SFTP Plus

Server v1.1

Linux & UNIX platform

Installation guide

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1 LEGAL NOTICES

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   openssl is Copyright © 1998-2001, The OpenSSL Project
   openssh is Copyright © 1995, Tatu Ylonen
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1.5 Change History

<table>
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<tr>
<th>Date</th>
<th>Version</th>
<th>History</th>
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<td>draft</td>
<td>Initial draft version for customers</td>
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<td>05/6/07</td>
<td>draft-2</td>
<td>2\textsuperscript{nd} draft release for customers</td>
</tr>
<tr>
<td>25/6/07</td>
<td>draft-3</td>
<td>3\textsuperscript{rd} draft release for customers</td>
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<tr>
<td>17/8/07</td>
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<td>4\textsuperscript{th} draft release for customers</td>
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</table>
2 PREFACE

The information in this manual is intended for personnel who install and administer SFTPPlus Server.

This manual describes how to install, configure and troubleshoot the SFTPPlus Server software product.

The manual is organised as follows;

Chapter 1 “Legal Notices” provides copyright, trademark and license information.

Chapter 2 “Preface” (this chapter) describes intended audience and a document layout overview.

Chapter 3 “Introduction” is a brief description of the SFTPPlus Server product.

Chapter 4 “Document Conventions” provides information on conventions used in this document.

Chapter 5 “Installation Requirements” provides details on minimum hardware and software pre-requisites.

Chapter 6 “Installing SFTPPlus Server” describes how to install the SFTPPlus software with platform specific information.

Chapter 7 “Configuring SFTPPlus Server” describes the basic configuration procedure for SFTPPlus Server.

Chapter 8 “Testing SFTPPlus Server” describes a testing procedure for verification of the SFTPPlus Server software and comprises of two tests.

Chapter 9 “Troubleshooting” providing troubleshooting hints and tips.

Chapter 10 “Error messages” lists error messages and descriptions for SFTPPlus Server and components.

Chapter 11 “Platform Distribution Contents - AIX” lists the directory structure and files contained with the tarball for the AIX platform.
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chapter 12</strong></td>
<td>“Platform Distribution Contents - i386 Linux” lists the directory structure and files contained within the tarball for the i386 Linux platform.</td>
</tr>
<tr>
<td><strong>Chapter 13</strong></td>
<td>“Platform Distribution Contents – HP-UX” lists the directory structure and files contained within the tarball for the HP-UX Linux platform.</td>
</tr>
<tr>
<td><strong>Chapter 14</strong></td>
<td>“Platform Distribution Contents - Solaris” lists the directory structure and files contained within the tarball for the Solaris platform.</td>
</tr>
<tr>
<td><strong>Chapter 15</strong></td>
<td>“Distribution Contents – SFTPPlus Admin” lists the directory structure and files contained within the tarball for SFTPPlus Admin.</td>
</tr>
<tr>
<td><strong>Chapter 16</strong></td>
<td>“Distribution Contents – Xampp for Linux” lists the components contained within the tarball for Xampp for Linux installation.</td>
</tr>
<tr>
<td><strong>Chapter 17</strong></td>
<td>“Vsftpd.Conf Configuration Reference” provides additional information regarding setup parameters for the vsftpd configuration files.</td>
</tr>
<tr>
<td><strong>Chapter 18</strong></td>
<td>“Xampp Reference” provides additional information regarding the use of Xampp services and important reference information.</td>
</tr>
<tr>
<td><strong>Chapter 19</strong></td>
<td>“Uninstalling/Removing SFTPPlus Server”</td>
</tr>
<tr>
<td><strong>Chapter 20</strong></td>
<td>“References” provides list of additional documents that the reader may wish to obtain for further information on SFTPPlus Client, other technical information or information regarding the SFTPPlus range of software products. Please see our website <a href="http://www.proatria.com">www.proatria.com</a> for details.</td>
</tr>
<tr>
<td><strong>Chapter 21</strong></td>
<td>“Contact information” provides information for contacting Pro:Atria Limited through various media for sales, help and support services.</td>
</tr>
</tbody>
</table>
3 INTRODUCTION

SFTPPlus

SFTPPlus Server – a tool for secure file transfers

SFTPPlus Server utilises open standards to implement secure file transfer with controls and audit suitable for the enterprise.

SFTPPlus includes an openssh server with modifications for authentication and audit, and additionally (for the Windows platform) Pro:Atria provides Apache and MySQL, as packaged by the Xampp project.

The web interface provides a single point of administration, authentication and audit for multiple transfer servers, including sftp, ftps, http and ftp transfer. The benefits of this include;

- The ability to provide sftp access without giving a native OS userid and password
- Maintaining the audit trail to see what files have been transferred

As all protocols are standards-based, any client may be chosen.

Also;

SFTPPlus Server is available for many platforms including;

Unix (AIX, Solaris, HP-UX, Tru64), Linux, Netware and Windows as well as major enterprise products e.g. Apache, BEA Websphere, IBM Weblogic, RACF, ACF2, Top Secret, Microsoft Exchange, Lotus Domino/Notes, Oracle, DB2, SQL, etc

Please see PDF document “SFTPPlus features & Benefits v1.2” for further details.
## 4 DOCUMENT CONVENTIONS

The following conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Usage</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bold</strong></td>
<td>Menu’s, GUI elements, strong emphasis or action</td>
<td>Click Apply or OK</td>
</tr>
<tr>
<td>-&gt;</td>
<td>Series of menu selections</td>
<td>Select File -&gt; Save</td>
</tr>
<tr>
<td>Monospace</td>
<td>Filenames, commands, directories, URLs,</td>
<td>Refer to Readme.txt</td>
</tr>
<tr>
<td><em>Italics</em></td>
<td>Information that the user must supply or type</td>
<td>dir /s</td>
</tr>
<tr>
<td>Double Quote</td>
<td>Reference to other documents or products, emphasis</td>
<td>See “SFTPPlus User Manual”</td>
</tr>
<tr>
<td>Between bracket</td>
<td>Optional items</td>
<td>[ -s ] [ -f ] [ filename]</td>
</tr>
</tbody>
</table>

---

### Please Note:

Indicates neutral or positive information that emphasizes or supplements important points of the main text. Supplies information that may apply only in special cases.

---

### Caution:

Advises users that failure to take or avoid a specific action could result in loss of data or system corruption.

---

### Windows Only:

---

### Linux Only:

Advises users of information that is platform specific. Other platform graphic logos can be shown.
## 5 INSTALLATION REQUIREMENTS

For Linux/Unix platform;

### 5.1 Hardware

<table>
<thead>
<tr>
<th>Minimum Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Disk* - Free Space for installation</td>
<td>200MB</td>
</tr>
<tr>
<td>- Xampp installation</td>
<td>151MB</td>
</tr>
<tr>
<td>- SFTPPlus Server</td>
<td>15.5MB</td>
</tr>
<tr>
<td>Hard disk for Native components</td>
<td></td>
</tr>
<tr>
<td>- AIX httpd</td>
<td></td>
</tr>
<tr>
<td>- AIX PHP</td>
<td></td>
</tr>
<tr>
<td>- AIX MySQL</td>
<td></td>
</tr>
<tr>
<td>- HP-UX – httpd (Apache2)</td>
<td></td>
</tr>
<tr>
<td>- HP-UX - httpd (Apache2) &amp; PHP4 (depot file)</td>
<td>100MB</td>
</tr>
<tr>
<td>- HP-UX – PHP</td>
<td></td>
</tr>
<tr>
<td>- HP-UX – MySQL</td>
<td></td>
</tr>
<tr>
<td>- Linux – httpd (Apache2)</td>
<td></td>
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<tr>
<td>- Linux – PHP</td>
<td></td>
</tr>
<tr>
<td>- Linux – MySQL</td>
<td></td>
</tr>
<tr>
<td>- Solaris – httpd (Apache2)</td>
<td></td>
</tr>
<tr>
<td>- Solaris – PHP</td>
<td></td>
</tr>
<tr>
<td>- Solaris – MySQL</td>
<td></td>
</tr>
<tr>
<td>Memory (in addition to OS requirement)</td>
<td>32MB</td>
</tr>
</tbody>
</table>

* Ongoing storage requirements will be dependant on various factors such as size of files, frequency of transfers, archive requirements, etc.
### 5.2 Software Pre-requisites

<table>
<thead>
<tr>
<th>Software</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System (OS)</td>
<td>Kernel 2.2 or higher</td>
</tr>
<tr>
<td>Native httpd module, or Apache also;</td>
<td></td>
</tr>
<tr>
<td>PHP 5 (or as provided as default installation using xampp distribution)</td>
<td>4.1 or higher</td>
</tr>
<tr>
<td>MySQL 5 (or as provided as default installation using xampp distribution but version 4 is also included)</td>
<td>4.1 or higher</td>
</tr>
</tbody>
</table>
6 INSTALLING SFTPPLUS SERVER

The SFTPPlus Server software is delivered in two gzipped tarballs. The files are extracted to a single master directory.

6.1 Download SFTPPlus Server distributions and SFTPPlus Admin package

The URL to download the SFTPPlus Server distributions is available from our office, please email a request to sales@proatria.com

You will need to download the appropriate files for your platform in order to install SFTPPlus Server, these being:

For AIX platform
SFTPPlus-Server-aix.tar.gz
SFTPPlusAdmin-1.2.4.tgz

For i386 Linux platform
SFTPPlus-Server-linux.i386.tar.gz
SFTPPlusAdmin-1.2.4.tgz

For HP-UX platform (PA-RISC)
SFTPPlus-Server-hpux.tar.gz
SFTPPlusAdmin-1.2.4.tgz

For Solaris platform
SFTPPlus-Server-sol2.8.tar.gz
SFTPPlusAdmin-1.2.4.tgz

You will also require an httpd daemon, php and MySQL. The easiest deployment is by a Xampp installation.

6.2 Xampp installation notes

Where possible (and available, see below) we recommend the Xampp implementation for ease of installation. This is based on the Apache Friends distribution and is available from;

http://www.apachefriends.org

We recommend that the Xampp distribution (version 1.6.1) is obtained from our download page or FTP site as this has been tested with SFTPPlus Server. However, we do have alternative suggestions as each platform has slightly different criteria. You
may of course decide not to install the default method and install your own native system components. As this situation may occur we have included the relevant information required to modify your existing installation.

6.2.1 AIX Xampp Installation

At the time of writing this document, there is no Xampp for AIX. It is therefore recommended that the native components for Httpd (Apache2) and PHP is loaded; please refer to your system documentation for this. MySQL can be downloaded from the following site:

http://dev.mysql.com/downloads/mysql/5.0.html#downloads

If the above URL does not work or you are unsure which download to use please contact us.

6.2.2 Linux Xampp Installation

To trial SFTPPlus Server for a quick and simple Linux installation it is suggested that you download and install (recommended) a Xampp distribution (version 1.6.1) which installs Apache2, PHP (4 and 5) and MySQL 5.0 and is available from our download page or FTP server. However, if you already have these components installed via native modules and are proficient with your chosen platform you may opt for a non-default installation, please see the relevant non-default installation for your platform.

6.2.3 HP-UX Xampp Installation

At the time of writing this document, there is no Xampp for HP-UX. However, you can opt to install the 32 bit Linux Xampp Installation – details can be found in the chapter “Default Installation Procedure – HP-UX Xampp”. Alternatively you can install the native Httpd (Apache2) and obtain the PHP and MySQL distributions which can be obtained from our download site (please send us an email and we will forward details) or obtained from the following sites;

MySQL - http://dev.mysql.com/downloads/mysql/5.0.html


If these links do not work, please contact us.

6.2.4 Solaris Xampp Installation

At the time of writing this document, there is a download for Xampp on the Solaris platform. It has been developed and tested on Solaris 8 and tested on Solaris 9.
Caution:

The Solaris download on the Apache Friends website is still in development. You use this at your own risk. Please ensure you have sufficient system backups.

You may opt to install the native components supplied with Solaris for Httpd and PHP. MySQL can be downloaded from the following site:

http://dev.mysql.com/downloads/mysql/5.0.html#downloads

If the above URL does not work or you are unsure which download to use please contact us.

Please go the relevant default installation procedure for your platform.

6.3 Default Installation procedure – AIX xampp

In progress

6.4 Default Installation procedure – i386 Linux xampp

Follow this procedure to install SFTPPlus Server with the Xampp distribution (comprising Apache2, PHP and MySQL)

6.4.1 Extract and install the SFTPPlus Server files

Perform the following procedure:

- Download the correct gzipped tarballs to the /tmp directory
- Extract SFTPPlus Server using the command;
cd /opt

tar –zxvf /tmp/SFTPPlus-Server-linux.i386.tgz

This will create /opt/SFTPPlus/

• Move to the SFTPPlus main directory;

  cd /opt/SFTPPlus

• Create the SFTPPlus admin directory and untar the SFTPPlus Admin software;

  mkdir admin
  cd admin/
  tar –zxvf /tmp/SFTPPlusAdmin-1.2.4.tgz

• SFTPPlus Server is installed but not configured (comes later)

Now we need to install Xampp for Linux

6.4.2 Xampp procedure

6.4.2.1 Xampp download and install

Download the Xampp distribution for Linux from our download site or via the Apache Friends website at;


You require the XAMPP Linux 1.6.1 file – 51MB and save to the /tmp directory

Perform the following steps to install;

1. Go to a Linux shell and login as the administrator root
su

2. Change current directory to /opt

   cd /opt

3. Extract the download archive

   
   tar -xvfz /tmp/xampp-linux-1.6.1.tar.gz

4. Xampp is now installed. It will be located in the /opt/lampp directory

6.4.2.2 Xampp configuration

Use this procedure and enter the following commands;

1. Move to the Xampp directory

   cd /opt/lampp

2. Create a symbolic link to the SFTPPlus files

   ln –s /opt/SFTPPlus/admin/SFTPPlus/.

3. Test the symbolic link

   cd SFTPPlus

   This should take you to /opt/SFTPPlus/admin/SFTPPlus

4. We need to edit the Apache configuration file httpd.conf

   cd /opt/lampp/etc

   Use vi or your favourite editor to edit the file

   vi httpd.conf
5. Ensure that the correct port is used for the SFTPPlus Server http GUI frontend, for example the default port is 80 (normal for http protocol). This will be the port used to access the Administration GUI screens through your Browser. Ensure the following parameters are set:

```
ServerRoot "/opt/lampp/"

Listen 80

ServerName <ip-address>
```

Where `<ip-address>` is the ip address of the computer where lamp has been installed, for example:

```
ServerName 192.168.0.10
```

Please Note:
If you choose a different port other than 80 or you use a different computer where Apache is located you can change the ‘Listen’ parameter to the format, (for example):

```
12.34.56.78:15080
```

and this will redirect as appropriate.

This completes the Lampp installation. We can now start the Lampp service.

6.4.2.3 Start Xampp

To start XAMPP simply call this command:
```
/opt/lampp/lampp start
```

You should now see something like this on your screen:
Starting XAMPP 1.6.1...
LAMPP: Starting Apache...
LAMPP: Starting MySQL...
LAMPP started.

Ready. Apache and MySQL are running.

If you get any error messages please take a look at the Xampp Reference chapter in this document.

To ensure correct operation of SFTPPlus Server with Xampp, you must disable the ProFTP service. To do this, follow this procedure:

1. Open a terminal session,
2. Type the following command:

   /opt/lampp/lampp stopftp

You should now see something like this on your screen:

XAMPP: Stopping ProFTP...

This will permanently stop the Xampp ProFTP service running and remove the chance of any interference with the SFTPPlus Server FTP daemon.

6.4.2.4  Test Xampp

How can you check that everything really works in Xampp? Just type in the following URL at your favourite web browser (needs to be the same computer where you installed Xampp, otherwise you need to use the IP address of the web server):

   http://localhost

Now you should see the start page of XAMPP containing some links to check the status of the installed software and some small programming examples.
If you choose the ‘Status’ link in the left hand panel, it will confirm the operation of the Xampp installation.

Your Xampp basic installation is now complete. However, we need to make some further changes to default Xampp to point to the SFTPPlus Server software.

6.4.3 PHP file update
If this is purely to run on the local system only, you can skip this section.

Update the files;

/opt/SFTPPlus/admin/SFTPPlus/admindb.php
/opt/SFTPPlus/admin/SFTPPlus/auditdb.php
and
/opt/SFTPPlus/admin/SFTPPlus/usersdb.php

with the database server network information, userids and passwords to match the grant statements in the /opt/SFTPPlus/admin/SFTPPlus/SFTPPlus_Database.sql file.
Please Note: Database Server information

The files admindb.php, auditdb.php and usersdb.php can use either ‘localhost’ or ip-address to reference the database server. If your network is running DNS you can also use the domain name (including fully qualified domain name) to define the database connection.

6.4.4 SQL database update

Run the database sql scripts to create and initialise the database by doing the following procedure; (This must be done under the root account)

- Go to the /opt/SFTPPlus/admin/SFTPPlus directory

  cd /opt/SFTPPlus/admin/SFTPPlus

- Connect to mysql by calling the command;

  /opt/lampp/bin/mysql

- You will now see a mysql prompt. Enter the following instructions;

  source SFTPPlus_database.sql
  source SFTPPlus_Database_Update_1.sql
  source SFTPPlus_Database_Update_2.sql
  source SFTPPlus_Database_Update_3.sql

Caution:

At this moment in time, do not run the SFTPPlus_Database_Update_4.sql script.

- type ‘exit’ at the mysql prompt to return to the Operating System prompt.
Please go to the chapter titled “Configuring SFTPPlus Server”

6.5 Default Installation procedure – HP-UX Xampp

Currently, there is no 64 bit Xampp distribution for HP-UX. You therefore have a choice to install either

- Linux Xampp distribution
- use the native Httpd module and separate PHP and MySQL downloads

It is recommended that the native httpd module is loaded. The latest PHP and MySQL can be obtained from our download site (please send us an email and we will forward details) or obtain them from the following sites;
MySQL - http://dev.mysql.com/downloads/mysql/5.0.html


If these links do not work, please contact us.

Follow this procedure to install SFTPPlus Server with the Xampp distribution (32 bit) comprising Apache2, PHP and MySQL.

6.5.1 Extract and install the SFTPPlus Server files

Perform the following procedure;
- Download the correct tarball to the /tmp directory
- Extract SFTPPlus Server using the command;

```bash
cd /opt
tar –zxvf /tmp/SFTPPlus-Server-linux.i386.tgz
```

This will create /opt/SFTPPlus/
• Move to the SFTPPlus main directory:

   `cd /opt/SFTPPlus`

• Create the SFTPPlus Admin directory and untar the SFTPPlus Admin software:

   `mkdir admin`

   `cd admin/`

   `tar –zxvf /tmp/SFTPPlusAdmin-1.2.4.tgz`

• SFTPPlus Server is installed but not configured (comes later)

Now we need to install Xampp distribution

6.5.2  **Xampp procedure**

6.5.2.1  **Xampp download and install**

Download the Xampp distribution for Linux from our download site or via the Apache Friends website at;


You require the XAMPP Linux 1.6.1 file – 51MB and save to the /tmp directory

Perform the following steps to install;

1. Go to a Linux shell and login as the administrator root
   
   `su`

2. Change current directory to /opt

   `cd /opt`
3. Extract the download archive

   tar -xvfz /tmp/xampp-linux-1.6.1.tar.gz

4. Xampp is now installed. It will be located in the /opt/lamp directory

6.5.2.2 Xampp configuration

Use this procedure and enter the following commands;

6. Move to the Xampp directory

   cd /opt/lampp

7. Create a symbolic link to the SFTPPlus files

   ln –s /opt/SFTPPlus/admin/SFTPPlus/ .

8. Test the symbolic link

   cd SFTPPlus

   This should take you to /opt/SFTPPlus/admin/SFTPPlus

9. We need to edit the Apache configuration file httpd.conf

   cd /opt/lampp/etc

   Use vi or your favourite editor to edit the file

   vi httpd.conf

10. Ensure that the correct port is used for the SFTPPlus Server http GUI front-end, for example the default port is 80 (normal for http protocol). This will be the port used to access the Administration GUI screens through you Browser. Ensure the following parameters are set;

   ServerRoot “/opt/lampp”
Listen 80

ServerName <ip-address>

Where <ip-address> is the ip address of the computer where lamp has been installed, for example;

ServerName 192.168.0.10

Please Note:
If you choose a different port other than 80 or you use a different computer where Apache is located you can change the ‘Listen’ parameter to the format, (for example);

12.34.56.78:15080

and this will redirect as appropriate

11. Move back to the main Xampp directory

   cd ..
   pwd

this should return

   /opt/lampp

This completes the Lampp installation. We can now start the Lampp service.
6.5.2.3 Start Xampp

To start XAMPP simply enter this command:

/opt/lampp/lampp start

You should now see something like this on your screen:
Starting XAMPP 1.6.1...
LAMPP: Starting Apache...
LAMPP: Starting MySQL...
LAMPP started.
Ready. Apache and MySQL are running.
If you get any error messages please take a look at the Xampp Reference chapter in this document.

To ensure correct operation of SFTPPlus Server with Xampp, you must disable the ProFTP service. To do this, follow this procedure;

3. Open a terminal session,
4. Type the following command;

/opt/lampp/lampp stopftp

You should now see something like this on your screen:

XAMPP: Stopping ProFTP...

This will permanently stop the Xampp ProFTP service running and remove the chance of any interference with the SFTPPlus Server FTP daemon.

6.5.2.4 Test Xampp

How can you check that everything really works in Xampp? Type in the following URL at your favourite web browser (needs to be the same computer where you installed Xampp, otherwise you need to use the IP address of the web server):

http://localhost

Now you should see the start page of XAMPP containing some links to check the status of the installed software and some small programming examples.
If you choose the ‘Status’ link in the left hand panel, it will confirm the operation of the Xampp installation.

Your Xampp basic installation is now complete. However, we need to make some further changes to default Xampp to point to the SFTPPlus Server software.

6.5.3 **PHP file update**

If this is purely to run on the local system only, you can skip this section.

Update the files;

```
/opt/SFTPPlus/admin/SFTPPlus/admindb.php
/opt/SFTPPlus/admin/SFTPPlus/auditdb.php
and
/opt/SFTPPlus/admin/SFTPPlus/usersdb.php
```
with the database server (localhost or preferably ip address), userids and passwords to match the grant statements in the /opt/SFTPPlus/admin/SFTPPlus/SFTPPlus_Database.sql file.

6.5.4 SQL database update
Run the database sql scripts to create and initialise the database by doing the following procedure; (this must be done under the root account)

- Go to the /opt/SFTPPlus/admin/SFTPPlus directory
  
  cd /opt/SFTPPlus/admin/SFTPPlus

- Connect to mysql by calling the command;

  /opt/lampp/bin/mysql

- You will now see a mysql prompt. Enter the following instructions;

  source SFTPPlus_database.sql  
  source SFTPPlus_Database_Update_1.sql  
  source SFTPPlus_Database_Update_2.sql  
  source SFTPPlus_Database_Update_3.sql

Caution:
At this moment in time, do not run the SFTPPlus_Database_Update_4.sql script.

- type ‘exit’ at the mysql prompt to return to the Operating System prompt.

Please go to the chapter titled “Configuring SFTPPlus Server”
6.6 Default Installation procedure – Solaris Xampp

There is a Xampp distribution for Solaris. However, this is still in the experimental stage and it is suggested that this should only be used if you are happy to use this distribution with a high failure probability. It is therefore recommended that the native httpd module is loaded.

The latest PHP and MySQL can be obtained from our download site (please send us an email and we will forward details) or obtain them from the following sites;
MySQL - [http://dev.mysql.com/downloads/mysql/5.0.html](http://dev.mysql.com/downloads/mysql/5.0.html)

If these links do not work, please contact us.

However, if you wish to install a Xampp installation for Solaris, follow this procedure.

6.6.1 Extract and install the SFTPPlus Server files
Perform the following procedure;

- Download the correct gzipped tarballs of SFTPPlus Server and SFTPPlus Admin to the /tmp directory
- Extract SFTPPlus Server using the command;

```
cd /opt

tar –zxvf /tmp/SFTPPlus-Server-so2.8.tgz
```

This will create /opt/SFTPPlus/

- Move to the SFTPPlus main directory;

```
cd /opt/SFTPPlus
```

- Create the SFTPPlus Admin directory and untar the SFTPPlus Admin software;

```
mkdir admin

mkdir admin/
```

```
tar –zxvf /tmp/SFTPPlusAdmin-1.2.4.tgz

- SFTPPlus Server is installed but not configured (comes later)

Now we need to install Xampp for Linux

6.6.2 Xampp procedure

6.6.2.1 Xampp download and install

Download the Xampp distribution for Solaris (Sparc) from our download site or via the Apache Friends website at;


You require the XAMPP Linux 0.8.2 file – 45MB and save to the /tmp directory

Perform the following steps to install;

5. Open a shell and login as the administrator root

   su

6. enter following command to start the shell script;

   sh /tmp/xampp-solaris-0.8.2.sh

7. The shell script will ask you where to install XAMPP

Caution:

The recommended location to install Xampp is /opt/xampp. Anything else may work too, but other directory specifications have not been tested – use other installation directory trees at your own risk.
Where do you want to install XAMPP? (press Ctrl+C to quit)
[/opt/xampp]

8. Enter the path you want to install XAMPP or simply press return if you accept
the proposed location. It is recommended that you install to /opt/xampp

9. Xampp is now installed. It will be located in the /opt/xampp directory

6.6.2.2 Xampp configuration

Use this procedure and enter the following commands;

1. Move to the Xampp directory

   cd /opt/xampp

2. Create a symbolic link to the SFTPPlus files

   ln –s /opt/SFTPPlus/admin/SFTPPlus/ .

3. Test the symbolic link

   cd SFTPPlus

   This should take you to /opt/SFTPPlus/admin/SFTPPlus

4. We need to edit the Apache configuration file httpd.conf

   cd /opt/xampp/etc

   Use vi or your favourite editor to edit the file

   vi httpd.conf

5. Ensure that the correct port is used for the SFTPPlus Server http GUI front-
end, for example the default port is 80 (normal for http protocol). This will be
the port used to access the Administration GUI screens through you Browser.
Ensure the following parameters are set;
ServerRoot 

Listen 80

ServerName <ip-address>

Where <ip-address> is the ip address of the computer where lamp has been installed, for example:

ServerName 192.168.0.10

Please Note:
If you choose a different port other than 80 or you use a different computer where Apache is located you can change the ‘Listen’ parameter to the format, (for example);

12.34.56.78:15080

and this will redirect as appropriate

This completes the Xampp installation. We can now start the Xampp service.
6.6.2.3 Start Xampp

To start XAMPP simply call this command;

```
/opt/xampp/xampp start
```

You should now see something like this on your screen;

Starting XAMPP for Solaris 0.8.2...
XAMPP: Starting Apache...
XAMPP: Starting MySQL...
XAMPP: Starting ProFTPD…
LAMPP started.
Ready. Apache and MySQL are running.

If you get any error messages please take a look at the Xampp Reference chapter in this document.

To ensure correct operation of SFTPPlus Server with Xampp, you must disable the ProFTP service. To do this, follow this procedure;

1. Open a terminal session,
2. Type the following command;

```
/opt/xampp/xampp stopftp
```

You should now see something like this on your screen:

XAMPP: Stopping ProFTP...

This will permanently stop the Xampp ProFTP service running and remove the chance of any interference with the SFTPPlus Server FTP daemon.
6.6.2.4 Test Xampp

How can you check that everything really works in Xampp? Just type in the following URL at your favourite web browser (needs to be the same computer where you installed Xampp, otherwise you need to use the IP address of the web server);

http://localhost

Please Note:
If you start Xampp as a normal user and not as root, Apache will use port 8080 instead of 80.

Now you should see the start page of XAMPP containing some links to check the status of the installed software and some small programming examples.

If you choose the ‘Status’ link in the left hand panel, it will confirm the operation of the Xampp installation.

Your Xampp basic installation is now complete. However, we need to make some further changes to default Xampp to point to the SFTPPlus Server software.
6.6.3 PHP file update
If this is purely to run on the local system only, you can skip this section.

Update the files;

```
/opt/SFTPPlus/admin/SFTPPlus/admindb.php
/opt/SFTPPlus/admin/SFTPPlus/auditdb.php
```

and

```
/opt/SFTPPlus/admin/SFTPPlus/usersdb.php
```

with the database server (localhost or preferably ip address), userids and passwords to match the grant statements in the file;

```
/opt/SFTPPlus/admin/SFTPPlus/SFTPPlus_Database.sql
```

6.6.4 SQL database update
Run the database sql scripts to create and initialise the database by doing the following procedure; (This must be done under the root account)

- Go to the /opt/SFTPPlus/admin/SFTPPlus directory

```
cd /opt/SFTPPlus/admin/SFTPPlus
```

- Connect to mysql by calling the command;

```
/opt/xampp/bin/mysql
```

- You will now see a mysql prompt. Enter the following instructions;

```
source SFTPPlus_database.sql
source SFTPPlus_Database_Update_1.sql
source SFTPPlus_Database_Update_2.sql
source SFTPPlus_Database_Update_3.sql
```
Caution:

At this moment in time, do not run the SFTPPlus_Database_Update_4.sql script.

- type ‘exit’ at the mysql prompt to return to the Operating System prompt.

Please go to the chapter titled “Configuring SFTPPlus Server”

6.7 Installation procedure – AIX Native components
To be written

6.8 Installation procedure – i386 Linux Native components
To be written

6.9 Installation procedure – HP-UX Native components
The installation of the Apache, PHP 4 and MySQL modules is relatively straightforward on HP-UX. This procedure is outlined below.

6.9.1 Apache & PHP4
There are two methods to install Apache & PHP for HP-UX, these are;

- obtain source files and compile/build on target machine
- obtain pre-compiled platform specific binaries

The easiest method of deployment on a HP-UX system is to install a pre-compiled binary package using a depot file. A build/compile document is also available with details on how to compile your own binaries for Apache2 and PHP on the HP-UX platform in the document;

“Compiling Apache 2 and PHP 4 for HP-UX”
You can obtain pre-compiled binaries from either our download page (send us an email and we will forward a link or provide ftp details, alternatively you can download the depot file from the HP Software Depot webpage. The HP Software Depot webpage can be found at;

http://h20293.www2.hp.com/

If this link does not work please send us an email, we are able to forward information regarding obtaining the depot file.

To install depot packaged products you use a utility called swinstall which is located in the /usr/sbin directory.

---

**Caution:**

swinstall cannot handle compresses or gzipped depot file. You **must** uncompress or gunzip them first.

---

At the time of writing, the depot file containing Apache 2.0.55.00 and PHP 4 is;

HPUXWSAX-B214-1123-64.depot
MD5 Checksum is 409140038d65e9a587ae4be61a98ce1a

The package name is; HP-UX Apache-based Web Server
The install path is; /opt/hpws/apache
Disk space required for download is 35MB.
Disk space required for install is 100MB
The procedure is as follows;

Download Instructions
Verification of depot (cksum)
GUI Installation Instruction
Command Line Installation Instructions
NewConfig Support

6.9.1.1 Download Instructions
Obtain the depot file from either the Pro:Atria download page or from the HP Depot home page and save to the /tmp directory.

The file should be 36659200 bytes. Compare this to the file you downloaded. If the two sizes are not equal, then download once again and compare the byte size. If they are equal continue to the next section.

6.9.1.2 Verification of depot (cksum)
Once the download is complete and the byte size has been checked, you are ready for verification.

1. Verify that the bits are not corrupt by typing;

   \texttt{cksum <absolute path to file>}

   For Example: cksum /tmp/HPUXWSAX-B214-1123-64.depot

\begin{itemize}
\item Please Note:
  The cksum value is mentioned above in the “Apache & PHP4” section.
\item Please Note:
  For an IPv6 version the product version number will start with a “B”
\end{itemize}

If the output does not match, please download the file again. Otherwise, continue with the next step.
2. Verify that the download is in the correct directory by typing:

```
/usr/sbin/swlist -s <absolute path to file>
```

For Example: `/usr/sbin/swlist -s /tmp/HPUXWSAX-B214-1123-64.depot`

Output should look similar to this:

```
# # Bundle(s):
#
hpuxwsApache  A.2.0.55.00  HP-UX Apache-based Web Server
```

### 6.9.1.3 GUI Installation Instructions

Once the depot has been verified, you are ready for installation. This section assumes you are familiar with the swinstall tool. Consult your system documentation for further details on this software utility.

1. Login as root.
2. Run swinstall to install the product with the following command:

```
/usr/sbin/swinstall -i -s <absolute path to file>
```

For Example: `/usr/sbin/swinstall -s /tmp/HPUXWSAX-B214-1123-64.depot`

3. When the GUI comes up, click on the appropriate product depot to highlight it. You can select more than one depot.
4. Select "Mark for Install" from the "Actions" menu. The ‘Marked?’ field now indicates "Y."
5. Select "Install" from the "Actions" menu. The Analysis window appears.
6. Select "OK" when the analysis is complete. The Confirmation window appears.
7. Select "Yes" when ready. The Install window appears.
8. Select "Done" when the install is complete.
9. Select "Exit" from the "File" menu.
10. During installation, existing configuration files will be updated using the HP-UX defined standard methodology for delivering new user configurable files. See the "NewConfig Support" below for more details.

Refer to the README included in the product at `/opt/hpws/README` for further information. `/opt/hpws/<PRODUCT>/GETTING_STARTED` contains information on installation.
6.9.1.4 Command Line Installation Instructions

Once the depot has been verified, you are ready for installation. This section assumes you are familiar with the swinstall tool. Consult your system documentation for further details on this software utility.

1. Login as root.
2. Install the product from the command line by typing:

   `/usr/sbin/swinstall -s <absolute path to file> 

   For Example: `/usr/sbin/swinstall -s /tmp/<HP-UX_WS>.depot`

   Output should look similar to this:

   ======= 01/01/03 01:01:01 PST BEGIN swinstall SESSION (non-interactive)

   * Session started for user "root@machinename".
   (The details of your output will vary)

3. During installation, existing configuration files will be updated using the HP-UX defined standard methodology for delivering new user configurable files. See the "NewConfig Support" below for more details.

   Refer to the README included in the product at /opt/hpws/README for further information. /opt/hpws/<PRODUCT>/GETTING_STARTED contains information on installation

6.9.1.5 NewConfig Support

Earlier releases of the HP-UX Web Server Suite (known as HP Apache-based Web Server) had the following behavior for user configurable files, say httpd.conf. When the software is installed, all the existing files on the system were saved with a ".save" suffix. Therefore, httpd.conf would be saved as httpd.conf.save. At the same time, new versions of the files were installed. Thus httpd.conf would be a new version corresponding to the installed version of the binary.

Starting with this version, the HP-UX Web Server Suite follows the HP-UX defined standard methodology for delivering new user configurable files (henceforth referred to as just "file" or "files").

The new process is as follows;

1. The new files are delivered at:
2. During the preparation phase in a swinstall, a file from the previous installation of the component is moved to a safe location for a later review;

   /opt/hpws/<component>/old/<ABSOLUTE-PATH-TO-FILE>

3. The installation process then checks to see if the file is currently absent (implying either that this is the first installation or that the file has been removed), or that the working file is identical to the file at /opt/hpws/<component>/old/<ABSOLUTE-PATH-TO-FILE>. In both the cases, the file already on the system can be overwritten. The install process then copies the files from;

   /opt/hpws/<component>/newconfig/<ABSOLUTE-PATH-TO-FILE>

to:

   <absolute-path-to-file>

Otherwise, it leaves the file untouched. An administrator can review the files later to determine and execute the move of the file from newconfig location to the actual location manually.

Currently, even /etc/rc.config.d/hpws_*conf files are covered in the newconfig support.

The administrator can review the /var/adm/sw/swagent.log to identify the files that have been updated by the newconfig process. The following type of "NOTE:" message in the log file will assist the administrator to make this determination.

   NOTE: A new version of "/opt/hpws/apache/conf/httpd.conf" has been installed on the system.

   IMPORTANT: The files located at /opt/hpws/<component>/newconfig and /opt/hpws/<component>/old/<ABSOLUTE-PATH-TO-FILE> are available to the administrator for reference when manually editing the current files, but they should not be altered. Doing so would make the file updates unpredictable.

The HP-UX Apache2 and PHP 4 installation is complete, proceed to the next section.
6.9.2 **MySQL**

There are two methods to install MySQL for HP-UX, these are;

- obtain source files and compile/build on target machine
- obtain pre-compiled platform specific binaries

The easiest method of deployment on a HP-UX system is to install a pre-compiled binary package using a depot file. A build/compile document is also available with details on how to compile your own binaries for MySQL for HP-UX in the document;

**“Compiling MySQL for HP-UX”**

You can obtain pre-compiled binaries from either our download page (send us an email and we will forward a link or provide ftp details, alternatively you can download the depot file from the MySQL download page. The MySQL download webpage can be found at;

http://www.mysql.org/downloads/mysql/5.0.html

If this link does not work please send us an email, we are able to forward information regarding obtaining the depot file.

At the time of writing, the depot file containing MySQL are (your choice depends on your OS version and architecture);

**HP-UX 11.00 (PA-RISC 2.0, 64bit)**

mysql-5.0.41-hpux11.00-hppa2.0w-64bit.depot.gz
MD5 Checksum is 3a87360bba78256088bfb9559c55712

**HP-UX 11.11 (PA-RISC 2.0, 64bit)**

mysql-5.0.41-hpux11.11-hppa2.0w-64bit.depot.gz
MD5 Checksum is 9a48123946f6b7f7a8955eb02cf245c8

**HP-UX 11.23 (IA64, 64bit)**

mysql-5.0.41-hpux11.23-ia64-64bit.depot.gz
MD5 Checksum is cdb12c1d3ce987f4b626f8e52e6cdcee

Disk space required for download (compressed/uncompressed) is 65MB/425MB.
Disk space required for install is 200 to 475MB depending on version and architecture used.
The procedure is as follows;

Download Instructions
Verification of depot (cksum)
GUI Installation Instruction
Command Line Installation Instructions
NewConfig Support

6.9.2.1 Download Instructions

Obtain the appropriate depot file for your OS version and architecture from either the Pro:Atria download page or from the MySQL download page and save to the /tmp directory.

The file sizes should be;

mysql-5.0.41-hpux11.00-hppa2.0w-64bit.depot.gz = 68334731 bytes (183695360 bytes uncompressed)

mysql-5.0.41-hpux11.11-hppa2.0w-64bit.depot.gz = 68376571 bytes (183808000 bytes uncompressed)

mysql-5.0.41-hpux11.23-ia64-64bit.depot.gz = 128166107 bytes (435906560 bytes uncompressed)

Compare this to the file you downloaded. If the two sizes are not equal, then download once again and compare the byte size. If they are equal continue to the next section.

6.9.2.2 Verification of depot (cksum)

Once the download is complete and the byte size has been checked, you are ready for verification.

4. You will need to extract the depot files from the gz file by typing the following command;

```
tar x /tmp/<package name>
```

5. Verify that the bits are not corrupt by typing;

```
cksum <absolute path to file>
```
For Example: `cksum /tmp/<package name>.depot`

If the output does not match, please download the file again. Otherwise, continue to the next step.

### 6.9.2.3 Command Line Installation Instructions

Once the depot has been verified, you are ready for installation. This section assumes you are familiar with the `swinstall` tool. Consult your system documentation for further details on this software utility.

MySQL is normally installed to `/opt/mysql` and has been assumed for the HP-UX installation in this document. However, if you have chosen a different directory change command lines where MySQL is used with your MySQL install directory.

1. Login as root.
2. Install the product from the command line by typing:

   `/usr/sbin/swinstall -s <absolute path to file> *`

   For Example: `/usr/sbin/swinstall -s /tmp/<package name>.depot *`

   Output should look similar to this;

   ======= 01/01/03 01:01:01 PST BEGIN swinstall SESSION (non-interactive)

   * Session started for user "root@machinename".

   (The details of your output will vary)

3. During installation, existing configuration files will be updated using the HP-UX defined standard methodology for delivering new user configurable files.

### 6.9.2.4 Final configuration

Use this procedure and enter the following commands;

6. Move to the Apache directory

   `cd /opt/hpws/apache`
7. Create a symbolic link to the SFTPPlus files

```
ln -s /opt/SFTPPlus/admin/SFTPPlus/ .
```

8. Test the symbolic link

```
cd SFTPPlus
```

This should take you to /opt/SFTPPlus/admin/SFTPPlus

9. We need to edit the Apache configuration file httpd.conf

```
cd /opt/hpws/apache/etc
```

Use vi or your favourite editor to edit the file

```
vi httpd.conf
```

10. Ensure that the correct port is used for the SFTPPlus Server http GUI frontend, for example the default port is 80 (normal for http protocol). This will be the port used to access the Administration GUI screens through your Browser. Ensure the following parameters are set;

```
ServerRoot "/opt/hpws/apache/"

Listen 80

ServerName <ip-address>
```

Where <ip-address> is the ip address of the computer where lamp has been installed, for example;

```
ServerName 192.168.0.10
```

Please Note:

If you choose a different port other than 80 or you use a different computer where Apache is located you can change the ‘Listen’ parameter to the format, (for example);
12.34.56.78:15080

and this will redirect as appropriate

We can now start the Apache service.

6.9.2.5 Start HP-UX Apache

To start Apache in HP-UX, as root, simply type this command at a shell window;

```
/opt/hpws/apache/bin/apachectl start
```

The Apache server should now be started.

6.9.3 PHP file update

If this is purely to run on the local system only, you can skip this section.

Update the files;

```
/opt/SFTPPlus/admin/SFTPPlus/admindb.php
/opt/SFTPPlus/admin/SFTPPlus/auditdb.php
```

and

```
/opt/SFTPPlus/admin/SFTPPlus/usersdb.php
```

with the database server (localhost or preferably ip address), userids and passwords to match the grant statements in the file;

```
/opt/SFTPPlus/admin/SFTPPlus/SFTPPlus_Database.sql
```
6.9.4 SQL database update

Run the database sql scripts to create and initialise the database by doing the following procedure; (This must be done under the root account)

- Go to the /opt/SFTPPlus/admin/SFTPPlus directory

  `cd /opt/SFTPPlus/admin/SFTPPlus`

- Connect to mysql by calling the command;

  `/opt/mysql/mysql`

- You will now see a mysql prompt. Enter the following instructions;

  `source SFTPPlus_database.sql`
  `source SFTPPlus_Database_Update_1.sql`
  `source SFTPPlus_Database_Update_2.sql`
  `source SFTPPlus_Database_Update_3.sql`

  **Caution:**
  At this moment in time, do not run the SFTPPlus_Database_Update_4.sql script.

- type ‘exit’ at the mysql prompt to return to the Operating System prompt.

Your HP-UX MySQL module installation is now complete.

Please go to the chapter titled “Configuring SFTPPlus Server”
6.10 Installation procedure – Solaris Native components

6.10.1 Solaris 8 (Sparc)

6.10.1.1 Assumptions:

- Specific version numbers may have changed.
- Installations are done using ksh as superuser (root).
- Lines starting with #: are literal examples of root commands.
- Some variable parameters may be specific to your installation and not reflect the correct software versions.
- Sparc Solaris 8 installed with most recent recommended patches:

  ```
  #: uname -a
  SunOS hostname 5.8 Generic_117000-03 sun4u sparc SUNW,UltraAX-i2
  ```

- A source or build directory exists on a filesystem with plenty of free space:

  ```
  #: mkdir /build
  #: cd /build
  ```

6.10.1.2 Steps:

1. Verify all of the following SUNW* developer packages have been installed:
   - SUNWarc
   - SUNWbtool
   - SUNWhw
   - SUNWlibm
   - SUNWsprot
   - SUNWtoo

   Sample command line to determine if package SUNWarc is installed:

   ```
   #: pkginfo | grep SUNWarc
   ```

   System SUNWarc Archive Libraries
   System SUNWarcx Archive Libraries (64-bit)

   Missing packages may be found on the Solaris 8 installation CDs or downloaded from the Sun Website.

2. The $PATH environmental variable for root should begin with the following:

   ```
   /usr/local/bin
   /usr/local/sbin
   /usr/ccs/bin
   ```

   Sample command line to determine the current $PATH:

   ```
   #: echo $PATH
   /usr/local/bin:/usr/local/sbin:/usr/ccs/bin:/usr/sbin:/usr/bin
   ```
3. The following baseline tools are needed for this installation and are available as easily installed packages from sunfreeware.com:
   - perl (a suitable version is usually already installed)
     
     ```
     perl -v
     ```
     This is perl, version 5.005_03 built for sun4-solaris
   - gunzip or gzip (a suitable version is usually already installed)
     
     ```
     gunzip -V
     gunzip 1.2.4 (18 Aug 93)
     ```
   - libiconv (downloaded current version of package from sunfreeware.com)
     
     ```
     gunzip libiconv-1.8-sol8-sparc-local.gz
     pkgadd -d libiconv-1.8-sol8-sparc-local
     ```
   - gcc (downloaded current version of package from sunfreeware.com)
     
     ```
     gunzip gcc-3.4.1-sol8-sparc-local.gz
     pkgadd -d gcc-3.4.1-sol8-sparc-local
     gcc --version
     ```
     gcc (GCC) 3.4.1
   - libgcc (should be installed as part of the gcc package - located in /usr/local/lib)
     
     ```
     gmake (downloaded current version of package from sunfreeware.com)
     ```
     ```
     gunzip gmake-3.80-sol8-sparc-local.gz
     pkgadd -d make-3.80-sol8-sparc-local
     ```
     After you install the GNU counterpart of a Solaris program (e.g. tar and make), be sure that your $PATH environmental variable selects the GNU version first.

   Now, set these Environmental Variables:
   
   ```
   CXX=`which gcc`; export CXX
   CXXFLAGS="-O3 -felide-constructors -fno-exceptions -fno-rtti"
   export CXXFLAGS
   CC=`which gcc`; export CC
   CFLAGS="-O3"; export CFLAGS
   LD_LIBRARY_PATH=SLD_LIBRARY_PATH:/usr/local/lib
   export LD_LIBRARY_PATH
   ```

   - gmake (downloaded current version of package from sunfreeware.com)
     
     ```
     ```
     ```
     make --version
     GNU Make 3.80
     ```

   - gnu tar (make sure /usr/local/bin is found early in root's $PATH)
     
     ```
     ```
     ```
     tar --version
     tar (GNU tar) 1.14
     flex (downloaded current version of package from sunfreeware.com)
     ```
     ```
     ```
     flex-2.5.31-sol8-sparc-local.gz
     pkgadd -d flex-2.5.31-sol8-sparc-local
     ```
Test the installation of baseline tools by building libxml2 from source:
Download the latest version from: ftp://xmlsoft.org/
# gunzip -dc libxml2-2.6.11.tar.gz | tar xvpf -
# cd libxml2-2.6.11
# ./configure
# make
# make install

4. Add /dev/random functionality to Solaris 8 if it doesn't already exist.
A /kernel/drv/random patch is available from SunSolve Patch Access. An earlier versions of this patch created /dev/random. To find the SPARC/Solaris 8 patch, type 112438-03 into the SunSolve Patch Access "Enter a PatchID" search window and click the Find Patch button. This will take you to the page where the patch is described and where the patch download links are.
Download the patch and install it as indicated in the instructions.

```
#: cd /build
#: unzip 112438-03.zip
#: patchadd /112438-03
```
You will probably need to reboot your system.

```
#: reboot -- -r
```

```
#: cd /build
```

If this doesn't work (/kernel/drv/random isn't created or patch doesn't install for some reason), here is an alternative:
download ANDIr-0.7-5.8-sparc-1 from:
http://www.cosy.sbg.ac.at/~andi/SUNrand/
```
#: pkgadd -d ANDIr-0.7-5.8-sparc-1
```

If /dev/random still doesn't exist, but /kernel/drv/random does:
```
#: ln -s /kernel/drv/random /dev/random
```

5. OpenSSL Installation

Download the latest OPENSSL source: http://www.openssl.org/
```
#: gunzip -c openssl-0.9.8e.tar.gz | tar xvpf -
#: cd openssl-0.9.8e
#: cp Makefile Makefile.orig
```
```
#: vi Makefile
```
```
replace "RANLIB=/usr/bin/ranlib" with "RANLIB=/usr/ccs/bin/ranlib"
```

- If you successfully implemented /dev/random, add the line:
  "DEVRANDOM= /dev/random"
- OR 
  "DEVRANDOM= /kernel/drv/random"

Make sure "PERL=" is set to the fully qualified path of perl program.
Save changes and exit vi
```
#: ./config --prefix=/usr/local/ssl -fPIC
#: make
#: make test
#: make install
#: cd ..
```

6. MySQL installation

- Create a pseudo user to run mysql:
  ```
  #: cd /build
  #: groupadd mysql
  #: useradd -g mysql mysql
  ```
- Download the latest MySQL binary for Solaris 8 from:
  http://www.mysql.com/
To complete the installation of binary MySQL:
- `ln -s mysql-5.1.1.19-beta-solaris8-sparc-64bit mysql`
- `cd mysql`
- `scripts/mysql_install_db --user=mysql`
- `chown -R root /usr/local/mysql`
- `chown -R mysql /usr/local/mysql/data`
- `chgrp -R mysql /usr/local/mysql`
- `cp support-files/my-medium.cnf /etc/my.cnf`

Try to start the MySQL server:
- `cd /usr/local/mysql/bin`
- `./mysqld_safe --user=mysql&`

Set the root MySQL user password and run a few quick tests:
- `./mysqladmin -u root password 'new-password'`
- `./mysqladmin -u root -h hostname password 'new-password'`

Test the server:
- `./mysqlshow -p`
  
  Enter password: new-password
  +-----------+
  | Databases |
  +-----------+
  | mysql     |
  | test      |
  +-----------+

  `./mysql -u root -p`
  Enter password: new-password

  Welcome to the MySQL monitor. Commands end with ; or \g.
  Your MySQL connection id is 3 to server version: 4.0.20-standard
  Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

  mysql> show databases;
  +-----------+
  | Databases |
  +-----------+
  | mysql     |
  | test      |
  +-----------+

  2 rows in set (0.00 sec)

  mysql> quit;
  Bye

If you would like MySQL to start and stop automatically:
- `cp /usr/local/mysql/support-files/mysql.server /etc/init.d/mysql`
- `ln /etc/init.d/mysql /etc/rc3.d/S99mysql`
- `ln /etc/init.d/mysql /etc/rc3.d/K01mysql`
7. Apache 2 installation
   
   #: cd /build
   o Download the latest source from: http://httpd.apache.org
     #: gzip -d httpd-2.0.50.tar.gz
     #: tar xvzf httpd-2.0.50.tar
     #: cd httpd-2.0.50
     #: ./configure --enable-so --with-layout=Apache --enable-ssl
     #: make
     #: make install
   
   o Edit the Apache configuration file
     #: cd /usr/local/apache2
     #: vi conf/httpd.conf
     
     - Change the following line:
       Group #-1
     
     - to:
       Group nobody
   
   o Test start the Apache Server
     #: /usr/local/apache2/bin/apachectl start
   
   o Create the SSL Key and Certificate
     #: cd /usr/local/ssl/bin
     #: ./openssl genrsa -des3 1024 > /usr/local/apache2/conf/localhost.key
     Generating RSA private key, 1024 bit long modulus
     ..........+++++
     .......................+++++
     e is 65537 (0x10001)
     Enter pass phrase: somephrase
     Verifying - Enter pass phrase: somephrase
     #: ./openssl req -new -key /usr/local/apache2/conf/localhost.key > /usr/local/apache2/conf/localhost.csr
     #: ./openssl req -x509 -days 3650 -key
     -in /usr/local/apache2/conf/localhost.csr > 
     /usr/local/apache2/conf/localhost.crt
   
   o Modify the ssl.conf file to use your certificate.
     #: cd /usr/local/apache2/conf
     #: vi ssl.conf
     
     - Find the following lines in the ssl.conf file:
       DocumentRoot "/usr/local/apache2/htdocs"
       ServerName new.host.name:443
       SSLCertificateFile /usr/local/apache2/conf/ssl.crt/server.crt
       SSLCertificateKeyFile 
       /usr/local/apache2/conf/ssl.key/server.key
- Change the respective lines so that they are as follows:
  DocumentRoot "/usr/local/apache2/htdocs-secure"
  ServerName localhost:443
  SSLCertificateFile /usr/local/apache2/conf/localhost.crt
  SSLCertificateKeyFile /usr/local/apache2/conf/localhost.key

#:` mkdir /usr/local/apache2/htdocs-secure

  o Create a simple home page (e.g. Home, Secure Home)
#:` vi /usr/local/apache2/htdocs-secure/index.html
  Save index.html and exit vi
#:` chmod a+rx /usr/local/apache2/htdocs-secure/
#:` chmod a+r /usr/local/apache2/htdocs-secure/index.html

  o Remove the encryption from the RSA private key
#:` cd /usr/local/apache2/conf
#:` cp localhost.key server.key.org
#:` /usr/local/ssl/bin/openssl rsa -in server.key.org -out localhost.key
#:` chmod 400 localhost.key

  o Start the Apache https server.
#:` /usr/local/apache2/bin/apachectl stop
#:` /usr/local/apache2/bin/apachectl startssl

  Note: when the machine is rebooted, Apache will not be restarted automatically. You can manually restart Apache using:

#:` /usr/local/apache2/bin/apachectl startssl

  or, alternatively, this process can be made automatic by writing a script in the /etc/init.d directory and linking it to the appropriate places in /etc/rc2.d and /etc/rc3.d. See the MySQL installation notes for an example.

8. PHP 5 installation
#:` cd /build

  o Download the latest production version of PHP from http://www.php.net
#:` gzip -d php-5.0.0.tar.gz
#:` tar xvpf php-5.0.0.tar
#:` cd php-5.0.0
#:` ./configure --with-apxs2=/usr/local/apache2/bin/apxs
   --with-mysql=/usr/local/mysql/
   --enable-dbase --with-libxml-dir=/usr/local/include/libxml2
#:` make
#:` make install
#:` cp php.ini-dist /usr/local/lib/php.ini
- Edit the Apache configuration file to deploy PHP
  `vi /usr/local/apache2/conf/httpd.conf`
  - Add the following line to the AddType section:
    `AddType application/x-httpd-php .php`
  - Check for the following line and add it if necessary:
    `LoadModule php5_module modules/libphp5.so`
  - Save and exit `vi`

- Restart Apache to load PHP
  `#/usr/local/apache2/bin/apachectl restart`

9. You will now need to extract and install the SFTPPlus Server tarball. To do this perform the following procedure:

- Download the correct gzipped tarballs of SFTPPlus Server and SFTPPlus Admin to the /tmp directory
- Extract SFTPPlus Server using the command;

  `#: cd /opt`

  `#: tar –zxvf /tmp/SFTPPlus-Server-so2.8.tgz`

  This will create /opt/SFTPPlus/

- Move to the SFTPPlus main directory;

  `#: cd /opt/SFTPPlus`

- Create the SFTPPlus Admin directory and untar the SFTPPlus Admin software;

  `#: mkdir admin`

  `#: cd admin/`

  `#: tar –zxvf /tmp/SFTPPlusAdmin-1.2.4.tgz`

- SFTPPlus Server is installed but not configured (comes later). Link SFTPPlus php files to Apache2 directory
• Create a symbolic link to the SFTPPlus files

  #: ln –s /opt/SFTPPlus/admin/SFTPPlus/ .

• Test the symbolic link

  #: cd SFTPPlus

This should take you to /opt/SFTPPlus/admin/SFTPPlus

• We need to edit the Apache configuration file httpd.conf

  #: cd /usr/local/apache2/etc

Use vi or your favourite editor to edit the file

  #: vi httpd.conf

• Ensure that the correct port is used for the SFTPPlus Server http GUI front-end, for example the default port is 80 (normal for http protocol). This will be the port used to access the Administration GUI screens through your Browser. Ensure the following parameters are set;

  ServerRoot “/usr/local/apache2/”
  
  Listen 80
  
  ServerName <ip-address>
  
  Where <ip-address> is the ip address of the computer where apache2 has been installed, for example;
  
  ServerName 192.168.0.10
Please Note:
If you choose a different port other than 80 or you use a different computer where Apache is located you can change the ‘Listen’ parameter to the format, (for example);

12.34.56.78:15080

and this will redirect as appropriate. Ensure that the ServerName parameter is set correctly if this is the case.

10. Go to “Configuring SFTPPlus Server” chapter to complete SFTPPlus Server configuration

6.10.2 Solaris 10 (Spare)

Section being written – expected September 2007
7 CONFIGURING SFTPPLUS SERVER

7.1 Configuration Procedure
The next stage is to configure the SFTPPlus Server. This will enable us to create a test user to ensure the environment is correctly set up. In the instructions we are using the userid test and alias userid sftpplus, but you can choose any userid for this purpose.

7.1.1 SFTPPlus variables

- Set the SFTPPlus home_dir and home_url variables. Edit the file 
  /opt/SFTPPlus/admin/SFTPPlus/explore/.config/conf.php

Set the $GLOBALS[“home_dir”] variable to read

```
$GLOBALS[“home_dir”] = “/opt/SFTPPlus/chroot/home”; 
```

Set the $GLOBALS[“home_url”] variable to read

```
$GLOBALS[“home_url”] = “http://<ip address>/SFTPPlus”; 
```

Where <ip address> is the ip address of the computer where SFTPPlus and Xampp are installed.

Save the file.

7.1.2 Creating Host keys

Section being written – will be added June 2007

7.1.3 Creating Self-signed certificates

Section being written – will be added June 2007
7.1.4 Chroot environment

The chroot (jail) environment in Linux/Unix provides a security feature that creates a limited sandbox (basically a holding area). In order for this to work there are some common programs and libraries used and these are supplied with SFTPPlus Server and are stored in the appropriate locations in the SFTPPlus Server directory tree.

The chroot environment is held as a subdirectory of the /opt/SFTPPlus installation. Within the chroot directory you need to have the correct libraries and executables, which can all be hard links to files in the /opt/SFTPPlus/bin and /opt/SFTPPlus/lib directories as appropriate. Some system libraries will be copied to this directory as they have to be accessible to the chroot environment. The script /opt/SFTPPlus/bin/mkchroot.sh will create the appropriate directories and links:

```
    cd /opt/SFTPPlus

    and execute the script

    /bin/mkchroot.sh
```

To ensure that users logon accounts are correctly chrooted for the restricted shell you must edit the file /opt/SFTPPlus/etc/rssh.conf to have the following parameter set:

```
    chrootpath =
```

If you are using the default installation path on Linux this would be;

```
    chrootpath = /opt/SFTPPlus/chroot/home
```

This ensures that the restricted shell is kept within the chroot environment and the user cannot break out from the chroot jail.

---

**Please Note:**

If your chroot path does not use the default path and includes spaces you must use quote marks, for example

```
    chrootpath = “/home/james denning”
```

---
To ensure that a user cannot escape their chrooted jail, the chroot process must be run as a non-privileged user.

### 7.1.4.1 chroot helper application

To assist with the chroot environment, the system uses an application called rssh_chroot_helper. This program is located in the /opt/SFTPPlus/libexec directory. This application runs in the background and performs important tasks at the system level which enables the users tasks to run in a non-privileged mode.

To enable the rssh_chroot_helper application to function correctly, it must:
- be owned by root
- have permissions 755 set
- have the sticky bit set

To change the owner to root, ensure you are logged in as root and type the following command:

```
chown root /opt/SFTPPlus/libexec/rssh_chroot_helper
```

To change the permissions, ensure you are logged in as root and type the following command:

```
chmod 755 /opt/SFTPPlus/libexec/rssh_chroot_helper
```

To change the sticky bit, ensure you are logged in as root and type type the following command:

```
chmod +s /opt/SFTPPlus/libexec/rssh_chroot_helper
```

### 7.1.5 Add user

You can alias OS user ID to the SFTPPlus User. If you do not want to have OS aliases skip this section.

Configure the alias user for the restricted shell (rssh) – logged on as root.
Add the user;

    su –
    useradd sftpuser
    passwd sftpuser

enter the password and confirm it at the prompts (don’t forget it!).

    cd /opt/SFTPPlus/
    cd chroot/home/
    mkdir sftpplus
    chown sftpuser sftpplus
    cd ../../../

You should be in /opt/SFTPPlus

7.1.5.1 Home directory permissions and environment variable

    chmod 777 chroot/home/sftpplus
    export LD_LIBRARY_PATH=/opt/SFTPPlus/lib

AIX Only:
The library path is different for AIX. The export command that must be used for AIX is;

    export LIBPATH =/opt/SFTPPlus/lib
7.1.7 Home directory rename
You may wish to rename the home directory for use by the test user; If not skip this section

Please Note:
The UID information in your password file may differ from the information illustrated above.

7.1.6 User account check
Ensure the account is correctly setup;

su – sftpuser

You should see output similar to this;

This account is restricted by rssh.
Allowed commands: sftp

If you believe this is an error, please contact your system administrator.

HP-UX Only:
The library path is different for HP-UX. The export command that must be used for HP-UX is;

export SHLIB_PATH =/opt/SFTPPlus/lib
mv /opt/SFTPPlus/chroot/home/sftpplus /opt/SFTPPlus/chroot/home/sftpuser

Please Note:
If you change the home directory of a user (such as the example above for user ‘sftpuser’ home directory from sftpplus to sftpuser, you must ensure that you reflect this change in the /etc/passwd file or an error will occur when the user logs in. You must also reflect this change in the SFTPPlus Server GUI and change the user details.

7.1.8 sftp protocol server (sshd)
If you are not going to use the sftp protocol skip this section and go to the next section.

Edit the sshd_config
Edit /opt/SFTPPlus/etc/sshd_config and set the correct information for;

port

and

SFTPPlusAuth ( normally http://<ip address>/SFTPPlus/ )

where <ip address> is the ip address of the computer where SFTPPlus Server is installed.

We set the port to be 15022 so it will not interfere if you have an existing ssh daemon. However you are free to use whichever port you wish. Set the port parameter to your desired port number.

7.1.8.1 starting sshd server daemon (test only)

Create sshd account (using root account)

useradd sshd

Create a dummy directory for account to use
mkdir /var/empty

Whilst logged in as root, start the sshd server in debug mode; (use only as a one-off test as once a connection has been established the daemon will shutdown – see “Starting sshd server daemon (normal running)”

### AIX Only:
The library path is different for AIX. The export command that must be used for AIX is:

```
export LIBPATH=/opt/SFTPPlus/lib
```

Substitute the correct path variable below if using AIX.

### HP-UX Only:
The library path is different for HP-UX. The export command that must be used for HP-UX is:

```
export SHLIB_PATH=/opt/SFTPPlus/lib
```

Substitute the correct path variable below if using HP-UX.

```
export LD_LIBRARY_PATH=/opt/SFTPPlus/lib (if not previously kept)
```

and run the sshd daemon

```
/opt/SFTPPlus/sbin/sshd -D -d -d -d -f etc/sshd_config
```
7.1.8.2 starting sshd server daemon (normal running)

To start the sshd server in normal mode, login as root and enter the following commands;

**AIX Only:**
The library path is different for AIX. The export command that must be used for AIX is;

```
export LIBPATH=/opt/SFTPPlus/lib
```

Substitute the correct path variable below if using AIX.

**HP-UX Only:**
The library path is different for HP-UX. The export command that must be used for HP-UX is;

```
export SHLIB_PATH=/opt/SFTPPlus/lib
```

Substitute the correct path variable below if using HP-UX.

```
export LD_LIBRARY_PATH=/opt/SFTPPlus/lib (if not kept)
```

and run the sshd daemon

```
/opt/SFTPPlus/sbin/sshd -f /opt/SFTPPlus/etc/sshd_config
```

The sshd will start as a background process and listen for port traffic.

7.1.9 ftp/ftps server daemon configuration (vsftpd)
If you are not going to use the ftp/ftps protocols skip this section.

vsftpd stands for Very Secure File Transfer Daemon. It is the service that accepts incoming transmissions that use the FTP protocol. For SFTPPlus Server this daemon is located in the /opt/SFTPPlus/sbin directory.

vsftpd only has one parameter which is the config file it should read. If it is not given a config file it assumes that the vsftpd.conf and vsftpd.confssl files reside in the /etc directory, you need to specify the SFTPPlus vsftpd configuration directory when starting vsftpd for SFTPPlus Server. Also when starting the vsftpd daemon for SFTPPlus Server manually you will need to specify the SFTPPlus Server vsftpd directory on the command line when starting manually.

There are two configuration files that control what the vsftpd daemon does. vsftpd.conf (for FTP) and vsftpd.confssl (FTPS) may be used to control various aspects of vsftpd's behaviour. Normally with the native OS version of vsftpd, it looks for its configuration files at the location /etc/vsftpd.conf. However, the version supplied with SFTPPlus should reside in the /opt/SFTPPlus/sbin directory and it is this one we recommend.

The configuration files (vsftpd.conf and vsftpd.confssl) reside in the /opt/SFTPPlus/etc directory.

You may override the default configuration files by specifying a command line argument to vsftpd. The command line argument is the pathname of the configuration file for vsftpd, for example;

```
vsftpd /opt/SFTPPlus/etc/vsftpd.conf &
```

or

```
vsftpd /opt/SFTPPlus/etc/vsftpd-server2.conf &
```

7.1.9.1 Manually starting the vsftpd daemon

To start the vsftpd daemon follow this procedure;

You should be logged in as root.

Type the following to start the vsftpd daemon – (for ftp)

```
export LD_LIBRARY_PATH=/opt/SFTPPlus/lib:$PATH
/opt/SFTPPlus/sbin/vsftpd /opt/SFTPPlus/etc/vsftpd.conf &
```

Type the following to start the vsftpd daemon – (for ftp and ftps)
export LD_LIBRARY_PATH=/opt/SFTPPlus/lib:$PATH
/opt/SFTPPlus/sbin/vsftpd /opt/SFTPPlus/etc/vsftpd.confssl &

Please Note:
If you wish to run multiple FTP/FTPS servers on different ip addresses/ports, create copies of vsftpd.conf or vsftpd.confssl with unique names and ensure that the parameters;

listen_port=<port>

listen_address=<address>

are set correctly where <port> is the TCP port number for the vsftpd service to listen to, for example;

listen_port=15021

and <address> is in the correct TCP/IP format, for example;

listen_address=192.168.0.5

7.1.9.2 Scripted start/stop/restart of the vsftpd daemon

You can run the vsftpd daemon via a script. Copy and paste the following into a file called rc.SFTPPlusVSFTPD and place it in the /opt/SFTPPlus/etc directory.

If you wish to run ftps as well as ftp (explicit mode), you must change the script below to use the /opt/SFTPPlus/etc/vsftpd.confssl file with the correct parameter information for your system. In the example below, multiple library paths are specified. This has been done on purpose. If you wish to comment out paths that are not applicable for your platform precede the library path statement with a #

#!/bin/sh
#
# SFTPPlus vsftpd - automation and audit wrapper around SFTP Server
#
SFTPPLUSROOT=/opt/SFTPPlus
echo $$SFTPPLUSROOT
echo SFTPPLUSROOT
export SFTPPLUSROOT
PATH=$$SFTPPLUSROOT/bin:$PATH
LD_LIBRARY_PATH=$SFTPPLUSROOT/lib:$LD_LIBRARY_PATH
LIBPATH=$SFTPPLUSROOT/lib:$LIBPATH
SHLIB_PATH=$SFTPPLUSROOT/lib:$SHLIB_PATH
export PATH SHLIB_PATH LIBPATH LD_LIBRARY_PATH
RETVAL=0

case "$1" in
  start)
    echo -n "$Starting SFTPPlus vsftpd: "
    (cd $SFTPPLUSROOT;/sbin/vsftpd /opt/SFTPPlus/etc/vsftpd.conf &)
    RETVAL=$?
    ;;
  stop)
    echo -n "$Stopping SFTPPlus vsftpd: "
    (cd $SFTPPLUSROOT;killall vsftpd)
    RETVAL=$?
    ;;
  restart)
    echo -n "$Stopping SFTPPlus vsftpd: "
    (cd $SFTPPLUSROOT;killall vsftpd)
    RETVAL=$?
    echo -n "$Starting SFTPPlus vsftpd: "
    (cd $SFTPPLUSROOT;/sbin/vsftpd /opt/SFTPPlus/etc/vsftpd.conf &)
    RETVAL=$?
    ;;
  *)
    echo "$Usage: $0 {Start|Stop|Restart}"
    exit 1
    ;;
  esac

exit $RETVAL

---

Caution:

The script rc.SFTPPlusVSFTPD has been written with the assumption that you are only running 1 (one) vsftpd daemon and your configuration file is /opt/SFTPPlus/etc/vsftpd.conf.

---

Using this script you can;

Start the SFTPPlus Server vsftpd daemon by typing:
rc.SFTPPlusVSFTPD start

Stop the SFTPPlus Server vsftpd daemon by typing;

rc.SFTPPlusVSFTPD stop

Restart the SFTPPlus Server vsftpd daemon by typing;

rc.SFTPPlusVSFTPD restart

This script will be included in the Linux/UNIX distribution tarball in version 1.3

7.1.9.3 vsftpd FAQ

Q) Can I restrict users to their home directories?
A) Yes. You must use the setting;
   chroot_local_user=YES
   Don't forget to correctly set the 'home_url' parameter in;
   /opt/SFTPPlus/admin/SFTPPlus/explore/.config/conf.php
   and the chroot parameter in /opt/SFTPPlus/etc/rssh.conf

Q) Why don't symlinks work with chroot_local_user=YES?
A) This is a consequence of how chroot security works. As alternatives, look into hard links, or if you have a modern Linux, see the powerful "mount --bind".

Q) Does vsftpd support a limit on the number of users connected?
A1) Yes, indirectly. vsftpd is an inetd-based service. If use the popular "xinetd" as your inetd, this supports per-service per-IP connection limits.
   There is an example of this in the "EXAMPLE" directory.
A2) If you run vsftpd in "standalone" mode (which is the preferred mode with SFTPPlus Server) with the setting listen=YES, then you can stipulate the setting (e.g.);
   max_clients=10

Q) Help! I'm getting the error message "refusing to run with writable anonymous root".
A) vsftpd is protecting against dangerous configurations. The cause of this message is usually dodgy ownership of the ftp home directory. The home directory should NOT be owned by the ftp user itself. Neither should it be writable by the ftp user. A way to fix this is:
   chown root ~ftp; chmod -w ~ftp

Q) Help! I'm getting the error message "str_getpwnam".
A) The most likely cause of this is that the "nobody" user does not exist on your system. vsftpd needs this user to run bits of itself with no privilege.

Q) Help! Local users cannot log in.
A) There are various possible issues here.
A1) By default, vsftpd disables any logins other than anonymous logins. Put local_enable=YES in your /opt/SFTPPlus/etc/vsftpd.conf to allow local users to log in.
A2) vsftpd tries to link with PAM. (Run "ldd vsftpd" and look for libpam to find out whether this has happened or not). If vsftpd links with PAM, then you will need to have a PAM file installed for the vsftpd service. There is a sample one for RedHat systems included in the "RedHat" directory - put it under /etc/pam.d
A3) If vsftpd didn't link with PAM, then there are various possible issues. Is the user's shell in /etc/shells? If you have shadowed passwords, does your system have a "shadow.h" file in the include path?
A4) If you are not using PAM, then vsftpd will do its own check for a valid user shell in /etc/shells. You may need to disable this if you use an invalid shell to disable logins other than FTP logins. Put check_shell=NO in your /opt/SFTPPlus/etc/vsftpd.conf.

Q) Help! Uploads or other write commands give me "500 Unknown command."
A) By default, write commands, including uploads and new directories, are disabled. This is a security measure. To enable writes, put write_enable=YES in your /opt/SFTPPlus/etc/vsftpd.conf.

Q) Help! What are the security implications referred to in the "chroot_local_user" option?
A) Firstly note that other ftp daemons have the same implications. It is a generic problem. The problem isn't too severe, but it is this: Some people have FTP user accounts which are not trusted to have full shell access. If these accounts can also upload files, there is a small risk. A bad user now has control of the filesystem root, which is their home directory. The ftp daemon might cause some config file to be read - e.g. /etc/some_file. With chroot(), this file is now under the control of the user. vsftpd is careful in this area. But, the system's libc might want to open locale config files or other settings...

Q) Help! Uploaded files are appearing with permissions -rw-------.
A1) Depending on if this is an upload by a local user or an anonymous user, use "local_umask" or "anon_umask" to change this. For example, use "anon_umask=022" to give anonymously uploaded files permissions -rw-r--r--. Note that the "0" before the "22" is important.
A2) Also see the “Vsftpd Configuration Reference (Numeric Options) section or the vsftpd.conf.5 man page for the new "file_open_mode" parameter.

Q) Help! How do I integrate with LDAP users and logins?
A) Use vsftpd's PAM integration to do this, and have PAM authenticate against an LDAP repository.
Q) Help! Does vsftpd do virtual hosting setups?
A1) Yes. If you integrate vsftpd with xinetd, you can use xinetd to bind to several different IP addresses. For each IP address, get xinetd to launch vsftpd with a different config file. This way, you can get different behaviour per virtual address.
A2) Alternatively, run as many copies as vsftpd as necessary, in standalone mode. Use "listen_address=x.x.x.x" to set the virtual IP.

Q) Help! Does vsftpd support virtual users?
A) Yes, via PAM integration. Set "guest_enable=YES" in /opt/SFTPPlus/etc/vsftpd.conf. This has the effect of mapping every non-anonymous successful login to the local username specified in "guest_username". Then, use PAM and (e.g.) its pam_userdb module to provide authentication against an external (i.e. non-/etc/passwd) repository of users.
Note: currently there is a restriction that with guest_enable enabled, local users also get mapped to guest_username.

Q) Help! Does vsftpd support different settings for different users?
A) Yes - in a very powerful way. Look at the setting "user_config_dir" in the "Vsf tpd Configuration Reference (String Options) section or the man page.

Q) Help! Can I restrict vsftpd data connections to a specific range of ports?
A) Yes. See the config settings "pasv_min_port" and "pasv_max_port".

Q) Help! I'm getting the message "OOPS: chdir".
A) If this is for an anonymous login, check that the home directory for the user "ftp" is correct. If you are using the config setting "anon_root", check that is correct too. (Why would you be running anonymous logons for SFTPPlus Server anyway?)

Q) Help! vsftpd is reporting times as GMT times and not local times!
A) This behaviour can be changed with the setting "use_localtime=YES".

Q) Help! Can I disable certain FTP commands?
A) Yes. There are some individual settings (e.g. dirlst_enable) or you can specify a complete set of allowed commands with "cmds_allowed".

Q) Help! Can I change the port that vsftpd runs on?
A1) Yes. If you are running vsftpd in standalone mode (which is the suggested mode), use the "listen_port" directive in vsftpd.conf.
A2) Yes. If you are running vsftpd from an inetd or xinetd program, this becomes an inetd or xinetd problem. You must change the inetd or xinetd configuration files (perhaps /etc/inetd.conf or /etc/xinetd.d/vsftpd).

Q) Help! Will vsftpd authenticate against an LDAP server? What about a MySQL server?
A) Yes. vsftpd uses PAM for authentication, so you need to configure PAM to use pam_ldap or pam_mysql modules. This may involve installing the PAM modules and then editing the PAM config file (perhaps /etc/pam.d/vsftpd).
Q) Help! Does vsftpd support per-IP limits?
A1) Yes. If you are running vsftpd standalone (which we recommend with SFTPPlus Server), there is a "max_per_ip" sudo setting.
A2) Yes. If you are running vsftpd via xinetd, there is an xinetd config variable "per_source".

Q) Help! Does vsftpd support bandwidth limiting?
A) Yes. See the “Vsftpd Configuration Reference (Numeric Options) section or the vsftpd.conf.5 man page and investigate settings such as "anon_max_rate" and "local_max_rate".

Q) Help! Does vsftpd support IP-based access control?
A1) Yes. vsftpd can integrate with tcp_wrappers (if built with this support). It is enabled with the setting "tcp_wrappers=YES".
A2) Yes. vsftpd can be run from xinetd, which supports tcp_wrappers integration.

Q) Help! Does vsftpd support IPv6?
A) Yes, as of version 1.2.0. Read the vsftpd.conf.5 man page.

Q) Help! vsftpd doesn’t run.
A) Provide us your details and as much information about your OS as possible, such as kernel version, library versions, etc and send us the details and we will investigate.

Q) Help! I’m getting messages along the lines of 500 OOPS: vsf_sysutil_bind when trying to do downloads (particularly lots of small files).
A) Our build of vsftpd-1.2.1 or higher should sort this out.

Q) Help! Does vsftpd support hiding or denying certain files?
A) Yes. Look at the hide_file and deny_file options in the “Vsftpd Configuration Reference” (String Options) section or in the vsftpd man page.

Q) Help! Does vsftpd support FXP?
A) Yes. An FTP server does not have to do anything special to support FXP. However, you may get tripped up by vsftpd’s security precautions on IP addresses. In order to relax these precautions, have a look in the “Vsftpd Configuration Reference” (Boolean Options) or the vsftpd.conf.5 man page for pasv_promiscuous (and the less advisable port_promiscuous).

Q) I received an error “500: OOPS: SSL@ Cannot load RSA certificate”
A) Using FTPS you must have a host key cerated and held on the system. You also need to reference the certificate file in the vsftpd.confssl file. See section “Creating host keys” for more details.

7.1.10  http/https server protocol

If you are not going to use http/https skip this section and go to the next section.
(Section in progress)

7.1.11 Web Admin

Logon to the Web-server using the default setup maintainer user and password credentials;

Username = mike
Password = password

The URL will be in the form of (depending on your configuration);

http://localhost/SFTPPlus/

or

http://<hostname>/SFTPPLUS/

or

http://<ip-address>/SFTPPlus/

Where the <hostname> parameter is the name of web-server and <ip-address> is the IP address (in the format of xxx.xxx.xxx.xxx) of the web-server where SFTPPlus Server has been installed.

Use the admin web interface to setup the test user and server;

i. Add the new server, using the server name, and press ‘go’
   a. Select sftp for global users and password

ii. Add the user ‘test’ (if not using an existing user), press ‘go’
   a. Select sftp for global users and passwords
   b. Select the server from the list on the right
   c. Use home directory /opt/SFTPPlus/chroot/home/test
   d. Click ‘go’

iii. Set the password using the ‘password’ button
You are now ready to perform a test to validate the installation and configuration in the next chapter.
8 TESTING SFTPPLUS SERVER

8.1 Testing

8.1.1 SFTP session
Start a sftp session in debug mode using the new user test – logged on as any non-root user. This should be can on the ‘localhost’. Any errors can then be corrected quickly before testing on another networked Linux computer.

   a. `sftp -v -v -v -oport=15022 test@localhost`
   b. Use the password defined in the “Chroot Environment – Add User” section;
   c. Perform some test transfers, for example;
      i. `get /etc/hosts hosts`
      ii. `put hosts`
   d. `quit`

8.1.2 Results files
Check the results files;
   a. As standard user
      
      `ls -l hosts111`
   b. As root users;
      
      `ls -l /opt/SFTPPlus/chroot/home/test/hosts111`

8.1.3 Audit trail
Check the audit trail from the web interface;
   a. Click audit
   b. Check for messages for logging in, selecting the alias and transferring the files.

This concludes testing of SFTPPlus Server.
9 TROUBLESHOOTING

It's a fact of life that things do go wrong from time-to-time and software is no exception. This chapter is to help guide you in providing some help in troubleshooting common issues that may arise from installing SFTPPlus Server on a Linux/Unix platform.

9.1 Self Help

Certain chapters within this guide are dedicated to providing you with resources and information so that you may diagnose and fix any errors yourself as quickly as possible. Of course, this may not always be the case and this is why the “Technical Support” section is included to provide extra technical support that will help us to find a resolution to your problem as expediently as possible. However, in the first instance here are a few sections which you should find useful if you have a problem;

9.1.1 Common Questions

Here are the most common questions that we are asked and problems that are raised regarding SFTPPlus Server.

Section being written

9.2 Technical Support

First and foremost, we would like to thank you for using SFTPPlus products.

Technical support is a vital part of the total Pro:Atria customer experience. We want you to get the most from our products long after the initial sale and installation. We are dedicated to ensure that every issue is resolved expeditiously and to your satisfaction. To enable you to maximise the return on your investment, we offer a suite of support offerings designed to meet your business needs.

This sub-chapter provides an overview of the SFTPPlus support offerings and how to use them.

9.2.1 Trial support

Whilst you are trialling SFTPPlus Server, you are entitled to full technical support to enable you to install, configure and perform test transfers on your platform(s). We will endeavour to help you at every step to ensure you can complete your trial successfully. Our normal terms for trials are 30 days but this can be extended on agreement. We will always make reasonable efforts to assist you to integrate and setup SFTPPlus in your business during the trial period.
9.2.2 Annual Maintenance support
Payment of the annual maintenance fee entitles you to full technical support via email, telephone support and software updates.

9.2.3 General support information
We would normally conduct technical support via various media but we have preferred routing in the order of;

- Email
- Telephone

and if required, where practical/possible
- Site visit. (Please contact us for cost and availability)

To help us assess any issues that may arise, it will be helpful to us, and speed up diagnostics, if you would send relevant information pertaining to the issue. This should include;

- The platform (i.e. Operating System) that SFTPPlus Server is running on
- Any information about the target platform you are connecting to would be useful
- Version of SFTPPlus Server you are running
- Copies of Messages from the audit log or error reports
- Any other screen output that you may have

In the first instance, sending us this diagnostic information should help us diagnose the problem and identify a solution for you as quickly as possible.

Upon receipt of the above information, we will respond by confirming that we have received your enquiry and it is receiving attention. We will then look through the information supplied and diagnose the problem. When a solution is found we will email or telephone you with a detailed solution.
10 ERROR MESSAGES

The messages issued by SFTPPlus and other components are listed here for your convenience.

10.1 SFTPPlus Server Message convention

SFTPPlus Server provides a comprehensive messaging system to inform users of tasks being executed. The message.php file contains message routing and description information for SFTPPlus Server to use. Message routing can be defined against the severity level and provides a flexible method of application information to users.

Please Note:
The SFTPPlus message file (message.php) can be found in the /opt/SFTPPlus/ directory and may contain a more up-to-date set of messages than this document.

SFTPPlus messages can be directed to several reporting destinations:

<table>
<thead>
<tr>
<th>Destination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>console</td>
<td>Display if interactive, or piped output.</td>
</tr>
<tr>
<td>log</td>
<td>Write to the message.log file.</td>
</tr>
<tr>
<td>eventlog</td>
<td>(Windows only) Write to the Eventlog and (if configured) MS Tools.</td>
</tr>
<tr>
<td>email</td>
<td>Send email as defined in global.conf file.</td>
</tr>
<tr>
<td>snmp</td>
<td>Send SNMP alert – This feature is not available in version 1.1 and planned for future release.</td>
</tr>
</tbody>
</table>
A SFTPPlus message is classified as one of four severities. These are described in the following table:

<table>
<thead>
<tr>
<th>Severity Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Information – Information message only, no action required.</td>
</tr>
<tr>
<td>W</td>
<td>Warning – Warning message, some user action may be required.</td>
</tr>
<tr>
<td>E</td>
<td>Error – This is a non fatal error and is either a system error or SFTPPlus task error but will not terminate the current process.</td>
</tr>
<tr>
<td>S</td>
<td>Severe - This is normally a fatal error and is either a system failure or a SFTPPlus task error and will terminate the current process.</td>
</tr>
</tbody>
</table>

10.2 SFTPPlus Server Message list

Below is an expanded list of SFTPPlus Server system error message codes.

Message ID 0
Severity I
Text Help Messages issued before processing the global.conf file

Message ID 1
Severity I
Text Configuration read, startup continues
Help The global.conf file has been processed and startup continues

Message ID 2
Severity S
Text Unable to find conf files
Help SFTPPlus has failed to find the required configuration files. Consult message.log and check the runtime path. This may also indicate a problem with semaphore locking.

Message ID 3
Severity E
Text STDERR
Help   Error output from a command issued.

Message ID  4  
Severity    I  
Text        STDOUT  
Help        Output from a command issued.

Message ID  5  
Severity    I  
Text        Config file  
Help        Configuration file is being read

Message ID  6  
Severity    I  
Text        Setting:  
Help        Setting from a configuration file

Message ID  7  
Severity    E  
Text        Definition | disabled - ignoring  
Help        The definition is specifically disabled in the configuration file. The definition should be removed if not needed. It can be left as disabled if it may be required in future.

Message ID  8  
Severity    E  
Text        Unable to scan | - ignoring  
Help        A defined directory was not able to be scanned. Check the directory exists and is accessible to the SFTPPlus service.

Message ID  9  
Severity    E  
Text        Command was  
Help        Command used to test a directory

Message ID  10  
Severity    I  
Text        Adding | to monitoring list  
Help        The definition listed has been added to the list of active
definitions

Message ID 11
Severity E
Text Missing subdir parameter in |, ignoring
Help A definition has no subdir parameter. Add the correct subdir parameter to the definition. This must point to a sub-directory of inbox.

Message ID 12
Severity I
Text Using server | for
Help The server specified for a transfer

Message ID 13
Severity E
Text Missing server parameter |, ignoring
Help No server was specified for a transfer - the target server must be specified.

Message ID 14
Severity I
Text Using port | for
Help The port specified for a transfer.

Message ID 15
Severity I
Text Using port 22 for
Help Using the default port (22) for sftp

Message ID 16
Severity I
Text Using user | for
Help The user specified for the remote system for a transfer

Message ID 17
Severity E
Text Missing user parameter
Help A userid must be specified for the target system
Message ID 18
Severity I
Text Using password provided for
Help The password provided will be used.

Message ID 19
Severity E
Text Missing password parameter
Help No password has been provided for the remote system. This must be the password for the specified user on the remote system.

Message ID 20
Severity I
Text Using saved profile | for
Help The specified PuTTY profile will be used.

Message ID 21
Severity E
Text Missing savedprofile parameter
Help No PuTTY profile has been specified. The profile will be created by using the putty.exe gui, and saving a connection definition.

Message ID 22
Severity I
Text Using target directory | for
Help The remote directory where transferred files will be placed.

Message ID 23
Severity E
Text Missing targetdir parameter
Help A remote directory must be specified for storing transferred files.
Using response file | for
A response file as specified will be retrieved after a transfer

Message ID 25
Severity E
Text Missing response file parameter
Help A response file name must be specified. This can include %FNAME% and %FTYPE% for filename and type

Message ID 26
Severity I
Text Using response directory | for
Help The response file will be retrieved from the specified remote directory.

Message ID 27
Severity E
Text Missing response directory parameter
Help A remote directory where the response file will be found must be specified

Message ID 28
Severity I
Text Using maxtry | for
Help The maximum times a transfer will be attempted before considering as a Permanent failure.

Message ID 29
Severity I
Text Using global maxtry | for
Help Using the global maxtry value for this transfer.

Message ID 30
Severity I
Text Using waittime | for
Help The time between transfer attempts in seconds.
Message ID 31
Severity I
Text Using global waittime | for
Help Using the global waittime for this transfer.

Message ID 32
Severity I
Text Using initialwait | for
Help The initial wait time before attempting to retrieve a response file. This is intended to allow for processing time between sending a file and the output being created remotely.

Message ID 33
Severity I
Text Using global initialwait | for
Help The global initial waittime will be used for this transfer.

Message ID 34
Severity I
Text Looking for files
Help SFTPPlus is starting a directory scan.

Message ID 35
Severity I
Text Checking
Help SFTPPlus is checking for files for the specified transfer.

Message ID 36
Severity E
Text Unable to scan directory
Help SFTPPlus has failed to scan a directory - please check following messages for details.

Message ID 37
Severity I
Text pausing
Help SFTPPlus is waiting for further files.
Message ID 38
Severity S
Text sleep interrupted
Help SFTPPlus has received a signal and will shut down

Message ID 39
Severity S
Text unreachable code
Help Debugging information. If this message appears, please contact Technical Support.

Message ID 40
Severity I
Text Checking file size
Help Checking the size of a file before transfer, to ensure that it is not still being written to.

Message ID 41
Severity I
Text filesize | bytes
Help Report on the size of a file to be transferred

Message ID 42
Severity I
Text creating checksum
Help The md5sum hash of the file is being created

Message ID 43
Severity I
Text Sending file
Help The file is being sent

Message ID 44
Severity I
Text psftp returned
Help Return code from psftp

Message ID 45
Severity E
Secure ftp error - please see
An error has occurred in a transfer, and the indicated file will include more information.

Message ID 46
Severity I
Text File sent OK.
Help A transfer has completed

Adding response to queue
A response file will be retrieved at the appropriate time

Message ID 47
Severity I
Text Checking for response file for
Help An attempt to retrieve a response file is in progress

Failed to obtain response for
A response file has not been retrieved. This may indicate insufficient waittime.

Message ID 49
Severity W
Text Waiting | for response file for | attempts left
Help Information about the number of retries

Response file | for | transfer is available
A response file has been retrieved successfully

Message ID 51
Severity I
Text File Transfer message:
Help Report from a file transfer session.

Message ID 53
Severity I
Text Processing file | as
Help The original filename has had a timestamp added for uniqueness

Message ID 54
Severity I
Text Response received ok
Help A response file has been received

Message ID 55
Severity I
Text Preparing to send for
Help A file is being prepared for transfer

Message ID 56
Severity I
Text Waiting | to send file for |, | attempts left
Help Report on the number of retries for sending a file

Message ID 57
Severity I
Text Adding response to queue for
Help A response file transfer will be queued for later retrieval

Message ID 58
Severity E
Text Failed to send file for
Help transfer has failed - see following messages

Message ID 59
Severity E
Text Type | not supported, ignoring
Help An invalid transfer type has been specified, the transfer definition will not be used
Message ID  60  Severity  E
Text  Missing type parameter |, ignoring
Help  No transfer type has been specified - the transfer definition will not be used

Message ID  61  Severity  I
Text  Transfer type | for
Help  The specified transfer type will be used

Message ID  62  Severity  I
Text  md5sum will be sent for
Help  The transfer will also include the md5sum file

Message ID  63  Severity  I
Text  md5sum will not be sent for
Help  The transfer will not include the md5sum file

Message ID  64  Severity  I
Text  preprocess command for | is
Help  The specified command will run before a transfer

Message ID  65  Severity  I
Text  no preprocess command for
Help  There is no preprocess for a transfer

Message ID  66  Severity  I
Text  postprocess | command for | is:
Help  The specified command will run after a transfer

Message ID  67
<table>
<thead>
<tr>
<th>Severity</th>
<th>Text</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>no postprocess</td>
<td>command for</td>
</tr>
<tr>
<td>I</td>
<td>Running</td>
<td>command for</td>
</tr>
<tr>
<td>W</td>
<td>Command for</td>
<td>rc 0</td>
</tr>
<tr>
<td>W</td>
<td>Command for</td>
<td>rc</td>
</tr>
<tr>
<td>I</td>
<td>Command for</td>
<td>stdout</td>
</tr>
<tr>
<td>W</td>
<td>Command for</td>
<td>stderr</td>
</tr>
<tr>
<td>S</td>
<td>Program interrupted, shutting down</td>
<td>An interrupt signal was received</td>
</tr>
<tr>
<td>S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Message ID</td>
<td>Severity</td>
<td>Text</td>
</tr>
<tr>
<td>------------</td>
<td>----------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>75</td>
<td>W</td>
<td>SMTP Socket problem</td>
</tr>
<tr>
<td>76</td>
<td>I</td>
<td>Text File still changing, postponing</td>
</tr>
<tr>
<td>77</td>
<td>I</td>
<td>Text Email messages for</td>
</tr>
<tr>
<td>78</td>
<td>I</td>
<td>Text Email messages for</td>
</tr>
<tr>
<td>79</td>
<td>S</td>
<td>Text Failure writing file</td>
</tr>
<tr>
<td>80</td>
<td>I</td>
<td>Text Failure reading file</td>
</tr>
<tr>
<td>81</td>
<td>I</td>
<td>Text md5sum will not be created for</td>
</tr>
</tbody>
</table>
Severity I
Text Timestamp will not be used in the target filename
Help The target file name will not include the timestamp. This means that SFTPPlus will not be able to guarantee that files will not be overwritten

Message ID 82
Severity I
Text Timestamp will not be used in the local response filename
Help The local response file name will not include the timestamp. This means that SFTPPlus will not be able to guarantee that files will not be overwritten

Message ID 83
Severity I
Text Using remote directory | for
Help The remote directory where transfer files will be pulled from.

Message ID 84
Severity E
Text Missing remotedir parameter
Help A remote directory must be specified for pulling transfer files.

Message ID 85
Severity I
Text Using filename | for
Help The remote filename that will be pulled.

Message ID 86
Severity E
Text Missing remotefile parameter
Help A remote filename must be specified for pulling.

Message ID 87
Severity I
Text Using starttime | for
Help The starttime for pulling the file
Message ID 88
Severity I
Text Timed out. Logged on for |, idle time |
Help User was automatically logged off after idle timeout

Message ID 89
Severity I
Text Logged out, logged on for |
Help User logged off

Message ID 90
Severity I
Text Logging in
Help User login in progress. Message is issued after successful authentication

Message ID 91
Severity I
Text Server | name |
Help A server definition was added, with the supplied server name.

Message ID 92
Severity I
Text Server | name | updated
Help The server definition has been updated.

Message ID 93
Severity W
Text Login attempt failed
Help A failed login attempt has happened. The userid supplied is shown

Message ID 94
Severity E
Text Database error
Help An error has occurred accessing a database.
Message ID  95
Severity   W
Text       Not allowed
Help       The user does not have permission to access this resource

Message ID  96
Severity   I
Text       User | name | added
Help       A user has been added to the database

Message ID  97
Severity   I
Text       User | name | updated
Help       A user definition has been updated

Message ID  98
Severity   I
Text       Downloading |
Help       A download has started

Message ID  99
Severity   I
Text       Downloaded |
Help       A download has completed

Message ID  100
Severity   I
Text       Uploading |
Help       An upload has been started

Message ID  101
Severity   I
Text       Uploaded |
Help       An upload has completed
Message ID 102
Severity I
Text Uploaded all files
Help A set of uploads has completed

Message ID 103
Severity I
Text setting file creation mode to | and umask to |
Help The settings are made for sftp transfers

Message ID 104
Severity I
Text open
Help The file has been opened for transfer

Message ID 105
Severity W
Text read change len |
Help Reading the file resulted in a short buffer

Message ID 106
Severity I
Text reading file
Help The file is being read for transfer

Message ID 107
Severity W
Text nothing at all written
Help During an upload an empty packet resulted in zero bytes being written

Message ID 108
Severity I
Text writing file
Help A file is being written as part of an upload
Message ID 109
Severity  W
Text      process_setstat: truncate
Help     An over size file has been truncated to the correct length

Message ID 110
Severity  I
Text      chmoded |
Help     The file permissions have been changed

Message ID 111
Severity  I
Text      chmod |: operation prohibited by sftp-server configuration
Help     A chmod action has been denied

Message ID 112
Severity  I
Text      process_setstat: utimes
Help     The file timestamp has been set

Message ID 113
Severity  I
Text      chowned |
Help     The file ownership been changed

Message ID 114
Severity  I
Text      chown |: operation prohibited by sftp-server configuration
Help     A chown action has been denied

Message ID 115
Severity  I
Text      process_fsetstat
Help
<table>
<thead>
<tr>
<th>Message ID</th>
<th>Severity</th>
<th>Text</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>116</td>
<td>I</td>
<td>process_fsetstat: ftruncate</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>I</td>
<td>chmod: succeeded.</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>I</td>
<td>chmod: operation prohibited by sftp-server config</td>
<td></td>
</tr>
<tr>
<td>119</td>
<td>I</td>
<td>process_fsetstat: utimes</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>I</td>
<td>chown: succeeded</td>
<td></td>
</tr>
<tr>
<td>121</td>
<td>I</td>
<td>chown: operation prohibited by sftp-server config</td>
<td></td>
</tr>
<tr>
<td>122</td>
<td>I</td>
<td>opendir</td>
<td>The current directory has been changed</td>
</tr>
<tr>
<td>123</td>
<td>I</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Text: remove file
Help: A file has been deleted

Message ID: 124
Severity: I
Text: setting directory creation mode to | and umask to |
Help: The mode for creating directories has been set

Message ID: 125
Severity: I
Text: mkdir |
Help: A directory has been created

Message ID: 126
Severity: I
Text: rmdir |
Help: A directory has been deleted

Message ID: 127
Severity: I
Text: realpath |
Help: The path used maps to this real path

Message ID: 128
Severity: I
Text: rename old | new |
Help: A rename operation has completed

Message ID: 129
Severity: I
Text: readlink |
Help:

Message ID: 130
Severity: I
Text: symlink old | new |
Help A symlink has been created

Message ID 131
Severity I
Text Starting sftp-server logging for user |.
Help Logging for a session is in progress

Message ID 132
Severity W
Text bad value | for SFTP_UMASK, turning umask control off.
Help The value supplied is invalid for a umask.

Message ID 133
Severity I
Text umask control is on.
Help umask restrictions will be enforced

Message ID 134
Severity W
Text client is not permitted to chmod.
Help chmod functionality is restricted

Message ID 135
Severity I
Text client is not permitted to chown.
Help

Message ID 136
Severity I
Text sftp-server finished.
Help An sftp session has completed.

Message ID 137
Severity I
Text LOGIN_EXCEED_MAXTRIES
Help
Message ID 138
Severity I
Text LOGIN_ROOT_DENIED
Help

Message ID 139
Severity I
Text AUTH_SUCCESS
Help

Message ID 140
Severity I
Text AUTH_FAIL_NONE
Help

Message ID 141
Severity I
Text AUTH_FAIL_PASSWD
Help

Message ID 142
Severity I
Text AUTH_FAIL_KBDINT
Help

Message ID 143
Severity I
Text AUTH_FAIL_PUBKEY
Help

Message ID 144
Severity I
Text AUTH_FAIL_HOSTBASED
Help
Message ID 145  
Severity I  
Text AUTH_FAIL_GSSAPI  
Help  

Message ID 146  
Severity I  
Text INVALID_USER  
Help  

Message ID 147  
Severity I  
Text NOLOGIN  
Help  

Message ID 148  
Severity I  
Text CONNECTION_CLOSE  
Help  

Message ID 149  
Severity I  
Text CONNECTION_ABANDON  
Help  

Message ID 150  
Severity I  
Text SFTP_ACTION  
Help  

Message ID 151  
Severity I  
Text AUDIT_UNKNOWN  
Help  

Message ID 152  
Severity I  
Text connection from | port | euid |
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<tr>
<td>Severity</td>
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<tr>
<td>Text</td>
<td>event euid</td>
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<td>Severity</td>
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<tr>
<td>Text</td>
<td>session open euid</td>
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<tr>
<td>Text</td>
<td>session close euid</td>
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<td>Help</td>
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<td>Severity</td>
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<td>Text</td>
<td>run command euid</td>
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<td>Severity</td>
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<tr>
<td>Text</td>
<td>sftp action euid</td>
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<tr>
<td>Help</td>
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<tbody>
<tr>
<td>Severity</td>
<td>I</td>
</tr>
<tr>
<td>Text</td>
<td>No</td>
</tr>
<tr>
<td>Help</td>
<td>A packet from the sftpplus database has missing template fields.</td>
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<table>
<thead>
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<th>Message ID</th>
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<tbody>
<tr>
<td>Severity</td>
<td>I</td>
</tr>
<tr>
<td>Text</td>
<td>Full Data:</td>
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<tr>
<td>Help</td>
<td></td>
</tr>
</tbody>
</table>
Message ID 160
Severity I
Text Trying user |
Help Checking for the username that will be used

Message ID 161
Severity I
Text Using |
Help The username that will be used

Message ID 162
Severity I
Text Using | for |
Help The username that will be used

Message ID 163
Severity I
Text Using | as home
Help The home directory that will be used

Message ID 164
Severity I
Text Using | as home for |
Help The home directory that will be used

Message ID 165
Severity I
Text Expanding |
Help The tilde character is being expanded to a full filename

Message ID 166
Severity I
Text tilde_expand_filename: ~username too long
Help The given username cannot be used
Message ID 167
Severity I
Text tilde-expand-filename: Path too long
Help The expanded filename cannot be used

Message ID 168
Severity I
Text tilde-expand-filename result: |
Help The expanded filename

Message ID 169
Severity I
Text System record updated for
Help The system record has been updated
11 PLATFORM DISTRIBUTION CONTENTS - AIX
12 PLATFORM DISTRIBUTION CONTENTS – I386 LINUX

SFTPPlus Server 1.1 distribution package

SFTPPlus Admin distribution package

Xampp 1.6.1 distribution package
13 PLATFORM DISTRIBUTION CONTENTS – HP-UX

PA-RISC Distribution

Itanium Distribution
14 PLATFORM DISTRIBUTION CONTENTS - SOLARIS
15 DISTRIBUTION CONTENTS – SFTPPLUS ADMIN

The SFTPPlus Admin distribution comprises of one tarball. This tarball is 614,400 bytes in size and comprises the following files.

<table>
<thead>
<tr>
<th>Filename</th>
<th>Directory</th>
<th>Size (bytes)</th>
<th>Description</th>
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<tbody>
<tr>
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<td>SFTPPlus/explore/.config</td>
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<td>HTACCESS file</td>
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<tr>
<td>.htaccess</td>
<td>SFTPPlus/explore/.include</td>
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<td>HTACCESS file</td>
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<td>.htusers.php</td>
<td>SFTPPlus/explore/.config</td>
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<td>__copy.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>270</td>
<td>Image file</td>
</tr>
<tr>
<td>__cut.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>585</td>
<td>Image file</td>
</tr>
<tr>
<td>__paste.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>635</td>
<td>Image file</td>
</tr>
<tr>
<td>_admin.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>639</td>
<td>Image file</td>
</tr>
<tr>
<td>_archive.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>649</td>
<td>Image file</td>
</tr>
<tr>
<td>_arrowdown.gif</td>
<td>SFTPPlus/explore/_img</td>
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<td>Image file</td>
</tr>
<tr>
<td>_arrowup.gif</td>
<td>SFTPPlus/explore/_img</td>
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</tr>
<tr>
<td><em>copy</em>.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>591</td>
<td>Image file</td>
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<tr>
<td>_copy.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>587</td>
<td>Image file</td>
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<tr>
<td>_delete.gif</td>
<td>SFTPPlus/explore/_img</td>
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<td>Image file</td>
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<td>Image file</td>
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<td>_download.gif</td>
<td>SFTPPlus/explore/_img</td>
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<tr>
<td>_home.gif</td>
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<td>_upload.gif</td>
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<td>license.txt</td>
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<td>text file – contains Mozilla public license information</td>
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<tr>
<td>Filename</td>
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<td>Size (bytes)</td>
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<td>MaintainerPassword.php</td>
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<td>2,053</td>
<td>php file</td>
</tr>
<tr>
<td>maintainers.php</td>
<td>SFTPPlus/</td>
<td>1,143</td>
<td>php file</td>
</tr>
<tr>
<td>message.php</td>
<td>SFTPPlus/</td>
<td>26,502</td>
<td>php file</td>
</tr>
<tr>
<td>midl.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>632</td>
<td>image file</td>
</tr>
<tr>
<td>mimes.php</td>
<td>SFTPPlus/explore/.config</td>
<td>3,754</td>
<td>php file</td>
</tr>
<tr>
<td>mp3.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>246</td>
<td>image file</td>
</tr>
<tr>
<td>nl.php</td>
<td>SFTPPlus/explore/_lang</td>
<td>5,801</td>
<td>php file - Dutch language module</td>
</tr>
<tr>
<td>nl_mimes.php</td>
<td>SFTPPlus/explore/_lang</td>
<td>1,316</td>
<td>php file – Dutch language module</td>
</tr>
<tr>
<td>pdf.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>372</td>
<td>image file</td>
</tr>
<tr>
<td>php.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>139</td>
<td>image file</td>
</tr>
<tr>
<td>pl.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>406</td>
<td>image file</td>
</tr>
<tr>
<td>proatria.jpg</td>
<td>SFTPPlus/</td>
<td>7,050</td>
<td>image file</td>
</tr>
<tr>
<td>readme.txt</td>
<td>SFTPPlus/explore/</td>
<td>3,097</td>
<td>text file – Quixplorer release notes</td>
</tr>
<tr>
<td>real.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>645</td>
<td>image file</td>
</tr>
<tr>
<td>release.txt</td>
<td>SFTPPlus/explore/</td>
<td>2,850</td>
<td>text file – Quixplorer release notes</td>
</tr>
<tr>
<td>ru.php</td>
<td>SFTPPlus/explore/_lang</td>
<td>7,654</td>
<td>php file – Russian language module</td>
</tr>
<tr>
<td>ru_mimes</td>
<td>SFTPPlus/explore/_lang</td>
<td>1,684</td>
<td>php file – Russian language module</td>
</tr>
<tr>
<td>samples</td>
<td>SFTPPlus/</td>
<td>1,751</td>
<td></td>
</tr>
<tr>
<td>ServerDetail.php</td>
<td>SFTPPlus/</td>
<td>25,577</td>
<td>php file</td>
</tr>
<tr>
<td>ServerDomainUsers.php</td>
<td>SFTPPlus/</td>
<td>18,533</td>
<td>php file</td>
</tr>
<tr>
<td>servers.php</td>
<td>SFTPPlus/</td>
<td>950</td>
<td>php file</td>
</tr>
<tr>
<td>sftpplus.jpg</td>
<td>SFTPPlus/</td>
<td>7,395</td>
<td>image file</td>
</tr>
<tr>
<td>SFTPPlus_database.sql</td>
<td>SFTPPlus/</td>
<td>9,901</td>
<td>sql file</td>
</tr>
<tr>
<td>SFTPPlus_Database_Update_1.sql</td>
<td>SFTPPlus/</td>
<td>209</td>
<td>sql update file 1</td>
</tr>
<tr>
<td>Filename</td>
<td>Directory</td>
<td>Size (bytes)</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------</td>
<td>--------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>SFTPPlus_Database_Update_2.sql</td>
<td>SFTPPlus/</td>
<td>659</td>
<td>sql update file 2</td>
</tr>
<tr>
<td>SFTPPlus_Database_Update_3.sql</td>
<td>SFTPPlus/</td>
<td>186</td>
<td>sql update file 3</td>
</tr>
<tr>
<td>SFTPPlus_Database_Update_4.sql</td>
<td>SFTPPlus/</td>
<td>501</td>
<td>sql update file 4 – PLEASE NOTE: DO NOT USE</td>
</tr>
<tr>
<td>sftpplus_tiny.sql</td>
<td>SFTPPlus/</td>
<td>5,082</td>
<td>image file</td>
</tr>
<tr>
<td>SFTPPlus-MSSQL.sql</td>
<td>SFTPPlus/</td>
<td>8,148</td>
<td>sql script file for Microsoft SQL</td>
</tr>
<tr>
<td>SFTPPlusWebAdmin.bfproject</td>
<td>SFTPPlus/</td>
<td>2,354</td>
<td></td>
</tr>
<tr>
<td>sound.gif</td>
<td>SFTPPlus/</td>
<td>603</td>
<td>image file</td>
</tr>
<tr>
<td>spread.gif</td>
<td>SFTPPlus/</td>
<td>367</td>
<td>image file</td>
</tr>
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<td>src.gif</td>
<td>SFTPPlus/</td>
<td>181</td>
<td>image file</td>
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<td>style.css</td>
<td>SFTPPlus/</td>
<td>18,666</td>
<td>Cascading Style Sheet</td>
</tr>
<tr>
<td>style.css</td>
<td>SFTPPlus/</td>
<td>681</td>
<td>Cascading Style Sheet</td>
</tr>
<tr>
<td>style1.css</td>
<td>SFTPPlus/</td>
<td>753</td>
<td>Cascading Style Sheet</td>
</tr>
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<td>tablebg.gif</td>
<td>SFTPPlus/</td>
<td>175</td>
<td>image file</td>
</tr>
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<td>tar.gif</td>
<td>SFTPPlus/</td>
<td>644</td>
<td>image file</td>
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<td>test.php</td>
<td>SFTPPlus/</td>
<td>84</td>
<td>php file</td>
</tr>
<tr>
<td>tgz.gif</td>
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<td>649</td>
<td>image file</td>
</tr>
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<td>transferauth.php</td>
<td>SFTPPlus/</td>
<td>1,442</td>
<td>php file</td>
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<tr>
<td>transferheader.php</td>
<td>SFTPPlus/</td>
<td>1,999</td>
<td>php file</td>
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<tr>
<td>transferindex.phpo</td>
<td>SFTPPlus/</td>
<td>4,979</td>
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<td>transferlogin.php</td>
<td>SFTPPlus/</td>
<td>4,105</td>
<td>php file</td>
</tr>
<tr>
<td>TransferLoginAlias.php</td>
<td>SFTPPlus/</td>
<td>1,568</td>
<td>php file</td>
</tr>
<tr>
<td>TransferLoginSimple.php</td>
<td>SFTPPlus/</td>
<td>1,744</td>
<td>php file</td>
</tr>
<tr>
<td>txt.gif</td>
<td>SFTPPlus/</td>
<td>591</td>
<td>php file</td>
</tr>
<tr>
<td>upload.php</td>
<td>SFTPPlus/</td>
<td>523</td>
<td>php file</td>
</tr>
<tr>
<td>upload_file.php</td>
<td>SFTPPlus/</td>
<td>520</td>
<td>php file</td>
</tr>
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<td>UploadFile.php</td>
<td>SFTPPlus/</td>
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<td>php file</td>
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<td>UserDelete.php</td>
<td>SFTPPlus/</td>
<td>1,122</td>
<td>php file</td>
</tr>
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<td>UserDetail.php</td>
<td>SFTPPlus/</td>
<td>19,647</td>
<td>php file</td>
</tr>
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<td>userPassword.php</td>
<td>SFTPPlus/</td>
<td>1,927</td>
<td>image file</td>
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<td>users.php</td>
<td>SFTPPlus/</td>
<td>939</td>
<td>php file</td>
</tr>
<tr>
<td>usersdb.php</td>
<td>SFTPPlus/</td>
<td>865</td>
<td>php file</td>
</tr>
<tr>
<td>Filename</td>
<td>Directory</td>
<td>Size (bytes)</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>------------------------</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>video.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>393</td>
<td>image file</td>
</tr>
<tr>
<td>word.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>372</td>
<td>image file</td>
</tr>
<tr>
<td>zip.gif</td>
<td>SFTPPlus/explore/_img</td>
<td>119</td>
<td>image file</td>
</tr>
</tbody>
</table>
16 DISTRIBUTION CONTENTS – XAMPP FOR LINUX (i386)

This is supplied as a 51MB file in tar.gz format.

The contents of the Xampp for Linux 1.6.1 distribution is follows;

Apache 2.2.4, MySQL 5.0.37, PHP 5.2.1 & 4.4.6 & PEAR + SQLite 2.8.17/3.2.8 + multibyte (mbstring) support, Perl 5.8.7, ProFTPD 1.3.0a, phpMyAdmin 2.10.02, OpenSSL 0.9.8e, GD 2.0.1, Freetype2 2.1.7, libjpeg 6b, libpng 1.2.12, gdbm 1.8.0, zlib 1.2.3, expat 1.2, Sablotron 1.0, libxml 2.4.26, Ming 0.3, Webalizer 2.01, pdf class 009e, ncurses 5.8, mod_perl 2.0.2, FreeTDS 0.63, gettext 0.11.5, IMAP C-Client 2004e, OpenLDAP (client) 2.3.11, mcrypt 2.5.7, mhash 0.8.18, eAccelerator 0.9.4, cURL 7.13.1, libxml2 1.1.8, phpSQLiteAdmin 0.2, libapreq 2.07, FPDF 1.53, XAMPP Control Panel 0.6

Total of 9,835 files

MD5 checksum: b296ff33e3e76a9bf1893f3831141878
17 DISTRIBUTION CONTENTS – XAMPP FOR SOLARIS

This is supplied as a 45MB file in a shell script file format with embedded gz data.

The contents of the Xampp for Solaris 0.8.2 distribution is as follows;

Apache 2.2.4, MySQL 5.0.37, PHP 5.2.1 & PEAR + multibyte (mbstring) support, Perl 5.8.3, ProFTPD 1.3.0a, phpMyAdmin 2.10.02, OpenSSL 0.9.8e, FreeType2 2.1.7, libjpeg 6b, libpng 1.2.12, zlib 1.2.3, expat 1.95.7, Ming 0.3, pdf class 009e, IMAP C-Client 2006, OpenLDAP (client) 2.3.11, libiconv 1.8, FreeTDS 0.63, libgd (1.8.3), Libxslt (1.1.9), mcrypt 2.5.7, cURL 7.15.5, eAccelerator (0.9.5), Webalizer (2.01)

MD5 checksum: caa9f5491aab2e179366ba0a610b06f0
18 VSFTPD.CONF CONFIGURATION REFERENCE

18.1 Description
vsftpd.conf (for FTP) and vsftpd.confssl (FTPS) may be used to control various aspects of vsftpd's behaviour. By default, vsftpd looks for this file at the location /etc/vsftpd.conf. However, you may override this by specifying a command line argument to vsftpd. The command line argument is the pathname of the configuration file for vsftpd, for example;

vsftpd /opt/SFTPPlus/etc/vsftpd-server2.conf.

18.2 Format
The format of vsftpd.conf is very simple. Each line is either a comment or a directive. Comment lines start with a # and are ignored. A directive line has the format:

option=value

Please Note:
It is important to note that it is an error to put any space between the option name = and value.

Each setting has a compiled in default which may be modified in the configuration file. These parameter defaults are noted in the tables below.

18.3 Boolean Options
Below is a list of Boolean options. The value for a Boolean option may be set to YES or NO.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>allow_anon_ssl</td>
<td>NO</td>
<td>Only applies if ssl_enable is active. If set to YES, anonymous users will be allowed to use secured SSL connections.</td>
</tr>
<tr>
<td>anon_mkdir_write_enable</td>
<td>NO</td>
<td>If set to YES, anonymous users will be permitted to create new directories under certain conditions. For this to work, the option write_enable must be</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>activated, and the anonymous ftp user must have write permission on the parent directory.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>anon_other_write_enable</td>
<td>NO</td>
<td>If set to YES, anonymous users will be permitted to perform write operations other than upload and create directory, such as deletion and renaming. This is generally not recommended but included for completeness.</td>
</tr>
<tr>
<td>anon_upload_enable</td>
<td>NO</td>
<td>If set to YES, anonymous users will be permitted to upload files under certain conditions. For this to work, the option write_enable must be activated, and the anonymous ftp user must have write permission on desired upload location</td>
</tr>
<tr>
<td>anon_world_readable_only</td>
<td>YES</td>
<td>When enabled, anonymous users will only be allowed to download files which are world readable. This is recognising that the ftp user may own files, especially in the presence of uploads.</td>
</tr>
<tr>
<td>anonymous_enable</td>
<td>YES</td>
<td>Controls whether anonymous logins are permitted or not. If enabled, both the usernames ftp and anonymous are recognised as anonymous logins.</td>
</tr>
<tr>
<td>ascii_download_enable</td>
<td>NO</td>
<td>When enabled, ASCII mode data transfers will be honoured on downloads.</td>
</tr>
<tr>
<td>ascii_upload_enable</td>
<td>NO</td>
<td>When enabled, ASCII mode data transfers will be honoured on uploads.</td>
</tr>
<tr>
<td>async_abor_enable</td>
<td>NO</td>
<td>When enabled, a special FTP command known as &quot;async ABOR&quot; will be enabled. Only ill advised FTP clients will use this feature. Additionally, this feature is awkward to handle, so it is disabled by default. Unfortunately, some FTP clients will hang when cancelling a transfer unless this feature is available, so you may wish to enable it.</td>
</tr>
</tbody>
</table>

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SFTPPlus Server v1.1 for Linux & Unix - Installation Guide, Doc. Ver. 25/6/07-draft
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>background</td>
<td>NO</td>
<td>When enabled, and vsftpd is started in &quot;listen&quot; mode, vsftpd will background the listener process. i.e. control will immediately be returned to the shell which launched vsftpd.</td>
</tr>
<tr>
<td>check_shell</td>
<td>YES</td>
<td>Note! This option only has an effect for non-PAM builds of vsftpd. If disabled, vsftpd will not check /etc/shells for a valid user shell for local logins.</td>
</tr>
<tr>
<td>chmod_enable</td>
<td>YES</td>
<td>When enabled, allows use of the SITE CHMOD command. NOTE! This only applies to local users. Anonymous users never get to use SITE CHMOD.</td>
</tr>
<tr>
<td>chown uploads</td>
<td>NO</td>
<td>If enabled, all anonymously uploaded files will have the ownership changed to the user specified in the setting chown_username. This is useful from an administrative, and perhaps security, standpoint.</td>
</tr>
<tr>
<td>chroot_list_enable</td>
<td>NO</td>
<td>If activated, you may provide a list of local users who are placed in a chroot() jail in their home directory upon login. The meaning is slightly different if chroot_local_user is set to YES. In this case, the list becomes a list of users which are NOT to be placed in a chroot() jail. By default, the file containing this list is /etc/vsftpd.chroot_list, but you may override this with the chroot_list_file setting.</td>
</tr>
<tr>
<td>chroot_local_user</td>
<td>NO</td>
<td>If set to YES, local users will be (by default) placed in a chroot() jail in their home directory after login. <strong>Warning:</strong> This option has security implications, especially if the users have upload permission, or shell access. Only enable if you know what you are doing. Note that these security implications are not vsftpd specific. They apply to all FTP daemons which offer to put local users in chroot() jails.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>connect_from_port_20</td>
<td>NO</td>
<td>This controls whether PORT style data connections use port 20 (ftp-data) on the server machine. For security reasons, some clients may insist that this is the case. Conversely, disabling this option enables vsftpd to run with slightly less privilege.</td>
</tr>
<tr>
<td>deny_email_enable</td>
<td>NO</td>
<td>If activated, you may provide a list of anonymous password e-mail responses which cause login to be denied. By default, the file containing this list is /etc/vsftpd.banned_emails, but you may override this with the banned_email_file setting.</td>
</tr>
<tr>
<td>dirlist_enable</td>
<td>YES</td>
<td>If set to NO, all directory list commands will give permission denied.</td>
</tr>
<tr>
<td>dirmessage_enable</td>
<td>NO</td>
<td>If enabled, users of the FTP server can be shown messages when they first enter a new directory. By default, a directory is scanned for the file .message, but that may be overridden with the configuration setting message_file</td>
</tr>
<tr>
<td>download_enable</td>
<td>YES</td>
<td>If set to NO, all download requests will give permission denied.</td>
</tr>
<tr>
<td>dual_log_enable</td>
<td>NO</td>
<td>If enabled, two log files are generated in parallel, going by default to /var/log/xferlog and /var/log/vsftpd.log. The former is a wu-ftpds style transfer log, parseable by standard tools. The latter is vsftpd's own style log</td>
</tr>
<tr>
<td>force_dot_files</td>
<td>NO</td>
<td>If activated, files and directories starting with . will be shown in directory listings even if the &quot;a&quot; flag was not used by the client. This override excludes the &quot;.&quot; and &quot;..&quot; entries.</td>
</tr>
<tr>
<td>force_local_data_ssl</td>
<td>YES</td>
<td>Only applies if ssl_enable is activated. If activated, all non-anonymous logins are forced to use a secure SSL connection in</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default Value</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>force_local_logins_ssl</td>
<td>YES</td>
<td>Only applies if ssl_enable is activated. If activated, all non-anonymous logins are forced to use a secure SSL connection in order to send the password.</td>
</tr>
<tr>
<td>guest_enable</td>
<td>NO</td>
<td>If enabled, all non-anonymous logins are classed as &quot;guest&quot; logins. A guest login is remapped to the user specified in the guest_username setting.</td>
</tr>
<tr>
<td>hide_ids</td>
<td>NO</td>
<td>If enabled, all user and group information in directory listings will be displayed as &quot;ftp&quot;.</td>
</tr>
<tr>
<td>listen</td>
<td>NO</td>
<td>If enabled, vsftpd will run in standalone mode. This means that vsftpd must not be run from an inetd of some kind. Instead, the vsftpd executable is run once directly. vsftpd itself will then take care of listening for and handling incoming connections.</td>
</tr>
<tr>
<td>listen_ipv6</td>
<td>NO</td>
<td>Like the listen parameter, except vsftpd will listen on an IPv6 socket instead of an IPv4 one. This parameter and the listen parameter are mutually exclusive.</td>
</tr>
<tr>
<td>local_enable</td>
<td>NO</td>
<td>Controls whether local logins are permitted or not. If enabled, normal user accounts in /etc/passwd may be used to log in.</td>
</tr>
<tr>
<td>log_ftp_protocol</td>
<td>NO</td>
<td>When enabled, all FTP requests and responses are logged, providing the option xferlog_std_format is not enabled. Useful for debugging.</td>
</tr>
<tr>
<td>ls_recurse_enable</td>
<td>NO</td>
<td>When enabled, this setting will allow the use of &quot;ls -R&quot;. This is a minor security risk, because a ls -R at the top level of a large site may consume a lot of resources.</td>
</tr>
<tr>
<td>no_anon_password</td>
<td>NO</td>
<td>When enabled, this prevents vsftpd from asking for an anonymous password - the anonymous user will log straight in</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>no_log_lock</td>
<td>NO</td>
<td>When enabled, this prevents vsftpd from taking a file lock when writing to log files. This option should generally not be enabled. It exists to workaround operating system bugs such as the Solaris / Veritas filesystem combination which has been observed to sometimes exhibit hangs trying to lock log files.</td>
</tr>
<tr>
<td>one_process_model</td>
<td>NO</td>
<td>If you have a Linux 2.4 kernel, it is possible to use a different security model which only uses one process per connection. It is a less pure security model, but gains you performance. You really don't want to enable this unless you know what you are doing, and your site supports huge numbers of simultaneously connected users.</td>
</tr>
<tr>
<td>passwd_chroot_enable</td>
<td>NO</td>
<td>If enabled, along with <code>chroot_local_user</code>, then a chroot() jail location may be specified on a per-user basis. Each user's jail is derived from their home directory string in <code>/etc/passwd</code>. The occurrence of <code>./</code> in the home directory string denotes that the jail is at that particular location in the path.</td>
</tr>
<tr>
<td>pasv_enable</td>
<td>YES</td>
<td>Set to NO if you want to disallow the PASV method of obtaining a data connection.</td>
</tr>
<tr>
<td>pasv_promiscuous</td>
<td>NO</td>
<td>Set to YES if you want to disable the PASV security check that ensures the data connection originates from the same IP address as the control connection. Only enable if you know what you are doing! The only legitimate use for this is in some form of secure tunnelling scheme, or perhaps to facilitate FXP support.</td>
</tr>
<tr>
<td>port_enable</td>
<td>YES</td>
<td>Set to NO if you want to disallow the PORT method of obtaining a data connection.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>port_promiscuous</td>
<td>Set to YES if you want to disable the PORT security check that ensures that outgoing data connections can only connect to the client. Only enable if you know what you are doing!</td>
<td></td>
</tr>
<tr>
<td>run_as_launching_user</td>
<td>Set to YES if you want vsftpd to run as the user which launched vsftpd. This is useful where root access is not available. MASSIVE WARNING! Do NOT enable this option unless you totally know what you are doing, as naive use of this option can create massive security problems. Specifically, vsftpd does not / cannot use chroot technology to restrict file access when this option is set (even if launched by root). A poor substitute could be to use a <code>deny_file</code> setting such as <code>/*,*..*</code>, but the reliability of this cannot compare to chroot, and should not be relied on. If using this option, many restrictions on other options apply. For example, options requiring privilege such as non-anonymous logins, upload ownership changing, connecting from port 20 and listen ports less than 1024 are not expected to work. Other options may be impacted.</td>
<td></td>
</tr>
<tr>
<td>secure_email_list_enable</td>
<td>NO</td>
<td>Set to YES if you want only a specified list of e-mail passwords for anonymous logins to be accepted. This is useful as a low-hassle way of restricting access to low-security content without needing virtual users. When enabled, anonymous logins are prevented unless the password provided is listed in the file specified by the <code>email_password_file</code> setting. The file format is one password per line, no extra white space. The default filename is</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>session_support</td>
<td>NO</td>
<td>This controls whether vsftpd attempts to maintain sessions for logins. If vsftpd is maintaining sessions, it will try and update utmp and wtmp. It will also open a pam_session if using PAM to authenticate, and only close this upon logout. You may wish to disable this if you do not need session logging, and you wish to give vsftpd more opportunity to run with less processes and / or less privilege. NOTE - utmp and wtmp support is only provided with PAM enabled builds.</td>
</tr>
<tr>
<td>setproctitle_enable</td>
<td>NO</td>
<td>If enabled, vsftpd will try and show session status information in the system process listing. In other words, the reported name of the process will change to reflect what a vsftpd session is doing (idle, downloading etc). You probably want to leave this off for security purposes.</td>
</tr>
<tr>
<td>ssl_enable</td>
<td>NO</td>
<td>If enabled, and vsftpd was compiled against OpenSSL, vsftpd will support secure connections via SSL. This applies to the control connection (including login) and also data connections. You'll need a client with SSL support too. NOTE!! Beware enabling this option. Only enable it if you need it. vsftpd can make no guarantees about the security of the OpenSSL libraries. By enabling this option, you are declaring that you trust the security of your installed OpenSSL library.</td>
</tr>
<tr>
<td>ssl_implicit</td>
<td>NO</td>
<td>Enables Implicit FTPS mode. Used in conjunction with ssl_enabled=yes.</td>
</tr>
<tr>
<td>ssl_sslv2</td>
<td>NO</td>
<td>Only applies if ssl_enable is activated. If enabled, this option will permit SSL v2 protocol connections. TLS v1 connections</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>ssl_sslv3</code></td>
<td>NO</td>
<td>Only applies if <code>ssl_enable</code> is activated. If enabled, this option will permit SSL v3 protocol connections. TLS v1 connections are preferred.</td>
</tr>
<tr>
<td><code>ssl_tlsv1</code></td>
<td>YES</td>
<td>Only applies if <code>ssl_enable</code> is activated. If enabled, this option will permit TLS v1 protocol connections. TLS v1 connections are preferred.</td>
</tr>
<tr>
<td><code>syslog_enable</code></td>
<td>NO</td>
<td>If enabled, then any log output which would have gone to /var/log/vsftpd.log goes to the system log instead. Logging is done under the FTPD facility.</td>
</tr>
<tr>
<td><code>tcp_wrappers</code></td>
<td>NO</td>
<td>If enabled, and vsftpd was compiled with tcp_wrappers support, incoming connections will be fed through tcp_wrappers access control. Furthermore, there is a mechanism for per-IP based configuration. If tcp_wrappers sets the VSFTPD_LOAD_CONF environment variable, then the vsftpd session will try and load the vsftpd configuration file specified in this variable.</td>
</tr>
<tr>
<td><code>text_userdb_names</code></td>
<td>NO</td>
<td>By default, numeric IDs are shown in the user and group fields of directory listings. You can get textual names by enabling this parameter. It is off by default for performance reasons.</td>
</tr>
<tr>
<td><code>tilde_user_enable</code></td>
<td>NO</td>
<td>If enabled, vsftpd will try and resolve pathnames such as ~chris/pics, i.e. a tilde followed by a username. Note that vsftpd will always resolve the pathnames ~ and ~/something (in this case the ~ resolves to the initial login directory). Note that ~user paths will only resolve if the file /etc/passwd may be found within the _current_chroot() jail.</td>
</tr>
<tr>
<td><code>use_localtime</code></td>
<td>NO</td>
<td>If enabled, vsftpd will display are preferred.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>directory listings with the time in your local time zone. The default is to display GMT. The times returned by the MDTM FTP command are also affected by this option.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>use_sendfile</td>
<td>YES</td>
<td>An internal setting used for testing the relative benefit of using the sendfile() system call on your platform.</td>
</tr>
<tr>
<td>userlist_deny</td>
<td>YES</td>
<td>This option is examined if userlist_enable is activated. If you set this setting to NO, then users will be denied login unless they are explicitly listed in the file specified by userlist_file. When login is denied, the denial is issued before the user is asked for a password.</td>
</tr>
<tr>
<td>userlist_enable</td>
<td>NO</td>
<td>If enabled, vsftpd will load a list of usernames, from the filename given by userlist_file. If a user tries to log in using a name in this file, they will be denied before they are asked for a password. This may be useful in preventing cleartext passwords being transmitted. See also userlist_deny.</td>
</tr>
<tr>
<td>virtual_use_local_privs</td>
<td>NO</td>
<td>If enabled, virtual users will use the same privileges as local users. By default, virtual users will use the same privileges as anonymous users, which tends to be more restrictive (especially in terms of write access).</td>
</tr>
<tr>
<td>write_enable</td>
<td>NO</td>
<td>This controls whether any FTP commands which change the filesystem are allowed or not. These commands are: STOR, DELE, RNFR, RNTO, MKD, RMD, APPE and SITE</td>
</tr>
<tr>
<td>xferlog_enable</td>
<td>NO</td>
<td>If enabled, a log file will be maintained detailing uploads and downloads. By default, this file will be placed at /var/log/vsftpd.log, but this</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>xferlog_std_format</td>
<td>NO</td>
<td>If enabled, the transfer log file will be written in standard xferlog format, as used by wu-ftpd. This is useful because you can reuse existing transfer statistics generators. The default format is more readable, however. The default location for this style of log file is /var/log/xferlog, but you may change it with the setting xferlog_file</td>
</tr>
</tbody>
</table>

### 18.4 Numeric Options

Below is a list of numeric options. A numeric option must be set to a non negative integer. Octal numbers are supported, for convenience of the umask options. To specify an octal number, use 0 as the first digit of the number.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>accept_timeout</td>
<td>60</td>
<td>The timeout, in seconds, for a remote client to establish connection with a PASV style data connection.</td>
</tr>
<tr>
<td>anon_max_rate</td>
<td>0 (unlimited)</td>
<td>The maximum data transfer rate permitted, in bytes per second, for anonymous clients.</td>
</tr>
<tr>
<td>anon_umask</td>
<td>077</td>
<td>The value that the umask for file creation is set to for anonymous users. NOTE! If you want to specify octal values, remember the &quot;0&quot; prefix otherwise the value will be treated as a base 10 integer!</td>
</tr>
<tr>
<td>connect_timeout</td>
<td>60</td>
<td>The timeout, in seconds, for a remote client to respond to our PORT style data connection.</td>
</tr>
<tr>
<td>data_connection_timeout</td>
<td>300</td>
<td>The timeout, in seconds, which is roughly the maximum time we permit data transfers to stall for with no progress. If the timeout triggers, the remote client is kicked off.</td>
</tr>
<tr>
<td>file_open_mode</td>
<td>0666</td>
<td>The permissions with which uploaded files are created. Umasks are applied.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ftp_data_port</td>
<td>20</td>
<td>The port from which PORT style connections originate (as long as the poorly named <code>connect_from_port_20</code> is enabled).</td>
</tr>
<tr>
<td>idle_session_timeout</td>
<td>300</td>
<td>The timeout, in seconds, which is the maximum time a remote client may spend between FTP commands. If the timeout triggers, the remote client is kicked off.</td>
</tr>
<tr>
<td>listen_port</td>
<td>21</td>
<td>If vsftpd is in standalone mode, this is the port it will listen on for incoming FTP connections.</td>
</tr>
<tr>
<td>local_max_rate</td>
<td>0 (unlimited)</td>
<td>The maximum data transfer rate permitted, in bytes per second, for local authenticated users.</td>
</tr>
<tr>
<td>local_umask</td>
<td>077</td>
<td>The value that the umask for file creation is set to for local users. NOTE! If you want to specify octal values, remember the &quot;0&quot; prefix otherwise the value will be treated as a base 10 integer!</td>
</tr>
<tr>
<td>max_clients</td>
<td>0 (unlimited)</td>
<td>If vsftpd is in standalone mode, this is the maximum number of clients which may be connected. Any additional clients connecting will get an error message.</td>
</tr>
<tr>
<td>max_per_ip</td>
<td>0 (unlimited)</td>
<td>If vsftpd is in standalone mode, this is the maximum number of clients which may be connected from the same source internet address. A client will get an error message if they go over this limit.</td>
</tr>
<tr>
<td>pasv_max_port</td>
<td>0 (use any port)</td>
<td>The maximum port to allocate for PASV style data connections. Can be used to specify a narrow port range to assist firewalling.</td>
</tr>
<tr>
<td>pasv_min_port</td>
<td>0 (use any port)</td>
<td>The minimum port to allocate for PASV style data connections. Can be used to specify a narrow port range to assist firewalling.</td>
</tr>
<tr>
<td>trans_chunk_size</td>
<td>0 (let vsftpd pick a sensible)</td>
<td>You probably don't want to change this, but try setting it to something like...</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>anon_root</td>
<td>(none)</td>
<td>This option represents a directory which vsftpd will try to change into after an anonymous login. Failure is silently ignored.</td>
</tr>
<tr>
<td>banned_email_file</td>
<td>/etc/vsftpd.banned_emails</td>
<td>This option is the name of a file containing a list of anonymous e-mail passwords which are not permitted. This file is consulted if the option deny_email_enable is enabled.</td>
</tr>
<tr>
<td>banner_file</td>
<td>(none)</td>
<td>This option is the name of a file containing text to display when someone connects to the server. If set, it overrides the banner string provided by the ftpd_banner option.</td>
</tr>
<tr>
<td>chown_username</td>
<td>root</td>
<td>This is the name of the user who is given ownership of anonymously uploaded files. This option is only relevant if another option, chown_uploads, is set.</td>
</tr>
<tr>
<td>chroot_list_file</td>
<td>/etc/vsftpd.chroot_list</td>
<td>The option is the name of a file containing a list of local users which will be placed in a chroot() jail in their home directory. This option is only relevant if the option chroot_list_enable is enabled. If the option chroot_local_user is enabled, then the list file becomes a list of users to NOT place in a chroot() jail.</td>
</tr>
<tr>
<td>cmds_allowed</td>
<td>(none)</td>
<td>This option specifies a comma separated list of allowed FTP commands (post login. USER, PASS and QUIT are always allowed pre-login). Other commands are rejected. This is a powerful method of really locking down an FTP server. Example: cmds_allowed=PASV,RETR,QUIT</td>
</tr>
</tbody>
</table>

18.5 String Options

Below is a list of string options.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>anon_root</td>
<td>(none)</td>
<td>This option represents a directory which vsftpd will try to change into after an anonymous login. Failure is silently ignored.</td>
</tr>
<tr>
<td>banned_email_file</td>
<td>/etc/vsftpd.banned_emails</td>
<td>This option is the name of a file containing a list of anonymous e-mail passwords which are not permitted. This file is consulted if the option deny_email_enable is enabled.</td>
</tr>
<tr>
<td>banner_file</td>
<td>(none)</td>
<td>This option is the name of a file containing text to display when someone connects to the server. If set, it overrides the banner string provided by the ftpd_banner option.</td>
</tr>
<tr>
<td>chown_username</td>
<td>root</td>
<td>This is the name of the user who is given ownership of anonymously uploaded files. This option is only relevant if another option, chown_uploads, is set.</td>
</tr>
<tr>
<td>chroot_list_file</td>
<td>/etc/vsftpd.chroot_list</td>
<td>The option is the name of a file containing a list of local users which will be placed in a chroot() jail in their home directory. This option is only relevant if the option chroot_list_enable is enabled. If the option chroot_local_user is enabled, then the list file becomes a list of users to NOT place in a chroot() jail.</td>
</tr>
<tr>
<td>cmds_allowed</td>
<td>(none)</td>
<td>This option specifies a comma separated list of allowed FTP commands (post login. USER, PASS and QUIT are always allowed pre-login). Other commands are rejected. This is a powerful method of really locking down an FTP server. Example: cmds_allowed=PASV,RETR,QUIT</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>deny_file</td>
<td>(none)</td>
<td>This option can be used to set a pattern for filenames (and directory names etc.) which should not be accessible in any way. The affected items are not hidden, but any attempt to do anything to them (download, change into directory, affect something within directory etc.) will be denied. This option is very simple, and should not be used for serious access control - the filesystem's permissions should be used in preference. However, this option may be useful in certain virtual user setups. In particular aware that if a filename is accessible by a variety of names (perhaps due to symbolic links or hard links), then care must be taken to deny access to all the names. Access will be denied to items if their name contains the string given by hide_file, or if they match the regular expression specified by hide_file. Note that vsftpd's regular expression matching code is a simple implementation which is a subset of full regular expression functionality. You are recommended to use filesystem permissions for any important security policies due to their greater reliability. Example: deny_file={<em>.mp3,</em>.mov,.private}</td>
</tr>
<tr>
<td>dsa_cert_file</td>
<td>None (an RSA certificate suffices)</td>
<td>This option specifies the location of the DSA certificate to use for SSL encrypted connections.</td>
</tr>
<tr>
<td>email_password_file</td>
<td>/etc/vsftpd.email_passwords</td>
<td>This option can be used to provide an alternate file for usage by the secure_email_list_enable setting.</td>
</tr>
<tr>
<td>ftp_username</td>
<td>ftp</td>
<td>This is the name of the user we use for handling anonymous FTP. The home directory of this user is the root of the anonymous FTP area.</td>
</tr>
<tr>
<td>ftppd_banner</td>
<td>None (default vsftpd banner is displayed)</td>
<td>This string option allows you to override the greeting banner displayed by vsftpd when a connection first comes in.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Default value</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>guest_username</td>
<td>ftp</td>
<td>See the boolean setting guest_enable for a description of what constitutes a guest login. This setting is the real username which guest users are mapped to.</td>
</tr>
<tr>
<td>hide_file</td>
<td>(none)</td>
<td>This option can be used to set a pattern for filenames (and directory names etc.) which should be hidden from directory listings. Despite being hidden, the files / directories etc. are fully accessible to clients who know what names to actually use. Items will be hidden if their names contain the string given by hide_file, or if they match the regular expression specified by hide_file. Note that vsftpd's regular expression matching code is a simple implementation which is a subset of full regular expression functionality. Example: hide_file={<em>.mp3,.hidden,hide</em>,h?}</td>
</tr>
<tr>
<td>listen_address</td>
<td>(none)</td>
<td>If vsftpd is in standalone mode, the default listen address (of all local interfaces) may be overridden by this setting. Provide a numeric IP address.</td>
</tr>
<tr>
<td>listen_address6</td>
<td>(none)</td>
<td>Like listen_address, but specifies a default listen address for the IPv6 listener (which is used if listen_ipv6 is set). Format is standard IPv6 address format.</td>
</tr>
<tr>
<td>local_root</td>
<td>(none)</td>
<td>This option represents a directory which vsftpd will try to change into after a local (i.e. non-anonymous) login. Failure is silently ignored.</td>
</tr>
<tr>
<td>message_file</td>
<td>.message</td>
<td>This option is the name of the file we look for when a new directory is entered. The contents are displayed to the remote user. This option is only relevant if the option dirmessage_enable is enabled.</td>
</tr>
</tbody>
</table>
| nopriv_user     | nobody        | This is the name of the user that is used by vsftpd when it wants to be totally unprivileged. Note that this should be a dedicated user, rather than nobody. The user nobody tends to be used for rather a lot of important
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pam_service_name</strong></td>
<td>ftp</td>
<td>This string is the name of the PAM service vsftpd will use.</td>
</tr>
<tr>
<td><strong>pav_address</strong></td>
<td></td>
<td>Use this option to override the IP address that vsftpd will advertise in response to the PASV command. Provide a numeric IP address.</td>
</tr>
<tr>
<td><strong>rsa_cert_file</strong></td>
<td>/usr/share/ssl/certs/vsftpd.pem</td>
<td>This option specifies the location of the RSA certificate to use for SSL encrypted connections.</td>
</tr>
<tr>
<td><strong>secure_chroot_dir</strong></td>
<td>/usr/share/empty</td>
<td>This option should be the name of a directory which is empty. Also, the directory should not be writable by the ftp user. This directory is used as a secure chroot() jail at times vsftpd does not require filesystem access.</td>
</tr>
<tr>
<td><strong>ssl_ciphers</strong></td>
<td>DES-CBC3-SHA</td>
<td>This option can be used to select which SSL ciphers vsftpd will allow for encrypted SSL connections. See the <strong>ciphers</strong> man page for further details. Note that restricting ciphers can be a useful security precaution as it prevents malicious remote parties forcing a cipher which they have found problems with.</td>
</tr>
</tbody>
</table>
| **user_config_dir**   | (none)                 | This powerful option allows the override of any config option specified in the manual page, on a per-user basis. Usage is simple, and is best illustrated with an example. If you set **user_config_dir** to be `/opt/SFTPPlus/etc/vsftpd_user_conf` and then log on as the user "chris", then vsftpd will apply the settings in the file `/opt/SFTPPlus/etc/vsftpd_user_conf/chris` for the duration of the session. The format of this file is as detailed in this manual page! PLEASE NOTE that not all settings are effective on a per-user basis. For example, many settings only prior to the user's session being started. Examples of settings which will not affect any behaviour on a per-user basis include listen_address, banner_file, max_per_ip, max_clients,
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>user_sub_token</td>
<td>(none)</td>
<td>This option is useful in conjunction with virtual users. It is used to automatically generate a home directory for each virtual user, based on a template. For example, if the home directory of the real user specified via <code>guest_username</code> is <code>/home/virtual/$USER</code>, and <code>user_sub_token</code> is set to <code>$USER</code>, then when virtual user fred logs in, he will end up (usually chroot()'ed) in the directory <code>/home/virtual/fred</code>. This option also takes affect if <code>local_root</code> contains <code>user_sub_token</code>.</td>
</tr>
<tr>
<td>userlist_file</td>
<td>/etc/vsftpd.user_list</td>
<td>This option is the name of the file loaded when the <code>userlist_enable</code> option is active.</td>
</tr>
<tr>
<td>vsftpd_log_file</td>
<td>/var/log/vsftpd.log</td>
<td>This option is the name of the file to which we write the vsftpd style log file. This log is only written if the option <code>xferlog_enable</code> is set, and <code>xferlog_std_format</code> is NOT set. Alternatively, it is written if you have set the option <code>dual_log_enable</code>. One further complication - if you have set <code>syslog_enable</code>, then this file is not written and output is sent to the system log instead.</td>
</tr>
<tr>
<td>xferlog_file</td>
<td>/var/log/xferlog</td>
<td>This option is the name of the file to which we write the wu-ftp style transfer log. The transfer log is only written if the option <code>xferlog_enable</code> is set, along with <code>xferlog_std_format</code>. Alternatively, it is written if you have set the option <code>dual_log_enable</code>.</td>
</tr>
</tbody>
</table>
19 XAMPP REFERENCE

If you have opted for a Xammp installation, this chapter contains reference information which you may find useful.

19.1 Unpacking Xammp

It is important to only use the native system tar command to unpack the Xammp distribution. Don’t use any Microsoft Windows tools to extract the archive, it will not work.

19.2 Existing Xammp installations

If you have an existing Xammp installation, it will be overwritten by re-installing it.

19.3 Xampp start and stop parameters

Advanced start and stop parameters are available with the Xampp installation. To use these functions you issue a command with the following syntax:

```
/opt/lampp/lampp <parameter>
```

For example, to start Xampp you would need to enter (in a terminal session) the following command with the parameter ‘start’;

```
/opt/lampp/lampp start
```

You will see the following information returned:

```
Starting XAMPP 1.6.1...
LAMPP: Starting Apache...
LAMPP: Starting MySQL...
LAMPP started.
```

This will confirm that the components that make up the Xampp distribution have started.
However, Xampp has more command parameters that perform other functions. These parameters are described in the table below.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>start</td>
<td>Starts Xampp.</td>
</tr>
<tr>
<td>stop</td>
<td>Stop Xampp.</td>
</tr>
<tr>
<td>restart</td>
<td>Stops and starts Xampp.</td>
</tr>
<tr>
<td>startapache</td>
<td>Start only the Apache web server component.</td>
</tr>
<tr>
<td>startssl</td>
<td>Starts the Apache SSL support. This command activates the SSL support permanently, e.g. if you restarts XAMPP in the future SSL will stay activated.</td>
</tr>
<tr>
<td>startmysql</td>
<td>Starts only the MySQL database.</td>
</tr>
<tr>
<td>startftp</td>
<td>Starts the ProFTPD server. This command activates the ProFTPD permanently, e.g. if you restarts XAMPP in the future FTP will stay activated. You should not activate the function as it will interfere with SFTPPlus Server. Please see note below:</td>
</tr>
<tr>
<td>stopapache</td>
<td>Stop only the Apache web server component</td>
</tr>
<tr>
<td>stopssl</td>
<td>Stop the Apache SSL support. This command deactivates the SSL support permanently, e.g. if you restart XAMPP in the future SSL will stay deactivated. To re-enable SSL support you must issue the command:</td>
</tr>
<tr>
<td>/opt/lampp/lampp startssl</td>
<td></td>
</tr>
<tr>
<td>stopmysql</td>
<td>Stops the MySQL database.</td>
</tr>
<tr>
<td>stopftp</td>
<td>Stops the ProFTPD server. This command deactivates the ProFTPD permanently, e.g. if you restart XAMPP in the future, FTP will stay deactivated. Please see note below:</td>
</tr>
<tr>
<td>security</td>
<td>Starts a small security check program.</td>
</tr>
</tbody>
</table>

---

**Please Note:**

SFTPPlus Server does not require the ProFTPD FTP server component of Xampp. SFTPPlus Server provides its own FTP server component.

---

19.4 PHP 4 or PHP 5?
Xampp provides both PHP4 and PHP5 versions. Whilst SFTPPlus Server was developed with version 4 it should work on version 5 without any problems. You may switch between versions on a Xampp installation.

By the following command you can switch to PHP 4.x:

```
/opt/ampp/ampp php4
```

And with the following command you can switch to PHP 5.x:

```
/opt/ampp/ampp php5
```

If you forgot which version of PHP is in use simply use `phpinfo()` in a php script or call this command:

```
/opt/ampp/ampp phpstatus
```

### 19.5 Important Files and Directories

<table>
<thead>
<tr>
<th>File/Directory</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>/opt/ampp/bin/</code></td>
<td>The XAMPP commands home. <code>/opt/ampp/bin/mysql</code> calls for example the MySQL monitor.</td>
</tr>
<tr>
<td><code>/opt/ampp/htdocs/</code></td>
<td>The Apache DocumentRoot directory.</td>
</tr>
<tr>
<td><code>/opt/ampp/etc/httpd.conf</code></td>
<td>The Apache configuration file.</td>
</tr>
<tr>
<td><code>/opt/ampp/etc/my.cnf</code></td>
<td>The MySQL configuration file.</td>
</tr>
<tr>
<td><code>/opt/ampp/etc/php.ini</code></td>
<td>The PHP configuration file.</td>
</tr>
<tr>
<td><code>/opt/ampp/etc/proftpd.conf</code></td>
<td>The ProFTPD configuration file.</td>
</tr>
<tr>
<td><code>/opt/ampp/phpmyadmin/config.inc.php</code></td>
<td>The phpMyAdmin configuration file.</td>
</tr>
</tbody>
</table>

### 19.6 Accessing Xampp Apache server page

You would normally access the Xampp Apache home page by typing in the following at your browser address field;
http://localhost

or

http://<IP Address>

If you have SSL enabled you would type in the following;

https://localhost

or

https://<IP Address>

You can only use ‘localhost’ on the computer where Xampp is installed. IP Address is the IP Address of the web server where Xampp is installed.

19.7 **Xampp security**

By default, Xampp is not security hardened. If you want to keep your Xampp installation secure you must take additional steps.

The open security defaults are:

1. The MySQL administrator (root) has no password
2. The MySQL daemon is accessible via the network
3. ProFTPD uses the password “lamp” for user “nobody”
4. phpMyAdmin is accessible via the network
5. Examples are accessible via the network
6. MySQL and Apache running under the same user “nobody”

To secure these security weaknesses simply call the following command;

`/opt/lamp/lamp security`

This starts a small security check routine and asks you questions. This makes your Xampp installation more secure.
Caution:

When (and if?) you change the password on Xampp components, please do not forget them. If you do you cannot retrieve them except by overwriting xampp with a fresh install of Xampp and starting again.

19.8 Xampp FAQ

19.8.1 What's the meaning of the messages while starting XAMPP?

You may get three error messages while starting XAMPP:

LAMPP-Apache is already running.
An Apache daemon is already running.

The LAMPP startup script did not start XAMPP-Apache because there is an Apache instance already running. To start XAMPP properly, first you have to stop this daemon.

LAMPP-MySQL is already running.
A MySQL daemon is already running.

Mostly due to the same reasons as the above error. The LAMPP startup script found a MySQL daemon already running on your system. To start LAMPP properly, you have to stop this daemon first.

19.8.2 I got the error "/lib/libc.so.6: version `GLIBC_2.2' not found". What now?

/opt/lampp/bin/XXX: /lib/libc.so.6: version `GLIBC_2.2' not found (required by XXX)

Your Linux system is too old. XAMPP needs a newer Linux distribution that uses the glibc 2.1 version.

19.8.3 What's the secret about "Error 1"?

Good question :) This error can exist for multiple reasons. Apache spits out this error under several circumstances. To find the exact reason we have some exploring to do:
tail -2 /opt/lampp/logs/error_log

If you now see "Invalid argument: Could not set permissions on ssl_mutex" or "Invalid argument: Unable to create scoreboard" please take a look at answers below.

19.8.4 Apache doesn't seem to start. What can I do?

This error can exist for multiple reasons. Apache spits out this error under several circumstances. To find the exact reason we have some exploring to do:

tail -2 /opt/lampp/logs/error_log

If you now see "Invalid argument: Could not set permissions on ssl_mutex" or "Invalid argument: Unable to create scoreboard" please take a look at answers below.

19.8.5 "Invalid argument: Could not set permissions on ssl_mutex"?

The whole error message is:

```
[error] (22)Invalid argument: Could not set permissions on ssl_mutex; check User and Group directives
```

In this case you have to change the Group directive (about line 318) in /opt/lampp/etc/httpd.conf.
You should find there something like:

```
Group ...
```

Change the "..." to "nobody", "nogroup" or #-1. One of these three possibilities should work.

19.8.6 "Invalid argument: Unable to create scoreboard"?

The whole error message is:

```
[crit] (22)Invalid argument: Unable to create scoreboard (anonymous shared memory failure)
```

In this case you have to remove the hash (#) in front of the Scoreboard directive (about line 71) in /opt/lampp/etc/httpd.conf
There, you should find something like:

```
#ScoreBoardFile logs/apache_runtime_status
```

Simply remove the hash at the beginning of this line:
Now this error message should not bother you anymore.

19.8.7 Invalid argument: Configuration failed
In this case, Apache is unable to get the IP address for your host name. It should normally work but sometimes (mostly if you're using DHCP) this situation could happen.

Solution:
Simply call the following command (use copy & paste. The ` characters are mandatory):

```
echo 127.0.0.1 `hostname` >> /etc/hosts
```

This will fix the configuration error of your system and the »Configuration failed« error should disappear.

19.8.8 The configuration file now needs a secret passphrase (blowfish_secret)
This message may appear since XAMPP for Linux 1.2 was released. Since version 2.5.2, phpMyAdmin supports the encryption of cookie-saved passwords.

Solution:
Edit config.inc.php at line 60. You find this file in the phpmyadmin directory of your XAMPP installation. The line should look like this:

```
$cfg['blowfish_secret'] = '';
```

Enter in this line a password-like word or phrase, for example:

```
$cfg['blowfish_secret'] = 'holla';
```

That's all. You should now be able to use phpMyAdmin in the same way as before.

19.8.9 Cannot restore segment prot after reloc: Permission denied?
I assume you are using Fedora? Since version 4 - I think - SELinux is activated by default and this is preventing the successful start of XAMPP.

Solution:
At the moment I only know one solution - deactivating SELinux:

```
setenforce 0
```

Now XAMPP works fine again.
19.9 Xampp uninstall

To uninstall Xampp type in this command:

```
rm -rf /opt/lampp
```
20 UNINSTALLING/REMOVING SFTPPLUS SERVER

To completely remove SFTPPlus Server you need to follow these steps:

20.1 Xampp uninstall

You need to stop all xampp services

at a terminal window type:

```
   su -
   /opt/lampp/lampp stop
```

To uninstall Xampp type in this command:

```
   rm –rf /opt/lampp
```

20.2 SFTPPlus Server uninstall

Next, you can remove SFTPPlus Server itself. At a terminal window type the following:

```
   rm –rf /opt/SFTPPlus
```

SFTPPlus Server is now completely removed from your system.
21 REFERENCES

There are other documents available to help you with the trial or usage of the SFTPPlus Server product. These documents may also be referenced within this document for further information.

Also available:

SFTPPlus v1.2 – Features and Benefits
SFTPPlus Server v1.1 – Admin GUI User Guide

To obtain a list of the most up-to-date documents, email docs@proatria.com
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