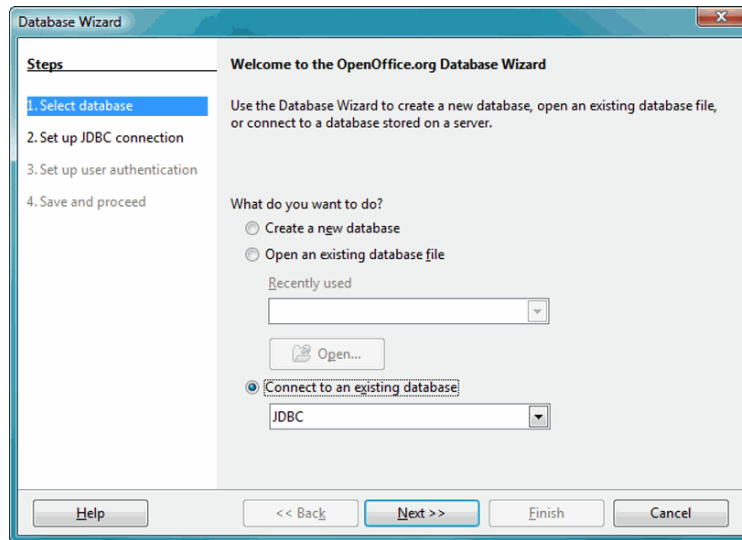
D:\osas\bbj\lib\BBjJDBC.jar

where **D:\osas** is the directory in which you installed OSAS 7.5.

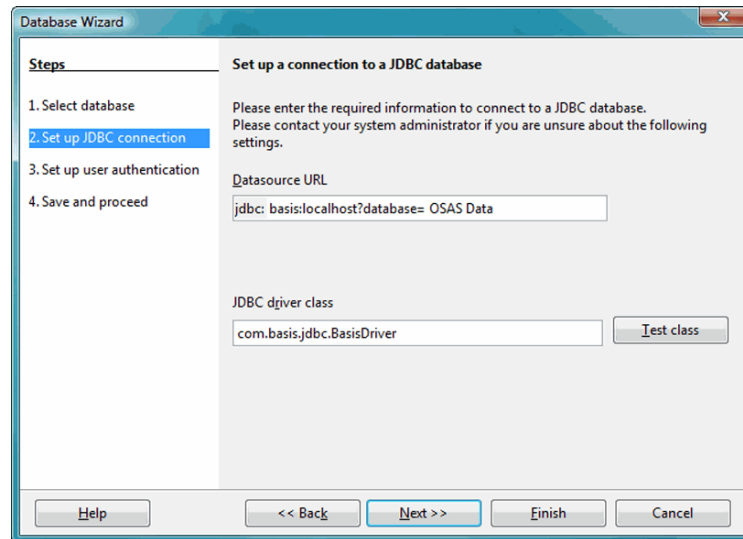
8. Click **OK** to close the Class Path screen, then click **OK** to save your changes and close the Options screen.
9. Select **New** from the **File** menu, then select **Database** from the submenu that appears.



10. When the first screen of the Database Wizard appears, select **Connect to an existing database**, make sure **JDBC** appears in the box, then click **Next** to continue.



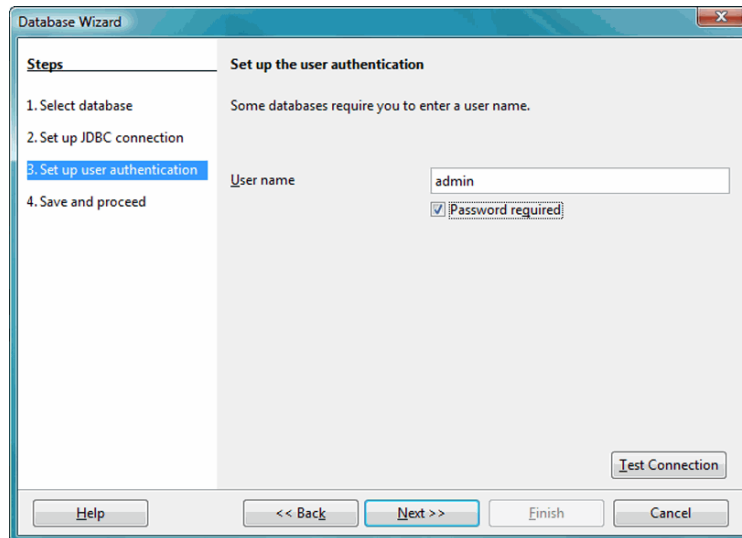
11. Enter **basis:localhost?database=OSAS Data** in the **Datasource URL** box (next to the jdbc: entry that is placed there for you), then enter **com.basis.jdbc.BasisDriver** in the **JDBC Driver Class** box. Click **Next** when you finish to continue.



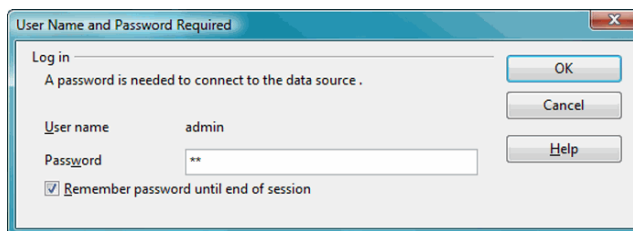
Click **Test Class** to verify your Java settings, if necessary.

Note: The **OSAS Data** in the Datasource URL box is the name of the OSAS database as managed in BBJ Enterprise Manager. This entry must match that name exactly.

12. Enter the **User name** to connect to OSAS data (make sure that the user name you enter exists as a user in the BBJ Enterprise Manager), then select the **Password required** check box to enforce security when you connect.



13. Click **Test Connection** when you finish to make sure that the connection works properly. When the Log in prompt appears, enter the password you selected when you set up that user in the BBJ Enterprise Manager and click **OK** to test the connection.

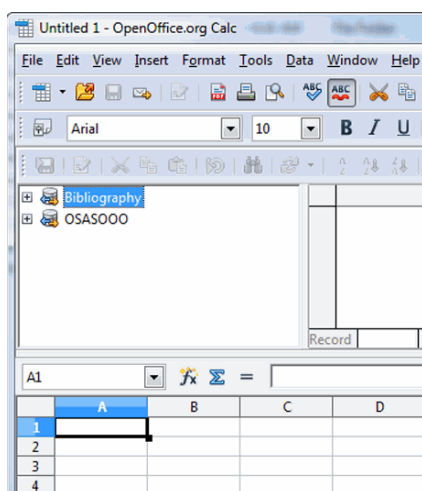


A message appears when the connection is established successfully. If the connection is not established successfully, a message also appears and lists the errors encountered. Click **OK** to close this message.

14. Click **Finish**. When the Save As screen appears, save the file that contains the database information you entered to a directory on your hard drive.

Close the OpenOffice.org Base database application when it appears to return to Calc.

15. After you return to Calc, press **F4**. Calc changes the screen to lists the databases that you can access (along with their tables) in the top section of the screen.



16. Click the plus sign (+) next to the OSAS database you created to expand it, then click the plus sign next to **Tables** to list the OSAS tables you can work with. When the table listing appears, select a table to list its columns and data in the window to the right.

The link between OpenOffice.org, the JDBC driver, and your OSAS data is complete. You can now use that link to create static and dynamic reports from OSAS data, then use OpenOffice.org's spreadsheet tools to manipulate the data to highlight trends, create graphs, and organize information.

Creating Static Reports

After setting up OpenOffice.org so that it can access OSAS data via the JDBC driver, you can simply drag and drop data from the table listing to create a static report. Keep in mind that when you create a static report this way, you're creating a simple copy of the existing data—the data these reports contain is not updated when you work with the report later.

To create a report from live data that updates each time you open it, see “Creating Dynamic Reports” on page E-8.

To create a static report, open Calc, press **F4** to open the table listing, then use the tools within Calc to import data from the selected table into the spreadsheet.

- To add the entire table to the spreadsheet, click the box in the upper left corner of the table’s contents listing to select the entire table, then drag it to the location you want it to appear in on the spreadsheet below.
- To add only a specific entry from the table to the spreadsheet, select a row by clicking the box to the left of the entry and drag it to the spreadsheet.

To select adjacent rows, press and hold the **Shift** key while clicking rows. To select multiple non-adjacent rows, press and hold the **Ctrl** key.

- To add a column from the table, click a heading to select the entire column, then drag it to the spreadsheet below.

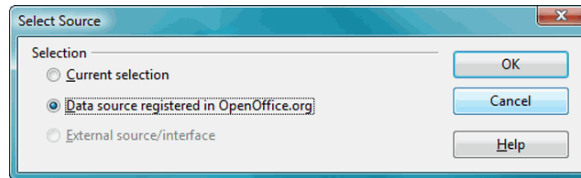
Creating Dynamic Reports

Use the OpenOffice.org DataPilot to create dynamic reports that connect directly to live OSAS data via the JDBC driver. The DataPilot creates reports that are similar to the OSAS productivity PivotTable reports that open in Microsoft Excel. Like those reports, you can easily update the data a dynamic OpenOffice.org report contains so that you can work with the most current data.

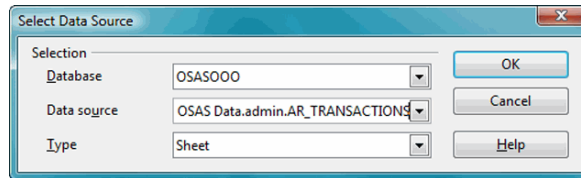
Follow these steps to create a dynamic report from OSAS data with the OpenOffice.org DataPilot:

1. Open Calc. If you like, you can press **F4** after Calc opens to view the database table listing in the top section of the screen.
2. Place the cursor in the cell where you want the dynamic report to begin.
3. On the **Data** menu, point to **DataPilot**, then select **Start** from the submenu.

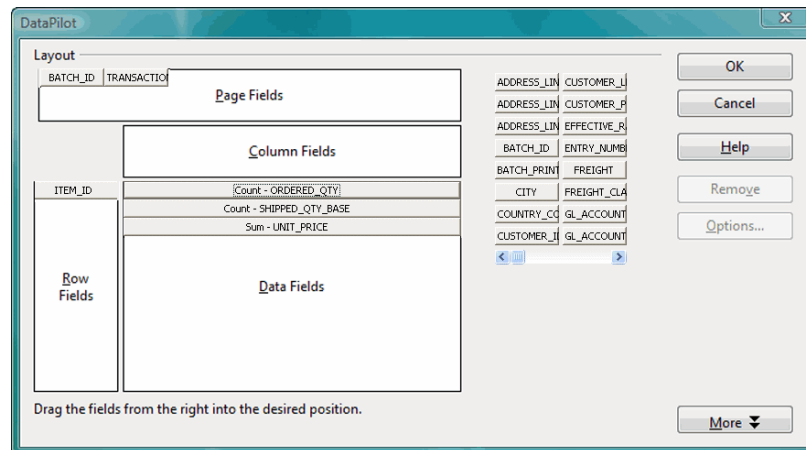
4. When the Select Source screen appears, select **Data source registered in OpenOffice.org** and click **OK**.



5. When the Select Data Source screen appears, select the OSAS database you created in the **Database** box, the file from which you want to pull information in the **Data source** box, and **Sheet** in the **Type** box. Click **OK** when you finish.



6. When the DataPilot screen appears, drag fields from the table listing to the location you want these fields to appear in on the report in the **Layout** section of the screen.



To change how a field appears on the screen, select the field in the layout and click **Options**.

Click **OK** when you finish to create the dynamic report. A sample report (using the layout in the example on the previous page) appears below.

	E	F	G	H	I
27					
28					
29					
30		BATCH_ID	1		
31		TRANSACTION_NO	12		
32					
33		ITEM_ID	Data		
34		100	Count - ORDERED_QTY	1	
35			Count - SHIPPED_QTY_BASE	1	
36			Sum - UNIT_PRICE	528.54	
37		150	Count - ORDERED_QTY	1	
38			Count - SHIPPED_QTY_BASE	1	
39			Sum - UNIT_PRICE	1317.38	
40		300	Count - ORDERED_QTY	1	
41			Count - SHIPPED_QTY_BASE	1	
42			Sum - UNIT_PRICE	51.38	
43		550	Count - ORDERED_QTY	1	
44			Count - SHIPPED_QTY_BASE	1	
45			Sum - UNIT_PRICE	1434.59	
46		600	Count - ORDERED_QTY	1	
47			Count - SHIPPED_QTY_BASE	1	
48			Sum - UNIT_PRICE	286.65	
49		Total Count - ORDERED_QTY		5	
50		Total Count - SHIPPED_QTY_BASE		5	
51		Total Sum - UNIT_PRICE		3618.55	
52					
53					
54					

- When you finish, save your report. To update the values in the report the next time you work with it, click a selection field (one marked with the arrow). When the User Name and Password Required screen appears, enter the user name and password of the user you specified when you created the database link to log in and update the report's values.

Consult the OpenOffice.org help files and reference materials for more details on working with DataPilot reports.

Install Terminals

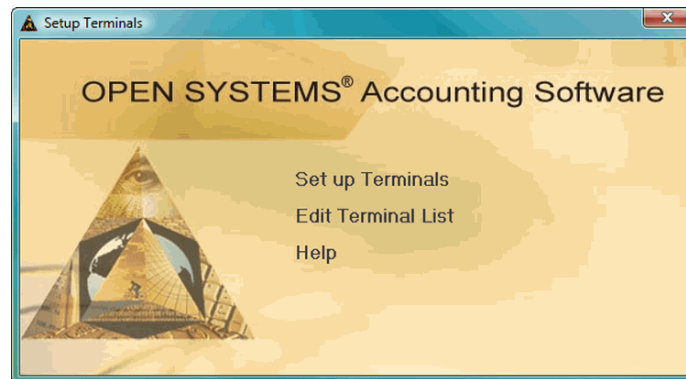
You can set up the desktop installation of OSAS on VPRO/5 such that you can access it from other computers via mapped drives by installing and setting up terminals. For example, set up terminals if you want to install OSAS on a computer that is regularly backed up but relatively inaccessible (in a server room, for instance), but access it from a second centrally located workstation (which may not be on a regular backup schedule).

Keep in mind that the number of terminals that can connect to OSAS in this configuration is limited by your BASIS license's user count. That is, if the user count is 2, only two terminals can connect to OSAS at the same time. A third terminal connection would be refused.

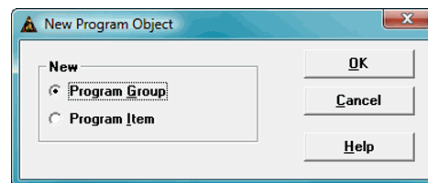
Follow these steps to install terminals to connect to OSAS on the main computer:

1. Move to the first workstation on which to install a terminal and map a drive to the folder on the main computer on which you installed OSAS. Make sure the mapped drive you create reconnects with each login.
2. Use Windows Explorer to access the **\\OSAS\\setup** directory on the main computer via the mapped drive you just set up. After navigating to the directory, double-click the **SETUPTRM.exe** file to launch the terminal installation program.

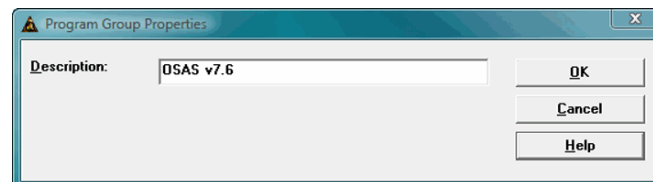
3. When the menu appears, double-click **Set up Terminals**.



4. When the New Program Object dialog box appears, select **Program Group** and click **OK** to continue.

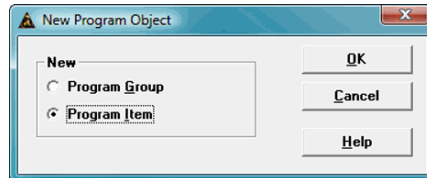


5. When the Program Group Properties dialog box appears, enter the name of the program group (or folder) in which to place the terminal's shortcuts and click **OK**.

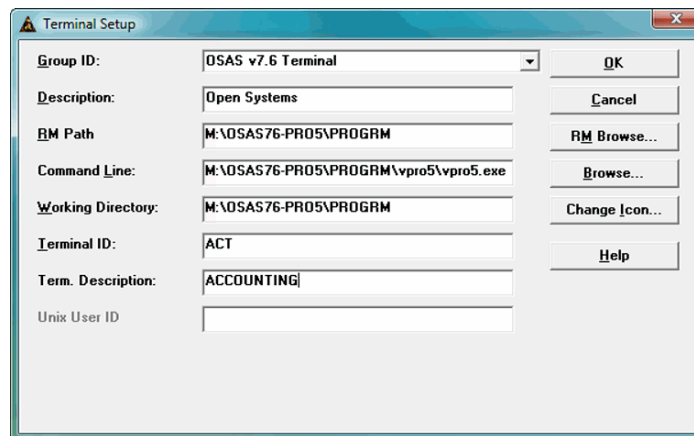


6. When the program group folder window appears (named with the name you entered in the above step), minimize or close it to continue with the terminal setup.

7. On the New Program Object dialog box, select **Program Item** to add a shortcut to the program group you created above. Click **OK** to continue.



8. When the Terminal Setup screen appears, enter the information to use to create the shortcut and click **OK** to continue.



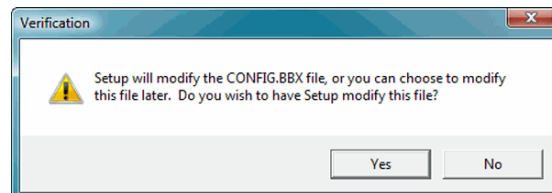
Enter the following information:

- The **Group ID** you created previously appears. Change it, if necessary. The system creates the shortcuts in the group ID folder you select.
- Enter a **Description** for the shortcut. The system automatically adds the terminal ID you enter below to this description when creating the shortcut.

- In the **RM Path** field, edit the mapped network path to the **\progRM** directory in which Resource Manager is installed, if necessary. Click **RM Browse** to navigate to this directory and automatically enter the path into the field.
- In the **Command Line** field, edit the complete mapped network path to the **vpro5.exe** file, if necessary. Click **Browse** to navigate to this file and automatically enter the path into the field.
- In the **Working Directory** field, edit the mapped network path to the **\progRM** directory, if necessary.
- Enter a unique ID (up to three characters) for the terminal you're setting up in the **Terminal ID** field. You can use a combination of numbers and uppercase or lowercase letters. OSAS automatically adds the letter "T" to the front of this ID when it creates the OSAS shortcut and sets up its properties.
- Enter a **Terminal Description**—for example, the name of the person whose terminal you are setting up, or the name of the department that accesses OSAS from the terminal.
- If you use a Linux or UNIX data server, enter the **Unix User ID** to use to log in to the server. This ID must be a valid login ID (*root* is not allowed). If you do not use a Linux or UNIX data server, this field is not available.

Click **OK** when you finish to create the shortcut. The program group folder window appears with the new shortcut you created. Close this window.

9. When the Verification message appears, click **Yes** to add the terminal's information to the config.bbx file on the main computer. Click **No** if you want to add this information to the config.bbx file manually.



OSAS uses the information in this file to communicate with and run correctly on devices (such as terminals or printers) that connect to it. New terminal information must be added to this file; otherwise OSAS will not recognize or communicate with the new terminal.

Terminal setup is now complete. Close the New Program Object dialog box and Setup Terminals menu. If you have multiple terminals to set up, move to the next workstation and repeat the above steps to set up the next terminal.

APPENDIX G



Java Web Start Setup

If you use OSAS in an enterprise environment, you can set up a web server that allows client workstations to access OSAS through the Java Web Start client application. Java Web Start allows you to open and access an application over a network without requiring additional software. This type of configuration requires only that the client workstations you use have the JRE installed; you do not need to install any other software on the clients.

Due to security issues, this type of configuration functions best when used on a local area network (LAN) with a local webserver. You can use this configuration over a wide area network (WAN) to access OSAS via remote clients, but keep in mind that performance will depend on your network connections, setup, and latency

Set Up the Web Server

Follow these steps to set up your web server for use with Java Web Start clients:

1. Install your web hosting software and set up the machine to correctly serve web pages. Consult your software reference guides and online materials for details on setting up the web server.

2. Download and install the Java Software Developers Kit (SDK) for your operating system on the web server. You can download the SDK from www.java.sun.com.

You use the tools included in the SDK later to sign the .JAR files that OSAS requires to run correctly.

3. Install the combined OSAS data/application server on the web server. Refer to “Combined Installation” on page 3-3 for full instructions.

After setting up the web server, you now need to set up a new MIME type for the Java Web Start extension, modify the .JNLP file as necessary so that OSAS functions correctly, and sign the Java .JAR files required for BBJ to run properly on the web server.

Add the JNLP MIME Type

To prepare the web server so that it can work with Java Web Start, you need to add a new MIME type. A MIME type tells the server what kind of file is associated with a particular extension so that the server can run the correct application for that file. For example, the type **image/gif** is associated with .GIF graphic files, and tells the server to use a graphics program to open the file. The Java Web Start MIME type is an **application/x-java-jnlp** type.

The procedure for setting up a new MIME type varies depending on the type of web server you use. Instructions for Apache® and Windows Internet Information Services (IIS) are found below; consult your web server’s reference materials if you use a different type.

Apache Web Servers

Follow these steps to configure Apache web servers to add the JNLP MIME type:

1. Change to the **conf** directory in the server’s home directory. For example, enter **cd /home/apache/conf** at the prompt (be sure to substitute the correct directory location for your system) to switch to this directory.
2. Edit the **mime.types** file located in the **conf** directory to add this line:

application/x-java-jnlp-file jnlp

Save the file when you finish.

3. If you use Apache v2.0 or higher, you also need to edit the **httpd.conf** configuration file. Change to the **/etc/httpd/conf** directory, then open the **httpd.conf** file. In the AddType section, add this line:

AddType application/x-java-jnlp-file .jnlp

Save the file when you finish.

4. Restart the server to complete the addition.

Windows XP IIS Web Servers

Follow these steps to configure Windows XP IIS servers to add the JNLP MIME type:

1. Launch the IIS Management Console.
2. Expand the web server in the list that appears on the left side of the screen by clicking the plus sign (+) next to it.
3. Expand the Web Sites folder for the server by clicking the plus (+) sign.
4. Right-click **Default Web Site** in the list and select **Properties** from the menu that appears.

If you renamed the web site to something more descriptive when you set it up, right-click that name in the list.

5. When the Properties dialog box appears, click the HTTP Headers tab.
6. In the MIME Map section at the bottom of the screen, click File Types.
7. When the File Types dialog box appears, do the following:
 - Enter **.jnlp** in the **Associated Extension** box (remember to add the period before **jnlp**).
 - Enter **Application/x-java-jnlp-file jnlp** in the **Content Type (MIME)** box.

Click **OK** when you finish to save your changes and close the File Type dialog box.

8. Click **OK** to save your changes and close the Properties dialog box.
9. Restart the IIS Admin Service to complete the addition.

Modify the OSAS .JNLP File

JNLP is the Java Network Launch Protocol—a series of protocols and APIs that allow Java applications (such as OSAS 7.6) to be deployed over the Internet. Clients use launchers (such as Java Web Start) to launch the JNLP scripts that open and interact with applications hosted on other networks.

Follow these steps to use the OSAS .JNLP script with Java Web Start:

1. Copy the **osas.jnlp** file from the **/osas/progRM** directory of the OSAS installation on the web server to a public directory on the server.

This directory can be located anywhere on the web server as long as it is accessible to all users.

2. Open the file in a text editor and modify it so that it uses the correct information for your system.

Refer to “Sample .JNLP File” on page G-7 for a description of the .JNLP file and the areas that you may need to modify.

3. Save your changes.

Sign the .JAR Files

After you’ve added the MIME type and copied and modified the .JNLP file for your web server, you need to sign the .JAR files that OSAS requires to run through a Web Start setup and copy them to the web server. Signing .JAR files allows them full access to the operating system (as required by BBj to run correctly). If you do not sign the .JAR files, OSAS will not run correctly when accessed from a client via a web browser.

Each .JAR file can be signed only once. For this reason, save the original .JAR files to a safe location and only sign copies of these files. When you sign a .JAR file, you use the tools in the Java Software Developers Kit (SDK) to create a keystore and sign the files with the password you select. After signing the files, you copy them to the webserver.

The keytool and jarsigner tools that are required to sign .JAR files are provided in the Java SDK.

You need to sign three .JAR files for use with Web Start: **BBjThinClient.jar**, **BBjtUtil.jar**, **PDFRenderer.jar**, and **webstartXXXX.jar**. The first two files are located in the **\osas\bbj\lib** directory of the OSAS installation on the web server; the last one is located in the **\osas\bbj\lib\webstart** directory.

Follow these steps to sign the .JAR files:

1. Create a keystore. A keystore is a file that contains all of the information contained within the .JARs signed. To create a new keystore, enter

keytool -genkey -keystore LocalKeyStore -alias testing

This command creates a new keystore (named **LocalKeyStore**) in the current directory. There can be many types of keys in your keystore. The **-alias testing** switch creates a new type called **testing**.

2. When prompted, enter the keystore passphrase to use for this keystore. Make a note of the passphrase you use; you'll need it later when you sign the .JAR files.
3. When prompted, enter the name and organization to use for the keystore.

The information you enter here will appear on client workstations when the web server asks them to grant it full access to their computer when users access OSAS remotely.

4. Enter this command to sign the **BBjThinClient.jar** file into the keystore (remember, sign only copies; keep the originals in a safe location):

jarsigner -keystore LocalKeyStore BBjThinClient.jar testing

The **-keystore** switch specifies the keystore to use. Provide the full path if it is not in the local directory.

5. Repeat step 4 to sign the **BBjtUtil.jar**, **PDFRenderer.jar** and **webstartXXXX.jar** files.
6. Copy the .JAR files to the path you specified within the .JNLP file.

You can now begin testing your web server. If a security request prompt appears during testing, the security manager will strongly recommend not to continue because the jarsigner is not yet validated by a trusted server.

You can use any provider to validate .JAR files (BASIS uses VeriSign). If you use VeriSign, note that the process you use to sign .JARs when backed by VeriSign is slightly different than that given above. For further information, see www.verisign.com.

Note: Obtaining a secure certificate from VeriSign takes about 8–14 days.

Sharing Resources

Web Start tries to share resources with any BBj Services JVM running on the client workstation. In some cases, Web Start's ThinClient.jar is incompatible with BBj Services' ThinClient.jar. To avoid this problem, use the additional **-INF<marker>** argument in the **application** section of the .JNLP file. Web Start only shares resources with other virtual machines containing the same marker.

Add this argument to the application section of the .JNLP file (see section 8 on page G-9 for a fuller discussion):

<argument>-INFbcommerce</argument>

where **bcommerce** is the marker you specify.

Using Port 113

Some Java implementations use port 113 (associated with the **ident** service) for authentication purposes. If port 113 is blocked, Java Web Start may take several minutes to launch, or it may fail completely.

Sample .JNLP File

A sample of the osas.jnlp file is shown below.

```

① <?xml version="1.0" encoding="utf-8"?>
  <!-- JNLP File for B-commerce Application ② -->
③ <jnlp
  spec="1.0+"
  codebase="http://osas.com/bbj/"
  href="osasconf.jnlp">
④ <information>
  <title>OPEN SYSTEMS Accounting Software</title>
  <vendor>Open Systems Inc.</vendor>
  <description>OPEN SYSTEMS Accounting Software v7.5 (BBj)</description>
  <description kind="short">Accounting software suite</description>
</information>
⑤ <security>
  <all-permissions/>
</security>
⑥ <resources>
  <j2se version="1.5" initial-heap-size="48m" max-heap-size="96m"/>
  <jar href="BBjThinClient.jar"/>
  <jar href="BBjUtil.jar"/>
  <jar href="PDFRenderer.jar"/>
⑦ </resources>
  <resources os="Windows 7">
    <nativelib href="webstart2166.jar"/>
  </resources>
  <resources os="Windows Vista">
    <nativelib href="webstart2166.jar"/>
  </resources>
  <resources os="Windows XP">
    <nativelib href="webstart2166.jar"/>
  </resources>
  <resources os="Linux">
    <nativelib href="webstart2145.jar"/>
  </resources>
  <resources os="Mac OS X">
    <nativelib href="webstart.jar"/>
  </resources>
⑧ <application-desc main-class="com.basis.bbj.client.comm.WebStartLauncher">
  <argument>-q</argument>
  <argument>-SC</argument>
  <argument>-unobody</argument>
  <argument>-cc:/osas76/progRM/config.bbx</argument>
  <argument>-WDC:/osas76/progRM</argument>
  <argument>-RHosas.com</argument>
  <argument>-tT000</argument>
  <argument>RMSETUP</argument>
  <argument>-INFosas</argument>
</application-desc>
⑨ </jnlp>

```

1. This is the XML specification line, which is required by XML parsers to determine the specification the file conforms to.
2. This is a comment line that is used to add information to the file for users. Comments begin with `<!--` and end with `-->`, and are ignored by XML parsers and web browsers. There is no limit to the number of comments, they may appear in any location in the file, and they may span multiple lines. Comments may not nest (this is illegal: `<!-- <!-- --> -->`).
3. This is the root tag in every .JNLP file. The attributes of this tag specify which version of the Web Start protocol is being used (1.0+) as well as information about where the file is located.

The **codebase** attribute specifies what protocol to use (http), what machine the file is hosted on (osas.com) and the directory the file is located in (bbj). The **href** attribute specifies the actual file name.

You may need to edit the codebase and href attributes to specify the correct machine, directory, and file name information.

4. This section contains the general information that is presented to users during installation. The `<title>` element lists the name of the icon on the user's desktop. The vendor and description are available to users through the Web Start launcher.
5. This section request complete access to the user's machine. The user is prompted to request access—if the user does not grant access, the application will not run.

In the 1.0+ specification, there is no middle ground. That is, requests for only network access or only disk access cannot be made.

6. This section describes the required version of Java, the initial and maximum memory sizes, and the .JAR files required to run the application. Web Start downloads the **BBjThinClient.jar** and **ThirdParty.jar** files from the Web Server in order to run BBj.
7. This section contains the file name of the Web Start .JAR file to use, organized by operating system and port ID.

If you use Windows, you must add a line for each version of Windows you use, but all Windows versions share the same **webstart2166.jar** file. (The **2166** refers to the port ID the operating system uses; for Linux, use 2145; for Solaris x86, use 2169; for Solaris Sparc, use 2179, and so on.)

If you use Linux, Solaris x86, or Solaris Sparc, add a line for those operating systems, followed by the .JAR file for the port that OS uses. If you use a different operating system, consult your reference materials for the port ID it uses, then specify the corresponding .JAR file here.

The **webstartXXXX.jar** files are located in the `\osas\bbj\lib\webstart` directory of the OSAS installation on the web server.

8. The application section specifies the main Java class to run as well as its arguments. For thin clients, the main class will always be `com.basis.bbj.com.WebStartLauncher`. The arguments vary depending on the application.

In this example,

- **q** suppresses the splash screen.
- **SC** establishes a secure connection.
- **unobody** connects as user nobody.
- **cc:/osas76/progRM/config.bbx** lists the location of the config.bbx file.
- **WDc:/osas76/progRM** specifies the working directory to start in.
- **RHosas.com** specifies the remote host to connect to.
- **tT000** specifies the terminal ID to use.
- **RMSETUP** specifies the BBJ application or program to run.
- **INFosas** specifies the marker to use to avoid resource sharing errors.

You should modify these lines to specify the user, configuration file, working directory, remote host, terminal ID, and BBJ application to run when clients access OSAS remotely.

9. This line closes the opening **<jnlp>** tag from section 3 and specifies the end of the file.

You can replace the parameters within `ec.bbj` to suit the needs of an application. Make sure that the file name is changed in section 3 to match whatever the new .JNLP file is named.

For More Information

The Java Web Start developers guide can be found at <http://java.sun.com>.

Further information about MIME types and content negotiation can be found at <http://httpd.apache.org>.

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