

# **Installation Manual**

2nd August 2004

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# 1 Introduction

## 1.1 Preamble

The process of Xamime installation is a quick and quite often effortless exercise. However, there are always situations which arise which fall outside of the anticipated range of any installation program, hence this section of the manual is dedicated to describing the steps that Xamime install performs and why.

## 1.2 Updates

Due to Xamime being a constantly updating software product, this manual is subject to change without notification. Current manuals are always available on the Xamime WWW site.

## 1.3 Limitations of Scope

This manual details *only* the installation process of Xamime onto a Linux/FreeBSD/Solaris server running Sendmail 8.11.x and 8.12.x.

**This manual does not cover the following processes**

- Installation of Xamime to non-Sendmail MTA servers
- Installation of Xamime for servers with shell based MUAs (ie pine, elm, mutt)
- Installation of Xamime for non Solaris OS's on SPARC hardware.

# 2 Prerequisites

## 2.1 Hardware

### 2.1.1 Processor

For reasons of optimal performance, Xamime is compiled to run on a minimum of a Pentium (i586) architecture or greater

### 2.1.2 Memory

It is recommended that any server running Xamime with AntiVirus be equipped with a minimal of 128Mb of memory. Xamime can run with as little as 32Mb present on Linux/BSD servers, however, performance can be seriously hampered if AntiVirus is activated.

### 2.1.3 Storage

#### Space requirements

Xamime base storage requires 10Mb of operating space. Additional storage is required for storing of email and logs. It is suggested that a minimum of 10x your daily email throughput be available.

#### File system recommendations

Due to the large quantity of files and subdirectories involved in storing email, it is suggested that advanced file systems such as XFS, JFS, ReiserFS or ext3 be employed (under Linux systems).

### 2.1.4 Network

TCP/IP networking is required

## 2.2 Software

### 2.2.1 Operating System

- Linux libc5, glibc 2.1, 2.2 and 2.3
- FreeBSD 4.x, 5.x
- Solaris 8, 9 and 10

### 2.2.2 Sendmail

Sendmail versions from 8.10.x to 8.12.x are recommended. Earlier versions are suspect to exploits. Later versions (8.13.x) are still unproven and additionally are not totally compatible with the rule set 0 hook employed by Xamime and similar MTA-filter systems.

### 2.2.3 Postfix

Postfix is a new MTA system which is rapidly gaining popularity with the UNIX community as a Sendmail replacement for smaller/simpler installation bases. Xamime can work with Postfix but additional setup steps are required beyond the initial installation phase.

### 2.2.4 AntiVirus

Xamime supports numerous AntiVirus engines from varying corporations

- NOD32 Eset
- Sophos
- FProt
- Command AntiVirus
- MacAfee
- Kaspersky (please note due to legal requirements, Kaspersky is no longer supported)
- BitDefender
- ClamAV
- GenericAV Interface, allowing connection to almost any AV program. The GenericAV interface supersedes all existing AV interfaces. Existing interfaces are kept for backward compatibility but are considered as deprecated.

### 2.2.5 Inetd

The Xamime WWW interface tool (XMAdmin) requires the use of either Inetd or xinetd.

## 2.3 Knowledge

It is recommended that the administrator of Xamime installations has prior experience with running Sendmail email servers as well as a strong understanding of UNIX systems.

## 3 Directory structure

The directory structure for Xamime is not very complicated, but it is important to understand what contents to expect in each directory in order to [later] diagnose any problems which may arise.

```
/usr/local/xamime
├── acls
│   ├── acls.meta
│   └── [ Each ACL is stored in a unique
│       │ directory with a numerical name ]
├── disclaimers
│   └── [ All file based disclaimers are
│       │ sourced relative to this directory ]
├── logs
│   └── xamime.log
├── groups
│   └── [ contains text only lists of email addresses
│       │ groups are used to allow dissimilar email
│       │ addresses to be collated under a single ACL
│       │ name ]
├── spool
│   └── [ As emails are received via sendmail
│       │ they are stored in this directory until
│       │ successfully processed by Xamime ]
└── tmp
    └── [ As emails are unpacked and examined their
        │ contents are stored in this directory.
        │ each email is assigned to a unique directory
        │ Blocked emails are suffixed with _B, passed
        │ emails are suffixed with _P ]
```

# 4 Installation

## 4.1 Unpacking Archive

Xamime is supplied in a *tar.gz* compressed archive format. Unpacking Xamime can be performed several ways

### 4.1.1 Single Step Extraction

```
tar -zxvf XAM-LEVEL3-33-29342-glibc23.tar.gz
```

### 4.1.2 Two Step Extraction

```
gunzip XAM-LEVEL3-33-29342-glibc23.tar.gz  
tar -xvf XAM-LEVEL3-33-29342-glibc23.tar.gz
```

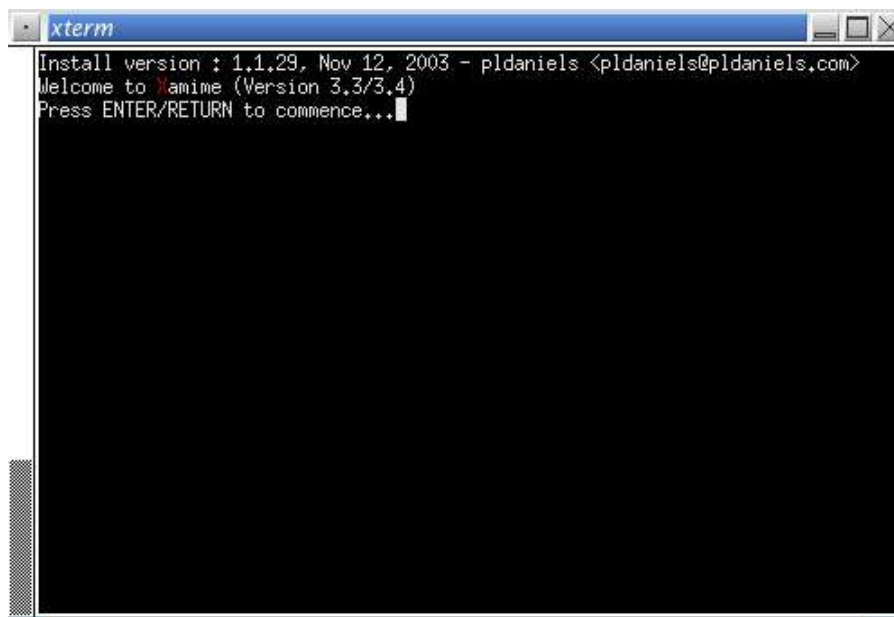
## 4.2 Starting Install

Xamime installation is performed by the *install.sh* program. The *install.sh* program is located in the xamime-release subdirectory which was created by the archive extraction process (See 4.1)

```
cd xamime-LINUX  
./install.sh
```

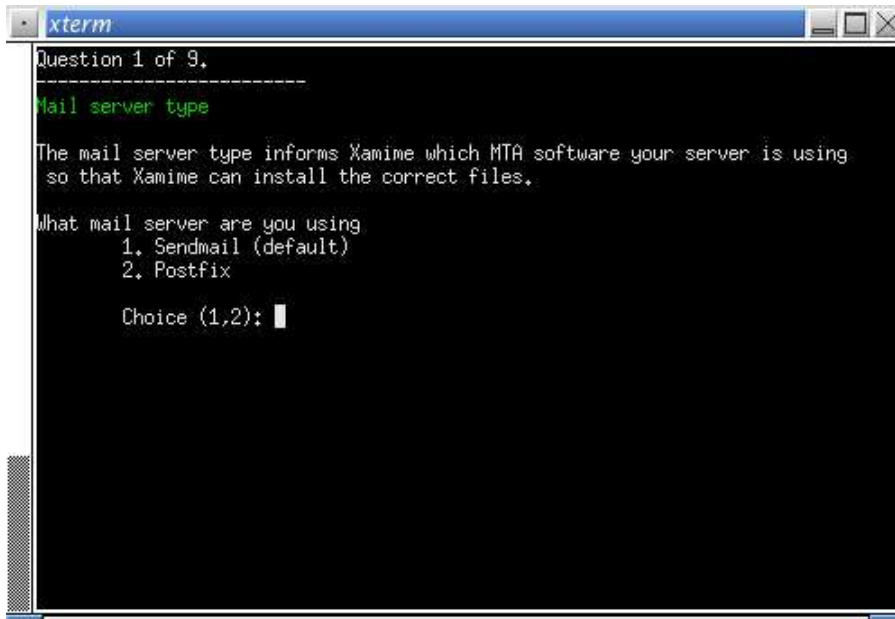
## 4.3 Installation Questions/Screens

### 4.3.1 Installation Start Screen



When you start the Xamime install script, it presents to you a terse summary of details regarding the version of Xamime you're about to install as well as the Xamime installation script version number. The Xamime installation version number is useful if you encounter any problems with your installation, you can report to PLD Software with this version number.

### 4.3.2 Question : Mail server type



Xamime currently supports Sendmail and Postfix mail servers. By default Xamime prefers to use Sendmail as it provides greater levels of control over the filtering process.

### 4.3.3 Question : Primary Domain

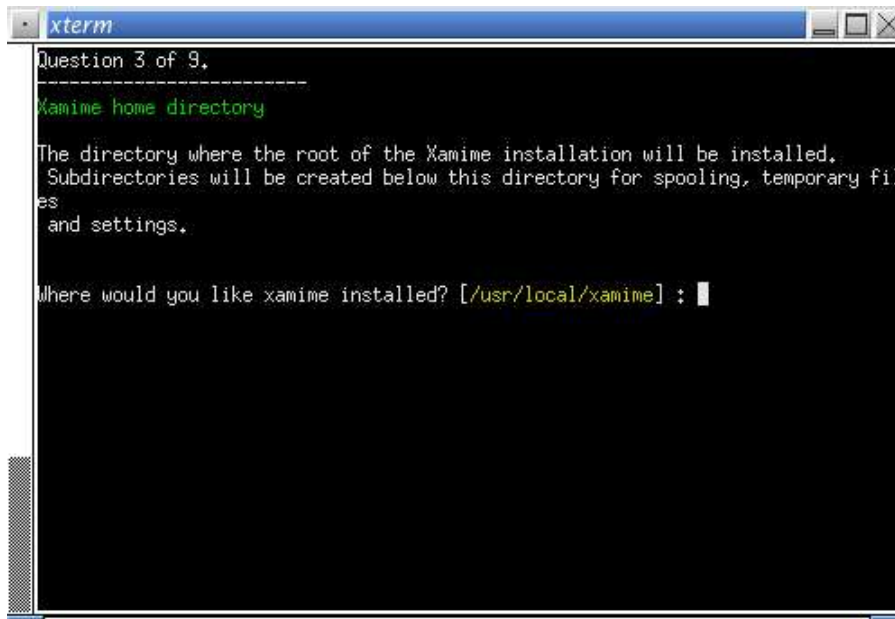
In order to facilitate the possible inclusion of disclaimers into email, Xamime needs to know which domain is considered "local". It is possible to leave this question unanswered, and rather direct Xamime to use the `sendmail /etc/mail/local-domains` file after the Xamime installation has been completed.



### 4.3.4 Question : Xamime installation directory

This is a fully qualified path requirement of where you would like to have Xamime installed. The default location is `/usr/local/xamime`.

If you wish to place the `/tmp` and `/spool` directories into other locations, you can do so after the installation by creating symlinks to the appropriate location.



```
xterm
-----
Question 3 of 9.
-----
Xamime home directory

The directory where the root of the Xamime installation will be installed.
Subdirectories will be created below this directory for spooling, temporary files
and settings.

Where would you like xamime installed? [/usr/local/xamime] : █
```

### 4.3.5 Question : XMAdmin Administration (root) username and password

In order to log into the XMAdmin WWW based administration interface authentication is required. This is the default/initial account name. Additional accounts can be added later from within the XMAdmin interface (See ADMINISTRATION MANUAL for more details)

The password which is to be used for authenticating against the above administrators account. All passwords are stored using MD5 hash algorithm (similar to the one used by `/etc/shadow` password systems). User accounts and passwords are stored in `xmadmin.passwd` file located in the Xamime installation directory.



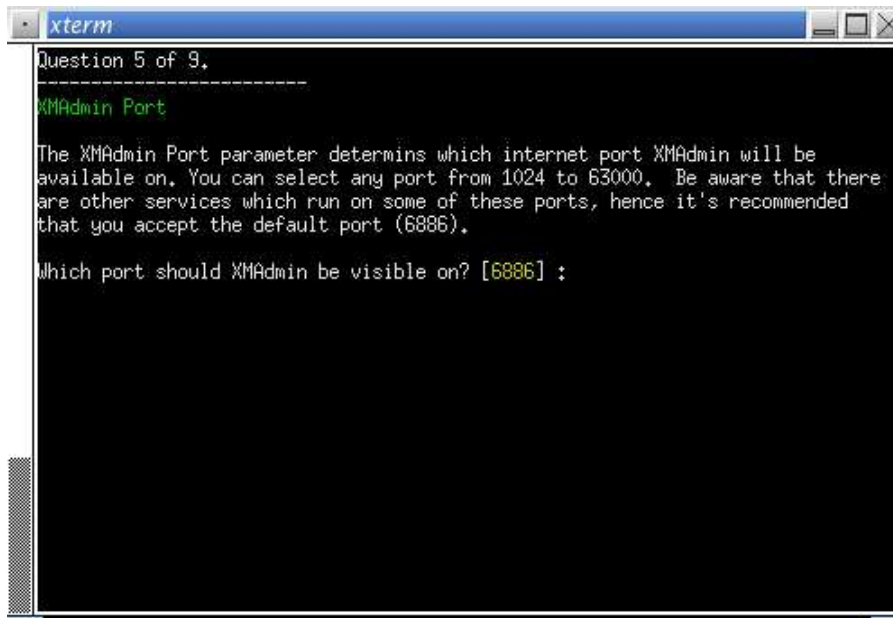
```
xterm
-----
Question 4 of 9.
-----
XMAdmin Administrator Account Name

The XMAdmin Administrator user is the primary/initial user to be
created for the XMAdmin WWW based tool. The Administrator will initially
be granted full access to all aspects of XMAdmin. The Administrator
can create new accounts [after the installation is complete].

Administrators name for the Web based Xamime admin tool [admin] : █
```

### 4.3.6 Question 4: XMAdmin TCP/IP Port

The XMAdmin interface requires a port number to be assigned in order to listen on. The default is 6886, though this can be changed to any number between 1 and 65,000 (approximately). Xamime install will add an entry into */etc/services* reflecting the port number selected.



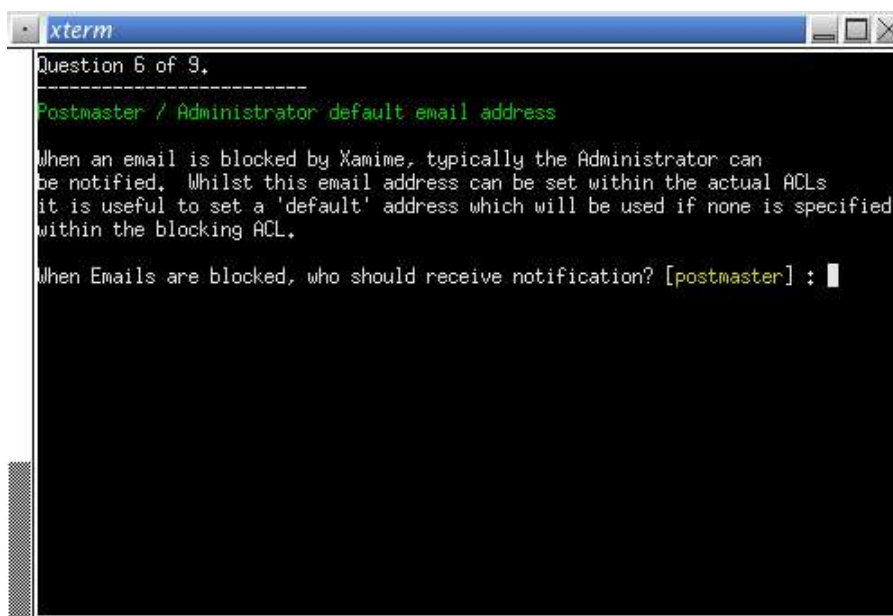
```
xterm
-----
Question 5 of 9.
XMAdmin Port

The XMAdmin Port parameter determines which internet port XMAdmin will be
available on. You can select any port from 1024 to 63000. Be aware that there
are other services which run on some of these ports, hence it's recommended
that you accept the default port (6886).

Which port should XMAdmin be visible on? [6886] :
```

### 4.3.7 Question 5: Default Administrator/Postmaster Email

This is the global default for the administration email address. It can be overridden by using a ACL specific postmaster address (see ADMINISTRATION MANUAL).



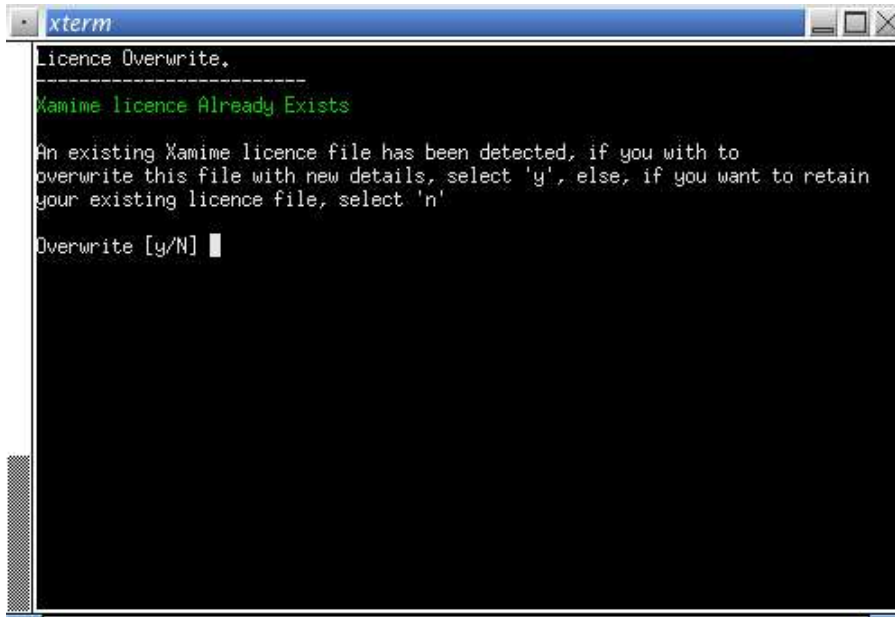
```
xterm
-----
Question 6 of 9.
Postmaster / Administrator default email address

When an email is blocked by Xamime, typically the Administrator can
be notified. Whilst this email address can be set within the actual ACLs
it is useful to set a 'default' address which will be used if none is
specified within the blocking ACL.

When Emails are blocked, who should receive notification? [postmaster] :
```

### 4.3.8 Question 6: Licence Information

#### Licence already exists



```

xterm
Licence Overwrite.
-----
Xamime licence Already Exists

An existing Xamime licence file has been detected, if you wish to
overwrite this file with new details, select 'y', else, if you want
to retain your existing licence file, select 'n'

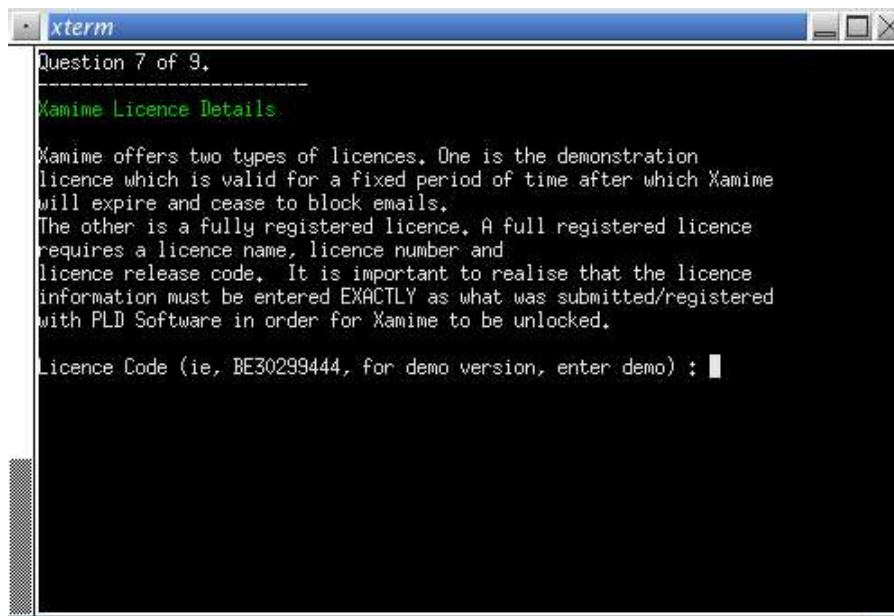
Overwrite [y/N] █

```

If you are overwriting an existing installation, Xamime will ask if you wish to overwrite the previous Xamime licence. If you do not wish to overwrite the existing licence details, select 'N' (default).

#### No existing licence / First installation

The Xamime package is distributed both as a demo and a registered package. The license code for demonstration versions is just “demo”. For registered versions, your license code will be issued by PLD Software, or your Xamime distributor. You can additionally obtain your own release code by going to the Xamime WWW site.



```

xterm
Question 7 of 9.
-----
Xamime Licence Details

Xamime offers two types of licences. One is the demonstration
licence which is valid for a fixed period of time after which
Xamime will expire and cease to block emails.
The other is a fully registered licence. A full registered
licence requires a licence name, licence number and licence
release code. It is important to realise that the licence
information must be entered EXACTLY as what was submitted/
registered with PLD Software in order for Xamime to be
unlocked.

Licence Code (ie, BE30299444, for demo version, enter demo) : █

```

### 4.3.9 Proceed With Installation :

At this point, Xamime has obtained all the required information for installing itself into your system. Xamime install will display a short summary of what it believes are the correct parameters for use.

Additionally, Xamime will display any AntiVirus programs it has detected on your systems of which it can use. Should you wish not to use any particular AntiVirus agent, you can disable its use from the XMAdmin main configuration panel (See ADMINISTRATION MANUAL)

```

xterm
Licence Code (ie, BE30299444, for demo version, enter demo) : demo
Licence Name / Company (eg, PLD Enterprises) : demo

Details of your installation...

Install path      : /usr/local/xamime
Admin Email      : postmaster
XMAdmin Port     : 6886

Local Domain     : pldnet.com
Sendmail         : /usr/sbin/sendmail
Sendmail.cf file: /etc/mail/sendmail.cf
Postfix          :
inetd file       : /etc/inetd.conf
xinetd file      :
crontab file     : /var/spool/cron/crontabs/root

Detected NOD32 Antivirus...
Detected Sophos SWEEEP Antivirus...
Detected McAfee UVSCAN Antivirus...
Detected BitDefender AntiVirus...
Do you wish to proceed with installation? (y/n) :

```

#### 4.3.10 Question 7: Restart Inetd / xinetd

Once Xamime has installed required information into `/etc/services` and `inetd.conf` (or `xinetd.conf`) it is required to restart the `inetd` service in order to make the changes active. If you select `[n]o` here, you will have to manually restart the `inetd` process later in order to gain access to XMAdmin.

```

xterm
Question 8 of 9.
-----
Restarting inetd [Super Daemon]

XMAdmin requires the use of the inetd super daemon. In order
to activate XMAdmin, it's required to 'restart' inetd. The process
of restarting inetd should not under normal circumstances cause any
interruption of existing services.

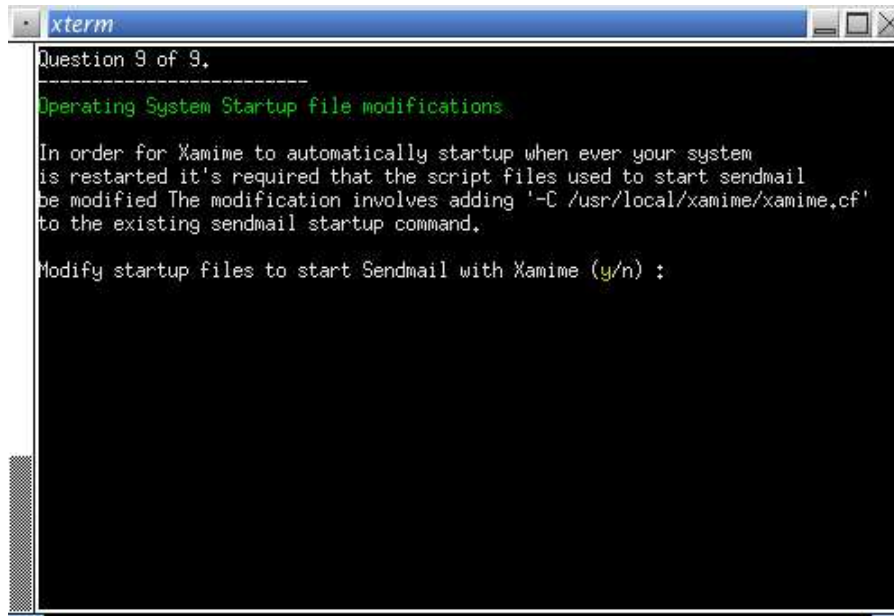
Do you want to restart inetd to enable XMAdmin (y/n) : █

```

#### 4.3.11 Question 8: Alter OS Startup files

So that you do not have to manually start `sendmail` with the Xamime parameters each time your system reboots, Xamime install can update your existing startup files/scripts automatically. If there are any problems with attempting to update

the files, Xamime will notify you and provide an appropriate message guiding you in how to manually update your start files/scripts.



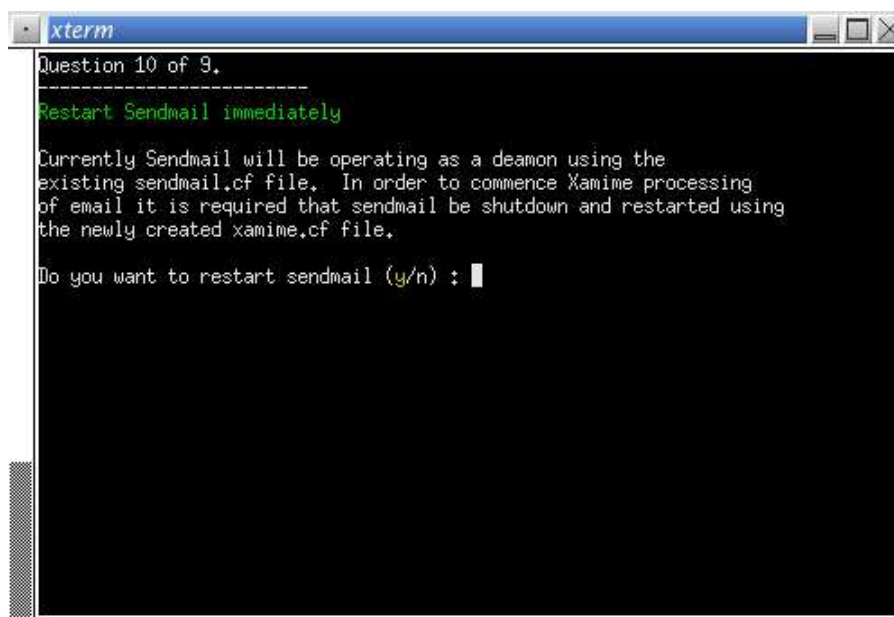
```
xterm
-----
Question 9 of 9.
-----
Operating System Startup file modifications.

In order for Xamime to automatically startup when ever your system
is restarted it's required that the script files used to start sendmail
be modified The modification involves adding '-C /usr/local/xamime/xamime.cf'
to the existing sendmail startup command.

Modify startup files to start Sendmail with Xamime (y/n) :
```

#### 4.3.12 Question 9: Restart Sendmail

Everything has been installed. Xamime is preparing to become active. Once sendmail is restarted [with the new parameters] Xamime will commence filtering your email. You can say [n]o here, but you will need to restart sendmail at a later stage with the required flags in order to commence using Xamime. (See TECHNICAL MANUAL for details on how to start Xamime manually)

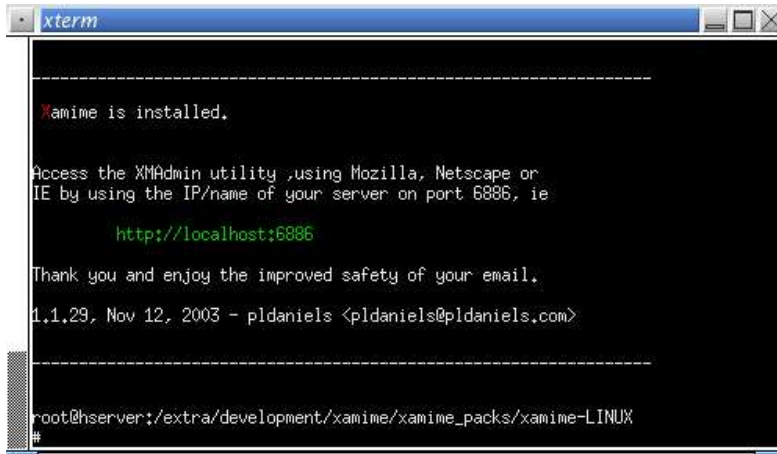


```
xterm
-----
Question 10 of 9.
-----
Restart Sendmail immediately

Currently Sendmail will be operating as a daemon using the
existing sendmail.cf file. In order to commence Xamime processing
of email it is required that sendmail be shutdown and restarted using
the newly created xamime.cf file.

Do you want to restart sendmail (y/n) : █
```

### 4.3.13 Completed.



```
xterm
-----
Xamime is installed.

Access the XMAdmin utility using Mozilla, Netscape or
IE by using the IP/name of your server on port 6886, ie

    http://localhost:6886

Thank you and enjoy the improved safety of your email.
1,1,29, Nov 12, 2003 - pldaniels <pldaniels@pldaniels.com>
-----
root@hserver:/extra/development/xamime/xamime_packs/xamime-LINUX
#
```

The Xamime installation has now been completed. Further administration can be performed via the XMAdmin WWW interface.

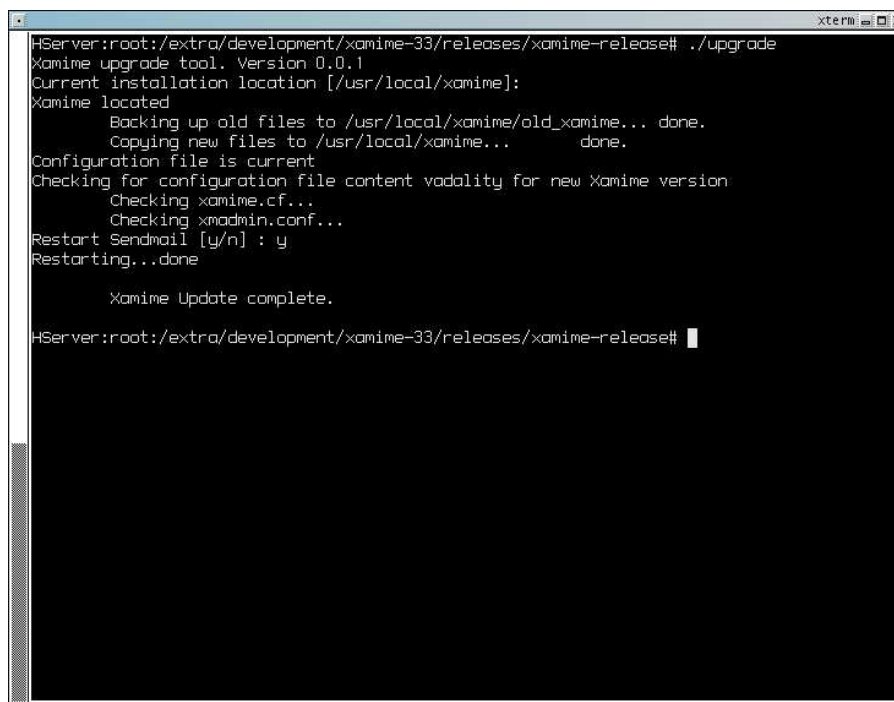
# 5 Upgrading

## 5.1 Details

If an existing Xamime installation is located on your server, it is recommended that you execute the upgrade script rather than the `install.sh` script.

The Xamime `upgrade` script will verify the current version of Xamime running and determine if it is possible to upgrade.

- Note - Xamime versions prior to 3.3.9999 *cannot* be upgraded using the `Upgrade` script.



```
HServer:root:/extra/development/xamime-33/releases/xamime-release# ./upgrade
Xamime upgrade tool. Version 0.0.1
Current installation location [/usr/local/xamime]:
Xamime located
  Backing up old files to /usr/local/xamime/old_xamime... done.
  Copying new files to /usr/local/xamime... done.
Configuration file is current
Checking for configuration file content validity for new Xamime version
  Checking xamime.cf...
  Checking xadmin.conf...
Restart Sendmail [y/n] : y
Restarting...done

  Xamime Update complete.

HServer:root:/extra/development/xamime-33/releases/xamime-release#
```

## 5.2 Update changes

The upgrade checks and updates (if required) the following aspects of an Xamime installation

### ***xamime.conf* - *xamime.cfg* files**

Beyond version 3.3.9999 Xamime converted over from a slow runtime processed text file configuration into a rapid load binary file. As a result, older `xamime.conf` files need to be converted using the `confcompile` program in order to enable Xamime to use them (See TECHNICAL MANUAL for more details).

### ***filetype.list* - *filetype.list* files**

In order to handle more extensive variations in file type detection, Xamime moved from the older text only `filetype.spec` file to a `filetype.list` file which is compiled into a `filetype.spec` (binary) file. The resulting file is readable at a rate several thousand times faster than the older format. The `filetype.list` files are editable with existing text-editing tools. Compiling a `filetype.spec` file from the `filetype.list` file is detailed in the TECHNICAL MANUAL.

**ACLs**

ACLs from pre 3.3.9999 installations are incompatible with the new ACLitem based ACLs which current Xamime versions use. There is no upgrade patch in order to convert the existing ACLs.

# 6 Technical Details

## 6.1 Installation Files

During the install, Xamime alters several system level files in order to provide correct functioning of Xamime. What is changed and why is detailed in this chapter.

### 6.1.1 Services File

Xamime installs an additional services line in the */etc/services* file as follows

```
xmadmin 6886/tcp
```

This is to bind the *tcp port 6886* to the name *xmadmin*.

### 6.1.2 inetd File

The WWW interface of Xamime (XMAdmin) uses *inetd* to provide interfacing with TCP sockets on port 6886. A line similar to what follows is added to the */etc/inetd.conf* file

```
xmadmin stream tcp nowait.1000 root
  ../usr/local/xamime/xmadmin xmadmin
  ../usr/local/xamime/xmadmin.conf
```

This can be broken down into a per field explanation

**xmadmin** The *xmadmin* binary which is the administration program

**stream** Use streams

**tcp** Use TCP protocol

**nowait.1000** Allow 1000 connections per minute (it should be noted that a single page can require multiple connections due to http's requirement of a connection per item (ie, image or HTML code))

**root** Run XMAdmin as root user

**/usr/local/xamime/xmadmin** Full path of XMAdmin binary

**xmadmin** Executable name

**/usr/local/xamime/xmadmin.conf** Full path of XMAdmin configuration file

If changes are made to the *inetd.conf* file, it's required that a HUP signal be sent to the *inetd* daemon in order to make it restart.

### 6.1.3 CRON/Crontab

Xamime requires to run two periodic events in order to keep things running smoothly. These are log rolling and sendmail queuing.

## Log Rolling

As with all system logs, Xamime logs do grow over time. The larger a log, the more CPU it requires to append and update (if your servers ever get progressively slower over a period of days, it may well be worth looking at the size of your logs). Xamime installs a crontab entry to roll over logs once a day. Each log file is suffixed with a number indicating its age in days. The limit to how many days logs are kept is determined by the XMAdmin configuration parameter in the XMAdmin main configuration.

## Sendmail queuing

Due to the manner in which Xamime forwards on passed email (non-blocked) it is possible for email to remain queued (due to the destination server having issues or a line being down). In order to prevent a backlog of such email a periodic queuing of sendmail, with its normal *sendmail.cf* configuration is required. By default Xamime installs a 15 minute queue. This may be changed.

### 6.1.4 Startup Scripts/Files

In order to ensure that Xamime restarts with every reboot of the server, Xamime install alters a startup file for depending on each distribution/OS. See table for details on which files are modified

Operating System/Distro	Version	File Changed
Slackware	Any	/etc/rc.d/rc.M
Redhat	6.x/7.x/8.x/9.x	/etc/init.d/sendmail
Debian	2.x	/etc/init.d/sendmail
SuSE	7.x/8.x/9.x	/etc/init.d/sendmail
FreeBSD	4.x/5.x	/etc/rc.conf
Solaris	28	/etc/init.d/sendmail

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