Tango Enterprise 3

Windows
Development Studio
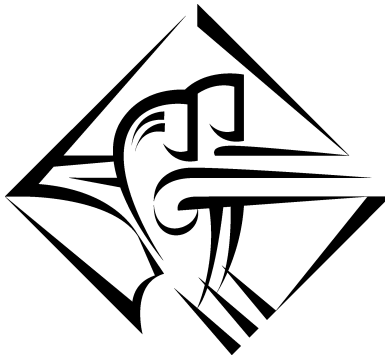
Getting Started Guide

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Table of Contents

About This Guide

Tango Enterprise is comprised of two products:

■ *Tango Development Studio* is used to develop and maintain Tango applications. Tango Development Studio includes Tango Editor and Tango Personal Server.

■ *Tango Application Server* (Tango Server) is used to deploy the applications created with Tango Development Studio.

Typical installations include a Tango Development Studio for each developer and one or more Tango Servers, depending on the volume of application users.

You may also need to install ODBC drivers, a Web server, and a database on your machine for a complete Tango installation. Installers for each of these products are provided on the Tango CD-ROM; see "Tango CD-ROM" on page 2.

This *Getting Started Guide* gives you the information you need to install and start to use Tango Development Studio.

The topics covered in this guide include:

■ installing Tango components from the Tango CD-ROM

■ preparing to install Tango Development Studio

■ installing Tango Development Studio

■ registering your product

■ starting and stopping a Tango Server

■ configuring plug-ins

■ converting query documents from previous versions of Tango to application files

■ executing Tango application files

■ getting help.

Getting Ready to Install Tango

This section provides a checklist to review before you install Tango. Using this checklist helps ensure your Tango installation goes smoothly so you are up and running as soon as possible.

Before you begin installing Tango, you should read in this section about:

- the contents of your Tango package
- what you need to know before installing Tango.

Tango CD-ROM The Tango CD-ROM contains the setup program and the following compressed directories and files:

- an **ODBC 3.5** installer that includes Microsoft and Intersolv drivers
- **Apache Web server** installer
- **Pervasive.SQL Workstation** installer
- **Tango documentation** in Adobe Acrobat format (`.pdf`) and **Adobe Acrobat Reader** installer
- **Tango Development Studio** installer, which includes the following
    - Tango Personal Server (`t3server.exe`), and Java Server files
    - Tango Editor (`t3editor.exe`)
    - Tango CGI (`t3cgi.exe`)
    - Tango plug-ins: Netscape (NS) (`t3ns.dll`), and Microsoft Internet Information Server (IIS) (`t3iis.dll`)
    - various directories to contain Tango program files, tutorials, demos, and samples
    - program HTML help files
    - Readme file.

For an overview of the entire installation process (ODBC, Apache Web server, Pervasive.SQL database, and Tango), see the `Install.txt` file on the Tango CD-ROM, which can be accessed by clicking **Start Here** on the Master Setup screen.

Tango Documentation

The following Tango user's documentation can be installed from the Master Setup screen of the Tango Development Studio CD-ROM. All manuals and guides are in Adobe Acrobat (`.pdf`) format. You can also install Adobe Acrobat Reader from the Tango Documentation installer.

The manuals and guides, plus a quick reference card, are available in printed form for an additional cost. Contact your Pervasive sales representative for details.

- *Getting Started Guide*
- *User's Guide*
- *Meta Tags and Configuration Variables* manual
- *Tutorial.*

In addition, on-line HTML versions of the *User's Guide* and the *Meta Tags and Configuration Variables* manual are always available once you have installed the Tango Development Studio, from the **Help** menu of Tango Editor.

What You Need To Know

The following table shows the minimum and recommended configurations for Tango.

Equipment	Minimum	Recommended
Computer	Any Windows NT, 95, or 98 compatible PC	Pentium or greater
Operating Environment	Windows NT 4.0, 95, or 98	Same as minimum
RAM	16 MB	32 MB
Display	VGA	SVGA or better
Hard Disk Space	14 MB for Tango Editor 1 MB for Tango Personal Server	30 MB of free space for installation
Mouse	Any supported by Windows NT, 95, or 98	Same as minimum
CD-ROM Drive	Any supported by Windows NT, 95, or 98	Same as minimum
Web Server	Any supporting the CGI standard	Any supporting ISAPI or NSAPI, for example: ISAPI – IIS 3.0 or greater NSAPI – Netscape 2.0 or greater
Database Connectivity	ODBC 2.5	ODBC 3.5

Generally, if Windows NT, Windows 95, or Windows 98 is installed correctly and you have enough disk space, you can install and run Tango Editor and Tango Personal Server.

Installing the Components of Tango

Before proceeding with installing all of the products that make up a full Tango install, look at the `Install.txt` file on the CD-ROM. This file contains an overview of the installation process and may contain information that was not available when this guide was created.

The `Install.txt` file contains information that was available at shipping time. Visit the Pervasive Web site to get any late breaking news.

To look at the `Install.txt`, insert the CD-ROM in the CD-ROM drive, and when the setup screen appears, click the **Start Here** button. This opens the install notes in your Windows default text editor.

Follow the installation instructions in the `Install.txt` to install the ODBC, Apache Web server, Pervasive.SQL database, and Tango documentation components of Tango.

The following sections refer specifically to the installation of the Tango Development Studio—Tango Personal Server and Tango Editor and their associated files.

Tango Development Studio Installation

Before Installing Tango

For information on converting query documents to Tango application files, see "Converting Previous Query Documents" on page 30.

Before installing Tango, you should do the following:

■ If you want to install Web server plug-ins, stop your Web server.

■ If you have a 2.*x* version of Tango on your computer, do not remove it. The Tango Enterprise 3 setup program will automatically keep your existing preferences (for Tango Editor only), and copy any snippets you have created and place them into the My Snippets directory in Tango 3. You should also convert your previous version query documents *before* removing the program.

> **Note** If you used the NS plug-in with Tango 2.*x*, you should deconfigure your Netscape obj.conf, magnus.conf, and mime.types files when you uninstall Tango 2.*x*. Failure to do so may prevent your Web server from starting. For information on how to deconfigure your files, see "Deconfiguring NS Plug-in Files If Uninstalling Tango 2.*x*" on page 29.

■ If you have an earlier version of Tango 3.*x* on your computer, follow these instructions:

   ■ If you have modified any of the standard files installed in the Tango3 directory (such as the demos, tutorials, and configuration application) in your Web server root directory, make backups of them, as new versions will overwrite them during the upgrade.

   ■ Read the main Readme.txt file by choosing **Release Notes** from the **Tango Enterprise 3.52** program group once you have installed Tango. It contains valuable information that is not covered in your printed documentation or previous Readme files, including information about changes in Tango since previous versions.

Installing Tango

This section tells you how to install Tango. It covers the following topics:

- what the setup program does
- what you need to know
- installing Tango.

What the Setup Program Does

The Tango setup program does the following:

- detects your operating system and screen resolution
- checks for ODBC and, if necessary, allows you to install ODBC 3.5 and drivers

> **Note** Tango requires that you have ODBC installed on your computer. If you want to use the E-bank and E-Commerce demos, you must also install Pervasive.SQL or Microsoft Access. You can install ODBC 3.5, and the Pervasive.SQL and Microsoft Access drivers from the master Setup screen.

- detects whether a previous version of Tango is already installed
- asks whether the uninstaller should be launched if it detects a prior installation of Tango 3 product
- accepts user input regarding components and configuration
- checks for disk space
- creates directories on your hard disk and copies Tango program files to them
- creates a Java (`\java`) directory below the directory where Tango Server is installed and copies Java files to it
- carries forward any version 2.*x* Tango Editor preferences and snippets, if present
- configures IIS *or* NS plug-ins, and creates a suffix mapping for `.taf`
- creates a virtual directory in IIS, if required
- creates the Tango 3 Server service on NT 4.0
- creates data sources for the demos, if required
- creates Start menu shortcuts
- updates shared system files

■ creates the necessary registry entries for Tango

■ creates an uninstaller accessible through the Add/Remove Programs icon in the Control Panel.

What You Need to Know

To install Tango you need to know the following information:

■ type of installation you want to perform: Typical, Compact, or Custom

■ which Tango components you want to install

■ where on your hard disk you want to install Tango

■ your HTML document root directory

■ your Web server's CGI and/or plug-ins directories

■ what mail server you want the Mail action to use.

Note You should stop all software on your computer, including your Web server, before continuing.

Starting the Installation

1 Open your CD-ROM drive and insert the Tango CD.

The Tango setup program starts automatically, and displays the Tango Master Setup screen.

Before installing Tango, you should read the latest information about the Tango installation. Click **Start Here** to view installation notes, which opens the Install.txt file in your default text editor.

Tango Development Studio requires that the following components be installed on your machine. You can install them by making sure they are selected from the Master Setup screen:

■ **ODBC**

If you do not have ODBC installed, you can run the ODBC 3.5 installer by selecting **ODBC 3.51** on the Master Setup screen, which installs the ODBC driver manager and some useful ODBC drivers, including Microsoft Access.

■ **Web server**

If you do not already have a Web server installed, you can install the Apache Web server from the Master Setup screen by selecting **Apache**.

■ **Database (Pervasive.SQL)**

If you want to use the E-bank and E-Commerce demos, you must install Pervasive.SQL. If you want to use the Tutorials, you must either install Pervasive.SQL or Microsoft Access drivers.

If you want to install Pervasive.SQL, you *must* do so before you install Tango. To install, select **Pervasive.SQL** on the Master Setup screen.

■ **Tango Documentation**

This option installs Tango documentation in Adobe Acrobat (`.pdf`) format, which includes the *User's Guide*, this *Getting Started* guide, reference material, and tutorials. If you do not have Adobe Acrobat installed, click the Install Adobe Acrobat button during this phase of the installation. To install Tango documentation, select **Tango Documentation** on the Master Setup screen

Once these installers have finished, you then proceed to the installation of Tango Development Studio.

The Tango Enterprise 3 Setup dialog box appears.

2 Click **Next**.

If you already have a version of Tango 3 installed, the setup program detects it and asks if you want to upgrade it and continue, or uninstall it.

**3** Click **Yes** to continue and upgrade your version of Tango, or click **No** to uninstall and reinstall it.

If you click **Yes**, a dialog box appears, warning you to make sure you have stopped Tango Server and any Web servers that may be running.

Otherwise, the Tango 3 License Agreement appears.

4 Click **Yes** if you accept the terms of the agreement and to continue the installation.

The Web Server Type dialog box appears.
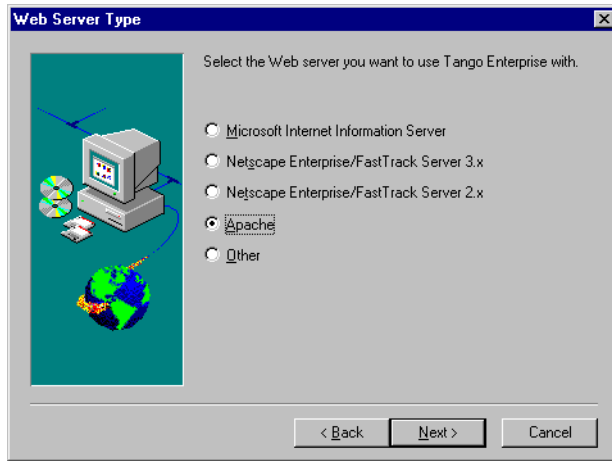
Note If you are installing Tango 3 under Windows 95 or Windows 98, the Microsoft Internet Information Server option does not appear. Tango does not support this Web server under Windows 95 or Windows 98.

5 Select the Web server you want to use with Tango. The choices are as follows:

■ Microsoft Internet Information Server (not available for Windows 95 or Windows 98)

■ Netscape Enterprise/FastTrack Server 3.*x*

■ Netscape Enterprise/FastTrack Server 2.*x*

■ Apache Web server

■ Other

Note When Tango is configured for Netscape Enterprise/ FastTrack Server 3.*x* or 2.*x,* different versions of the Tango plug-in are installed. Make sure you choose the correct version of your Web server during installation.

Tango works with all Web servers supporting the CGI standard, as well as ISAPI or NSAPI. If your Web server is not listed, select **Other**.

6 Click **Next** to continue.

The Setup Type dialog box appears.
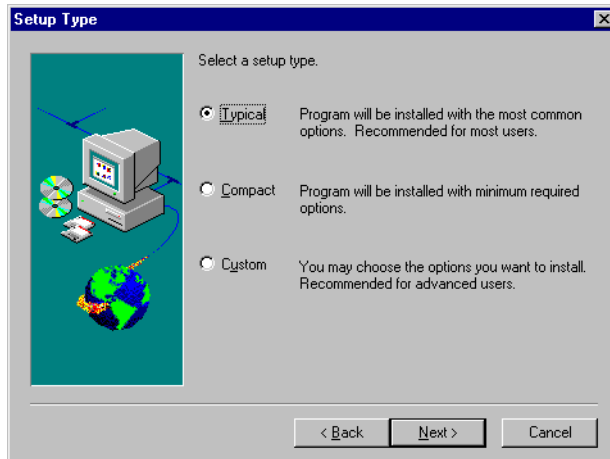
7 Select the type of setup you want to perform.

- ■ **Typical** installs the most common options and is recommended for most users.
- ■ **Compact** installs the minimum number of files required to run the product you are installing. A compact installation does not install:
    - ■ the Tutorial folder
    - ■ the Tango HTML Help Files
    - ■ Demos.
- ■ **Custom** allows you to select only the options you want to install. This type of installation is recommended only for advanced users.

8 Click **Next** to continue.

- ■ If you selected Typical or Compact, the Program Directory dialog box appears.
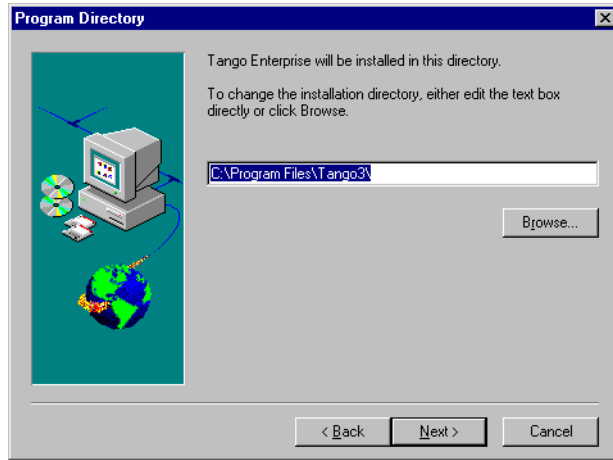
    Continue at step 10.

- ■ If you selected **Custom**, the Custom Options dialog box appears. You can select from the following options:
    - ■ Tango Editor
    - ■ Tango Personal Server
    - ■ Tango CGI
    - ■ Netscape and Microsoft server plug-ins

- Tango HTML Help Files
- Demos
- Tutorials

9 Select the options you want to install.

10 Click **Next** to continue.

The Program Directory dialog box appears.

11 Specify the location where you want to install Tango.

Do one of the following:

- To accept the default location, C:\Program Files\Tango3\, continue at the next step. The default drive is the same drive Windows is installed on.
- In the text box, type the location where you want to install Tango.
- Click **Browse** to find the drive and directory where you want to install Tango.

Whenever a dialog box appears asking you to specify a drive and directory location, these three methods always apply.

The HTML Document Root Directory dialog box appears.

Note This directory is your Web server's HTML document root.
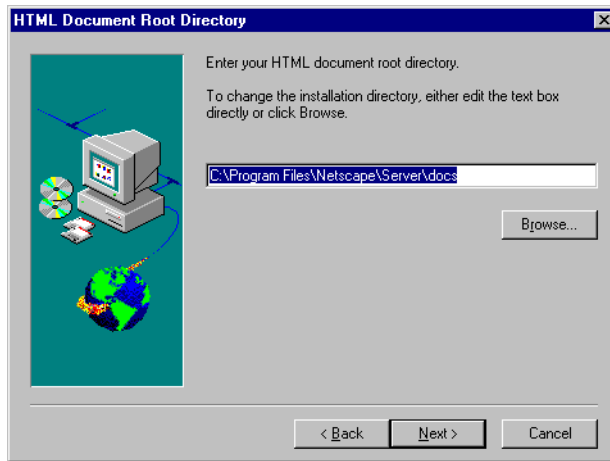
12 Specify the location where your HTML documents are located.

Depending on the type of Web server you selected, the default locations are as follows:

Note The default drive is the same drive Windows is installed on.

■   For Netscape Fastrack or Enterprise Server

NT   `C:\Netscape\SuiteSpot\docs\`
95/98 `C:\Program Files\Netscape\Server\docs\`

■   For Microsoft Internet Information Server
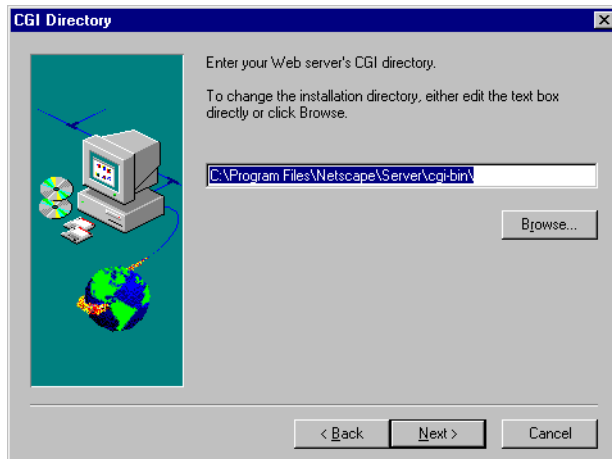
`C:\InetPub\wwwroot\`

■   For Apache

`C:\Program Files\Apache Group\Apache\htdocs\`

■   For Other

`C:\MyWebSrv\docs\`

13 Click **Next** to continue.

If you are installing the CGI, the CGI Directory dialog box appears.

Depending on the type of Web server you selected, the default locations are as follows:

■ For Netscape Fastrack or Enterprise Server

NT   `C:\Netscape\SuiteSpot\cgi-bin\`
95/98 `C:\Program Files\Netscape\Server\cgi-bin\`

■ For Microsoft Internet Information Server

`C:\InetPub\scripts\`

■ For Apache

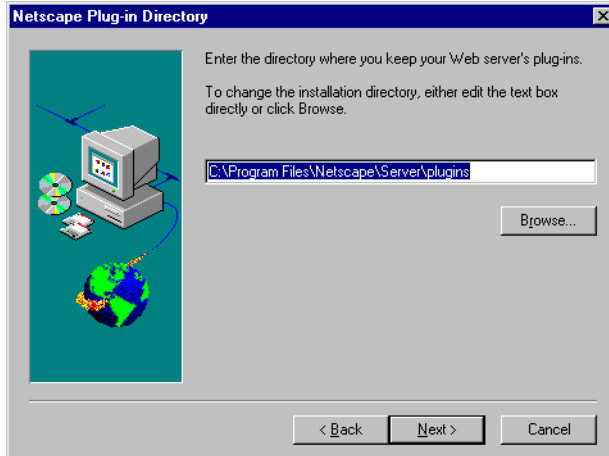`C:\Program Files\Apache Group\Apache\cgi-bin\`

■ For Other

`C:\MyWebSrv\cgi-bin\`

14 Specify the location of your Web server's CGI directory.

■ If the type of Web server you selected is either Netscape or Microsoft, or you selected a plug-in in the Custom Options dialog box, the corresponding Netscape Plug-in Directory

dialog box or Microsoft IIS Plug-in Directory dialog box
appears.

- ■ If the type of Web server you selected is Other, continue at
  step 18.

15 Specify the location where your Web server's plug-ins are
located.

Depending on the type of Web server you selected, the default
locations are as follows:

- ■ For Netscape Fastrack or Enterprise Server

  NT   `C:\Netscape\SuiteSpot\plugins\`
  95/98 `C:\Program Files\Netscape\Server\plugins\`

- ■ For Microsoft Internet Information Server

  `C:\InetPub\scripts\`

Note For security reasons, you may want to put Microsoft IIS
plug-ins in a directory other than the default.

16 Click **Next** to continue.

If you selected a Netscape Server, the Netscape Server Configuration Directory dialog box appears.
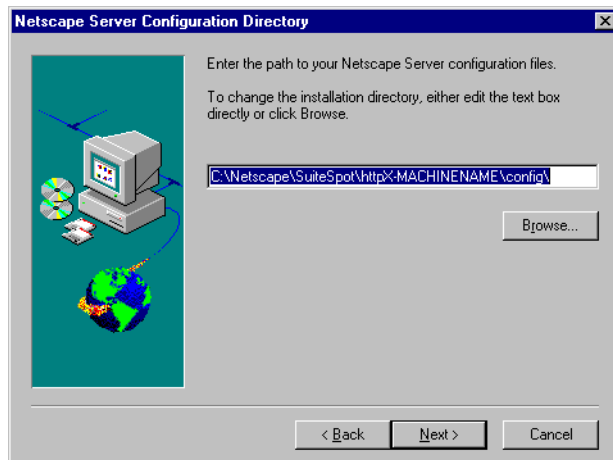
17 Specify the Netscape Server directory.

In place of "X-MACHINENAME" in the default location string, type the appropriate path, or browse to the appropriate config directory; for example:

```
C:\Netscape\SuiteSpot\httpd-mymachine\config\
```

https is the prefix for a Netscape Enterprise Server and httpd for a Netscape FastTrack Server.

18 Click **Next** to continue.

The Outgoing Mail (SMTP) Server dialog box appears.
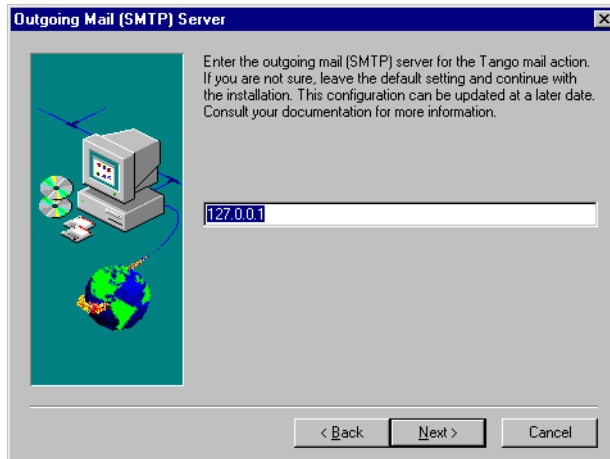
If the name of the SMTP server is other than "127.0.0.1" (for example, "mail.domain.com"), enter the name of the server to use for the Tango Mail action.

You can change the mail server name at a later time by using the `config.taf` application file to configure Tango Server.

For more information, see "Configuring Tango Server" on page 23 and Chapter 20 of the *User's Guide*.

19 Click **Next** to continue.

The Start Copying Files dialog box appears, displaying your current settings. You can scroll down the list to see all the target directories.
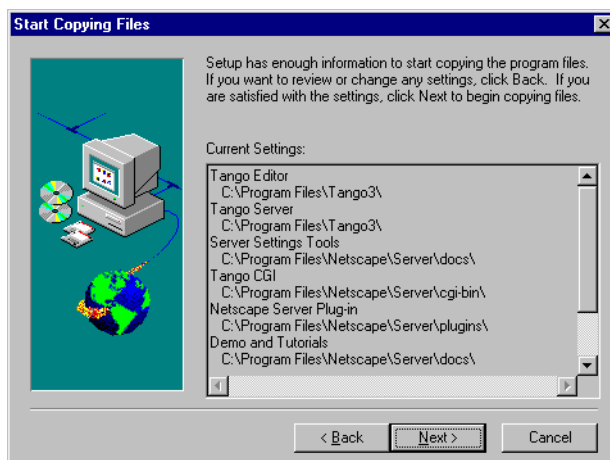
- If the settings are correct, continue at the next step.
- If you want to change some settings, click **Back** to return to the previous dialog boxes, and make your changes.

20 Click **Next** to continue.

The setup program copies files to your computer, and a message appears telling you the setup is complete.

The setup program then asks to restart your machine, which finishes the configuration of Tango and other components that you may have installed, and starts up your Tango Personal Server. You are also asked to choose the **Getting Started with Tango** shortcut after restart; see the next section.

After Installation

Once you have restarted, go the **Release Notes** shortcut in the **Tango Enterprise 3.52** program group. This launches the Readme.txt in your default text editor. Please read this file closely for late-breaking configuration and usage instructions for Tango.

To get started with Tango, go to the **Getting Started with Tango** shortcut in the **Tango Enterprise 3.52** program group. This shortcut launches the following page in your Web browser
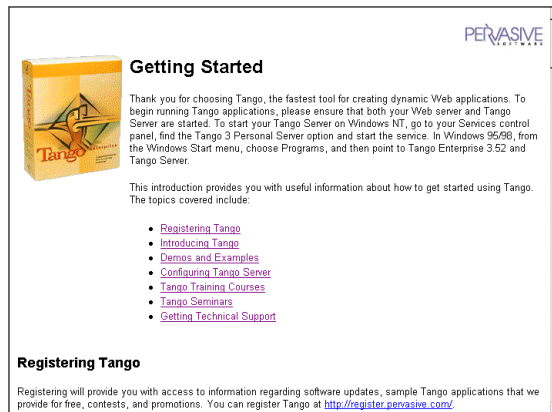
1 Click **Registration** for more information on registering Tango.

2 Click the link to the Tango registration Web site:

```
http://register.pervasive.com/
```

Follow the instructions on this page to obtain your registration number from Pervasive.

Registering Tango

When you run Tango Editor, you are asked to register Tango Development Studio by entering your registration number. You do not need this number in order to run Tango Editor or Tango Server.

Tango Development Studio

To register Tango Development Studio

1 Show the Register Now! dialog box by doing one of the following:

- Open Tango Editor.
- Choose **Enter Registration Number** from the **Help** menu.

The Register Now! dialog box appears.

Clicking the **Get Registration Number** button takes you to `http://register.pervasive.com/`, where you can register your copy of Tango Development Studio.

2 Enter the product registration number you got from Pervasive.

3 Click **Register** to register Tango Editor.

Upgrading From Tango 3.0

There is one change from version 3.0 that requires a minor reconfiguration of your Tango Server with some installations. This section describes the change.

Starting in version 3.1, the HTTP header used by Tango Server is no longer stored in the `t3server.ini` file. Previously, the HTTPHEADER entry—corresponding to the system configuration variable `httpHeader`—was used for this purpose. Now, permanent changes to the header are made by setting the contents of the file pointed to by the HEADERFILE configuration file entry.

If you had changed the HTTP header from Tango's default, follow these steps to update your configuration for proper operation with the current version of Tango.

1 Open the `t3server.ini` file with a text editor. Under Windows NT, it is located in the `\WINNT\Tango3\` directory on the main drive (that is, usually `C:\WINNT\Tango3\t3server.ini`). Under Windows 95 or Windows 98, it is located in the `\WINDOWS\Tango3\` directory.

2 Find the HTTPHEADER line and copy the part after the "`=`" to the clipboard.

3 Note the value of the HEADERFILE line and find the file pointed to by it. If this file does not exist, create it using a text editor such as Notepad.

4 Paste the old HTTPHEADER value into the file. Make sure you do not add any extra returns to the beginning or end of the file.

5 Replace any line-ending escape sequences "`\n`" or "`\r\n`" in the text with the new `<@CRLF>` tag. For example, if your old header value was:

```
Content-Type: text/
html\n<@SETCOOKIES><@USERREFERENCECOOKIE>\n
```

change it to:

```
Content-Type: text/
html<@CRLF><@SETCOOKIES><@USERREFERENCECOOKIE><@CRLF>
```

Save the file.

6 In the `t3server.ini` file, delete the entire HTTPHEADER line. (Tango Server version 3.1 and higher ignores it.)

Starting and Stopping Tango Server

Windows NT

If you install Tango Server in Windows NT, Tango Server is registered as an NT service and set to start automatically when Windows starts. No further setup is necessary, unless you want to customize your Tango Server configuration.

You can start and stop Tango Server at any time, or change its startup parameters, by opening the Services control panel.

To start and stop Tango Server in Windows NT

Do either of the following:

You can also start Tango Server as a console application for debugging by double clicking the Tango Server executable file name, `t3server.exe` found in the `Tango3` directory.
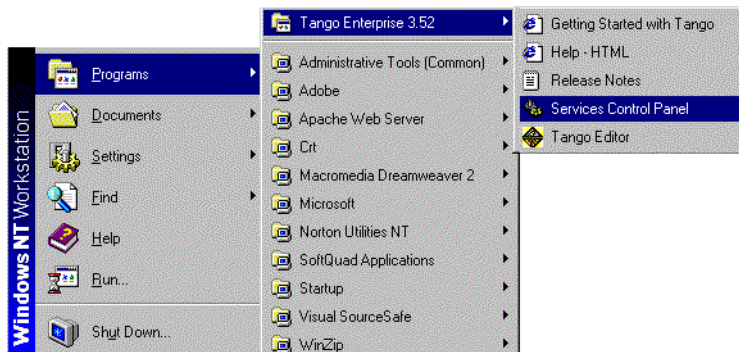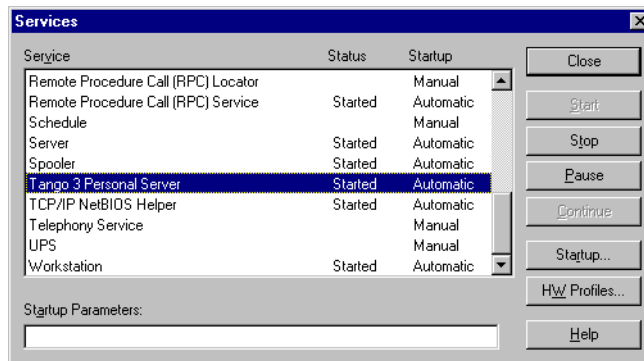
■ From the Windows **Start** menu, choose **Programs**, and then point to **Tango Enterprise 3.52** and **Services Control Panel**.

■ From the Windows Control Panel, choose **Services**.

The Services control panel appears.

Select "Tango 3 Personal Server". Use the control panel's buttons to start, stop, pause, or continue the service. You can also enter startup parameters to pass to the service.

Windows 95/98 — *To start and stop Tango Server in Windows 95/98*

You can start and stop Tango Server in Windows 95/98 using one of the following methods:

■ Tango Server Manager gets installed when you install Tango Server. It appears as an icon in the notification area on the Windows taskbar.

Tango Manager icon

Notification area on the Windows taskbar
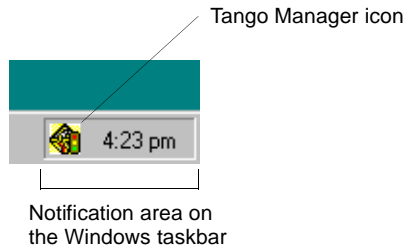
To start Tango Server, right click the Tango Server Manager icon to display the menu of commands, and click **Start Tango Server**. (The **Stop Tango Server** command is unavailable and appears grayed out.)
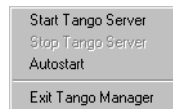
Once Tango Server starts, the **Stop Tango Server** command becomes active and **Start Tango Server** is grayed out.

If you want Tango Server to start automatically when you start your computer, select **Autostart**. A checkmark beside the command indicates the option is active.

To close Tango Server Manager, click **Exit Tango Manager**. The icon disappears until you restart Windows (with **Autostart** enabled) or until you select the **Tango Server Manager** shortcut in the Windows **Start** menu under **Programs** and **Tango Enterprise 3**.

■ Double click the Tango Server executable file name, `t3server.exe`, found in the Tango 3 directory.
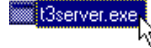
■ From the Windows **Start** menu, choose **Run,** open `t3server.exe` in the Tango 3 directory, and click **OK**.

■ Open an MS-DOS window, change to the Tango 3 directory, and type: `t3server.exe`.

To stop Tango Server, display the MS-DOS window and press CTRL-C on the keyboard.

Configuring Tango Server

The Tango Server configuration file contains the settings for many Tango Server options. These options are set by default. You generally do not need to edit this file directly.

The Tango Server configuration file is called `t3server.ini`. Under Windows NT, it is located in the `\WINNT\Tango3\` directory on the main drive (that is, usually `C:\WINNT\Tango3\t3server.ini`). Under Windows 95 or Windows 98, it is located in the `\WINDOWS\Tango3\` directory.

For detailed information on configuring Tango Server, see Chapter 20, "Using Tango Server" in the *User's Guide*. You can also access configuration information by clicking the **Tango Server** button on the on-line HTML help button bar.

> **Note** If you are editing the configuration file, you may see file stanzas for more than one server. This occurs if you have multiple servers installed on one machine. If you are editing the configuration file, make sure you modify the correct file stanza, for example, `[Tango_3_Personal_Server]` or `[Tango_3_Server]`.

For information on Tango configuration variables, see Chapter 7 and Chapter 20 in the *User's Guide*, and the *Meta Tags and Configuration Variables* manual.

You can configure Tango Server by setting system configuration variables using the `config.taf` application file that comes with Tango. This file is located under your HTML document root directory in `\Tango3\config.taf`. To use it, execute the file in your browser, for example,

    http://*www.yourserver.com*/Tango3/config.taf

When you execute the `config.taf` application file, you are asked for a password.

Enter Configuration Password

The default password after installation is the first five characters of your box number. The password can be changed by editing the value of configPasswd in the t3server.ini file and restarting the server.

The default password after installation is `admin`.

Caution For purposes of security, it is *strongly recommended* that you change the default password. You can change the password by stopping Tango Server, editing the value of the configuration variable, `CONFIGPASSWD=` in the `t3server.ini` file, and restarting the server.

Click a category on the left to see the options for that category. The listed options correspond to Tango system configuration variables.

Configuration categories   Corresponding Tango system configuration variables appear in text fields

The configuration options affect basic Tango Server functionality. Before changing any value, you should understand the effect of the change.

Configuring the Microsoft IIS Plug-in for Added Security in Windows NT

If security is a priority on your Web site, you should do the following steps to configure your Tango IIS (Internet Information Server) plug-in.

IIS allows read-only access to your Web document directories by default, but application files must have execute permission to work with the IIS plug-in. Therefore, a secure installation requires that you keep all your application files in a directory separate from your HTML documents. Follow this procedure to improve security after you have installed Tango.

1 Stop the World Wide Web Publishing service.

2 Do the following to set the security permissions for `C:\Inetsrv\scripts\t3iis.dll` so that an anonymous Internet guest has file "Execute" permission only.

- ■ Right click the file.
- ■ Select **Properties**.
- ■ Select the Securities tab and the **Permissions** button.

   If the user is not already listed, select **Add**; otherwise double click the user name to edit the security permissions.

3 Create a subdirectory of `C:\InetPub\wwwroot\` called `\taf`.

4 Move all your application files, if necessary, to `C:\InetPub\wwwroot\taf\`

5 Set the security permissions for `C:\InetPub\wwwroot\taf\` so the anonymous Internet guest user (`IUSR_<computer_name>`) has "Read-Execute" (RX) and "Read" (R) permissions. You do this as you did it in step 2.

6 Start Internet Service Manager.

7 Open the Service Properties for the World Wide Web service.

8 Select the Directories tab, and add a virtual directory called `\taf`. This should map to the directory that you have created (`C:\InetPub\wwwroot\taf\`), and where your application files will be saved.

9 Set the permissions for the virtual directory, `\taf`, in the Internet Service Manager to Execute only.

To use the Tango plug-in for IIS, call the application files you have created using the virtual directory, for example,

```
http://127.0.0.1/taf/myfile.taf?function=form
```

Using the Netscape Server Plug-In

If you have Netscape Server 3.51, you must have the Netscape-provided patch installed. See the following URL:

```
http://help.netscape.com/download/server/
enterprise/P106927.exe
```

The Netscape Server 2.0 plug-in causes the `<@CGIPARAM SERVER_NAME>` meta tag to always return empty. The problem stems from a limitation of NSAPI.

Configuring the Netscape Plug-in

During installation, Tango modifies two files in your Web server's config subdirectory: `mime.types` and `obj.conf`. If you ever find it necessary to change your NS (Netscape) configuration, you will find the following information about the file changes necessary.

Note The setup program installs only one plug-in the location you specify. If you want to set up multiple Web servers, you will need to set up the plug-in manually.

The following line is added to the end of the `mime.types` file:

```
type=magnus-internal/taf exts=taf
```

The following two lines are added to the beginning of the `obj.conf` file:

```
Init fn="load-modules" shlib="[path to plug-in]/
t3ns.dll" funcs="Tango_main,Tango_main_init"

Init fn="Tango_main_init" stanza="t3ns.dll"
```

Inside the definition of the `<Object name=default>` object, the following line is inserted at the beginning of the section containing other services:

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

For the Netscape plug-in, the `t3client.ini` file for the Netscape plug-in (`t3ns.dll`) reads as follows:

```
[Tango Client Definitions]
t3cgi.exe=*
plugin**=
```

* These lines are only present if the CGI is also present.

```
[t3cgi.exe]*
TANGO_HOST=localhost*
TANGO_PORT=18000*
```

** Either `t3ns.dll` or `t3iis.dll`.

```
[plugin]**
TANGO_HOST=localhost
TANGO_PORT=18000
```

Deconfiguring NS Plug-in Files If Uninstalling Tango 2.*x*

If you used the NS plug-in with Tango 2.*x*, you must deconfigure your Netscape `obj.conf`, `magnus.conf`, and `mime.types` files when you uninstall Tango 2.*x*. Failure to make these changes may prevent your Web server from starting.

> **Note** The Tango 2.*x* Setup program installed the Tango NS plug-in the Netscape plug-ins directory.

1 From the `magnus.conf` file, remove:

```
Init fn=load-modules shlib="C:/Netscape/Server/
Plugins/TangoNS.dll" funcs=TangoMain
```

and save the file.

2 From the `mime.types` file, remove:

```
type=magnus-internal/qry exts=qry
```

and save the file.

3 From the `obj.conf` file, in the `<Object name="default">` section, remove:

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

and save the file.

Converting Previous Query Documents

Tango 3 Editor can automatically convert Tango query documents from earlier versions to Tango 3 application files. The file extension of query documents created in earlier versions of Tango is `.qry`.

The following describes how to convert your query documents and how the conversion alters query documents in creating an application file.

To convert query documents to application files

You can also drag one or more query documents onto the Tango Editor icon on your desktop.

Tango Editor automatically opens and starts the conversion process.

1 Open Tango Editor.

2 From the **File** menu, choose **Open**.

The Open dialog box appears.

3 Locate and select one or more query documents you want to convert.

4 Click **OK**.

A message appears asking if you want Tango Editor to create an application file with the same functionality.
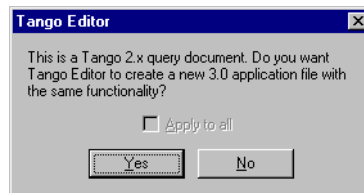
5 Click **Yes** to continue. Click **No** to cancel.

If you are opening more than one document and want to convert all of them, select the **Apply to all** option. Otherwise, this message appears for each query document.

Note Converting a query document to an application file does not alter the original query document.

An application file window opens displaying the new application file with the same name as the query document and the Tango application file (`.taf`) extension.

Note If you convert a query document whose name has a space in it, when you save the converted document the suggested name for it is only the first word of the original document name.

The conversion takes query document objects—actions, variable assignment attributes, meta tags, and global variables—and converts them to Tango 3 objects as follows:

■ All occurrences of ".qry" are changed to ".taf".

■ Stop actions become Return actions.

■ Variable assignment—previously an attribute of an action— becomes a separate Assign action.

■ Branch actions become If/Branch action pairs.

■ Headers for External actions change.

■ Assignments to doc$results become <@PURGERESULTS>; <@GLOBAL doc$results> become <@RESULTS>.

For more information on Tango 3 meta tags, see "What's New In Tango Meta Tags" and "Terminology Changes and Additions" in the *Meta Tags and Configuration Variables* manual.

■ The functionality of many previous meta tags has been enhanced. Tango takes care of the conversion to Tango 3 meta tags. The names of many of the previous meta tags have not changed, but the functionality of those meta tags has changed significantly.

Converting Text Files

If you have used the <@INCLUDE> meta tag to include files containing Tango meta tags, use Tango Editor's **Convert Text File** command to convert those files.

1 From the **File** menu, choose **Convert Text File**.
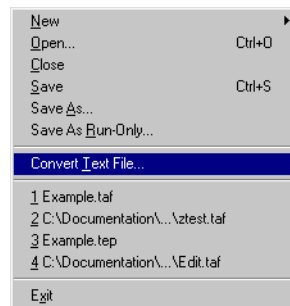
The Convert Text File dialog box appears.

2 Select the HTML or text files you want to convert.

3 Click **Open**.

The selected files are converted to the Tango 3 meta tag syntax and the original files are renamed as `*.old`.

Using Converted Application Files

In general, converted application files should work as they did under Tango 2.*x*. However, some new features have made a few differences unavoidable.

This section lists those differences and suggests application file changes to compensate for them.

Direct DBMS SQL Auto-Encoding

A new Tango Server feature automatically escapes single quotes in meta tag values substituted in Direct DBMS SQL. For example, if a variable called `myName` contains "O'Brien", then

```
SELECT * FROM customer WHERE cust_name = '<@VAR
NAME=myName>'
```

now results in:

```
SELECT * FROM customer WHERE cust_name = 'O''Brien'
```

In previous versions of Tango, the result was:

```
SELECT * FROM customer WHERE cust_name = 'O'Brien'
```

and a DBMS error resulted due to the unescaped quote.

In most cases, this new behavior does not adversely affect converted application files; however, there is one case in which it does. If your Direct DBMS SQL contains meta tags that evaluate to an entire (or partial) SQL statement constructed elsewhere, the quote-doubling may cause DBMS errors. This is because all single quotes are doubled, even those meant to delimit a string. In this case, the solution is to modify the meta tag(s) returning your SQL by adding the `ENCODING=none` attribute. For example:

```
<@VAR NAME=mySQL ENCODING=none>
```

Variable Scoping

Tango 3 supports various variable scopes. All global references in
2.*x* query documents are converted to unscoped variable
references. By default, assignments to non-existent unscoped
variables cause a user scope variable to be created (equivalent to a
2.*x* user global). When getting the value of an unscoped variable,
Tango starts looking for the variable in local scope and moves on
up to system scope until it is found.

In short, variables in your converted documents will work as they
always did. You should, however, consider modifying variable
references in cases where other scopes (local, for example) are more
appropriate. Doing so results in improved Tango Server
performance and reduced memory requirements.

Assignments to System Configuration Variable

If you have query documents that assign to system configuration
variables, you must make changes to the converted application file
for them to work under Tango 3.

In Tango 3, a password is required to assign to system
configuration variables (the old "system globals"). The password is
specified by the `CONFIGPASSWD=` line in the `t3server.ini` file. The
default value of this password is the first five characters of your
Tango box number. When Tango Server encounters an assignment
to a system configuration variable, it checks to see if there is a user
scope variable called `configPasswd` whose value contains the same
value as the one in the `t3server.ini` file. If so, the assignment is
allowed; if not, an error occurs.

To make assignments to system configuration variables in
converted documents work, make sure you add an assignment to
`user$configPasswd`, which sets it to the correct value. Another
(not secure and not recommended) option is to set the value of
`CONFIGPASSWD=` in the `t3server.ini` file value to empty.

External Actions

External actions on Windows now require an absolute path to the
DLL to be executed. This allows you to move your DLLs outside of
the Web server document directory. However, it means you must
manually edit your existing External actions to update the paths.

Executing a Tango Application File

**Using
the Plug-in**

Application files are executed in the same way HTML files are viewed: by specifying the name of the file in a URL, for example,

`http://www.yourserver.com/shop/additem.taf`

This example executes an application file called `additem.taf` located in the `shop` directory on the server `www.yourserver.com`.

This example assumes you are running one of the Tango Web server plug-ins or extensions (available for Microsoft's Internet Information Server and Netscape's Web servers).

Using the CGI

If you are using the Tango CGI instead of the plug-in, type the following in the URL line, replacing each italicized part with the actual information:

■ With Microsoft Internet Information Server

`http://`***www.yourserver.com***`/scripts/t3cgi.exe/`***path to application file***`/`***yourfile***`.taf`

■ With Netscape Server

`http://`***www.yourserver.com***`/cgi-bin/t3cgi.exe/`***path to application file***`/`***yourfile***`.taf`

**Passing
Parameters**

You can pass parameters to the application file by using *search* arguments. These are name-value pairs appearing after a question mark in the URL, for example,

`http://`***www.yourserver.com***`/shop/additem.taf?item_num=86`

In this example, the `item_num` search argument has a value of "**86**".

There are other ways of passing values to Tango application files. *Form* fields (post arguments) and *cookies* are two examples.

Getting Help

Technical Support

In addition to the information available in the printed and online documentation, you can also get technical help with Tango.

A special telephone number and e-mail address has been set up for this version of the Tango Development Studio. Free support is available for 60 days from installation:

Telephone:	1 877 412-1259 (toll-free in North America)
	(512) 231-6391
E-mail:	`tangodl@pervasive.com`

There are various other support options available to meet your needs. Contact Pervasive or your local distributor for more information about technical support contracts.

Tango-Talk

Users are encouraged to join the Internet mailing list named *Tango-Talk.* The mailing list is the ideal place to discuss your ideas with other interested Tango users. The Tango-Talk List Server is a service of Pervasive Software and is monitored by Pervasive technical support staff. To obtain a list of commands, including information on how to subscribe to the list, e-mail `tango-talk@pervasive.com` with the subject `help`.

Messages are archived at

`http://listserver.pervasive.com/tango-talk/`

Other Inquiries

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