



# **WebEnterprise Installation Guide**

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Release 1 of Forte™ WebEnterprise

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# Preface

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This *WebEnterprise Installation Guide* explains how to install Forte WebEnterprise and WebEnterprise Designer.

**Chapter 1, “Introduction,”** briefly describes the WebEnterprise software and installation requirements. The remaining chapters describe the installation of WebEnterprise components on certified Web servers and Forte servers.

Before installing WebEnterprise, review the Platform Matrix, Release Bulletins (especially the pre-installation warnings) and Defect Reports for this WebEnterprise release at <http://www.forte.com/support/platforms.html>.

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## Organization of This Manual

This manual explains how to install Forte WebEnterprise and the WebEnterprise Designer add-on on certified platforms.

Chapter	Description
Chapter 1, "Introduction"	Describes the Forte WebEnterprise software and the variations of the software that you can install.
Chapter 2, "Installing and Configuring WebEnterprise on a Forte Server Node"	Describes how to install and configure WebEnterprise components on your Forte server.
Chapter 3, "Installing and Configuring WebEnterprise on a Web Server Node"	Describes how to install and configure WebEnterprise components on your Web server node.
Chapter 4, "Upgrading WebEnterprise"	Explains how to upgrade WebEnterprise from an earlier version by preparing your current setup and reinstalling the WebEnterprise components on your Web server and Forte server.

# Conventions

This manual uses standard Forte documentation conventions in specifying command syntax and in documenting TOOL code.

## Command Syntax Conventions

The specifications of command syntax in this manual use a “brackets and braces” format. The following table describes this format:

Format	Description
<b>bold</b>	Bold text is a reserved word; type the word exactly as shown.
<i>italics</i>	Italicized text is a generic term that represents a set of options or values. Substitute an appropriate clause or value where you see italic text.
UPPERCASE	Uppercase text represents a constant. Type uppercase text exactly as shown.
<u>underline</u>	Underlined text represents a default value.
vertical bars	Vertical bars indicate a mutually exclusive choice between items. See braces and brackets, below.
braces { }	Braces indicate a required clause. When a list of items separated by vertical bars is enclosed in braces, you must enter one of the items from the list. Do not enter the braces or vertical bars.
brackets [ ]	Brackets indicate an optional clause. When a list of items separated by vertical bars is enclosed by brackets, you can either select one item from the list or ignore the entire clause. Do not enter the brackets or vertical bars.
ellipsis ...	The item preceding an ellipsis may be repeated one or more times. When a clause in braces is followed by an ellipsis, you can use the clause one or more times. When a clause in brackets is followed by an ellipsis, you can use the clause zero or more times.

## TOOL Code Conventions

Where this manual includes documentation or examples of TOOL code, the TOOL code conventions in the following table are used.

Format	Description
parentheses ( )	Parentheses are used in TOOL code to enclose a parameter list. Always include the parentheses with the parameter list.
comma ,	Commas are used in TOOL code to separate items in a parameter list. Always include the commas in the parameter list.
colon :	Colons are used in TOOL code to separate a name from a type, or to indicate a Forte name in a SQL statement. Always include the colon in the type declaration or statement.
semicolon ;	Semicolons are used in TOOL code to end a TOOL statement. Always type a semicolon at the end of a statement.

# The Forte Documentation Set

Forte produces a comprehensive documentation set describing the libraries, languages, workshops, and utilities of the Forte Application Environment. The complete Forte Release 3 documentation set consists of the following manuals in addition to comprehensive online Help.

## Forte 4GL

- *A Guide to the Forte 4GL Workshops*
- *Accessing Databases*
- *Building International Applications*
- *Esript and System Agent Reference Manual*
- *Forte 4GL Java Interoperability Guide*
- *Forte 4GL Programming Guide*
- *Forte 4GL System Installation Guide*
- *Forte 4GL System Management Guide*
- *Fscript Reference Manual*
- *Getting Started With Forte 4GL*
- *Integrating with External Systems*
- *Programming with System Agents*
- *TOOL Reference Manual*
- *Using Forte 4GL for OS/390*

## Forte Express

- *A Guide to Forte Express*
- *Customizing Forte Express Applications*
- *Forte Express Installation Guide*

## Forte WebEnterprise and WebEnterprise Designer

- *A Guide to WebEnterprise*
- *Customizing WebEnterprise Designer Applications*
- *Getting Started with WebEnterprise Designer*
- *WebEnterprise Installation Guide*

## Forte Example Programs

In this manual, we often include code fragments to illustrate the use of a feature that is being discussed. If a code fragment has been extracted from a Forte example program, the name of the example program is given after the code fragment. If a major topic is illustrated by a Forte example program, reference will be made to the example program in the text.

These Forte example programs come with the Forte product. They are located in subdirectories under `$FORTE_ROOT/install/examples`. The files containing the examples have a `.pex` suffix. You can search for TOOL commands or anything of special interest with operating system commands. The `.pex` files are text files, so it is safe to edit them, though you should only change private copies of the files.

## Viewing and Searching PDF Files

You can view and search 4GL PDF files directly from the documentation CD-ROM, store them locally on your computer, or store them on a server for multiuser network access.

**Note** You need Acrobat Reader 4.0+ to view and print the files. Acrobat Reader with Search is recommended and is available as a free download from <http://www.adobe.com>. If you do not use Acrobat Reader with Search, you can only view and print files; you cannot search across the collection of files.

► **To copy the documentation to a client or server:**

- 1 Copy the `fortedoc` directory and its contents from the CD-ROM to the client or server hard disk.

You can specify any convenient location for the `fortedoc` directory; the location is not dependent on the Forte distribution.

- 2 Set up a directory structure that keeps the `fortedoc.pdf` and the `4gl` directory in the same relative location.

The directory structure must be preserved to use the Acrobat search feature.

**Note** To uninstall the documentation, delete the `fortedoc` directory.

► **To view and search the documentation:**

- 1 Open the file `fortedoc.pdf`, located in the `fortedoc` directory.
- 2 Click the **Search** button at the bottom of the page or select **Edit > Search > Query**.
- 3 Enter the word or text string you are looking for in the Find Results Containing Text field of the Adobe Acrobat Search dialog box, and click **Search**.

A Search Results window displays the documents that contain the desired text. If more than one document from the collection contains the desired text, they are ranked for relevancy.

**Note** For details on how to expand or limit a search query using wild-card characters and operators, see the Adobe Acrobat Help.

- 4 Click the document title with the highest relevance (usually the first one in the list or with a solid-filled icon) to display the document.

All occurrences of the word or phrase on a page are highlighted.

- 5 Click the buttons on the Acrobat Reader toolbar or use shortcut keys to navigate through the search results, as shown in the following table:

Toolbar Button	Keyboard Command
Next Highlight	Ctrl+] ]
Previous Highlight	Ctrl+[ [
Next Document	Ctrl+Shift+] ]

- 6 To return to the `fortedoc.pdf` file, click the Homepage bookmark at the top of the bookmarks list.
- 7 To revisit the query results, click the **Results** button at the bottom of the `fortedoc.pdf` home page or select **Edit > Search > Results**.

# Chapter 1

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## Introduction

This chapter briefly describes the Forte WebEnterprise software and the variations of the software that you can install.

Installation of WebEnterprise on any supported platform consists of the following steps:

- checking the software requirements for the node
- using a platform-specific installation procedure for installing WebEnterprise components on your Forte server
- using a platform-specific installation procedure for installing WebEnterprise components on your Web server

WebEnterprise provides a graphical installation program for NT nodes, and an installation script for UNIX nodes. Installation on OpenVMS nodes is manual.

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## About Forte WebEnterprise

Forte's WebEnterprise product family consists of two products:

- WebEnterprise Server
- WebEnterprise Designer

WebEnterprise Server consists of all the software and documentation required to add a Web interface to a Forte application. WebEnterprise Server is also referred to as WebEnterprise. WebEnterprise Server allows Web clients to access Forte servers running on all platforms supported by the Forte runtime system. For a list of certified Web server platforms and Web browsers, see the most recent platform matrix at <http://www.forte.com/support/platforms.html>.

WebEnterprise Designer is an interactive development environment for building Web applications. Applications developed with WebEnterprise Designer are deployed using WebEnterprise Server.

WebEnterprise is compatible with the following Internet standards:

- HTTP 1.0
- HTML 2.0 and enhancements

## Contents of WebEnterprise

The Forte WebEnterprise Server software set contains the following components:

- fortectgi (a CGI program)
- fortensapi (a plug-in library for Netscape's NSAPI interface)
- forteisapi (a plug-in library Microsoft's ISAPI interface)
- the HTTP Forte library distribution
- WebEnterprise projects (in pex file format): HTML, HTMLWindow, and HTMLSQL
- example program files

Forte WebEnterprise Designer is packaged as an add-on component to WebEnterprise Server. In addition to the WebEnterprise Server components, it consists of wizards for developing web applications.

## Installing WebEnterprise

WebEnterprise must be installed in two places: on your Forte Server nodes and on your Web Server node. Consequently, the installation process is divided into two phases: installation on Forte Server nodes (detailed in [Chapter 2, “Installing and Configuring WebEnterprise on a Forte Server Node”](#)) and installation on the Web Server node (detailed in [Chapter 3, “Installing and Configuring WebEnterprise on a Web Server Node”](#)).

The WebEnterprise graphical installation program for NT and the installation script for UNIX copy the required files to both your Web and Forte server, as shown in the table below. You perform these steps manually when installing on OpenVMS nodes. In addition, a Forte Escript script (we\_lib.scr) installs the HTTP library distribution on your Forte server nodes, and a Forte Fscript script (we\_proj.scr) imports your WebEnterprise projects into your repository.

Component	Forte Server Node	Web Server Node
fortecgi		✓
(optionally) fortensapi		✓
(optionally) forteisapi		✓
HTTP library distribution	✓	
WebEnterprise projects	✓	
WebEnterprise Designer add-on	✓	✓
example program files	✓	✓

Typically each WebEnterprise example consists of two sets of files. One set, consisting primarily of source files, is installed on the Forte Server, while the other set, consisting primarily of image files, is installed on the Web Server node.

## Installation Requirements

Before beginning your WebEnterprise installation, confirm that your server nodes and software comply with the Forte server, Web server, Web browser, and platform requirements. Refer to the platform matrix at <http://www.forte.com/support/platforms.html> for the complete list of supported Forte components, web servers, web browsers and platform requirements.

### Forte Runtime System Dependencies

For WebEnterprise there are two dependencies:

- WebEnterprise Server requires Forte Application Environment
- WebEnterprise Designer requires both Forte Application Environment and Forte Express.

You must install the correct point version of the Forte products before you install WebEnterprise.

Refer to the Platform Matrix at <http://www.forte.com/support/platforms.html> for the specific versions.

### Web Server Support

Forte internal testing was performed using:

- iPlanet Web Server
- Microsoft Internet Information Server (IIS)
- Process Software Purveyor Encrypt for OpenVMS

Forte Component	iPlanet Web Server	Microsoft Internet Information Server	Process Software Purveyor Encrypt
fortecgi	✓	✓	✓
fortensapi	✓		
forteisapi		✓	

## Chapter 2

---

# Installing and Configuring WebEnterprise on a Forte Server Node

This chapter describes how to install and configure WebEnterprise components on your Forte server. (A complete installation of WebEnterprise comprises components on both a Forte server node and a Web server node.)

The WebEnterprise software set provides a graphical installation program for NT nodes and an installation shell script for UNIX and OS/390 nodes. The installation on OpenVMS nodes is manual. Also provided are Forte scripts to load and install the WebEnterprise HTTP library on all WebEnterprise enabled nodes in your environment and to import the WebEnterprise projects into your repository.

# Installing and Configuring WebEnterprise on an NT Forte Server

You use the WebEnterprise graphical installation program `setup.exe` to place WebEnterprise components on both your NT Forte server and your NT Web server nodes. However, you must use separate invocations of the installation program to install the WebEnterprise Forte server components and the Web server components. Forte server and Web server files are, by convention, installed beneath different target directories, often with different owners, and often on different nodes. If your Web server is on an NT node, and your Forte server is on a UNIX node, or conversely, you will need to use both the NT setup program and the UNIX installation shell script to complete your installation.

To install WebEnterprise on an NT Forte server, you use the installation program and two Forte scripts. The WebEnterprise installation program copies the following Forte server components to a target directory on your NT node:

- the HTTP Forte library distribution
- WebEnterprise projects
- WebEnterprise Designer (this requires an installation of Forte Express)
- example program files

Post-installation

After the setup program places the components on your Forte server, you use the Escript script `we_lib.scr` to install the HTTP library distribution on the nodes of your choice and the Fscript script `we_proj.scr` to import the WebEnterprise projects into your repository.

See [“Post-Installation Setup and Verification” on page 35](#) for instructions on setting Forte server node environment variables and information about the example applications.

## Requirements

Before installing WebEnterprise components on your Forte server, consult the platform matrix at <http://www.forte.com/support/platforms.html> to determine if your Forte server platform and software meet WebEnterprise requirements.

Be prepared to provide the setup program with a target directory for the installation of WebEnterprise components. Forte server components must be installed beneath the root directory of a valid Forte installation. This typically is the directory pointed to by the `$FORTE_ROOT` environment variable. You must have the correct version of Forte installed in the target directory before proceeding with the WebEnterprise installation. If you are planning to install WebEnterprise Designer, you must also have the correct version of Forte Express installed in this same directory.

Upgrading

If you are upgrading from a previous release of WebEnterprise, see [Chapter 4, “Upgrading WebEnterprise.”](#)

## Performing the Installation

To achieve a complete installation of WebEnterprise on your Forte server and environment, you must follow the three installation procedures outlined in this section, namely:

- install WebEnterprise components
- install the HTTP library
- import the WebEnterprise projects

## Installing the WebEnterprise Components

This section describes how to use the installation program to install the basic WebEnterprise components on your NT Forte server.

### ► To install WebEnterprise components on an NT Forte Server:

- 1 Double-click the setup.exe icon in the Pc\_w32 directory on the CDROM distribution, or choose the **Start > Run** command and specify the path to the setup.exe program.

The Forte WebEnterprise License Agreement dialog appears.

- 2 Read the license agreement and click **Yes** if you agree.

The Welcome to Forte WebEnterprise Setup dialog appears.

- 3 Click the Install Forte Server Components radio button, and click **Next**.

The Select Forte WebEnterprise Destination Folder dialog appears.

The destination directory must correspond with the root folder of a valid Forte installation. The destination folder initially displayed in the dialog is associated with your environment's current FORTE\_ROOT. If this folder is not where you want to install the WebEnterprise components, click the Browse button and select the correct Forte folder in the Choose Folder dialog. When the correct path is displayed, click **OK**.

- 4 When the correct destination folder specification is displayed in the Select Forte WebEnterprise Destination Folder dialog, click **Next**.

The Select Optional Forte WebEnterprise Components dialog appears.

- 5 Enable the toggles of the optional WebEnterprise Forte server components you wish to install.

Note If you do not have Forte Express installed in the specified destination directory, WebEnterprise Designer does not appear in the list of optional components.

- 6 Click **Next**.

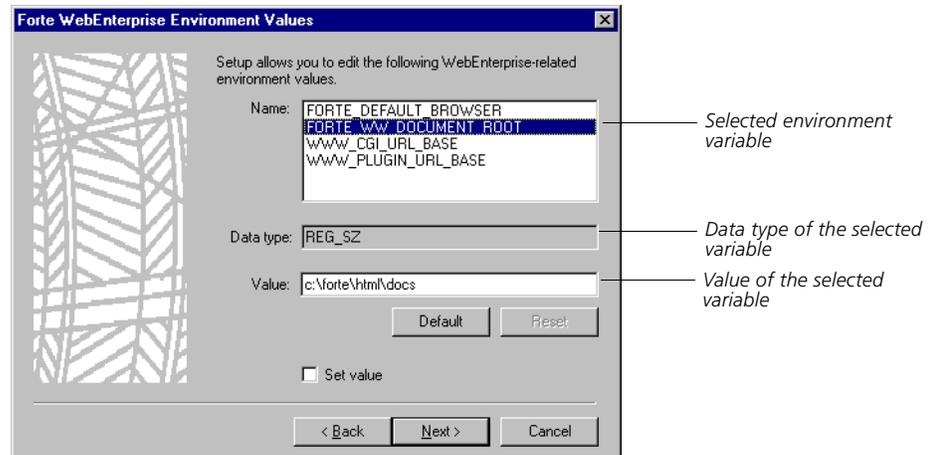
If you did not select WebEnterprise Designer as one of the components to install, the Forte WebEnterprise Environment Values dialog appears. Skip then to **Step 8 of this procedure**.

Prior to installation of WebEnterprise Designer, the Forte WebEnterprise Designer License Agreement dialog appears to confirm that you have a valid WebEnterprise Designer license. All Forte 4GL customers are automatically licensed to use WebEnterprise Designer.

- 7 If you have a WebEnterprise Designer license, enable the **Yes** toggle (all Forte 4GL customers are automatically licensed to use WebEnterprise Designer).

- 8 Click the **Next** button.

The Forte WebEnterprise Environment Values dialog appears, as shown below.



This dialog lets you create new settings or modify existing settings of WebEnterprise-specific environment variables (or WebEnterprise Designer-specific variables, if you are installing WebEnterprise Designer add-on) in your NT Registry. This step is optional. To accept a default configuration, go to [Step 9 of this procedure](#).

For descriptions and examples of these environment variables, see [“Post-Installation Setup and Verification” on page 35](#).

The environment variable values initially displayed in the Value field correspond to the following:

- If the selected environment value is defined in your environment, its current value is displayed.
- If the selected environment value is not defined in your environment, but a Forte suggested default value is provided, that default value is displayed.
- If the selected environment value is not defined in either of the scenarios mentioned above, the Value field is blank.

**Default button**—If the selected environment variable has a Forte recommended default value, you can reset its value by clicking the **Default** button.

Note that, except for Forte-set values, the default value is determined according to priorities described in Chapter 2 of the *A Guide to the Forte 4GL Workshops*.

**Reset button**—If you change a value which is currently defined in your environment, and decide against the new value, you can return to the previous value by clicking the **Reset** button.

**Set value toggle**—Enabling the Set Value toggle specifies that the selected environment variable value will be recorded in the Windows registry.

Note that you may change the setting of the environment variables after installation from the NT control panel.

**9** Click the **Next** button.

The Confirm Forte WebEnterprise Installation Selections dialog appears.

**10** Confirm your installation choices as presented in the dialog, and click **Next**.

The installation program completes the copying of the Forte server components. Now you must install the HTTP library distribution and import the WebEnterprise projects.

## Installing the HTTP Library

The WebEnterprise software set provides an Escript script called `we_lib.scr`, *which you must modify*, to install the HTTP library distribution on the Forte nodes of your choice. The script is located in `$FORTE_ROOT\install\scripts` after you've run setup.

Before installing the HTTP library, make sure that:

- The Node Manager is running for each node on which you want to install the HTTP library.
- All nodes that require the HTTP library are connected to the Forte environment when the HTTP library is installed. Nodes that are not connected will not have the HTTP library installed on them.
- The HTTP library is explicitly marked as “compiled” on each node. If it is not marked “compiled,” then only the HTTP library image repository is installed.

Perform the following steps on the Forte server node on which you installed the WebEnterprise distribution.

► **To install the HTTP library distribution on your Forte nodes:**

- 1 Copy the directory `$FORTE_ROOT\appdist\webenv\http` from the installed software set to the `$FORTE_ROOT\appdist\yourenv\` directory of your node.

In a default Forte installation the environment name is CentralEnv. Therefore, in an uncustomized setup you would copy the `http` directory to `$FORTE_ROOT\appdist\centrale`.

- 2 Open the Escript script `FORTE_ROOT\install\scripts\we_lib.scr` with a text editor, and locate the following lines:

```
AssignAppComp <node_name> HTTP
SetAppCompCompiled <node_name> TRUE HTTP
```

- 3 For *each node* in your Forte environment on which you wish to install the HTTP library distribution, do the following:

- a Copy the pair of lines containing the `AssignAppComp` and `SetAppCompCompiled` Escript commands.
- b Substitute the Forte node name for “`<node_name>`” on each line.

For example, to install the HTTP library distribution on Forte nodes “ForteProd” and “ForteTest,” you must include the following commands within the script:

```
AssignAppComp ForteProd HTTP
SetAppCompCompiled ForteProd TRUE HTTP
AssignAppComp ForteTest HTTP
SetAppCompCompiled ForteTest TRUE HTTP
```

- 4 Save the modified `we_lib.scr` file. It is recommended that you do not overwrite the original `we_lib.scr` script. For example, you might want to rename the original `we_lib.scr` script, `we_lib_original.scr`.
- 5 Start the Forte Environment Manager.

**6** Invoke Escript, and run the modified we\_lib.scr script.

- To run from the command line, specify the script we\_lib.scr with the -i flag. You can direct output to a log file using the -o flag, as follows:

```
escript -i %FORTE_ROOT%/install/scripts/we_lib.scr -o
%FORTE_ROOT%/log/we_lib.out
```

- To run using the **Start > Run > Forte > ESCRIPT** command, use this syntax from the Escript window:

```
escript > include %{FORTE_ROOT}/install/scripts/we_lib.scr -o
%FORTE_ROOT%/log/we_lib.out
```

**7** Check the output file we\_lib.out to confirm that the installation of the HTTP library distribution is complete.

## Importing the WebEnterprise Projects

The WebEnterprise software set provides an Fscript script called we\_proj.scr that installs the WebEnterprise projects http.pex, html.pex, htmlsql.pex, and htmlwin.pex on your Forte server node. The script is located in \$FORTE\_ROOT\install\scripts after you have run the installation program.

For WebEnterprise Designer users only

Forte Express provides a repository that includes all the required Express and WebEnterprise projects and libraries. This is the “wwseed” repository, installed with Express. The wwseed repository is useful if you do not already have a WebEnterprise repository or an Express repository.

Note If you use wwseed, importing the WebEnterprise projects is not necessary.

► **To import the WebEnterprise projects on an NT Forte Server:**

- 1** Make sure that the Forte Environment Manager and repository server are both running on your Forte server.
- 2** Invoke Fscript, and run the we\_proj.scr script.

- To run from the command line, specify the script we\_proj.scr with the -i flag. You can direct output to a log file using the -o flag, as follows:

```
fscript -i %FORTE_ROOT%/install/scripts/we_proj.scr -o
%FORTE_ROOT%/log/we_proj.out
```

- To run using the **Start > Run > Forte > FSCRIPT Standalone** command, use this syntax from the Fscript window:

```
fscript > include ${FORTE_ROOT}/install/scripts/we_proj.scr -o
%FORTE_ROOT%/log/we_proj.out
```

- 3** Check the output file we\_proj.out to confirm that the installation of the WebEnterprise projects is complete.

See “[Post-Installation Setup and Verification](#)” on page 35 for information about the example applications.

# Installing WebEnterprise Components on a UNIX Forte Server

You use the WebEnterprise installation script for UNIX to place WebEnterprise components on both your UNIX Forte server and your UNIX Web server. You invoke the setup program separately to install the WebEnterprise Forte server components and Web server components. Forte server and Web server files are, by convention, installed beneath different target directories, often with different owners, and often on different nodes. If your Web server is on an NT node, and your Forte server is on a UNIX node, or conversely, you will need to use both the NT installation program and the UNIX installation shell script to complete your installation.

To install WebEnterprise on a UNIX Forte server, you use the UNIX installation shell script WEINSTAL.SH and the Forte scripts we\_lib.scr and we\_proj.scr. The WebEnterprise UNIX installation shell script copies the following Forte server components to a target directory on your UNIX node:

- the HTTP Forte library distribution
- WebEnterprise projects
- WebEnterprise Designer add-on option (this requires an installation of Forte Express)
- example program files required by the Forte server

Post-installation

After the setup program places the components on your Forte server, you use the Escript script we\_lib.scr to install the HTTP library distribution on the nodes of your choice and the Fscript script we\_proj.scr to import the WebEnterprise projects into your Forte repository.

See [“Post-Installation Setup and Verification” on page 35](#) for instructions on setting Forte server node environment variables and information about the example applications.

## Requirements

Before installing WebEnterprise components on your Forte server, consult the platform matrix at <http://www.forte.com/support/platforms.html> to determine if your Forte server platform and software meet WebEnterprise requirements.

Be prepared to provide the setup program with a target directory for the installation of WebEnterprise components. Forte server components must be installed beneath the root directory of a valid Forte installation. This is the directory to which the environment variable FORTE\_ROOT points. You must have the correct version of Forte installed in the target directory before proceeding with the WebEnterprise installation. If you are planning to install the WebEnterprise Designer add-on, you must also have the correct version of Forte Express installed in this same directory.

Upgrading

If you are upgrading from a previous release of WebEnterprise, please see [Chapter 4](#), [“Upgrading WebEnterprise.”](#)

## Performing the Installation

To achieve a complete installation of WebEnterprise on your Forte server and environment, you must follow the three installation procedures outlined in this section, namely:

- install WebEnterprise components
- install the HTTP library
- import the WebEnterprise projects

## Installing the WebEnterprise Components

You use the UNIX installation script WEINSTAL.SH to install WebEnterprise Server and WebEnterprise Designer on your UNIX node.

### ► To install WebEnterprise components on a UNIX Forte Server:

- 1 If you are installing from CD, mount the WebEnterprise CD.
- 2 Set your current directory to the /ALL\_UNIX directory of the software distribution.
- 3 Execute the WEINSTAL.SH program located in the /ALL\_UNIX directory by typing:  

```
% ./WEINSTAL.SH
```
- 4 Choose the **Install Forte Server** option.
- 5 Select the WebEnterprise Server components to install.
- 6 If you have purchased WebEnterprise Designer, also select the WebEnterprise Designer component.
- 7 Click **Ok**.

Prior to installation of WebEnterprise Designer, the Forte WebEnterprise Designer License Agreement dialog appears to confirm that you have a valid WebEnterprise Designer license. All Forte 4GL customers are automatically licensed to use WebEnterprise Designer.

- 8 Confirm your installation choices as presented in the text.
- 9 Set the target directory for the installation.

Note that the specified target directory must contain the correct version of Forte. If you are also installing WebEnterprise Designer, the specified directory must also contain the correct version of Forte Express. Refer to the Platform Matrix for WebEnterprise at <http://www.forte.com/support/platforms.html>. The installer verifies that the versions of Forte, Forte Express and WebEnterprise are correctly matched.

The program copies the Forte server components to the target directory. Now you must install the HTTP library distribution and import the WebEnterprise projects.

## Installing the HTTP Library

The WebEnterprise software set provides the Escript script `we_lib.scr`, *which you must modify*, to install the HTTP library distribution on the Forte nodes of your choice. The script is located in `$FORTE_ROOT/install/scripts` after you have executed `WEINSTAL.SH`.

Before installing the HTTP library, make sure that:

- The Node Manager is running for each node on which you want to install the HTTP library.
- All nodes that require the HTTP library are connected to the Forte environment when the HTTP library is installed. Nodes that are not connected will not have the HTTP library installed on them.
- The HTTP library is explicitly marked as “compiled” on each node. If it is not marked “compiled,” then only the HTTP library image repository is installed.

Perform the following steps on the Forte server node on which you installed the WebEnterprise distribution. You must perform this procedure for each environment into which you wish to install WebEnterprise.

► **To install the HTTP library distribution on your Forte nodes:**

- 1 Copy the directory `$FORTE_ROOT/appdist/webenv/http` from the installed software set to the `$FORTE_ROOT/appdist/yourenv/` directory of your node.

In a default Forte installation, the environment name is `CentralEnv`. Therefore, in an uncustomized setup you would copy the `http` directory to `$FORTE_ROOT/appdist/centrale`.

- 2 Open the Escript script `we_lib.scr` in `$FORTE_ROOT/install/scripts` with a text editor, and locate the following lines:

```
AssignAppComp <node_name> HTTP
SetAppCompCompiled <node_name> TRUE HTTP
```

- 3 For *each node* in your Forte environment on which you wish to install the HTTP library distribution, do the following:

- a Copy the pair of lines containing the `AssignAppComp` and `SetAppCompCompiled` Escript commands.
- b Substitute the Forte node name for “`<node_name>`” on each line.

For example, to install the HTTP library distribution on Forte nodes “`ForteProd`” and “`ForteTest`,” you must include the following commands within the script:

```
AssignAppComp ForteProd HTTP
SetAppCompCompiled ForteProd TRUE HTTP
AssignAppComp ForteTest HTTP
SetAppCompCompiled ForteTest TRUE HTTP
```

- 4 Save the modified `we_lib.scr` file. It is recommended that you do not overwrite the original `we_lib.scr` script. For example, you might want to rename the original `we_lib.scr` script, `we_lib_original.scr`.

- 5 Start the Forte Environment Manager.
- 6 Invoke Escript, and run the we\_lib.scr script.

- To run from the command line, specify the script we\_lib.scr with the -i flag. You can direct output to a log file using the -o flag, as follows:

```
escript -i $FORTE_ROOT/install/scripts/we_lib.scr -o
$FORTE_ROOT/log/we_lib.out
```

- Or, to run interactively, launch **escript**, and at the prompt enter:

```
escript > include ${FORTE_ROOT}/install/scripts/we_lib.scr -o
$FORTE_ROOT/log/we_lib.out
```

- 7 Check the output file we\_lib.out to confirm that the installation of the HTTP library distribution is complete.

## Importing the WebEnterprise Projects

The WebEnterprise software set provides an Fscript script called we\_proj.scr that installs the WebEnterprise projects http.pex, html.pex, htmsql.pex, and htmlwin.pex to your repository. The script is located in \$FORTE\_ROOT/install/scripts after you've executed WEINSTAL.SH.

For WebEnterprise Designer users only

Forte Express provides a repository that includes all the required Express and WebEnterprise projects and libraries. This is the “wwseed” repository, installed with Express. The wwseed repository is useful if you do not already have a WebEnterprise repository or an Express repository.

Note If you use wwseed, importing the WebEnterprise projects is not necessary.

### ► To import the WebEnterprise projects on a UNIX Forte Server:

- 1 Make sure that the Forte Environment Manager and repository server are both running on your Forte server and that FORTE\_REPOSNAME is set correctly.
- 2 Invoke Fscript, and run the we\_proj.scr script.

- To run from the command line, specify the script we\_proj.scr with the -i flag. You can direct output to a log file using the -o flag, as follows:

```
fscript -i $FORTE_ROOT/install/scripts/we_proj.scr -o
$FORTE_ROOT/log/we_proj.out
```

- Or, to run interactively, launch **FSCRIPT Standalone** and at the prompt enter:

```
fscript > include ${FORTE_ROOT}/install/scripts/we_proj.scr -o
$FORTE_ROOT/log/we_proj.out
```

- 3 Check the output file we\_proj.out to confirm that the installation of the WebEnterprise projects is complete.

Post-installation

See [“Post-Installation Setup and Verification” on page 35](#) for instructions on setting Forte server node environment variables and information about the example applications.

# Installing WebEnterprise Components on an OpenVMS Forte Server

You must install each of the WebEnterprise components manually on an OpenVMS Forte server. A complete installation of WebEnterprise on an OpenVMS Forte server comprises the following components:

- HTTP library
- WebEnterprise projects
- example program files required by the Forte server

Note WebEnterprise Designer is not currently supported on OpenVMS.

Post-installation

See [“Post-Installation Setup and Verification” on page 35](#) for instructions on setting Forte server node environment variables and information about the example applications.

## Requirements

Before installing WebEnterprise components on your Forte server, consult the platform matrix at <http://www.forte.com/support/platforms.html> to determine if your Forte server platform and software meet WebEnterprise requirements. Be prepared to provide a target directory for the installation of WebEnterprise components.

Upgrading

If you are upgrading from a previous release of WebEnterprise, see [Chapter 4, “Upgrading WebEnterprise.”](#)

## Performing the Installation

To install WebEnterprise on your OpenVMS Forte server you must:

- choose an installation option for obtaining and unpacking the WebEnterprise software
- follow the steps for installing the WebEnterprise components on your Forte server

You must unpack the WebEnterprise software so that you can access and install the WebEnterprise components on your Forte server. Follow the steps in this section for the installation option you choose and then proceed to the section “Installing the HTTP Library” below.

## Installing the WebEnterprise Components

The WebEnterprise CD contains a VMS BACKUP saveset called FORWE10E.BCK that resides in the CD’s [AXP\_VMS] directory. This saveset contains the WebEnterprise components that you must install on your Forte server. FORWE10E.BCK is platform-inclusive and contains WebEnterprise shared libraries not only for OpenVMS, but for all supported WebEnterprise platforms.

► **To install the Forte server WebEnterprise components on a OpenVMS Forte server:**

- 1 Mount the CD using the following DCL command:

```
$ MOUNT /MEDIA=CDROM /UNDEFINED_FAT=(FIXED:NONE:32256) -
   devnam: WE10E
```

The “devnam” is the VMS device name of your CD drive.

- 2 Extract the contents of the saveset into your Forte installation:

```
$ BACKUP devnam:[AXP_VMS]FORWE10E.BCK /SAVE_SET
   FORTE_ROOT:[*...]
```

- 3 Proceed to the section “Installing the HTTP Library” below.

## Installing the HTTP Library

The WebEnterprise software set provides the Escript script `we_lib.scr`, which you must modify, to install the HTTP library distribution on the Forte nodes of your choice. The script is located in `FORTE_ROOT:[install.scripts]` in the unzipped software set.

Before installing the HTTP library, make sure that:

- The Node Manager is running for each node on which you want to install the HTTP library.
- All nodes that require the HTTP library are connected to the Forte environment when the HTTP library is installed. Nodes that are not connected will not have the HTTP library installed on them.
- In `we_lib.scr` the HTTP library is explicitly marked as “compiled” on each node. If it is not marked “compiled,” then only the HTTP library image repository is installed.

Perform the following steps on your Forte server node. You must perform this procedure for each environment into which you wish to install WebEnterprise.

► **To install the HTTP library distribution on your Forte nodes:**

- 1 Move the directory `[appdist.webenv.http]`, which you previously loaded, to the `FORTE_ROOT:[appdist.yourenv.http]` directory.

The `FORTE_ENVNAME` logical name contains *yourenv*, the name of your Forte environment. In a default Forte installation the environment name is `CentralEnv`. Therefore, in an uncustomized setup you move the `http` directory to `FORTE_ROOT:[appdist.centrale]` by doing the following:

```
$ rename forte_root:[appdist.webenv]http.dir -
   forte_root:[appdist.centrale]
$ rename forte_root:[appdist]webenv_http_cl0.dir -
   forte_root:[appdist]centrale_http_cl0.dir
```

- 2 Open the Escript script `we_lib.scr` with a text editor, and locate the following lines:

```
AssignAppComp <node_name> HTTP
SetAppCompCompiled <node_name> TRUE HTTP
```

- 3 For *each node* in your Forte environment on which you wish to install the HTTP library distribution, do the following:
  - a Copy the pair of lines containing the AssignAppComp and SetAppCompCompiled Escript commands.
  - b Substitute the Forte node name for “<node\_name>” on each line.

For example, to install the HTTP library distribution on Forte nodes “ForteProd” and “ForteTest,” you must include the following commands within the script:

```
AssignAppComp ForteProd HTTP
SetAppCompCompiled ForteProd TRUE HTTP
AssignAppComp ForteTest HTTP
SetAppCompCompiled ForteTest TRUE HTTP
```

- 4 Make sure that the Forte Environment Manager is running on your machine.
- 5 Invoke Escript, specifying the modified script we\_lib.scr with the -i flag on the command line.

You can direct output to a log file using the -o flag, as follows:

```
escript -i FORTE_ROOT:[install.scripts]we_lib.scr -o
FORTE_ROOT:[log]we_lib.out
```

- 6 Check the output file we\_lib.out to confirm that the installation of the HTTP library distribution is complete.

## Importing Additional WebEnterprise Projects

The WebEnterprise software distribution contains the script we\_proj.scr. This fscript is used to import the WebEnterprise projects to your repository. The script is located in FORTE\_ROOT:[install.scripts] in the unzipped software set.

### ► To install the WebEnterprise projects on an OpenVMS Forte Server:

- 1 Make sure that the Forte Environment Manager and repository server are both running on your Forte server.
  - 2 Invoke Fscript, specifying the script we\_proj.scr with the -i flag on the command line.
- You can direct output to a log file using the -o flag, as follows:

```
fscript -i FORTE_ROOT:[install.scripts]we_proj.scr -o
FORTE_ROOT:[log]we_proj.out
```

- 3 Check the output file we\_proj.out to confirm that the installation of the WebEnterprise projects is complete.

See “[Post-Installation Setup and Verification](#)” on page 35 for instructions on setting Forte server node environment variables and information about the example applications.

## Installing WebEnterprise Components on an OS/390 Forte Server

You use the WebEnterprise installation script for UNIX to place WebEnterprise components on your OS/390 Forte server. Web server components are not supported on OS/390, so you will run your web server on another supported platform. If your Web server is on an NT node, for example, you will need to use both the NT installation program (for the web server) and the UNIX installation shell script (for the Forte server) to complete your installation.

To install WebEnterprise on an OS/390 Forte server, you use the UNIX installation shell script WEINSTAL.SH and the Forte scripts we\_lib.scr and we\_proj.scr. The WebEnterprise UNIX installation shell script copies the following Forte server components to a target directory on your OS/390 node:

- the HTTP Forte library distribution
- WebEnterprise projects
- example program files required by the Forte server

Post-installation

After the setup program places the components on your Forte server, you use the Escript script we\_lib.scr to install the HTTP library distribution on the nodes of your choice and the Fscript script we\_proj.scr to import the WebEnterprise projects into your Forte repository.

See [“Post-Installation Setup and Verification” on page 35](#) for instructions on setting Forte server node environment variables and information about the example applications.

### Requirements

Before installing WebEnterprise components on your Forte server, consult the platform matrix at <http://www.forte.com/support/platforms.html> to determine if your Forte server platform and software meet WebEnterprise requirements.

Be prepared to provide the setup program with a target directory for the installation of WebEnterprise components. Forte server components must be installed beneath the root directory of a valid Forte installation. This is the directory to which the environment variable FORTE\_ROOT points. You must have the correct version of Forte installed in the target directory before proceeding with the WebEnterprise installation.

The Forte system software and runtime system software for OS/390 requires IBM OS/390 Release 2.5 with Program Update Tape (PUT) maintenance level 9807 or later. You must have an MVS installation at or above the maintenance level required.

To unload and install Forte system software, you must first create a temporary directory in the OS/390 UNIX HFS that can be deleted after the installation is complete.

Disk space

The unloading directory requires at least 6 MB of disk space for the HFS path where you unload the software. The installation directory requires at least 16MB of disk space for the WebEnterprise software

Upgrading

If you are upgrading from a previous release of WebEnterprise, please see [Chapter 4, “Upgrading WebEnterprise.”](#)

## Performing the Installation

To achieve a complete installation of WebEnterprise on your Forte server and environment, you must follow the following installation procedures outlined in this section, namely:

- restoring the WebEnterprise installation directory from IBM 3490 tape
- install WebEnterprise components
- install the HTTP library
- import the WebEnterprise projects

## Restoring the WebEnterprise Installation Directory

The WebEnterprise system software is distributed on the same tape as the Forte 4GL for OS/390 system software.

### ► To restore WebEnterprise server components:

- 1 Log in to the UNIX Services environment using the user ID that was used to unload the Forte product tape and install the Forte software.

The user ID must have read/write privileges for files in the FORTE\_ROOT directory where Forte will be installed.

You can log in using either the TSO OMVS command, or by using an rlogin or telnet client on another system.

- 2 Create a temporary directory for unloading the tape.

For example, to create /tmp/webent for unloading the tape, issue the UNIX command

```
mkdir /tmp/webent
```

- 3 Log on to TSO.
- 4 Create and submit an IEBGENER batch job to unload the tar file from the 3490 tape cartridge into the temporary unloading directory created in [Step 2](#) of this procedure.

Below is an example JCL file you can use to place the WEBENT.TAR file into the temporary HFS directory /tmp/webent:

```
//FRTEUNLD JOB (0000)
//*
//UNLOAD EXEC PGM=IEBGENER
//SYSIN DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT1 DD DSN=WEBENT.TAR,DISP=OLD,
// UNIT=3490,
// VOL=SER=<volser_from_external_label>,
// LABEL=(4,SL),
// BLKSIZE=27920,LRECL=80,RECFM=FB
//SYSUT2 DD PATH='/tmp/webent/webent.tar',
// PATHOPTS=(OWRONLY,OCREAT,OEXCL),
// PATHMODE=(SIRWXU,SIRGRP,SIROTH)
```

- 5 Log in to the UNIX Services environment again using the same user ID you used to unload the Forte product tape.
- 6 Expand the tar file that you unloaded in **Step 4** of this procedure.

If you unloaded the WebEnterprise tar file into /tmp/webent/webent.tar, use the following two UNIX commands to complete this step:

```
cd /tmp/webent
tar xovf webent.tar
```

## Installing the WebEnterprise Components

You use the UNIX installation script WEINSTAL.SH to install WebEnterprise Server and WebEnterprise Designer on your UNIX node.

### ► To install WebEnterprise components on an OS/390 Forte Server:

- 1 Set your current directory to the /tmp/webent/ALL\_UNIX directory of the software distribution.
- 2 Execute the WEINSTAL.SH program located in the /ALL\_UNIX directory by typing:

```
% ./WEINSTAL.SH
```

- 3 Choose the **Install Forte Server** option.
- 4 Select the WebEnterprise Server components to install.
- 5 Confirm your installation choices as presented in the text.
- 6 Set the target directory for the installation.

Note that the specified target directory must contain the correct version of Forte. Refer to the Platform Matrix for WebEnterprise at <http://www.forte.com/support/platforms.html>. The installer verifies that the versions of Forte and WebEnterprise are correctly matched.

- 7 After installation is complete, remove the temporary directory where you unloaded the tape.

For example, if you unloaded the tape into /tmp/webent, you can remove the directory with the command:

```
rm -rf /tmp/webent
```

The program copies the Forte server components to the target directory. Now you must install the HTTP library distribution and import the WebEnterprise projects.

## Installing the HTTP Library

The WebEnterprise software set provides the Escript script `we_lib.scr`, *which you must modify*, to install the HTTP library distribution on the Forte nodes of your choice. The script is located in `$FORTE_ROOT/install/scripts` after you have executed `WEINSTAL.SH`.

Before installing the HTTP library, make sure that:

- The Node Manager is running for each node on which you want to install the HTTP library.
- All nodes that require the HTTP library are connected to the Forte environment when the HTTP library is installed. Nodes that are not connected will not have the HTTP library installed on them.
- The HTTP library is explicitly marked as “compiled” on each node. If it is not marked “compiled,” then only the HTTP library image repository is installed.

Perform the following steps on the Forte server node on which you installed the WebEnterprise distribution. You must perform this procedure for each environment into which you wish to install WebEnterprise.

► **To install the HTTP library distribution on your Forte nodes:**

- 1 Copy the directory `$FORTE_ROOT/appdist/webenv/http` from the installed software set to the `$FORTE_ROOT/appdist/yourenv/` directory of your node.

In a default Forte installation, the environment name is `CentralEnv`. Therefore, in an uncustomized setup you would copy the `http` directory to `$FORTE_ROOT/appdist/centrale`.

- 2 Open the Escript script `we_lib.scr` in `$FORTE_ROOT/install/scripts` with a text editor, and locate the following lines:

```
AssignAppComp <node_name> HTTP
SetAppCompCompiled <node_name> TRUE HTTP
```

- 3 For *each node* in your Forte environment on which you wish to install the HTTP library distribution, do the following:

- a Copy the pair of lines containing the `AssignAppComp` and `SetAppCompCompiled` Escript commands.
- b Substitute the Forte node name for “`<node_name>`” on each line.

For example, to install the HTTP library distribution on Forte nodes “`ForteProd`” and “`ForteTest`,” you must include the following commands within the script:

```
AssignAppComp ForteProd HTTP
SetAppCompCompiled ForteProd TRUE HTTP
AssignAppComp ForteTest HTTP
SetAppCompCompiled ForteTest TRUE HTTP
```

- 4 Save the modified `we_lib.scr` file. It is recommended that you do not overwrite the original `we_lib.scr` script. For example, you might want to rename the original `we_lib.scr` script, `we_lib_original.scr`.

- 5 Start the Forte Environment Manager.
- 6 Invoke Escript, and run the we\_lib.scr script.
  - To run from the command line, specify the script we\_lib.scr with the -i flag. You can direct output to a log file using the -o flag, as follows:

```
escript -i $FORTE_ROOT/install/scripts/we_lib.scr -o
$FORTE_ROOT/log/we_lib.out
```

- Or, to run interactively, launch **escript**, and at the prompt enter:

```
escript > include ${FORTE_ROOT}/install/scripts/we_lib.scr -o
$FORTE_ROOT/log/we_lib.out
```

- 7 Check the output file we\_lib.out to confirm that the installation of the HTTP library distribution is complete.

## Importing the WebEnterprise Projects

The WebEnterprise software set provides an Fscript script called we\_proj.scr that installs the WebEnterprise projects http.pex, html.pex, htmlsql.pex, and htmlwin.pex to your repository. The script is located in \$FORTE\_ROOT/install/scripts after you've executed WEINSTALL.SH.

### ► To import the WebEnterprise projects on an OS/390 Forte Server:

- 1 Make sure that the Forte Environment Manager and repository server are both running on your Forte server and that FORTE\_REPOSNAME is set correctly.
- 2 Invoke Fscript, and run the we\_proj.scr script.

- To run from the command line, specify the script we\_proj.scr with the -i flag. You can direct output to a log file using the -o flag, as follows:

```
fscript -i $FORTE_ROOT/install/scripts/we_proj.scr -o
$FORTE_ROOT/log/we_proj.out
```

- Or, to run interactively, launch **FSCRIPT Standalone** and at the prompt enter:

```
fscript > include ${FORTE_ROOT}/install/scripts/we_proj.scr -o
$FORTE_ROOT/log/we_proj.out
```

- 3 Check the output file we\_proj.out to confirm that the installation of the WebEnterprise projects is complete.

Post-installation

See [“Post-Installation Setup and Verification” on page 35](#) for instructions on setting Forte server node environment variables and information about the example applications.

## Post-Installation Setup and Verification

After installing the WebEnterprise components on your Forte server do the following:

- setup your examples
- set required environment variables

### The WebEnterprise Examples

Forte WebEnterprise includes several example programs. Some of the examples have components that reside on the Forte server and on the Web server.

You copied the Forte server components of the WebEnterprise example programs into the \$FORTE\_ROOT/install/examples/web directory when you followed the procedure [“Performing the Installation.”](#)

If you did not choose to install the examples (this was an optional component you could install), you must individually install and set up each example application. See *A Guide to WebEnterprise*, Appendix A, for installation and set up instructions and for descriptions of the examples' components. For the WEDTuto example, see Appendix A of *Getting Started with WebEnterprise Designer* for installation instructions.

#### EasyWeb

This example demonstrates the minimum required components of a Forte Web application. EasyWeb is extremely useful for both verifying your installation and getting an initial understanding of WebEnterprise.

#### SoftWear

This example demonstrates a more typical Forte Web application.

#### ShopCart

This example illustrates how to use Forte templates and how to take advantage of session and state management.

#### SQLDemo

This example sets up a Web page from which you can enter a valid database name, a user name and password, and enter a SQL query. The results are displayed in a default tabular format on the Web page.

#### JBanking

The JBanking example illustrates how to run a Java client with a Forte IIOP server. JBanking makes use of an existing Forte example, Banking. The JBanking description provides the steps you must take to make the Banking application IIOP enabled for Java. It then describes how to compile and run the Java client that will communicate with the Banking application's service object.

## JBigBank

The JBigBank example expands on JBanking. JBigBank makes use of a modified version of the existing Forte Banking example, called BigBanking. The modifications to the Forte application allow the Java client to make use of more native Forte datatypes and an array of IntegerData. The JBigBank description provides the steps you must take to make the BigBanking application IOP enabled for Java. It then describes how to compile and run the Java client that will communicate with the BigBanking application's service object.

## CASTax

The CASTax example illustrates how to run a Java applet that communicates with a Forte IOP server. CASTax is a simple example, similar to JBanking and JBigBank, except that it addresses the requirements and restrictions connected with running your Java client in a browser.

## Movie (WebEnterprise Designer Example)

This example is created with WebEnterprise Designer. This example queries and updates a web site for current movies, including movie ratings, description, theatres where they are shown, and show times.

## WEDTut (WebEnterprise Designer Example)

The WEDtut example is an on-line copy of the application described in the book *Getting Started with WebEnterprise Designer*. We recommend you go through the Tutorial chapter to create your own application. If you need to, you can load the WEDtut example and run and examine it.

## Environment Variables

### HTTP Project Environment Variables

#### FORTE\_WW\_DOCUMENT\_ROOT

This variable specifies the root directory in which the scanner service searches for subdirectories and HTML templates. The value of the variable is a fully qualified directory name. Refer to Appendix B of *A Guide to WebEnterprise* for additional details.

#### FORTE\_CGI\_REG\_PORT

This variable is used to specify the port number for the fortectgi program on the Web server node. The value of the variable is an integer. It is used only for autoregistration. The default port number for autoregistration is 1783. Refer to Appendix B of *A Guide to WebEnterprise* for additional detail.

## FORTE\_HTTP\_MAX\_THREADS

This variable is used to tune the operation of WebEnterprise under heavy loads. The value of the variable is an integer. By default, HTTPAccess servers support a maximum of 50 simultaneous requests (i.e. Forte tasks). The FORTE\_HTTP\_MAX\_THREADS environment variable is used to adjust this setting. To raise or lower the setting, define FORTE\_HTTP\_MAX\_THREADS to the new value and restart the HTTPAccess server partition. Note that this environment variable must be “visible” (translatable) by the server partition. Note that this variable is set in conjunction with the Web Server node variable FORTE\_WWW\_MAX\_THREADS. In practice, this variable needs to be adjusted only in heavy load production environments. Refer to technote 11659 for details on when it might be necessary to set it, and how to determine the value.

## FORTE\_WW\_PORTS

This variable is used when load balancing an HTTPAccess service object. The value of the variable is a range of integers, as for example: 6100-6300. If more than one replicate is partitioned on the same physical node, then you must set this environment variable. When this variable is set, the HTTPAccess Enable method randomly selects a port number in the range specified by the environment variable. The randomly selected number is used as the listener port. The servicePort parameter specified in the Enable Access method is ignored. Note that if every replicate is partitioned to different physical nodes then you don't need to set this variable, as there is no potential conflict among partitions for a particular port number. Refer to the WebEnterprise Load Balancing and Failover technote 11861 for additional details.

## FORTE\_WW\_HANDLER\_CONFIG\_FILE

This variable is used to specify the name and location (relative to \$FORTE\_WW\_DOCUMENT\_ROOT) of the scanner service object's handler file. The value is a file name. Refer to Appendix B of *A Guide to WebEnterprise* for additional details.

## WebEnterprise Designer Environment Variables

### FORTE\_DEFAULT\_BROWSER

This variable is used during test runs of WebEnterprise Designer applications from the development environment. It specifies the preferred Web browser in which to launch the WebEnterprise Designer application. The value is the path and name of the preferred browser, as for example C:\PROGRA~1\Netscape\Communicator\Program\netscape.exe. If this variable is set, WebEnterprise Designer auto launches the browser from the development environment when you test run an application. Refer to Appendix B of *Getting Started with WebEnterprise Designer* for additional details.

### WWW\_CGI\_URL\_BASE

This variable specifies the fortectgi URL to register the Access Service Object with your Web server. The value is a URL string, as for example `http://www.forte.com/cgi-forte/fortectgi.exe`. Refer to Appendix B of *Getting Started with WebEnterprise Designer* for additional details.

### WWW\_PLUGIN\_URL\_BASE

This variable specifies the plug-in (either NSAPI or ISAPI) URL to access the WebEnterprise Designer application from the browser. The value is a URL string, as for example `http://www.forte.com/web.forte`. Refer to Appendix B of *Getting Started with WebEnterprise Designer* for additional details.

### FORTE\_WW\_HTMLEDITOR

This variable is used by the WebEnterprise Designer Customization Wizard. It specifies the preferred editor to use when opening HTML files (e.g. files with `.html` or `.htm` extensions). The value is the path and file name of the preferred editor. When you customize an HTML file from the Customization Wizard, the file is opened with the specified editor. Refer to *Customizing WebEnterprise Designer Applications* for addition details.

### FORTE\_WW\_EDITOR

This variable is used by the WebEnterprise Designer Customization Wizard. It specifies the preferred editor to use when opening non-HTML files. The value is the path and name of the preferred editor. When you customize a non-HTML file from the Customization Wizard, the file is opened with the specified editor. An example of a non-HTML file for which this occurs is the include file generated when you choose drop list or radio list validation for a field. Refer to *Customizing WebEnterprise Designer Applications* for addition details.

## Chapter 3

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# Installing and Configuring WebEnterprise on a Web Server Node

This chapter describes how to install and configure WebEnterprise components on your Web server node.

The WebEnterprise software set provides a graphical installation program for use on NT nodes, and a UNIX shell script for use on UNIX nodes. Installation on OpenVMS is manual. The installation step is primarily one of copying files from the distribution media to the target Web server node directory. If you do not have access to the Web server, then the Webmaster for your site must perform these steps.

After installation of WebEnterprise, you must configure the Web servers and set environment variables.

## Installing and Configuring WebEnterprise on an NT Web Server Node

You use the WebEnterprise graphical installation program for NT to copy WebEnterprise components to both your NT Forte server and your NT Web server nodes. You invoke the setup program separately for the Forte server components and Web server installation. Forte server and Web server files are, by convention, installed beneath different target directories, often with different owners, and often on different nodes.

The WebEnterprise setup program copies the following Web server components to a target directory on your NT node:

- the fortectgi program
- (optionally) the Netscape API plug-in library, fortensapi
- (optionally) the Microsoft API plug-in library, forteisapi
- (optionally) example program files
- icon and image files

Post-installation

After the setup program copies the WebEnterprise components to your Web server you must configure the Web server. See “[Post-Installation Configuration on an NT iPlanet Web Server](#)” on page 42, or “[Post-Installation Configuration on an NT Microsoft Web Server Node](#)” on page 46.

Refer to the section “[Post-Installation Setup and Verification](#)” on page 55 for details on setting Web server node environment variables.

### Requirements

Before installing WebEnterprise components on your Web server, consult the matrices in “[Installation Requirements](#)” on page 16 to determine if your Web server platform and Web server software meet the WebEnterprise requirements. Refer to <http://www.forte.com/support/platforms.html> for the most recent platform matrix.

Be prepared to provide the setup program with a target directory for the installation of WebEnterprise components. Web components are typically installed within a Web server’s file and directory hierarchy.

Upgrading

If you are upgrading from a previous release of WebEnterprise, please see [Chapter 4](#), “[Upgrading WebEnterprise](#).”

Note If you are upgrading an existing installation, **stop** the Web Server before starting the installation.

### Performing the Installation

Note All steps in this section pertain to files under the directory \web (for Web server) in the installed software set.

#### ► To install WebEnterprise components on your NT iPlanet Web Server or your NT Microsoft Internet Information Server:

- 1 Double-click the setup.exe icon in the Pc\_w32 directory of the software distribution, or choose the **Start > Run** command and specify the path to the setup.exe program.

The Forte WebEnterprise License Agreement dialog appears.

- 2 Read the License Agreement and click **Yes if you agree**.

The Welcome to Forte WebEnterprise Setup dialog appears.

- 3 Click the Install Web Server Components radio button, and click **Next**.

The Select Forte WebEnterprise Destination Folder dialog appears.

- 4 If the displayed destination folder is not where you want to install the WebEnterprise components, click the Browse button and select the correct folder in the Choose Folder dialog. For example:

for iPlanet Web Server

```
C:\netscape\suitespot\forte
```

for Microsoft IIS Server

```
C:\inetpub\forte
```

- 5 When the correct path is displayed, click **Next**.

You return to the Select Forte WebEnterprise Destination Folder dialog.

The Select Optional Forte WebEnterprise Components dialog appears.

- 6 Click the checkboxes of the components you would like to install on your web server.

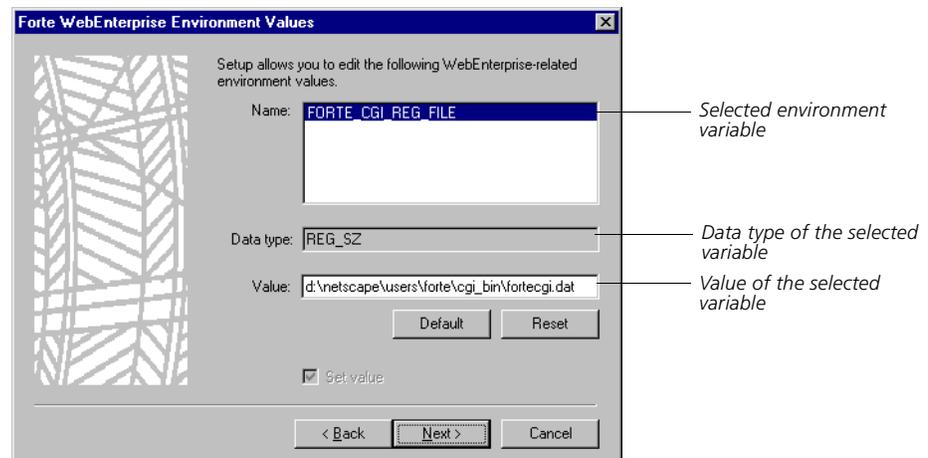
The fortensapi library should be installed only if you are using the iPlanet Web Server.

The forteisapi library should be installed only if you are using the Microsoft Internet Information Server.

The fortecgi program is required and is always installed.

- 7 Click **Next**.

The Forte WebEnterprise Environment Values dialog appears, as shown below.



This dialog lets you modify the value of the WebEnterprise-specific environment variables FORTE\_CGI\_REG\_FILE in your NT Registry. This step is optional. To accept a default configuration, go to **Step 8 of this procedure**.

For a description of the FORTE\_CGI\_REG\_FILE environment variable, see the Post-Installation Setup and Verification Section and Appendix B of *A Guide to WebEnterprise*.

**Caution** If you subsequently decide to change the setting the FORTE\_CGI\_REG\_FILE variable, stop and restart the Web server. Otherwise, the web server will not see the newly set value.

Before you modify any environment variables, the data displayed in the Value field corresponds to the following:

- If the selected environment value is defined in your environment, its current value is displayed.
- If the selected environment value is not defined in your environment, but a suggested default value has been provided, the default value is displayed.
- If the selected environment value is not defined in either of the scenarios mentioned above, the Value field remains blank.

**Default button**—If the selected environment variable has been provided a suggested default value, you can redisplay to the default value by clicking the **Default** button.

Note that, except for Forte-set values, the default value is determined according to priorities described in Chapter 2 of the *A Guide to the Forte 4GL Workshops*.

**Reset button**—If you change a value which is currently defined in your environment, and decide against the new value, you can return to the previous value by clicking the **Reset** button.

**Set value toggle**—Enabling the Set Value toggle specifies that the selected environment variable value will be recorded in the Windows registry.

- 8 Click the **Next** button.

The Confirm Forte WebEnterprise Installation Selections dialog appears.

- 9 Confirm your installation choices as presented in the dialog, and click **Next**.

The installation program completes the copying of the Web server components.

You must now configure your Web server to interface with the Forte CGI and plug-in libraries. See [“Post-Installation Configuration on an NT iPlanet Web Server”](#) or [“Post-Installation Configuration on an NT Microsoft Web Server Node”](#) on page 46.

## The WebEnterprise Example Programs

Forte WebEnterprise includes several example applications. Brief descriptions of the examples can be found in [“The WebEnterprise Examples”](#) on page 35.

If you did not choose to install the examples (this was an optional component you could install), you must individually install and set up each example application. See *A Guide to WebEnterprise*, Appendix A, for installation and set up instructions and for descriptions of the examples' components. For the WEDTut and Movie examples, see Appendix A of *Getting Started with WebEnterprise Designer* for installation instructions.

## Post-Installation Configuration on an NT iPlanet Web Server

After you have installed fortectgi program on your Web server you must configure the Web Server as described in this section.

- Note The cgi\_bin directory must be writable by the Web server process, and the server process must be able to execute the fortectgi program and, if applicable, the fortensapi library.

## Configuring the fortectgi Program

► **To configure the fortectgi.exe program on your NT iPlanet Web Server installation:**

**1** Map the target directory to the Web server.

Using the Netscape Server Administration window, do the following:

- a** Select the server you are configuring.
- b** Click the **Content Management** button to bring up the Content Management page.
- c** Click **Additional Document Directory** in the Server Preferences column.
- d** In the blank URL prefix field enter:

```
/forte
```

- e** In the blank Map To Directory field, enter your directory location, as for example:

```
c:/netscape/suitespot/forte
```

- f** Click the **OK** button. The Save and Apply Changes prompt window appears.
- g** Click the **Save and Apply** button at the bottom of the prompt window.

**2** Mark the cgi\_bin directory as a CGI directory.

To map the URL `http://server_name[:port#]/cgi-forte` to the directory containing your fortectgi.exe executable do the following:

- a** Click the **Programs** button to bring up the Programs page.
- b** Under the Programs column, click **CGI Directory**.
- c** In the blank URL Prefix field, type:

```
/cgi-forte
```

**Caution**

The iPlanet Web Server CGI directory prefix is case sensitive.

- d** In the blank CGI Directory field, type, for example:

```
c:/netscape/suitespot/forte/cgi_bin
```

- e** Click **OK**. The Save and Apply Changes prompt window appears.
- f** Click the **Save and Apply** button at the bottom of the prompt window.

**3** Click the **Apply** button at the top of the Server Administration window to apply your changes.

**4** Restart your iPlanet Web Server to have these settings take effect.

**5** Verify the installation of the fortectgi program by doing the following:

From your Web browser, enter the following URL:

```
http://your_webserver/cgi-forte/fortectgi.exe?
```

If the fortectgi program is installed correctly and basic authentication is off, you will see a page with a fortectgi Usage message. If basic authentication is on, you will see a dialog box prompting for a user ID and password.

If you get a different response, or you require more information on this step, refer to *A Guide to WebEnterprise*.

- 6** Verify the installation of the Forte example files.

From your Web browser, enter the following URL:

```
http://your_webserver/forte/examples/softwear/docs/homepage.htm
```

A Web page titled “SoftWear Inc.” appears. At this point, you can only see this page because the example application is not running on the Forte server.

## Configuring the Netscape Server API Plug-In

- **To configure the fortensapi.dll plug-in on an NT iPlanet Web Server installation:**

- 1** Stop the iPlanet Web Server.

- 2** Create a new MIME type for Forte files.

Using the Netscape Server Administration window, do the following.

- a** Click the **Server Preferences** button to go to the Server Preferences page.

- b** In the Server Preferences column, click **MIME Types** to add a new type.

- c** From the Category dropdown choose **type**.

- d** In the blank Content-Type field enter the value:

```
magnus-internal/fortetype
```

- e** In the file suffix field enter:

```
forte
```

- f** Click **New Type**. The Save and Apply Changes prompt window appears.

- g** Click the **Save and Apply** button at the bottom of the prompt window.

- 3** Edit the obj.conf file.

In the config directory of your iPlanet Web Server installation (usr/netscape/suitespot/https-*yournodename*/config/obj.conf), bring up this file in a text editor, and modify it by doing the following:

- a** Add a line to the obj.conf file, after the “load-types” directive, and after the last of the “Init” statements. Be sure to change the DLL pathname to match your own:

```
Init fn="load-modules" funcs="forte_service"
shlib="c:/netscape/suitespot/forte/cgi_bin/fortensapi.dll"
```

- b** In the <Object name = “default” > block, add the following line within the set of “Service” entries, above any entry that includes a “POST” method handler (in particular, above the Service fn = “CM\_POST” method = “POST” entry):

```
Service method="(GET|HEAD|POST)"
type="magnus-internal/fortetype" fn="forte_service"
```

- c** Save and close the obj.conf file.

- 4** Click the **Apply** button at the top of the Server Administration window to apply your changes.

You will receive a warning that reads “WARNING: The configuration files have been edited by hand. Use this button to load the latest configuration files.”

- 5** Click the **Load Configuration File** button.

- 6 Start your iPlanet Web Server to have the new settings take effect.

Using the Netscape Server Administration window, do the following:

- a Click the **Server Preferences** button to display the Server Preferences window.
- b In the Server Preferences column, click **On/Off**.
- c Click the **Server On** button.

(When the server is running, you can restart it by clicking the Server On button.)

The Netscape Server Administration application recognizes that your configuration files have changed and asks you if you want to load the new settings. Click **Yes**.

If your server fails to restart, carefully check your edits in obj.conf file (Step 3).

From now on, all http requests that ask for a page with a “.forte” extension will be directed to the fortensapi DLL.

- 7 Map the fortectgi.dat file for fortensapi.dll by doing the following:

Before fortensapi.dll can make use of Forte services, the fortectgi.dat registration file must be made accessible. Note that you do not have to create the fortectgi.dat file; Forte will do that.

- a On the Web server node, use the NT control panel to set the NT System environment variable FORTE\_CGI\_REG\_FILE. This permits fortensapi.dll to locate the Forte registration file. For example:

```
FORTE_CGI_REG_FILE =  
c:/netscape/suitespot/forte/cgi_bin/fortectgi.dat
```

- b Restart your iPlanet Web Server.

Note The location you choose for fortectgi.dat must be readable and writable by the iPlanet Web Server.

- 8 From your Web browser, enter the following URL to verify that fortensapi is working:

```
http://your_webserver/web.forte?
```

You should see an fortensapi-variety page titled “Forte NSAPI Usage”.

**Caution** Should you decide to uninstall the Forte components on the Web Server node, you must undo the configuration changes in the obj.conf file. Otherwise your iPlanet Web Server will fail on startup.

## Post-Installation Configuration on an NT Microsoft Web Server Node

After you have installed fortectgi on your Web server, you must configure the files as described in this section.

Note The cgi\_bin directory must be writable by the Web server process, and the server process must be able to execute the fortectgi executable.

### Configuring fortectgi.exe and forteisapi plug-in

#### ► To configure fortectgi.exe on an NT Microsoft IIS:

Note The instructions below assume that you are using the Microsoft Management Console (version 1.0). Alternatively, you can use the Microsoft Internet Server Manager (HTML). Refer to the Microsoft Option Pack 4 readme for special considerations in using the Internet Server Manager (HTML).

#### 1 Start the Microsoft Management Console.

Choose the command **Start > Programs > Windows NT 4.0 Option Pack > Microsoft Internet Information Server > Internet Service Manager**.

The Microsoft Management Console appears.

#### 2 Select the appropriate Web site in the left window of the Console.

For example, in a default installation on node "your\_webserver", click Default Web Site (in other words, **Console Root > Internet Information Server > your\_webserver > Default Web Site**).

#### 3 Click the **Action** button on the menu bar.

#### 4 Under the item New, select **Virtual Directory**.

#### 5 A wizard will now lead you through the process of adding a virtual directory. You should add two virtual directories (going through the procedure twice).

Field	Enter
Alias:	cgi-forte
Physical path:	c:\inetpub\forte\cgi_bin
Access:	read, script, execute, write
Field	Enter
Alias:	forte
Physical path:	c:\inetpub\forte
Access:	read

These two virtual directories should now appear under Default Web Site.

- 6 Verify the installation of fortectgi by doing the following:

From your Web browser, enter the following URL to verify the fortectgi installation:

```
http://your_webserver/cgi-forte/fortectgi.exe?
```

If fortectgi is installed correctly and basic authentication is off, you will see a page with a fortectgi Usage message. If basic authentication is on, you will see a dialog box prompting for a user ID and password.

If you get a different response, or you require more information on this step, refer to *A Guide to WebEnterprise*.

- 7 Verify the installation of the forteisapi plug-in by doing the following:

From your Web browser, enter the following URL to verify the fortectgi installation:

```
http://your_webserver/cgi-forte/forteisapi.dll?
```

If the forteisapi plug-in is installed correctly and basic authentication is off, you will see a page with a the forteisapi Usage message. If basic authentication is on, you will see a dialog box prompting for a user ID and password.

If you get a different response, or you require more information on this step, refer to *A Guide to WebEnterprise*.

- 8 Verify the installation of the Forte example files by doing the following:

From your Web browser, enter the following URL:

```
http://your_webserver/forte/examples/softwear/docs/homepage.htm
```

A Web page titled "SoftWear Inc." appears. At this point, you can only see this page because the example application is not running on the Forte server.

# Installing and Configuring WebEnterprise on a UNIX iPlanet Web Server Node

You use the WebEnterprise installation script for UNIX to place WebEnterprise components on both your UNIX Forte server and your UNIX Web server nodes. You invoke the installation script separately to install the WebEnterprise Forte server components and Web server components. Forte server and Web server files are, by convention, installed beneath different target directories, often with different owners, and often on different nodes.

The WebEnterprise installation shell script for UNIX copies the following Web server components to a target directory on your UNIX Web Server node:

- the fortectgi program
- (optionally) the Netscape NSAPI plug-in library, fortensapi
- icon and image files
- (optionally) example program files

Post-installation

After the installation shell script copies the WebEnterprise components to your Web server node, you must configure the files. See [“Post-Installation Configuration on a UNIX iPlanet Web Server Node” on page 49](#).

Refer to the section [“Post-Installation Setup and Verification” on page 55](#) for details on setting Web server node environment variables.

## Requirements

Before installing WebEnterprise components on your Web server, consult the platform matrix at <http://www.forte.com/support/platforms.html> to determine if your Web server platform and Web server software meet the WebEnterprise requirements. Be prepared to provide the installation script with a target directory for the installation of WebEnterprise components. Web components are typically installed within a Web server's file and directory hierarchy.

Upgrading

If you are upgrading from a previous release of WebEnterprise, please see [Chapter 4, “Upgrading WebEnterprise.”](#)

Note Stop the Web Server before starting the installation.

## Performing the Installation

All steps in this section pertain to files under the directory /web (for Web server) in the installed software set.

### ► To install WebEnterprise components on your NT iPlanet Web Server:

**Caution** You *must* install the Forte components as the iPlanet Web Server user. Otherwise you will encounter fatal file permission errors during installation.

- 1 If you are installing from CD, mount the WebEnterprise CD.
- 2 Set your current directory to the /ALL\_UNIX directory of the software distribution.
- 3 Execute the WEINSTAL.SH program located in the /ALL\_UNIX directory by typing:

```
% ./WEINSTAL.SH
```

- 4 Choose the **Install Web Server** components option.

- 5 Enter a target directory for the WebEnterprise files in the Destination Folder field. For example:

```
/usr/netscape/suitespot/forte
```

Web components are typically installed within your Web server's file and directory hierarchy.

- 6 Select the components you would like to install on your web server. The `fortecgi` program is required and is always installed.
- 7 Confirm your installation choices as presented in the text.
- 8 Confirm that permissions are properly set for the target directory. It is necessary that the Forte process be able to write files into the target directory, as for example the file `fortecgi.dat`. If you've installed the Forte Server components and the Web server components as different users, you might need to change permissions for the Web server target directory at the very end of the installation and configuration process so that it is writable by the Forte user.

The program completes the installation of the Web Server components.

You must now configure your Web server. See [“Post-Installation Configuration on a UNIX iPlanet Web Server Node”](#) below.

## The WebEnterprise Example Programs

Forte WebEnterprise includes several example applications. Brief descriptions of each example can be found in [“The WebEnterprise Examples”](#) on page 35.

You must individually install and set up each example application. See *A Guide to WebEnterprise*, Appendix A, for installation and set up instructions and for descriptions of the WebEnterprise Server examples' components. See *Getting Started with WebEnterprise Designer* for installation and set up instruction for the WebEnterprise Designer examples.

## Post-Installation Configuration on a UNIX iPlanet Web Server Node

After you have installed `fortecgi` on your Web server you must configure the Web Server as described in this section.

Note The `cgi_bin` directory must be writable by the Web server process, and the server process must be able to execute the `fortecgi` program and, if applicable, the `fortensapi` shared library.

### Configuring `fortecgi`

- **To configure the `fortecgi` program for your UNIX Enterprise Server installation:**

- 1 Use the Netscape Server Administration window to map the target directory to the Web server by doing the following:
  - a Select the server you are configuring.
  - b Click **Content Management**.
  - c Click **Additional Document Directory**.
  - d In the URL prefix field, enter:

```
/forte
```

- e In the Map To Directory field, enter your directory location, as for example:

```
/usr/netscape/suitespot/forte
```

- f Click **ok**. The Save and Apply Changes prompt window is displayed.
- g Click the **Save and Apply** button at the bottom of the prompt window.

- 2 Mark the cgi\_bin directory as a CGI directory.

Map the URL `http://server_name[:port#]/cgi-forte` to the directory containing your `fortecgi` executable. Use the Administration window to do the following:

- a Click the **Programs** button, and click **CGI Directory**.
- b In the URL Prefix field, enter:

```
/cgi-forte
```

**Caution** The iPlanet Web Server CGI directory prefix is case sensitive.

- c In the CGI Directory field, enter, as for example:

```
/usr/netscape/suitespot/forte/cgi_bin
```

- d Click **ok**. The Save and Apply Changes prompt window is displayed
- e Click the **Save and Apply** button at the bottom of the prompt window.

- 3 Click the **Apply** button at the top of the Server Administration window to apply your changes.

- 4 Restart your iPlanet Web Server to have these settings take effect.

- 5 Verify the installation of `fortecgi` by doing the following:

From your Web browser, enter the following URL:

```
http://your_webserver/cgi-forte/fortecgi?
```

If `fortecgi` is installed correctly and basic authentication is off, you will see a page with a `fortecgi Usage` message. If basic authentication is on, you will see a dialog box prompting for a user ID and password.

If you get a different response, or you require more information on this step, refer to *A Guide to WebEnterprise*.

- 6 Verify the installation of the Forte example files.

From your Web browser, enter the following URL:

```
http://your_webserver/forte/examples/softwear/docs/homepage.htm
```

A Web page titled “SoftWear Inc.” appears. At this point, you can only see this page because the example application is not running on the Forte server.

## Configuring fortensapi on a UNIX iPlanet Web Server Node

When you installed fortectgi on your UNIX Web server the fortensapi plug-in was placed on your machine. This section describes how to configure the fortensapi plug-in on the iPlanet Web Server.

► **To install fortensapi using iPlanet Web Server on a UNIX Web server:**

- 1 Stop the iPlanet Web Server.
- 2 Make sure that the Forte NSAPI shared library is in the same directory as the fortectgi executable.

The filename of your shared library is libqqnsapi.so on Sparc Solaris and Digital OSF Unix, libqqnsapi.a on AIX, and libqqnsapi.sl on HP-UX.

- 3 Configure your iPlanet Web Server using the Netscape Server Administration window by doing the following:

- a Under the Server Preferences, click **MIME Types** to add a new type, and in the Content-Type field enter the value:

```
magnus-internal/fortetype
```

- b In the file suffix field, enter:

```
forte
```

- c Click **New Type**. The Save and Apply prompt window is displayed.

- d Click the **Save and Apply** button at the bottom of the prompt window.

- 4 Edit the obj.conf file in the config directory of your iPlanet Web Server installation (usr/netscape/suitespot/https-*yournodename*/config/obj.conf).

- a Add a line to the obj.conf file, after the “load-types” directive, as the last of the “Init” statements (and be sure to change the shared library location to match your own):

```
Init fn="load-modules" funcs="forte_service"  
shlib="/usr/netscape/suitespot/forte/cgi_bin/libqqnsapi.so"
```

- b In the <Object name = “default” > block, add the following line within the set of “Service” entries, above any entry that includes a “POST” method handler (in particular, above the Service fn = “CM\_POST” method = “POST” entry):

```
Service method="(GET|HEAD|POST)"  
type="magnus-internal/fortetype" fn="forte_service"
```

- 5 Click the **Apply** button at the top of the server Administration window to apply your changes.

You will receive a warning that reads “WARNING: The configuration files have been edited by hand. Use this button to load the latest configuration files.”

**6** Click the **Load Configuration File** button.

**7** Restart your iPlanet Web Server to have the new settings take effect.

If your server fails to restart, carefully check your edits in the obj.conf file (Step 4).

The Netscape Server Administration application will recognize that your configuration files have changed and asks you if you want to load the new settings. Click **Yes**. They will now appear in the **Server Preferences > View Server Settings** display.

After these steps, all http requests that ask for a page with a “.forte” extension will be directed to the fortensapi shared library.

**8** Map the fortecgi.dat file for fortensapi.

Before fortensapi can make use of Forte services, the fortecgi.dat registration file must be made accessible.

Create a symbolic link to fortecgi.dat from the iPlanet Web Server default directory:

```
% cd /usr/netscape/suitespot/https-yournodename/config
% ln -s /usr/netscape/suitespot/forte/cgi_bin/fortecgi.dat
fortecgi.dat
```

**Note** The location chosen for fortecgi.dat must be readable and writable by the iPlanet Web Server.

**9** From your Web browser, enter the following URL to verify that fortensapi is working:

```
http://your_webserver/web.forte?
```

You should see an fortensapi page titled “Forte NSAPI Usage”.

**Caution** Should you decide to uninstall the Forte components on the Web Server node, you must undo the configuration changes in the obj.conf file. Otherwise your iPlanet Web Server might fail on startup.

# Installing WebEnterprise on a Process Software Purveyor Encrypt Server for OpenVMS

You must manually install WebEnterprise components on OpenVMS nodes. The steps in this chapter describe how to install the following WebEnterprise components on an OpenVMS Web server:

- the `fortecgi` program
- example program files

Post-installation

After performing the installation of WebEnterprise on your Web server, you must configure your Web Server. See Purveyor documentation for information on creating and configuring CGI files.

Refer to the section “Post-Installation Setup and Verification” for details on setting Web server node environment variables.

## Requirements

Before installing WebEnterprise components on your Web server, consult the platform matrix at <http://www.forte.com/support/platforms.html> to determine if your Web server platform and Web server software meet the WebEnterprise requirements.

Be prepared to provide a target directory for the installation of WebEnterprise components. Web components are typically installed within a Web server's file and directory hierarchy.

Upgrading

If you are upgrading from a previous release of WebEnterprise, see [Chapter 4, “Upgrading WebEnterprise.”](#)

## Performing the Installation

To install WebEnterprise on your OpenVMS Web server you must:

- choose an installation option for obtaining and unpacking the WebEnterprise software
- follow the steps for installing the WebEnterprise components on your Web server
- configure your WebEnterprise installation

You must unpack the WebEnterprise software so that you can access and install the WebEnterprise components on your Web server. Follow the steps in this section for the installation option you choose and then proceed to the section “Installing WebEnterprise on Process Purveyor Encrypt Web Server” below.

The WebEnterprise CD contains a VMS BACKUP saveset called `WEBWE10E.BCK` that resides in the CD's `[AXP_VMS]` directory. This saveset contains the WebEnterprise components that you must install on your Process Purveyor Web server.

► **To install the Web server WebEnterprise components:**

- 1 Mount the CD using the following DCL command:

```
$ MOUNT /MEDIA=CDROM /UNDEFINED_FAT=(FIXED:NONE:32256) -
  devnam: WE10E
```

The “devnam” is the VMS device name of your CD drive.

- 2 Extract the contents of the saveset into a work area with the command:

```
$ BACKUP devnam:[AXP_VMS]WEBWE10E.BCK /SAVE_SET SYS$DISK:[*...]
```

This command creates a tree under the [WEB] directory.

- 3 Proceed to the section “Installing WebEnterprise on Process Purveyor Encrypt Web Server” below.

## Installing WebEnterprise on Process Purveyor Encrypt Web Server

► **To install fortectgi on a Process Software Purveyor Encrypt Server for OpenVMS:**

- 1 Copy the Web server WebEnterprise icons and example files to the Purveyor installation.

Save the WebEnterprise icons and example files underneath the data directory of the Purveyor Web Server or a Virtual Server. For example, if the server’s data directory is “purveyor\_root:[purveyor.data]” (from the RSM Virtual Server’s menu), then:

- a copy the [web.axp\_vms.forte.icons] tree to [purveyor.data.forte.icons]
- b copy the [web.axp\_vms.forte.examples] tree to [purveyor.data.forte.examples]

- 2 Copy the fortectgi.exe program to the Purveyor installation.

Copy the fortectgi.exe executable to the subdirectory specified in the “CGI Programs Directory” box of the RSM Virtual Server’s menu. For example, if that field is set to “cgi-forte” and the data directory is set as in step 1, above, then:

- a copy [web.axp\_vms.forte.cgi\_bin] fortectgi.exe to purveyor\_root:[purveyor.data.cgi-forte]

- 3 Verify the installation of fortectgi.exe.

From your Web browser, enter the following URL:

```
http://your_webserver/cgi-forte/fortectgi.exe?
```

If fortectgi is installed correctly and basic authentication is off, you will see a page with a fortectgi Usage message. If basic authentication is on, you will see a dialog box prompting for a user ID and password.

If you get a different response, or you require more information on this step, refer to *A Guide to WebEnterprise*.

- 4 Verify the installation of the Forte example files.

From your Web browser, enter the following URL:

```
http://your_webserver/forte/examples/softwear/docs/homepage.htm
```

A Web page titled “SoftWear, Inc.” appears. At this point, you can only see this page because the example application is not running on the Forte system.

# Post-Installation Setup and Verification

## Web Server Interface Environment Variables

### FORTE\_CGI\_LOG\_DIR

This variable is used to facilitate debugging of WebEnterprise applications, particularly to help diagnose CGI access problems from the Web server node. When this variable is set, the WebEnterprise `fortecgi` executable logs extensive debugging information to a file. The value of the variable is a fully qualified directory specified in Forte Portable format, as for example `/tmp/`. The file `fortecgi.out` is written to the directory. Since the logging impacts performance, this variable should be set only to diagnose problems. Refer to technote 11309 for additional details.

### FORTE\_CGI\_REG\_PORT

This variable specifies the port number for the `fortecgi` program on the Web server. This variable is used only for autoregistration. The value of the variable is an integer. The default port number used for autoregistration is 1783. Refer to Appendix B of *A Guide to WebEnterprise* for additional details.

### FORTE\_CGI\_REG\_FILE

This variable specifies the fully qualified name of the `fortecgi.dat` file. The value of the variable is a path and file name, as for example, `C:\forte\data\fortecgi.dat`. If this variable is not set, WebEnterprise writes the file `fortecgi.dat` to the directory where the `fortecgi` program is located. Refer to Appendix B of *A Guide to WebEnterprise* for additional details.

**Caution** After setting the `FORTE_CGI_REG_FILE` variable, one must stop and restart the Web server. Otherwise, the web server will not see the newly set value.

### FORTE\_ISAPI\_LOG\_DIR

This variable is used to facilitate debugging of WebEnterprise applications, particularly to help diagnose ISAPI plug-in access problems from the Web server node. When diagnostics are enabled and this variable is set, the `forteisapi` plug-in library logs extensive information to a file. The value of the variable is a fully qualified directory specified in Forte Portable format, as for example `/tmp/`. Since the logging impacts performance, this variable should be set only to diagnose problems. Refer to technotes 11310 and 11859 for additional details.

### FORTE\_WWW\_MAX\_THREADS

This variable is used to tune WebEnterprise operation in heavy load situations. It specifies the maximum number of simultaneous requests that the Forte plug-ins will accommodate. The value of the variable is an integer. By default, the `ForteNSAPI` and `ForteISAPI` plug-ins support a maximum of 50 simultaneous requests (for example server threads). In practice, this variable should only be adjusted in production deployment environments. See technote 11659 for additional details.



## Chapter 4

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# Upgrading WebEnterprise

This chapter tells you how to upgrade WebEnterprise from an earlier version by preparing your current setup and reinstalling the WebEnterprise components on your Web server and Forte server. Following the upgrading steps will ensure that files are overwritten in the right order.

## Upgrading WebEnterprise

The current (new) HTTP project in WebEnterprise is compatible with all previous WebEnterprise versions. No coding changes are required to migrate applications to the current version of WebEnterprise.

Because the HTML, HTMLWindow, and HTMLSQL projects have not changed from previous WebEnterprise releases you do not need to upgrade these projects.

Upgrading involves preparing your current setup and installing the current (new) WebEnterprise components.

### Upgrading Your Forte Server

To upgrade WebEnterprise on your Forte server, you must install the current (new) WebEnterprise HTTP library distribution and rebuild your application.

You must choose from two upgrading approaches. You can either:

- create a new repository and export/import your Web application projects
- or
- replace the HTTP project in an existing repository

### Upgrading by Creating a New Repository

► **To upgrade the WebEnterprise installation on your Forte server by creating a new repository:**

- 1** Export your legacy WebEnterprise application projects (except for the HTTP project) from your repository using the Repository Workshop.  
See *A Guide to the Forte 4GL Workshops* for details on importing and exporting projects.
- 2** Create a new repository using the **rpcreate** command.  
See “Creating Repositories” in the *Forte 4GL System Management Guide*.
- 3** Load the HTTP project library distribution into the development environment.  
See “Deploying a Library Distribution” in the *Forte 4GL System Management Guide*.
- 4** Install the HTTP project library in the development environment.  
See “Deploying a Library Distribution” in the *Forte 4GL System Management Guide*.
- 5** Import the current (new) WebEnterprise HTTP library pex file, `$FORTE_ROOT/userapp/http/cl0/http.pex`.
- 6** Integrate the workspace.  
See *A Guide to the Forte 4GL Workshops* for information on how to integrate a workspace.
- 7** Import the previously exported projects. The order in which to import them depends on the supplier plan hierarchy.

## Upgrading by Replacing the HTTP Project in an Existing Repository

This upgrading procedure is more complex and is easier to complete using Fscript. The administrator performing this task should first remove any extraneous workspaces that have the HTTP project included in them, and then ask developers to disconnect from their workspaces in this repository. All workspaces should then be updated so that they refer to the same HTTP project. No workspace should have any component of the HTTP project checked out or branched.

► **To upgrade the WebEnterprise installation on your Forte server by replacing the HTTP project in an existing repository:**

- 1 Iterate through each project in the repository that uses HTTP as a supplier, and, after noting the name of the project, issue the following Fscript commands:

```
fscript> findplan projectname
fscript> removesupplierplan HTTP
fscript> commit
```

- 2 Once HTTP has been removed as a supplier to each project, iterate through the workspaces in the repository (using **Close**, **SetWorkspace**, and **Open**) and identify which workspaces have the HTTP project included as a public plan. After noting each workspace, issue the following command sequence.

```
fscript> excludeplan HTTP
fscript> commit
```

- 3 Integrate the workspace.
- 4 Issue the following command sequence:

```
fscript> removepublic HTTP
fscript> commit
```

- 5 You can now install the new HTTP project distribution following the instructions for your platform in [Chapter 2, “Installing and Configuring WebEnterprise on a Forte Server Node.”](#)
- 6 Create a new workspace and import \$FORTE\_ROOT/userapp/http/cl0/http.pex into that workspace. For each project that should have HTTP as a supplier, issue the command sequence:

```
fscript> includepublicplan projectname
fscript> addsupplierplan HTTP
fscript> commit
```

- 7 Integrate the workspace.
- 8 Go back through each workspace identified in [Step 2 of this procedure](#) and issue the command sequence:

```
fscript> includepublicplan projectname
fscript> updateworkspace
```

- 9 Return to the workspace you created [Step 6 of this procedure](#) and delete it.

**Caution** If you do not follow these migration steps and, instead, directly import the library pex file over the old HTTP project, you will notice that some of the old method source code is still visible. This effect can be misleading and does not reflect the actual code. Technote 11301 describes this issue.

## Upgrading Your Web Server

To upgrade the WebEnterprise installation on your Web server, you must perform a new installation of the Web server components and restart your Web server for the new settings to take effect. See [Chapter 3, “Installing and Configuring WebEnterprise on a Web Server Node.”](#)