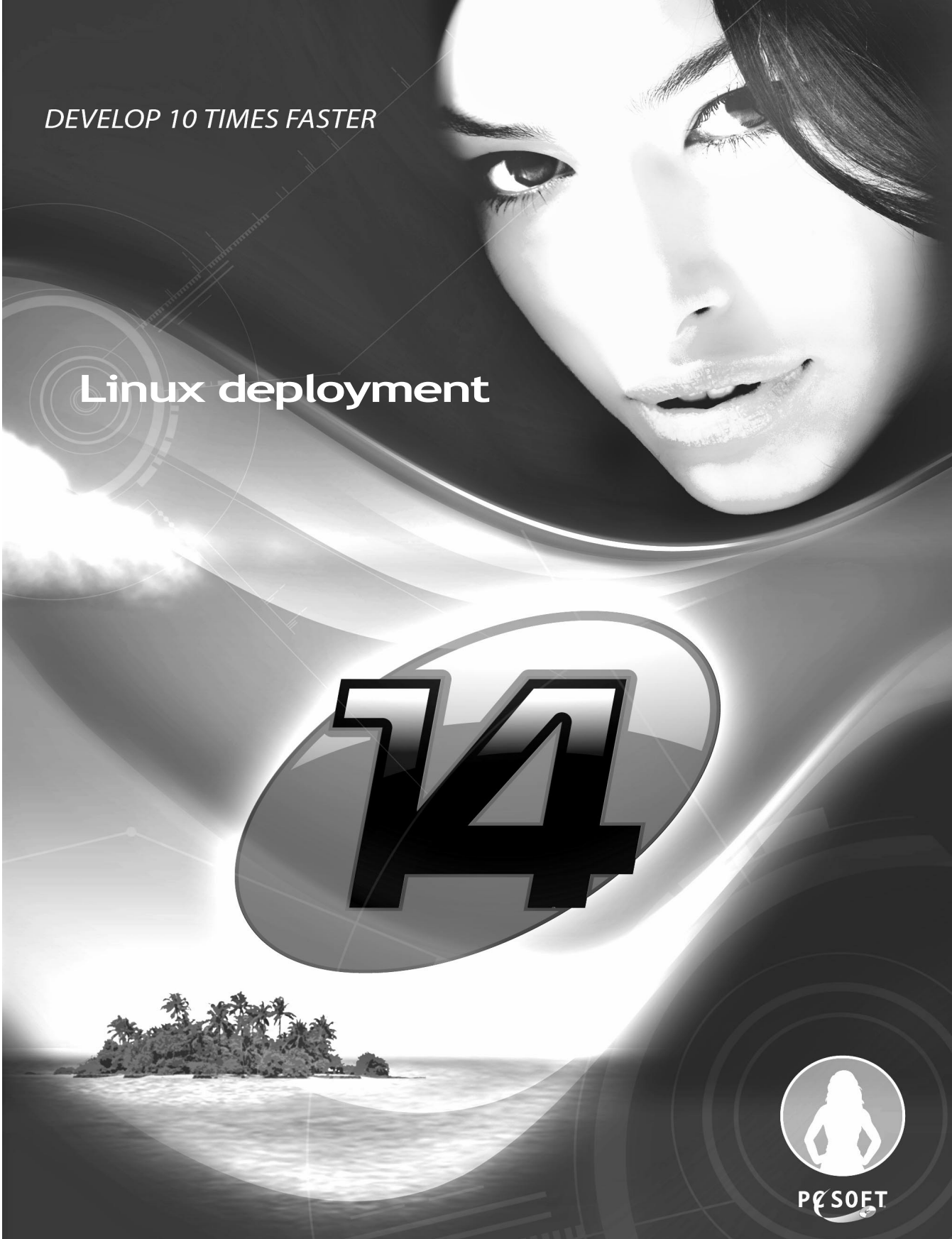

DEVELOP 10 TIMES FASTER
Linux deployment
14
PC SOFT

WebDev Linux application server Version 14
Application server - 14-1- 0509

Remember to visit our site (**www.windev.com**) on a regular basis to find out whether upgraded versions are available.

This documentation is not contractually binding. Modifications may have been made to the software the since this guide was published. See the **online help.**

SUMMARY

1. Overview of WebDev 14

WebDev is a full development environment dedicated to Internet and Intranet. WebDev is the perfect tool for developing Internet and Intranet sites that require (or not) database access.

The dynamic sites created by WebDev operate with all browsers, regardless of their version and platform (PC, MAC, Unix, and so on), and so on.

The sites can be used by all the Linux servers and by all the Windows servers: Apache, IIS, and so on.

The WebDev application server supports the following Linux distributions:

- RedHat 9.0,
- Mandrake 10.0,
- Debian Sage also named Debian GNU/Linux 3.1,
- Debian Etch also named Debian 4.0,
- SuSE 9.2.
- OpenSuse 10.3.

WebDev is made of:

- ***WebDev Development Version:***
  Installed on the development computer, this version is used to develop a WebDev site and to run its test locally.
- ***WebDev application server:***
  Installed on an HTTP server at the host, this version is used to deploy a dynamic WebDev site (site with database). The WebDev site can be used by all the Web users.

Note: The WebDev application server is not required to deploy a static site (i.e. a site that uses no data).

Features of the WebDev application server for Linux

The WebDev application server must be installed on a server (at the host or on an Intranet server). Via the WebDev application server:

- The Web users can use the dynamic WebDev sites.
- The server administrator can:
  - Manage and configure the dynamic WebDev sites found on the server.
  - Configure the WebDev accounts associated with each site manager.
  - Control the remote setup and update of the dynamic WebDev sites (via FTP).
- The manager of the WebDev sites can:
  - Install or update his dynamic sites remotely (via FTP).
  - Modify the configuration of his dynamic WebDev sites.

Warning

You must be experienced in installing software in Linux.

If you are not familiar with Linux, you must get Linux training before you install this software.

PC SOFT provides technical support for its own software only (via the Free Technical Support).

PC SOFT provides NO technical support about the operating systems (Windows and Linux).

If you need technical support about a software that is not edited by PC SOFT, contact the editor of the relevant software.

2. Installing an application server

2.1 Overview

Several steps are required to install the WebDev application server on a Linux server:

- Checking the elements installed on the Linux server
- Installing the WebDev application server for Linux
- Checking the setup of the application server
- Configuring the users and their rights for deploying WebDev applications.

2.2 Checking the elements installed on the Linux server

To operate properly, the WebDev application server for Linux requires:

- the presence of the Apache server. This HTTP server must operate properly. To check whether it is operating properly, start a Web explorer from another computer and enter the following address: "http://<Server Name>".
  Note: to install the WebDev application server for Linux, you must know:
  - the name and path of the configuration file for the Apache server (/etc/httpd/conf/http.conf for instance).
  - the name and path of the script used to reload the Apache configuration (/usr/sbin/apachectl -k graceful for instance).
- the presence of an FTP server (managing the connections with password)
- the presence of the libstdc++ library (libstdc++-libc6.2-2.so.3 library).
  Note: if a program locks the use of this library, then this program must be disabled.

Checking these elements must be done before installing WebDev for Linux.

The operating mode for performing these checks on the most common Linux distributions is presented in 'Appendix 2: Checking the server' (page 26).

2.3 Installing the WebDev application server for Linux

To install the WebDev application server for Linux, you can:

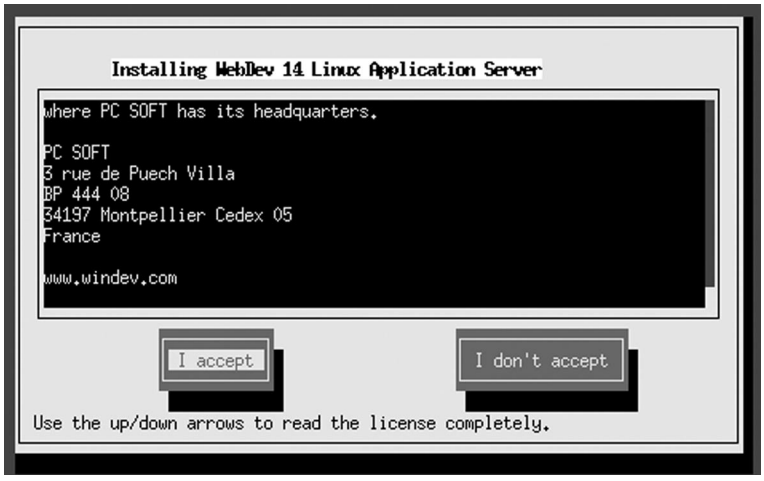
- run the "WebDev_Install" program on the Linux server from the setup CD.
- copy the content of the setup CD to the Linux server and run the "WebDev_Install" program.

Note: you must have sufficient rights to run this program otherwise "Permission denied" is displayed. The following line enables you to grant execution rights:

```
chmod +x WebDev_Install
```

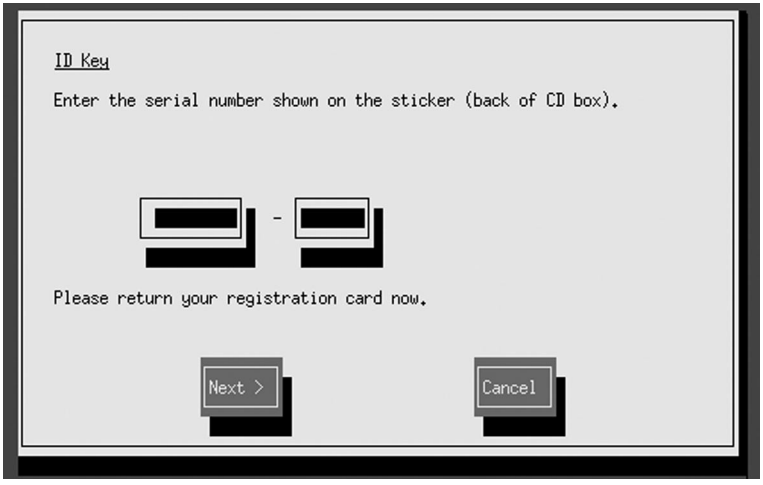
The main steps for setup are as follows:

1. Acceptance of the license:

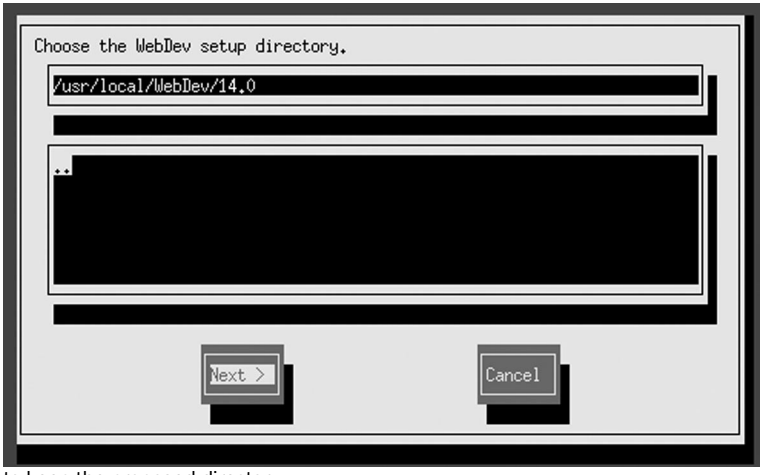


To validate this screen, you must scroll the entire license agreement with the up/down arrows.

2. Input of the identification key:

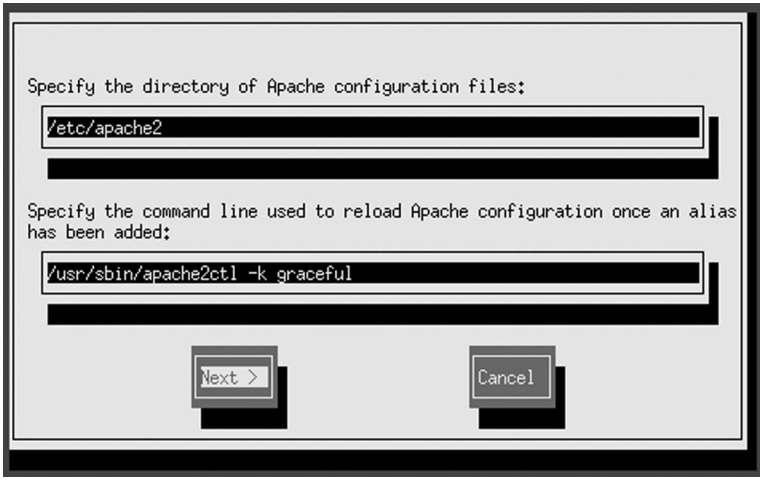


3. Selection of the setup directory:



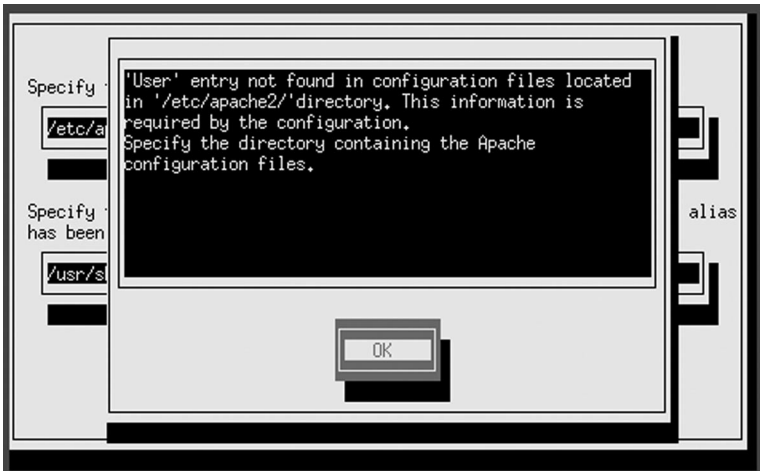
We advise you to keep the proposed directory.

4. Specify the parameters required to install the WebDev application server for Linux:



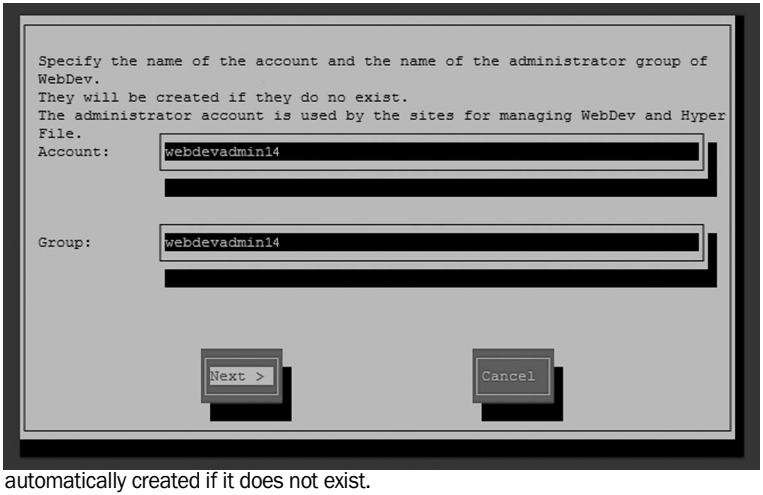
- the path of the configuration file for Apache. To find out the name and path of this file, see 'Appendix 2: Checking the server' (page 26).

The following message will be displayed if the specified path is incorrect:



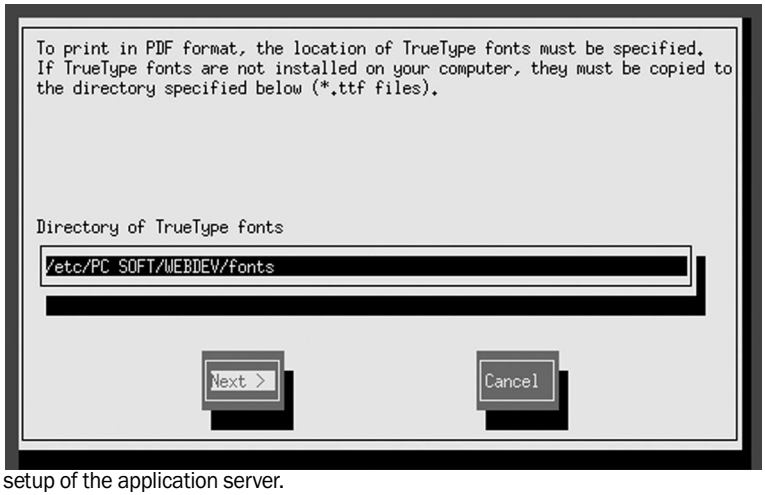
- The command line used to reload the Apache configuration once an alias was added (this operation is automatically performed when the WebDev sites are installed via FTP).

5. Specify the name of the Unix group corresponding to the administrator group of WebDev application server. The group proposed by default is webdevadmin14.

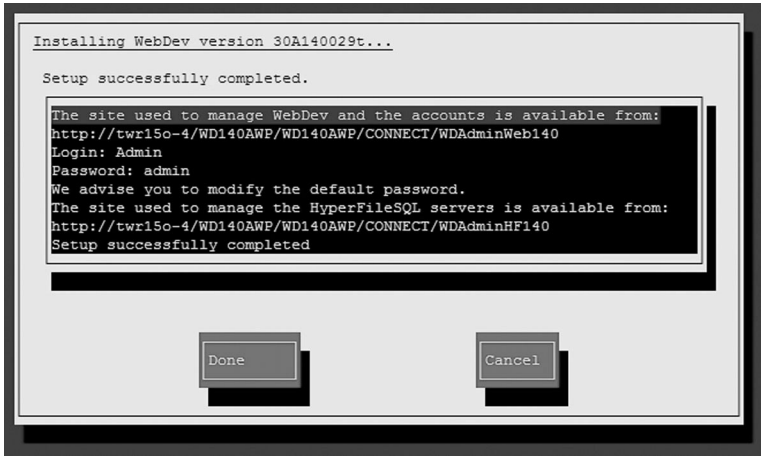


6. The group is automatically created if it does not exist.

7. To be able to print in PDF format, specify the directory of the TrueType fonts.



8. Validate the setup of the application server.
9. The setup is completed. The status report of setup is displayed.



2.4 Checking the setup of the application server

Once the WebDev application server for Linux is installed, we advise you to check the following points.

2.4.1 Checking the Apache server

This check must be performed if the setup was ended properly or if the setup was ended by the "Config-broken" error.
See 'Appendix 2: Checking the server' (page 26) for more details.

2.4.2 Running the test from a Windows browser

To check whether the WebDev application server for Linux operates properly:

1. Open an Internet browser.
2. Enter the following address:

```
http://<IP Address of Server>/WD140AWP/WD140AWP/version
```

where <Server IP Address> corresponds to the IP address of the Linux server.

3. The browser displays a few lines indicating the version of WebDev that is installed. For example:

```
WebDev 14.0 Linux
Copyright © PC SOFT 1993-2008
WD140AWP14.00Af   VI:
wd140session14.00AlVI:30-140033e
wd140admind14.00AmVI:30-140033e
(TST) 1303667-1699876806-1394533-YM
```

2.4.3 Running the test of the remote administrator

The remote administrator is the application used to manage the user accounts and the WebDev sites on the server. To check the operating mode of the remote administrator:

1. Open an Internet browser.

2. Enter the following address :

```
http://<IP Address of Server>/WD140AWP/WD140AWP/CONNECT/WDAdminWeb140
```

where <Server IP Address> corresponds to the IP address of the Linux server.

Caution: this address is case-sensitive (uppercase/lowercase characters). If a connection error occurs, don't forget to check the case and the spelling.

3. The administrator asks for identification. Enter the login (ADMIN) and the password (admin).

Note: the password must be typed in lowercase characters.

Problems that may occurred while running the test of the administrator

- **The error #403 is displayed when starting the remote administrator:**
  Reason: A "deny from all" clause is included in the configuration file of the Apache version installed.
  Solution:
  Add a <Directory> clause just before the definition of ScriptAlias into the configuration file of Apache

```
<Directory "/usr/local/WebDev/14.0/AWP">
     allow from all
</Directory>

ScriptAlias /WD140AWP/ "/usr/local/WebDev/14.0/AWP"
```

- **The images are not displayed in the remote administrator:**
  When you retrieve the URL of the image that is not displayed properly ("Properties" from the popup menu of the image) and when you run its test in the browser, the error #403 is displayed.
  Reason: The _WEB alias was defined for the Apache server but its access is locked by an Apache option.
  Solution:
  For each alias directory, you must define a <Directory> clause in the configuration file of Apache.

If the remote administrator or the WebDev sites do not operate properly

We advise you to perform the following operations:

- See the system "logs" (/var/log/messages for instance). These files may contain information about the errors that occurred (especially errors about rights).
- Restart the application server. The following command can be used:

```
killall wd140admind
/etc/init.d/WebDev14 restart
```

- Reboot the server if necessary.

2.5 Increase the number of simultaneous authorized connections

The number of connections supported by the WebDev application server depends on the following system resources:

- the number of semaphores
- the number of segments of shared memory.
- the minimum size of the shared memory.

2.5.1 Number of semaphores

The WebDev application server uses a number of semaphores proportional to the maximum number of simultaneous authorized connections.

To find out the maximum number of available semaphores, run the following command line:

```
/sbin/sysctl kernel.sem
```

This command line returns a series of numbers, the last one corresponding to the current number of semaphores (250 32000 32 150 for instance, corresponding to about 32 connections).

The following formula returns the number of semaphores required to manage n sessions:

s = 4 +4 * n

For example, to manage 100 simultaneous connections, the minimum number of semaphores is equal to: 4 + 4 * 100 = 404

To modify the number of semaphores:

1. Edit the /etc/sysctl.con file in a text editor.
For example, the following command line enables you to edit a file:

```
emacs /etc/sysctl.conf
```

Note: you also have the ability to edit the file with:

```
vi /etc/sysctl.conf
```

2. Add or modify the line corresponding to the "kernel.sem" entry and specify the new setting:

```
kernel.sem = xxx xxxxx xx 404
```

where x represent the digits that were previously returned.

3. To take these new parameters into account, use the following command line:

```
/sbin/sysctl -p
```

2.5.2 Number of segments of shared memory

The number of segments of shared memory to manage n connections must be equal to 4 + n.

To find out the number of segments of shared memory, run the following command line:

```
/sbin/sysctl kernel.shmmni
```

To modify the number of segments of shared memory:

1. Edit the /etc/sysctl.con file in a text editor.
For example, the following command line enables you to edit a file:

```
emacs /etc/sysctl.conf
```

Note: you also have the ability to edit the file with:

```
vi /etc/sysctl.conf
```

2. Add or modify the line corresponding to the "kernel.shmmni" entry and specify the new setting:

```
kernel.shmmni = xxx
```

where xxx corresponds to the new setting.

3. To take these new parameters into account, use the following command line:

```
/sbin/sysctl -p
```

2.5.3 Minimum size of the shared memory

The minimum size of the shared memory must be calculated according to the number of connections. The calculation is as follows:

(SHMHISTORYSIZE + (SHMDIALOGSIZE * n))*1024

where:

- n is the number of simultaneous connections.
- SHMHISTORYSIZE corresponds to the size (in KB) of the history of WebDev sessions (2048 KB by default).
- SHMDIALOGSIZE corresponds to the size (in KB) of the maximum request sent to the server (500 KB by default).

SHMHISTORYSIZE and SHMDIALOGSIZE are defined in the WebDev configuration files (see 'Appendix 3 - Configuration file' (page 36) for more details.

To find out the size of the shared memory, run the following command line:

```
/sbin/sysctl kernel.shmmax
```

To modify the size of the shared memory:

1. Edit the /etc/sysctl.con file in a text editor.
For example, the following command line enables you to edit a file:

```
emacs /etc/sysctl.conf
```

Note: you also have the ability to edit the file with:

```
vi /etc/sysctl.conf
```

2. Add or modify the line corresponding to the "kernel.shmmax" entry and specify the new setting:

```
kernel.shmmax = xxx
```

where xxx corresponds to the new setting.

3. To take these new parameters into account, use the following command line:

```
/sbin/sysctl -p
```

3. Creating the WebDev accounts

3.1 Overview

A WebDev account allows the server administrator to:

- group the dynamic sites that belong to a site manager. These dynamic sites are installed on a single Web server.
- configure the maximum number of connections allowed for all the dynamic sites of the site manager.
- configure the setup directories of the dynamic sites on the Web server.
- configure the directory for file transfer (for the remote setups and updates of the dynamic WebDev 14 sites by FTP).

This WebDev account allows the site manager to:

- use the remote WebDev administrator to manage his dynamic WebDev sites installed on the server.
- perform remote setups and updates of dynamic WebDev sites (via FTP).

Note: A specific account (login = "ADMIN", password = "admin") allows the server administrator to use the remote WebDev administrator. In this case, the server administrator can configure and control all the dynamic WebDev sites installed on the Web server. The remote WebDev administrator can no longer be used if this account is deleted. To recreate this account, create an account whose login is "ADMIN" (case sensitive).

The WebDev accounts are created in the remote administrator but they require a specific configuration of the users and user rights on the Linux server.

Note: The management of security for the WebDev sites has evolved and has been enhanced. From now on, the sites (as well as the site deployment) are run under the identity of the site owner defined in the remote administrator. The sites cannot interact. No specific rights other than the standard rights granted to each user are required to install a WebDev site.

3.2 Configuring the users and their rights on the Linux server

The Linux server must be configured before the first WebDev user account is created in the remote administrator.

3.2.1 Creating an FTP account in Linux

In most cases, an FTP account corresponds to a Unix user account.

The home directory of this system account corresponds to the directory for FTP download. This home directory corresponds to the directory where the files required to install the site will be transferred. The setup is automatically performed once the files have been transferred.

3.2.2 Creating the users and their directories

To manage the users on the server:

1. Create a new user via the following command line:

```
adduser <User Name>
```

All the necessary directories (including the FTP account) are created.

2. In the directory of this user, create three different directories:

- a directory for deploying the sites,
- a directory for the data,
- a directory for transferring the WebDev data.

You can for instance use the following syntax:

```
mkdir app
mkdir data
mkdir ftp_webdev
```

3. These directories should be assigned to the administrator group (webdevadmin14 group by default). The following syntax can be used:

```
chgrp webdevadmin14 app
chgrp webdevadmin14 data
chgrp webdevadmin14 ftp_webdev
```

4. Display the list of rights for the setup directory via the following command line:

```
ls -l
```

The rights are displayed in the following format:

```
drwxr-xr-x   2 root    webdevadmin14    4096 Mar  1 08:25 data
drwxr-xr-x   2 root    webdevadmin14    4096 Mar  1 08:26 app
drwxr-xr-x   2 root    webdevadmin14    4096 Mar  1 08:27 ftp_webdev
```

Read rights should be granted to the webdevadmin14 group. To do so, use the following command line:

```
chmod g+rx app
chmod g+rx data
```

If you display the list of rights again, you will get:

```
drwxr-x---   2 root    webdevadmin14    4096 Mar  1 08:25 data
drwxr-x---   2 root    webdevadmin14    4096 Mar  1 08:26 app
drwxr-x---  2 root   webdevadmin14    4096 Mar 1 08:27 ftp_webdev
```

Note: The webdevadmin14 group must have read/write rights in the ftp directory, site directory and data directory of the user so that a site backup can be performed from the remote administrator. No backup will be performed if these rights are not granted.

3.3 Creating the WebDev accounts

The WebDev accounts are created by the remote administrator.

3.3.1 How do I start the remote administrator

The remote administrator is an Internet site that can be started from any computer equipped with a browser. To start the remote administrator, use the following address:

```
http://<IP Address of Server>/WD140AWP/WD140AWP/connect/WDAdminWeb140
```

Once you are connected as administrator (login: ADMINISTRATOR, password: admin), you have the ability to create WebDev accounts.

3.3.2 Characteristics of a WebDev account

A WebDev account must have the following characteristics:

- Login of the user
- Password and its confirmation

The name of the WebDev account MUST correspond to the name of the associated Unix account.

Once this information is specified, all you have to do is enter the characteristics of the account:

- *the user details*:
  Name, first name, address, and so on.

- *the sites assigned to the site manager* (if necessary)
- *the maximum number of authorized connections*:
  Maximum number of simultaneous connections allowed for all the dynamic WebDev sites of the account. The site manager can then distribute his connections among his WebDev sites via the remote WebDev administrator.
- the directory for FTP transfer: The directory for FTP transfer corresponds to the home directory of the user. This directory was created in 'Creating the users and their directories', page 15.
- the home directory of the sites: The home directory of the sites corresponds to the directory where the WebDev sites of the user will be installed. This directory was created in 'Creating the users and their directories', page 15.
- the home directory of the data files: The home directory of the data files corresponds to the directory where the data files associated with the user site will be installed. This directory was created in 'Creating the users and their directories', page 15.

4. Installing a WebDev site

Two methods can be used to install a WebDev site on a Unix server:

- **1. The remote deployment directly from the development computer:**
  the manager of the WebDev sites will be able to deploy his site directly from the development computer. The necessary files will be transfered by FTP.
  This type of deployment is required if the Web server is not directly accessible by the site manager.
- **2. The remote deployment from an administration computer**: the developer does not have to know the characteristics of the server when creating the setup program (called "Package" in this case). The server parameters are specified when the package is run on an administration computer. This administration computer is a Windows computer.
  This type of deployment is recommended when the developer does not know the characteristics of the server when creating the setup program.

Note: A license of WebDev Application Server 14 is required for each Web server that hosts WebDev 14 sites.

4.1 Information required to deploy a site via FTP

The parameters required to perform a remote setup (direct setup or setup via package) are as follows:

- ***Name of the Web server*** (Address of the server). You can specify:
  - the name of a computer accessible via network (Intranet for instance). Example: "Test Server"
  - an IP address. Example: 123.3.250.12
  - an Internet address. Example: www.success.eu
- ***Name and password for the FTP account***.
- ***Name and password for the WebDev account***.

These parameters must be transmitted:
- to the manager of the WebDev sites for a remote setup performed from the development computer. The manager of the WebDev sites will be able to install his WebDev site from his development computer and to perform remote updates of his sites on a regular basis.
- to the person who will install the package corresponding to the WebDev site for a remote setup from an administration computer.

4.2 Errors that may occur during a setup via FTP

The list of errors that may occur is presented in 'Problems linked to a setup via FTP', page 21.

4.3 Information required for the deployment by package

The package was generated from WebDev Development.

To install the package on a computer:

1. Check whether you own the following elements:
   - the package
   - WDDeploy and its framework (WD140*.DLL files and *.WDK files).
2. Copy these elements to a PC running Windows. This PC must have access to the LINUX server by FTP.
3. Start WDDeploy and load the ZIP archive corresponding to the package.
4. Click the button used to deploy the site.

5. TROUBLESHOOTING

This chapter presents the main problems (and their solutions) that may occur when using WebDev Application Server 14.

5.1 Problems linked to a setup via FTP

The following list presents the error messages that are displayed in the wizard fro remote setup (at the site manager). Some of these messages require specific actions for configuring the deployment Web server.
Several solutions are proposed for each error.
Error messages may be displayed at different steps of the remote setup.

5.1.1 Step 1: Entering the logins and the Server/FTP passwords (site setup)

The setup wizard checks the validity of the logins and passwords. The list of errors that may occur is as follows.

Failure checking the user password: no information was returned by the server.

The possible problems are as follows:

- **The Web server does not operate**
  Solution: Restart the Web server on the server.
- **The FTP server does not operate.**
  Solution: Restart the FTP server on the server.
- **The FTP server is not configured properly: wrong user name,...**
  Solution: Check the configuration of the FTP server for the user.
- **The WebDev application server is not installed properly.**
  Solution: Reinstall the WebDev application server.

Wrong FTP password or the FTP server cannot be accessed.

The possible problems are as follows:

- **The FTP password specified by the site manager is incorrect.**
  Solution: Check the FTP password and give this password to the site manager.
- **The FTP server does not operate.**
  Solution: Restart the FTP server.
- **The number of authorized connections on the FTP server is exceeded.**
  Solution: The site manager must wait for a connection to the FTP server to be freed.
- **The address of the Web server is incorrect.**
  Solution: Indicate to the site manager the exact address of the Web server where the site must be installed by FTP.

Failure checking the user password: the user is unknown. Check the address of the server and the user name.

The possible problems are as follows:

- **The WebDev account manager does not recognize the site manager.**
  Solution: Check whether a WebDev account was created in the remote manager for this site manager and give the corresponding "login" to the site manager.

Failure checking the user password: no information was returned by the server.

The possible problems are as follows :

- **The password entered during the remote setup does not correspond to the password defined in the account manager.**

Solution: Check the password associated with the site manager in the remote WebDev administrator and give this password to the site manager.

5.1.2 Step 2: Installing the site (setup or update)

The setup wizard is used to install or update the site. The list of errors that may occur is as follows.

Unable to create a temporary directory on the server. Contact the server administrator.

The possible problems are as follows:

- **The site is installed in a directory belonging to the root user.**
  Solution: associate the directory with the user declared in Apache.

The client name is unknown. Check the client name and the associated password.

The possible problems are as follows:

- **The WebDev account manager does not recognize the site manager.**
  Solution: Check whether a WebDev account was created in the WebDev administrator for this site manager and give the corresponding "login" to the site manager.

The files required for setup have not been transmitted properly. Check whether the user name and the FTP password are correct and correspond to the owner account of the site.

The possible problems are as follows:

- **An error occurred during the FTP transfer and the file installed on the server cannot be read.**
  Solution: The site manager must restart his setup.
  Caution: If it is a first setup, the site manager must delete the server description from the "Remote Update" list.

The setup file is invalid. The file was not transmitted properly or the transmitted file was damaged.

The possible problems are as follows:

- **An error occurred during the FTP transfer and the file installed on the server cannot be read.**
  Solution: The site manager must restart his setup.
  Caution: If it is a first setup, the site manager must delete the server description from the "Remote Update" list.

Error decrypting the setup information. Check the password used.

The possible problems are as follows:

- **The password entered during the remote setup does not correspond to the password defined in the account manager.**
  Solution: Check the password associated with the site manager in the remote WebDev administrator and give this password to the site manager.

Unable to add programming due to the following error: XXX

When programming a delayed setup, one of the following problems occurred:

- **Insufficient memory**
  Solution: Free memory space on the Web server and retry the delayed setup.
- **Unable to find the local WebDev administrator, check whether the WebDev application server is installed properly**
  The local WebDev administrator does not respond to the programming request
  Error starting the local WebDev administrator: check whether the WebDev application server is installed properly

A site with the same name is already installed on this server. The same server cannot host two sites with the same name. Rename your site or uninstall the existing one. If it is the same site, you must perform a site update (instead of a site setup).

During a setup via FTP, two sites with the same name cannot be installed on the same Web server, even if these sites belong to different site managers.

For a first setup of the site on the server, the manager of the WebDev sites must rename his site (rename his project).

Note: To perform a setup via FTP, the site manager must select "Remote update" when installing his site via FTP (instead of "Remote setup").

Unable to create the directory of the site. Contact the server administrator.

The possible problems are as follows:

- **The home directory of the sites does not exist**
  Solution: Check the home directory of the sites specified in the account manager. Check the existence of this directory.
- **Insufficient access rights to the home directory of the sites**
  Solution: the rights granted to the directory must correspond to the rights granted to the site owner.

Unable to create the directory of the data files. Contact the server administrator.

The possible problems are as follows:

- **The home directory of the data does not exist**
  Solution: Check the home directory of the data specified in the account manager. Check the existence of this directory.
- **Insufficient access rights to the home directory of the data**
  Solution: the rights granted to the directory must correspond to the rights granted to the site owner.

Unable to obtain the privileges granted to the owner of XXXX file.

The identity of the site owner has not been validated.

Solution: Check the Unix account of the file owner. It must correspond to the associated WebDev account.

5.1.3 Step 3: Updating a site

When updating the site, the setup wizard checks whether the site is installed and configured properly. The list of errors that may occur is as follows.

Unknown site name

The possible problems are as follows:

- **The site is not installed on the server**
  Solution: Perform a full remote setup.
- **The site is no longer referenced in the WebDev administrator**
  Solution: Reference the WebDev site in the remote WebDev administrator.

The client name does not correspond to the name of the site owner

The possible problems are as follows:

- **This site was installed by another site manager.**
  Solution: In the remote WebDev administrator, assign the site to the corresponding WebDev account. Check whether the home directories (for the data, the site and the FTP transfer) are correct.

Failure while encrypting

The possible problems are as follows:

- **Failure encrypting the update.**
  Solution: Free memory space and/or disk space on the computer that performs the update (computer of the site manager for instance).

Error retrieving the information file. The XXXX.WINFO file or directory does not exist or it cannot be accessed

The possible problems are as follows:

- **Unable to copy the temporary file describing the status of the site. The user does not have the necessary rights in the FTP directory**
  Solution: The rights on the directory for FTP transfer must correspond to the rights granted to the site owner.
- **Unable to copy the temporary file describing the status of the site. Insufficient disk space**
  Solution: Free disk space on the server.

5.2 Error messages that may be displayed in the browser

A site developed in WebDev can display error messages on the browser of the client computers.

These error messages are presented in the online help for the WebDev application server.

Appendix 1 - Vocabulary of WebDev

This page presents the main terms specific to WebDev used in the documentation of the WebDev application server.

Server administrator
Person responsible for installing software, sites, and so on, on one or more servers at the host. For a shared server, the server administrator is responsible for distributing the connections per site manager, in charge of the physical location of the sites on the server, and so on.

Remote WebDev administrator
Site installed on the Web server, allowing:

- the site manager to remotely check and/or modify the configuration of his WebDev sites installed on a server.
- the server administrator to remotely check and/or modify the configuration of all the WebDev sites installed on the server. The server administrator can also manage the WebDev accounts.

WebDev administrator
Windows application installed on the server allowing the server administrator to configure the dynamic WebDev sites installed on the current server.
The WebDev administrator can also be used to create WebDev accounts.

WebDev account
Account associated with a site manager.

This account allows the server administrator to:

- group the sites that belong to a site manager.
- configure the number of authorized connections for a site manager.
- configure the setup directories of the sites
- configure the directory for file transfer (for a setup or an update via FTP)

This account allows the site manager to:

- use the remote administrator.
- perform remote setups and remote updates of the sites.

This account is created on a Web server by the server administrator via:

- the local administrator.
- the remote administrator.

Site developer
Person who creates and modifies WebDev sites with WebDev Development Version.

Host
Company hosting Internet sites on their Web servers.

Web user
User of Internet sites.

Site manager
Person responsible for deploying and maintaining one or more WebDev sites. This person is in direct contact with the server administrator.

APPENDIX 2: CHECKING THE SERVER

Before installing the WebDev application server for Linux, the configuration of the Linux server must be checked.
The different steps for performing this configuration are as follows:

- Checking the presence of the Apache server
- Searching for the configuration file of Apache
- Checking the presence of an FTP server
- Checking the presence of the libstdc++ library

After the setup, you must also check whether the Apache server was modified.

The following paragraphs explain how these checks can be performed in the different distributions:

- Debian
- Mandrake 10
- Redhat 9

1. Checking the configuration of the server in Debian

1.1. Apache server

Checking the presence of a Web server

Before installing the WebDev application server, you must check whether an Apache server is installed.
Note: to perform the following operations, you must be connected as "root".

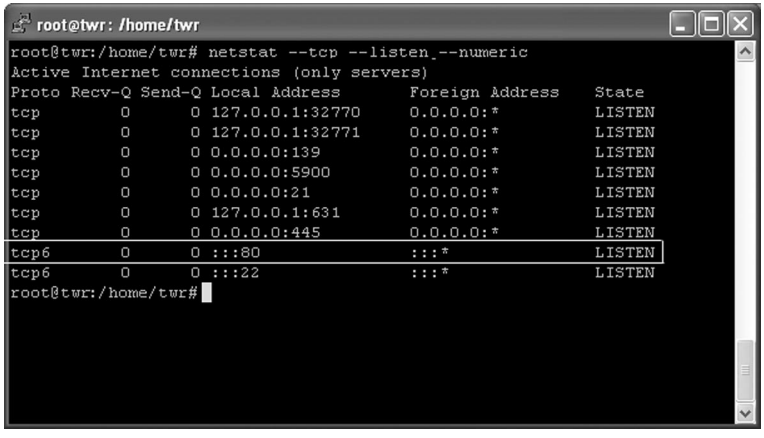
The following command enables you to find out whether the Apache server is started on the Linux server:

```
dpkg-l apache
```

Installing an Apache server

The following command line enables you to install an Apache server:

```
apt-get install apache
```



Searching for the configuration file of Apache

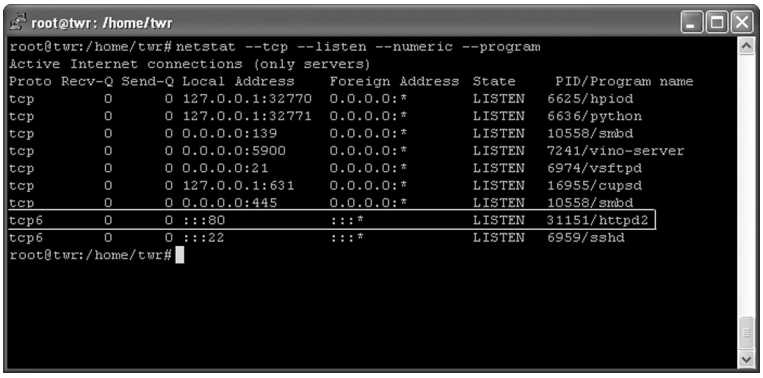
Before installing the WebDev application server for Linux, you must find out the directory and the name of the configuration file of Apache.

To do so, run the following command lines:

1. Return the list of programs corresponding to the services used:

```
netstat --tcp --listen --numeric --program
```

This command line returns the list of the services that are currently used with the name of the corresponding program.



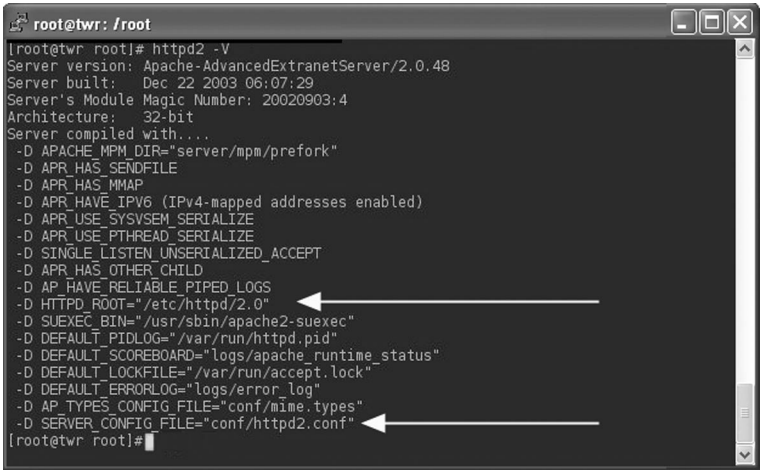
2. Once you know the name of the program, you can easily get information about its configuration. To do so, use the following command line:

```
<Program Name> -V
```

In our example, <Program Name> corresponds to http2:

```
http2 -V
```

You will get the following information:



In this information, the two important points are:

- the path of the server directory.

- the name and path of the configuration file. In most cases, its path is relative to the server directory.

The configuration file required to install the WebDev application server for Linux must contain the "User" word. We advise you to edit the configuration file that was previously found and to search for the "User" word.

If the word is not found, we advise you to perform a search in the files included in this configuration file (to find the included files, search for the "Include" word in the configuration file).

For example, the following command line enables you to edit a file in Debian:

```
editor  /etc/apache/httpd2.conf
```

Once the configuration file containing the "User" word was found, don't forget to write down its path and its name (they will be requested when installing the WebDev application server for Linux).

1.2. FTP server

The FTP server enables you to easily install the WebDev sites. This FTP server must be installed on the server and it must be able to manage the secure exchanges (with password).

The following command enables you to find out whether an FTP server is started on the Linux server:

```
netstat --tcp --listen |grep ftp
```

This line returns the FTP services currently installed on the server. An FTP server must be installed if the FTP service is not found.

The following command line enables you to install an FTP server:

```
apt-get install vsftpd
```

In this last case, the configuration parameters can be modified as follows:

- Edit "/etc/vsftpd.conf".
- Uncomment the "local_enable=YES" line to allow the computer logins to connect via FTP.
- Uncomment the "write-enable=YES" line to allow the write operations.
- Uncomment the "local_umask=022" line.
- Restart the FTP server via the following command line:

```
 /etc/init.d/vsftpd restart
```

1.3. libstdc++ library

To check if the presence of the libstdc++ library, use the following command line:

```
ldconfig -p | grep libstdc++-libc6.2-2.so.3
```

If this file does not exist, see the documentation of the distribution to install it. The following command line can also be used:

```
apt-get install libstdc++2.10-glibc2.2
```

Note: Make sure that the libstdc++ library is not configured in automatic update toward the last steady version: indeed, an update to a non-compatible module could be performed.

1.4. Checking the Apache server after installing the application server

This check must necessarily be performed, even if the setup was ended properly or if the setup was ended by the "Config-broken" error.

The steps are as follows:

1. Check the configuration of the Apache server via the following command line :

```
apachectl configtest
```

If an error occurs, perform the following operations.

2. Edit the configuration file of Apache.
Use the following command line for instance:

```
editor  /etc/apache/httpd.conf
```

3. Find the following line and delete the # character at the beginning of the line:

```
# LoadModule actions_module /usr/lib/apache/1.3/mod_actions.so
```

Note: this line may change according to the version of Apache. This line must have the following format:

```
# LoadModule actions_module <path of server modules>/mod_actions.so
```

4. Save the configuration file and check the configuration of the Apache server once again (point 1)

Once Apache is configured properly, restart Apache via the following command line:

```
apachectl graceful
```

Note: The WebDev14 service is enabled as soon as it is installed. However, in some cases, if the Linux machine is restarted, the service will not be restarted on boot.

To find out whether the WebDev application server is started, wd140admind must be started. To get this information, type the following command line:

```
ps -ef | grep wd140admind
```

In order for the WebDev14 service to be automatically started on boot, type the following command line:

```
update-rc.d WebDev14 defaults 91
```

2. Checking the configuration of the server in Mandrake

2.1. Apache server

Checking the presence of a Web server

Before installing the WebDev application server, you must check whether an Apache server is installed.

Note: to perform the following operations, you must be connected as "root".

The following command enables you to find out whether the Apache server is started on the Linux server:

```
netstat --tcp --listen
```

This line returns the services currently installed on the server. For example:

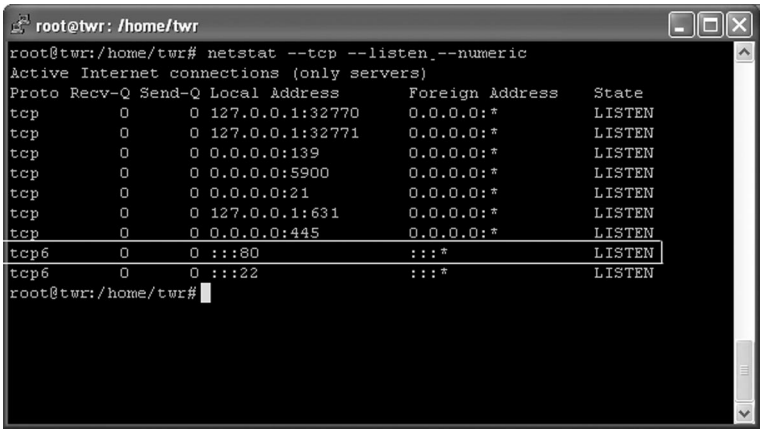
```
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 *:time                  *:*                     LISTEN
tcp        0      0 *:discard               *:*                     LISTEN
tcp        0      0 *:daytime               *:*                     LISTEN
tcp        0      0 *:http                  *:*                     LISTEN
tcp        0      0 *:ssh                   *:*                     LISTEN
```

If the http service is not found, then no Web server is currently started on the current computer.

The following command line can also be used to check the presence of a Web server:

```
netstat --tcp --listen --numeric
```

If the port 80 is displayed in the result, then a Web server is installed.



Installing an Apache server

The following command line enables you to install an Apache server:

```
urpmi apache
```

Searching for the configuration file of Apache

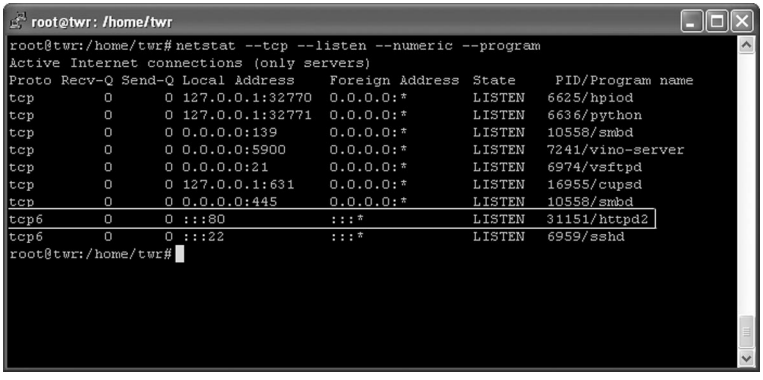
Before installing the WebDev application server for Linux, you must find out the directory and the name of the configuration file of Apache.

To do so, run the following command lines:

1. Return the list of programs corresponding to the services used:

```
netstat --tcp --listen --numeric --program
```

This command line returns the list of the services that are currently used with the name of the corresponding program.



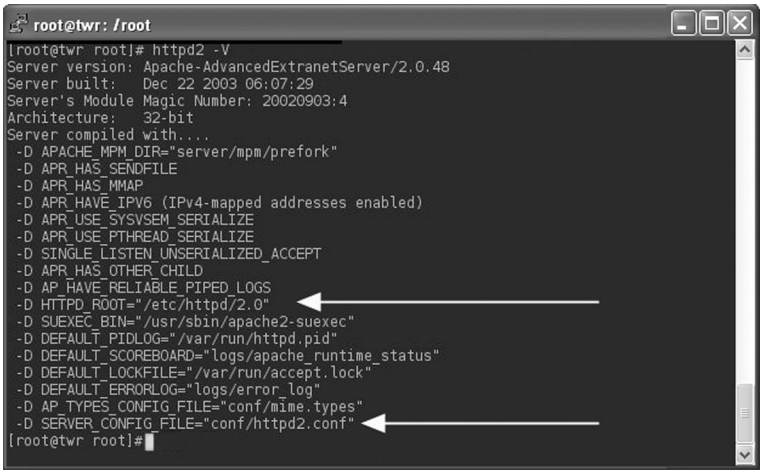
2. Once you know the name of the program, you can easily get information about its configuration. To do so, use the following command line:

```
<Program Name> -V
```

In our example, <Program Name> corresponds to http2:

```
http2 -V
```

You will get the following information:



In this information, the two important points are:

- the path of the server directory.
- the name and path of the configuration file. In most cases, its path is relative to the server directory.

The configuration file required to install the WebDev application server for Linux must contain the "User" word. We advise you to edit the configuration file that was previously found and to search for the "User" word.

If the word is not found, we advise you to perform a search in the files included in this configuration file (to find the included files, search for the "Include" word in the configuration file).

For example, the following command line enables you to edit a file:

```
emacs /etc/apache/httpd2.conf
```

Note: you also have the ability to edit the file with:

```
vi /etc/apache/httpd2.conf
```

Once the configuration file containing the "User" word was found, don't forget to write down its path and its name (they will be requested when installing the WebDev application server for Linux).

2.2. FTP server

The FTP server enables you to easily install the WebDev sites. This FTP server must be installed on the server and it must be able to manage the secure exchanges (with password).

The following command enables you to find out whether an FTP server is started on the Linux server:

```
netstat --tcp --listen |grep ftp
```

This line returns the FTP services currently installed on the server. An FTP server must be installed if the FTP service is not found.

The following command line enables you to install an FTP server:

```
urpmi proftpd
```

2.3. libstdc++ library

To check if the presence of the libstdc++ library, use the following command line:

```
ldconfig -p | grep libstdc++-libc6.2-2.so.3
```

If this file does not exist, see the documentation of the distribution to install it.

Note: Make sure that the libstdc++ library is not configured in automatic update toward the last steady version: indeed, an

update to a non-compatible module could be performed.

2.4. Checking the Apache server after installing the application server

This check must necessarily be performed, even if the setup was ended properly or if the setup was ended by the "Config-broken" error.

The steps are as follows:

1. Check the configuration of the Apache server via the following command line:

```
apachectl configtest
```

If an error occurs, perform the following operations.

2. Edit the configuration file of Apache.
Use the following command line for instance:

```
emacs /etc/apache/httpd2.conf
```

Note: you also have the ability to edit the file with:

```
vi /etc/apache/httpd2.conf
```

3. Find the following line and delete the # character at the beginning of the line:

```
# LoadModule actions_module /usr/lib/apache/1.3/mod_actions.so
```

Note: this line may change according to the version of Apache. This line must have the following format:

```
# LoadModule actions_module <path of server modules>/mod_actions.so
```

4. Save the configuration file and check the configuration of the Apache server once again (point 1)

Once Apache is configured properly, restart Apache via the following command line:

```
apachectl graceful
```

Note: The WebDev14 service is enabled as soon as it is installed. However, in some cases, if the Linux machine is restarted, the service will not be restarted on boot.

To find out whether the WebDev application server is started, wd140admind must be started. To get this information, type the following command line:

```
ps -ef | grep wd140admind
```

In order for the WebDev14 service to be automatically started on boot, type the following command line:

```
chkconfig --level2 service on
```

3. Checking the configuration of the server in RedHat

3.1. Apache server

Checking the presence of a Web server

Before installing the WebDev application server, you must check whether an Apache server is installed.

Note: to perform the following operations, you must be connected as "root".

The following command enables you to find out whether the Apache server is started on the Linux server:

```
netstat --tcp --listen
```

This line returns the services currently installed on the server. For example:

```
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 *:time                  *:*                     LISTEN
tcp        0      0 *:discard               *:*                     LISTEN
tcp        0      0 *:daytime               *:*                     LISTEN
tcp        0      0 *:http                  *:*                     LISTEN
tcp        0      0 *:ssh                   *:*                     LISTEN
```

If the http service is not found, then no Web server is currently started on the current computer. The name used for the service may change from one computer to another one.

The following command line can also be used to check the presence of a Web server:

```
netstat --tcp --listen --numeric
```

If the port 80 is displayed in the result, then a Web server is installed.

Installing an Apache server

The Apache server must be installed from the setup CD of Redhat.

Searching for the configuration file of Apache

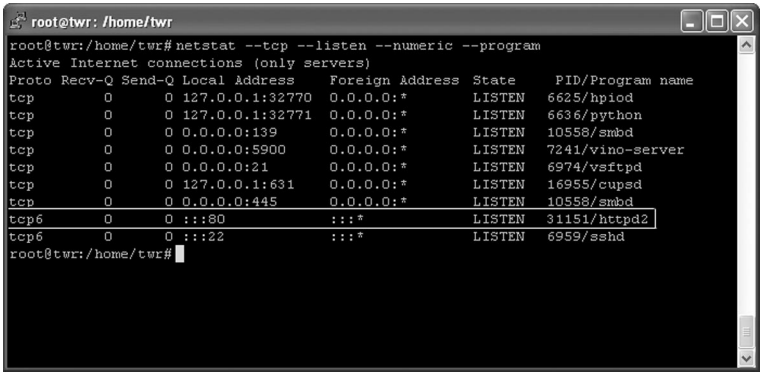
Before installing the WebDev application server for Linux, you must find out the directory and the name of the configuration file of Apache.

To do so, run the following command lines:

1. Return the list of programs corresponding to the services used:

```
netstat --tcp --listen --numeric -- program
```

This command line returns the list of the services that are currently used with the name of the corresponding program.



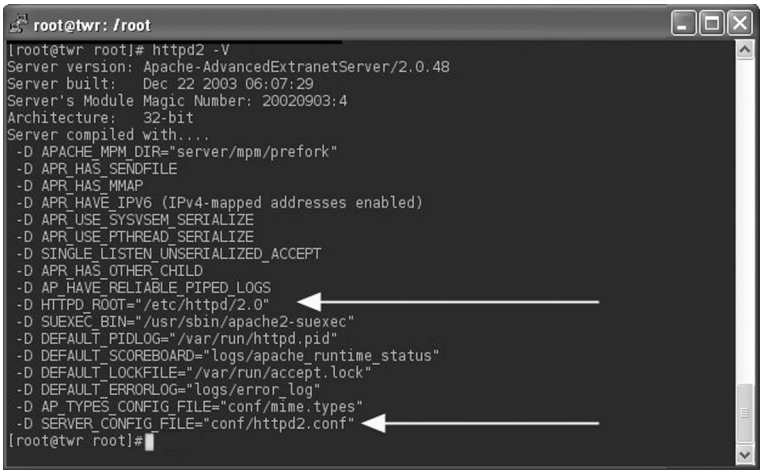
2. Once you know the name of the program, you can easily get information about its configuration. To do so, use the following command line:

```
<Program Name> -V
```

In our example, <Program Name> corresponds to http2:

```
http2 -V
```

You will get the following information:



In this information, the two important points are:

- the path of the server directory.
- the name and path of the configuration file. In most cases, its path is relative to the server directory.

The configuration file required to install the WebDev application server for Linux must contain the "User" word. We advise you to edit the configuration file that was previously found and to search for the "User" word.

If the word is not found, we advise you to perform a search in the files included in this configuration file (to find the included files, search for the "Include" word in the configuration file).

Use the following command line for instance:

```
emacs /etc/apache/httpd2.conf
```

or:

```
vi /etc/apache/httpd2.conf
```

Once the configuration file containing the "User" word was found, don't forget to write down its path and its name (they will be requested when installing the WebDev application server for Linux).

3.2. FTP server

The FTP server enables you to easily install the WebDev sites. This FTP server must be installed on the server and it must be able to manage the secure exchanges (with password).

The following command enables you to find out whether an FTP server is started on the Linux server:

```
netstat --tcp --listen |grep ftp
```

This line returns the FTP services currently installed on the server. An FTP server must be installed if the FTP service is not found.

The FTP server must be installed from the setup CD of Redhat.

3.3. libstdc++ library

To check if the presence of the libstdc++ library, use the following command line:

```
ldconfig -p | grep libstdc++-libc6.2-2.so.3
```

If this file does not exist, see the documentation of the distribution to install it.

Note: Make sure that the libstdc++ library is not configured in automatic update toward the last steady version: indeed, an update to a non-compatible module could be performed.

3.4. Checking the Apache server after installing the application server

This check must necessarily be performed, even if the setup was ended properly or if the setup was ended by the "Config-broken" error.

The steps are as follows:

1. Check the configuration of the Apache server via the following command line:

```
apachectl configtest
```

If an error occurs, perform the following operations.

2. Edit the configuration file of Apache.
Use the following command line for instance:

```
emacs /etc/apache/httpd2.conf
```

or:

```
vi /etc/apache/httpd2.conf
```

3. Find the following line and delete the # character at the beginning of the line:

```
# LoadModule actions_module /usr/lib/apache/1.3/mod_actions.so
```

Note: this line may change according to the version of Apache. This line must have the following format:

```
# LoadModule actions_module <path of server modules>/mod_actions.so
```

4. Save the configuration file and check the configuration of the Apache server once again (point 1)

Once Apache is configured properly, restart Apache via the following command line:

```
apachectl graceful
```

Note: The WebDev14 service is enabled as soon as it is installed. However, in some cases, if the Linux machine is restarted, the service will not be restarted on boot.

To find out whether the WebDev application server is started, wd140admind must be started. To get this information, type the following command line:

```
ps -ef | grep wd140admind
```

In order for the WebDev14 service to be automatically started on boot, type the following command line:

```
ntsysv
```

and check the wd140admind service.

APPENDIX 3 - CONFIGURATION FILE

1 Configuration file linked to the setup of WebDev

When installing the WebDev application server on a Linux server, the information regarding WebDev (application server and protocol manager) and the WebDev administrator is automatically saved in the following configuration file:
/etc/PC SOFT/WEBDEV/14.0/WEBDEV.conf

This information is automatically updated when the parameters of the remote WebDev administrator are modified.
Note: the different entries are given for information only and they allow you to check whether the WebDev application server is installed properly.

The entries of the created configuration file are as follows:

ALLOW_REMOTEINSTALL:
Allow to perform remote site setups (via FTP). This parameter is defined in the WebDev administrator.

ALLOW_REMOTEUPDATE:
Allow to perform remote site updates (via FTP). This parameter is defined in the WebDev administrator.

BINPATH:
Path of WD140session

BINPATHAWP:
Path of WD140AWP.

ERRORFILE:
Full name of the HTML file that will be used to display the error messages

LAUNCHER:
Name of the AWP engine

MAXCONNECT:
Maximum number of authorized connections (i.e. maximum number of engines started simultaneously). This parameter is defined in the WebDev administrator.

MAXCONNECTAPP:
Maximum number of connections to the same site (defined in the WebDev administrator)

MAXRECONNECTAPP:
Maximum number of simultaneous accesses to the same site by the same user (defined in the WebDev administrator)

SHMDIALOGSIZE:
Indicates the size (in KB) of the maximum WebDev request sent to the server (500 KB by default). This parameter is taken into account for all the WebDev applications and it can be customized for each site (in the configuration file of the site).

SHMHISTORYSIZE:
Indicates the size (in KB) of the history of WebDev sessions (2 MB by default).

SSLADMIN:
Key used to start the remote WebDev administrator in secure mode (1 to automatically enable the secure mode).
Caution: An SSL key must be installed and all the requirements specific to the SSL protocol must be complied with.

TIMEOUT_NORQ:
Time-out before the user is disconnected if no new request is received (defined in the WebDev administrator)

TIMEOUT_RQ:
Maximum time-out for the launcher (defined in the WebDev administrator).

VDIR:
Name of the virtual directory declared in the HTTP server that contains WD140AWP

WBGROUP:
Name of the WebDev 14 group (webdev14 by default)

WEBSERVER:
Indicates the WebDev server that must be configured automatically (5 corresponds to Apache).

WEBSERVERCONF:
Indicates the path of the Apache configuration file.

WEBSERVERRESTART:
Indicates the command line used to search for the Apache configuration.

If the error messages have been customized for all sites installed on the computer, a new entry is created for each error message.

2 Configuration file linked to the setup of a WebDev site

When installing a WebDev site on a Linux server, the information regarding the site is automatically saved in the following configuration file:
/etc/PC SOFT/WEBDEV/14.0/Applications/<SiteName>.conf

Where <SiteName> is the name of the site installed. The case used for the project name also applies to this name.

Notes:
- The different entries in the configuration file are given for information only and they allow you to check whether a WebDev site is installed properly.
- These entries are automatically configured when a WebDev site is installed.
- Caution: The name of the site is "case-sensitive". This parameter must not be modified.

The following entries are created:

AS400:
Indicates whether the site uses AS/400 files (value 1) or not

ERRORFILE:
Full name of the HTML file that will be used to display the error messages

HFPATH:
Location of the data files of the WebDev site (full path)

LOCKFORUPDATE:
Indicates whether the connection to the site is locked for update.

MAXCONNECTAPP:
Maximum number of connections to the same site (defined in the WebDev administrator)

MAXRECONNECTAPP:
Maximum number of simultaneous accesses to the same site by the same Web user (defined in the WebDev administrator)

MOREDLL:
Used to declare the AS/400 DLL if AS/400 files are used by a WebDev site.

PROJECTPATH:
Path of the site files (.WDL, .HTM, and so on)

PROJECTNAME:
Name of the site (i.e. name of the .WDL library to use)

SHMDIALOGSIZE:
Indicates the size (in KB) of the maximum WebDev request sent to the server (500 KB by default). The parameter used by default is the one specified in the configuration file of WebDev. If this parameter is specified in the configuration file of the site, it has priority over the setting specified in the WebDev configuration file.

TIMEOUT_NORQ:
Time-out before the Web user is disconnected if no new request is received (defined in the WebDev administrator).

VERSION:
Version of the site

VIMAGEDIR:
Virtual directory of the site images

APPENDIX 4 - MODULES SUPPLIED

The table below presents the modules installed by the WebDev application server for Linux and their main features.

Modules required by the WebDev sites to operate		
Name	**Functions**	**Started by...**
AWP (Active Web Pages) manager:	• Decodes the information coming from the WebDev site. • Transmits the decoded information to the WebDev application server.	Started by the Web server whenever a request is made by a Web user in a dynamic WebDev site.
WebDev application server:	• Runs the information transmitted by the AWP protocol. • Builds the dynamic HTML page displayed by the Web server on the browser of the Web user.	Started by WD140AWP whenever a Web user connects to a dynamic WebDev site.
Remote WebDev administrator:	• Allows the managers of the WebDev sites to directly manage their different WebDev sites installed on the server. • Allows the server administrator to remotely configure the different WebDev sites installed on the server, the WebDev accounts, and so on. This tool is required by the dynamic WebDev sites to operate.	Started by: • the site manager from his browser directly. • the server administrator from a computer other than the server, from his browser directly.

The remote WebDev administrator

The remote WebDev administrator is a WebDev site, installed on the deployment Web server. This site allows:

- the site manager to directly manage his WebDev sites installed on the Web server.
- the server administrator to directly manage the WebDev accounts and the WebDev sites installed on the Web server.

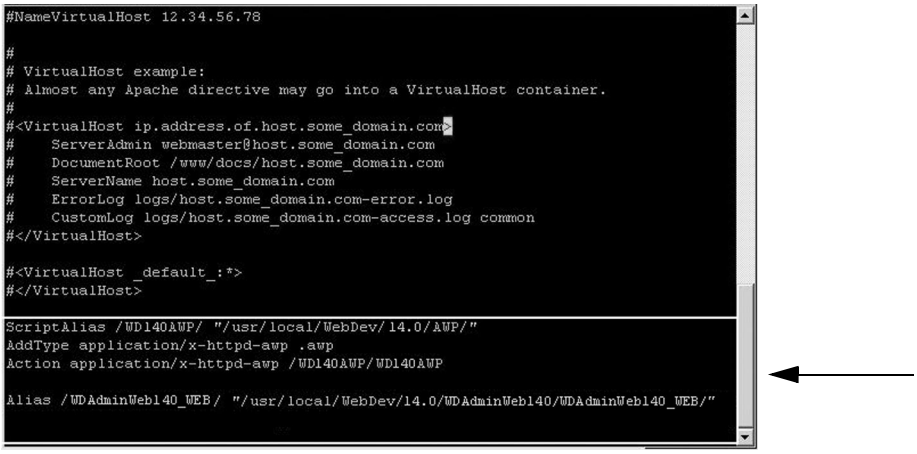
On a Linux server, the remote administrator should be used to manage the server as well as the dynamic WebDev sites installed on the server.

See the online help for the remote WebDev administrator for more details.

APPENDIX 5: CONFIGURING THE SERVER

Configuration files of Apache

When installing the WebDev application server for Linux, the following information is added to the configuration file of Apache:



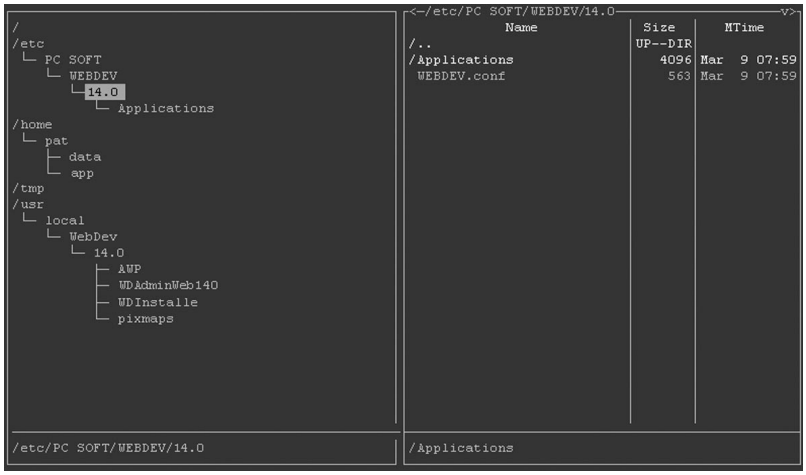
Therefore, the Apache server must allow the access to these directories.

You may have to add the "<directory>" clauses to the WebDev directory and to the directories of the sites. These operations are not performed when installing the WebDev application server for Linux. See 'Running the test of the remote administrator' (page 12) for more details

Files of the WebDev application server for Linux

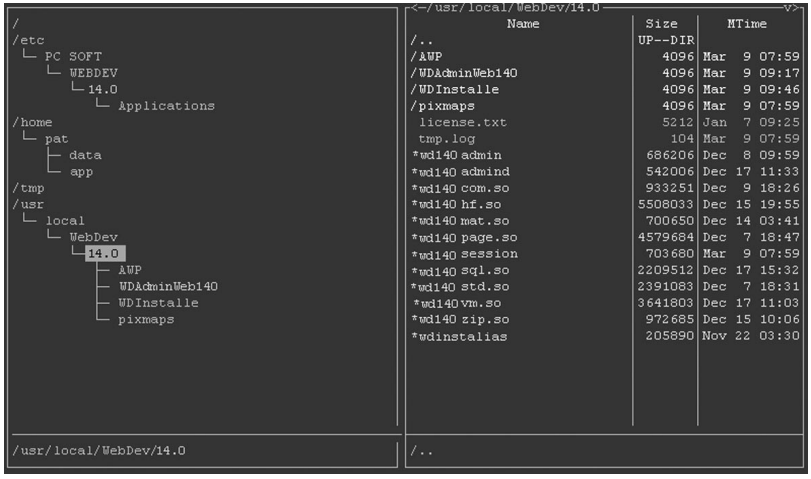
The files and directories installed by WebDev Application server 14 for Linux are as follows:

- Configuration file of WebDev 14: /etc/PC SOFT/WEBDEV/14.0/WEBDEV.conf

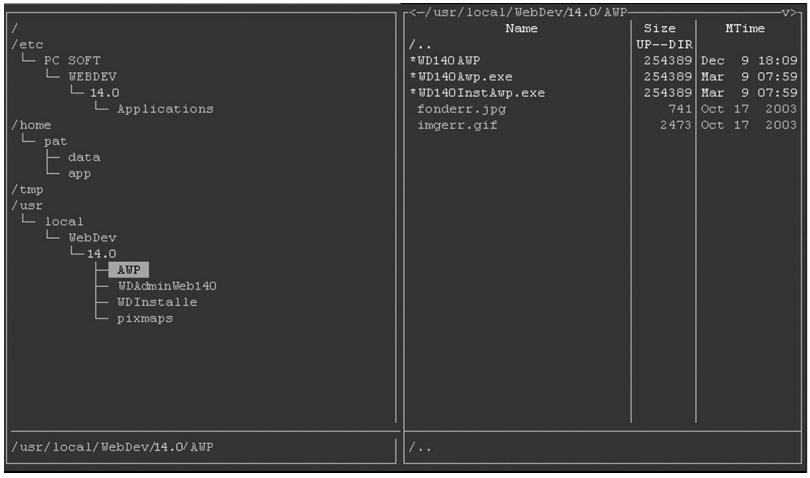


- Configuration file of the sites installed: /etc/PC SOFT/WEBDEV/14.0/Applications/<Site Name>.conf

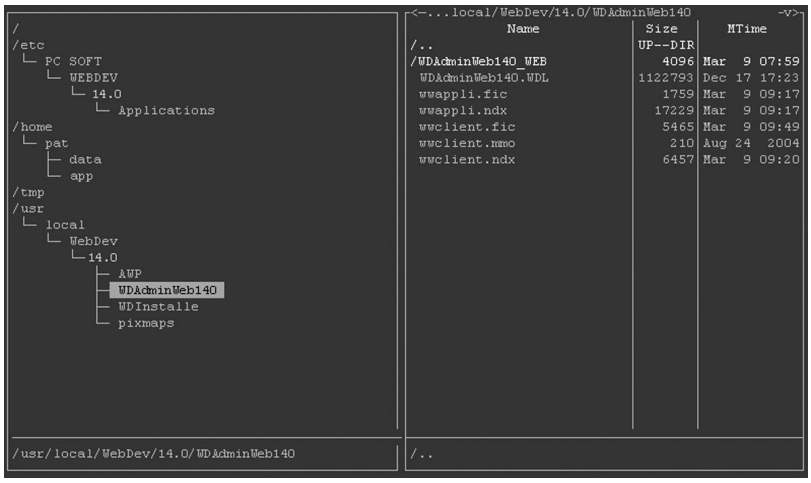
- Setup directory of WebDev Application Server for Linux: /usr/local/WebDev/14.0



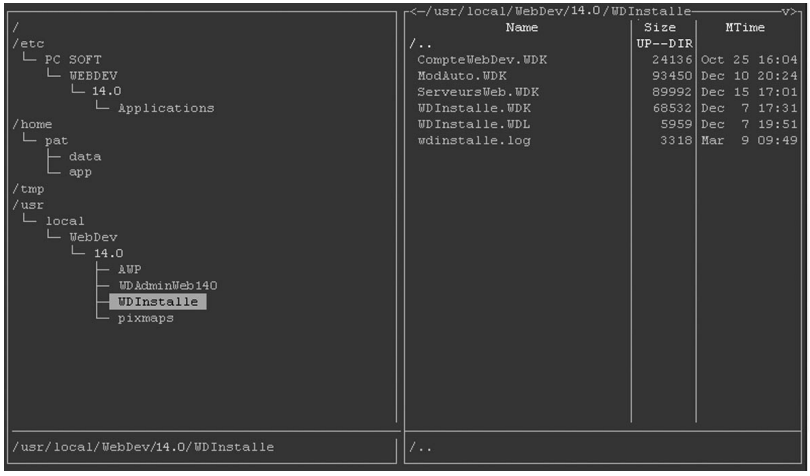
- Setup directory of the AWP protocol: /usr/local/WebDev/14.0/AWP



- Setup directory of the remote administrator: /usr/local/WebDev/14.0/WDAdminWeb140



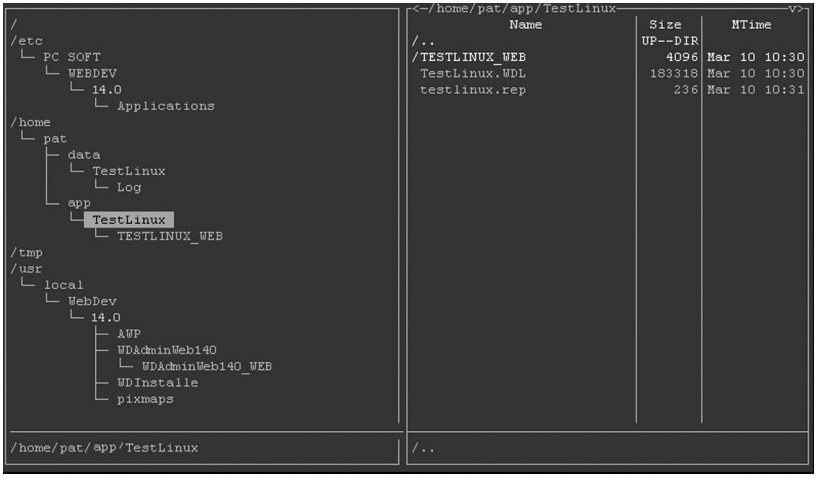
- Setup directory of the programs used to deploy the sites on the server: /usr/local/WebDev/14.0/WDInstalle



Files installed when deploying a dynamic WebDev site

Several types of files are installed when deploying a WebDev site:

- the pages, the images, ... are installed in the sub-directory of the site corresponding to the user. In this example, the files are installed in the app\<site name> sub-directory of the user Pat.
  This information (setup directory of pages, and so on) was given when creating the WebDev account in the remote administrator ('Creating the WebDev accounts', page 16).



- the data files (Hyper File only) are installed in the sub-directory of the data corresponding to the user. In this example, the files are installed in the data\<site name> sub-directory of the user Pat.
  This information (setup directory of data, and so on) was given when creating the WebDev account in the remote administrator ('Creating the WebDev accounts', page 16).