

eXtrem@il

User Manual

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Introduction

Firs of all: this is a draft document. When it stops of being that, I will remove this line. Is a draft because I don't have enought time to work on it. I prefer to spend my time developing the server, which is rather time consuming. Anyway, I will try to keep on this the necessary information to make the server work.

In the first section, I will give an overview of the mail server structure, and how is developed. Afterthat, a brief listing of the commands will be given.

Please, forward any comments to the following email: extremail@extremail.com

eXtremail Structure and Functionality

Files and Programing

EXtremail is developed using C, initially over a Linux system, but migrated to several operating systems: Solaris and Irix (the ones I had available at my office, of course ...).

Several C file sources conform the server:

- Main source file. Includes the main procedure and the initials call to others modules.
- SMTP source file. The main one Includes all the SMTP processing.
- POP3 source file. The main POP3 file process protocol.
- DNS source file. Includes all the necessary routines to manage the DNS (Domain Naming System) queries. These routines are developed from scratch, without using any third party libraries. This is not because I wanted to do it that way but I didn't find them. Special thanks to O'Reilly books, by the way, for their valuable help on this matters ...
- DSN source file. In this source are covered all the necessary functions to make DSN's (Delivery Status Notifications) work. Just, in the current version, are covered failed deliveries and delayed delivered. I will improve this matters ...
- Queue source file. This source covers all the management of the queued mails, queued because a big great reason: they have not been delivered due to a variety of reasons ...
- Remote management system source file. The server operation is controled using a client-server data connection using a specified port, usually the 4501. All the commands, once the server is started, are passed using this method. The necessary source is contained in these files.
- Main control source file. The main thread of the server is controled by some prime process that make fundamental jobs, as controlling the data chached into memory, the logs process ...
- Common files. Common functions, used by the rest of the files ...

As you can imagine, eXtremail is developed using multithread processing. The threads are used in two differents ways:

As it starts, eXtreme will run five threads, each controlling a basic functionality of the server:

- SMTP thread: it controls the SMTP server. This is the thread that control the operation of the incoming SMTP connections. From this thread, a new thread is started for each connection, making possible to the server to attend more than one connection at the same time. At the current version, once the mail is ready for delivering, there is a number of threads available for that task, not just one. This is specially interesting in mails that have a great deal of rcpt's ...
- POP3 thread. This thread will attend all the incoming POP3 connections. Each incoming connection will run a different thread, making the server, as in SMTP, capable of attending more than one connection concurrently.
- Remote management thread. This thread will attend all the incoming management connection. Each connection, like the SMTP and POP3, will run in a different thread.
- Queue thread. This thread will control of the queues operation, and will resent the queued mails at the programed intervals (eXtremail.conf file). There is a configurable number of threads in charge of this duty, making the delivery faster.
- Main control thread. This thread will control the whole operation of the server. In addition, this thread will catch all the signals delivered to the server. One of this signals is specilly interesting: SEGV. This signal, in previous version of extremail, would kill the process. Now, just kill the thread that is the responsible.

OS needs? Well, with the above data in mind you can imagine, for example, how many threads you can expect to have depending the number of users are on the system ...

Installing eXtremail

eXtremail comes on a rpm format. There are two rpm version: one of them uses dynamic lybraries, making the executable small. The other one links statically then libraries, making the executable bigger than the first, but allowing installation over more different platforms. If it were up to me, I would use the dynamic one.

The installation process is, so, the same that you would use with any other rpm package:

```
Rpm -i eXtremail.rpm
```

There is also a Debian package available for that Linux distribution, and, finally, a tar.gz version for Linux distributions that does not use rpm nor deb packages managers.

That will create the directory structure and install the files that comform the server, which are:

Directories:

Directory	Description
/home/eXtremail	Base directory
/home/eXtremail/bin	Binaries directory
/home/eXtremail/conf	Configuration files directory
/home/eXtremail/data	Base datafiles directory
/home/eXtremail/mbox	Base users mailboxes directory
/home/eXtremail/queue	Queued mails directory
/home/eXtremail/tmp	Temporary directory
/home/eXtremail/log	Log files directory

Files:

File	Description
/home/eXtremail/bin/smtpd	The server
/home/eXtremail/bin/adduser	Utility for adding users from the command line
/home/eXtremail/bin/adddomain	Utility for adding domains from the command line
/home/eXtremail/conf/eXtremail.conf	Configuration file
/home/eXtremail/data/login	Remote management login password

Using eXtremail

Extremail, once installed, will need some initial tasks.

Domains

Create, al least, one domain. That domain will be the local domain used for the locals users. That, of course, doesn't mean that that domain will become 'externally known'. As you probably know, to possibilitate the server (in this case, the server means the HOST hosting the mail server) to become 'visible' to the outside world you will need that data public on a DNS server database. You could create mydomain.com like local, but that wont make it popular: everyone needs to know the exact IP of the HOST server to send the mails to ...

Anyway, create the domain ...

Users

After having a local domain, you can start adding users ... Each user will have his own mailbox directory, and each received mail will be delivered on it, on separate and independent files.

The user identificative perform one more task: adding to it the local domain to which it belongs to we get the POP3 identificative to log to the POP3 server. There are two possibilities:

[‘user@domain’](#) or ‘user.domain’.

That way, an user called mick, belonging to the local domain acme.com would have a POP3 identificative like:

[mick@acme.com](#)

or

mick.acme.com

Why the last one? Because Netscape mail client doesn’t accept a POP3 identificative with an ‘@’ inside it. And I use Netscape ...

Starting and stopping eXtremail

There are three basic commans to use with the executable:

smtpd start

Will start the server.

smtpd stop

Will stop the server.

smtpd login <loginpassword>

This command will change the remote management login password. The password will be kept encrypted on a file in the data directory.

As it is installed, the default password for the remote management is **system**. Be careful: is case sensitive.

smtpd version

This command will tell you the extremail version and release you are running.

smtpd status

Will show the status and process id (if it’s running) of the server.

Mail Clients

Use any. I have tried with a lot: Netscape©, Pine© , Exchange© ... Use your favorite.

Configuration File

This file, located by default in /home/eXtremail/conf, and named eXtremail.conf, contains the basic configuration the server is started with. It contains the following parameters:

Parameter	Description	Default
Ports Parameters		
PORT_SMTP	SMTP port	25
PORT_POP3	POP3 port	110
PORT_REMT	Remote management port	4501
Log Parameters		
CFG_LOG_LEVEL	Log level	3
Files		
FILE_USER_DATA	Users datafile	/home/eXtremail/data/user_data
FILE_DOMAIN_DATA	Domain datafile	/home/eXtremail/data/domain_data
FILE_ALIAS_DATA	Aliases datafile	/home/eXtremail/data/alias_data
FILE_DENY_DATA	Deny entries datafile	/home/eXtremail/data/deny_data
FILE_DSN_FAIL	Failed delivery DSN text	/home/eXtremail/data/dsn_fail
FILE_DSN_DELA	Delayed delivery DSN text	/home/eXtremail/data/dsn_dela
FILE_PID	PID file	/home/eXtremail/data/pid
FILE_LOGIN	Remote management login file	/home/eXtremail/data/remt_login
Directories		
DIR_LOG	Log directory	/home/eXtremail/log/
DIR_USER_MBOX	User mailboxes directory	/home/eXtremail/mbox/
DIR_QUEUE_MBOX	Queued mailboxes directory	/home/eXtremail/queue/
DIR_TMP	Temporary directory	/home/eXtremail/tmp/
Queued socket connections allowed		
QUEUE_SMTP	Over SMTP connections	10
QUEUE_POP3	Over POP3 connections	10
QUEUE_REMT	Over management connections	10
Connections timeouts		
TIMEOUT_SMTP1	Over SMTP (HELO command)	300
TIMEOUT_SMTP2	Over SMTP (MAIL command)	300
TIMEOUT_SMTP3	Over SMTP (RCPT command)	300
TIMEOUT_SMTP4	Over SMTP (DATA command)	120
TIMEOUT_SMTP5	Over SMTP (Mail data)	600
TIMEOUT_POP3	Over POP3	600
TIMEOUT_REMT	Over REMT	60
TIMEOUT SOCK	Remote socket opening	60
TIMEOUT_DNS	DNS query	60
Reading buffers		
BUFFER SOCK	Reading from socket (bytes)	10000
BUFFER_MAIL	Reading from files (bytes)	10000
General configuration		
CFG_NUM_QUEUE	Number of mail queues	10
CFG_MIN_QUEUE	Minutes among queues retries	10
CFG_MIN_CONTROL	Control	5
CFG_HOR_RETRY_MAIL	Hours of mail retry	48
CFG_ANTI_RELY	Anti rely option	1
CFG_RELY_TIMEOUT	Rely time out	15
CFG_POSTMASTER	Postmaster	Postmaster@localdomain

CFG_LOCALDOMAIN	Local domain	Localdomain
CFG_LOCALIP	Mask of the local IP net	127.0.0.1

Antirely and POP before SMTP

Rely is the ability of the server to accept SMTP connections from external IP addresses and deliver those mails to remote folders, not locally.

As you can guess, that is open field for spammers. You can avoid that setting an '1' at the CFG_ANTIRELY parameter at the configuration file.

The way eXtremail knows if it is a local or remote IP? It uses CFG_LOCALIP like a mask ...

New to the 1.1.3 version is the ability called POP before SMTP. Using that feature you can rely just a specific set of IP addresses: those which has connected previously to the server using the POP3 protocol, which requires user authentication with a password.

Of course, that feature is time depending, which is a configuration parameter called CFG_RELY_TIMEOUT, and expressed in minutes. When that period has expired, no more rely will be allowed to that IP. A new POP3 connection will be needed. To activate this feature, put a '2' on the CFG_ANTIRELY parameter.

Remote Management Commands

The mail server is controled using a client-server operation: the server listen in a well known port, that can be specified in the eXtremail.conf file (by default 4501), that can be triggered using, for example, a telnet client. The server expect a set of commands from the client that will be interpreted in order to add new users, domains ...

Why this formula? Because it was the easiest way of implementing the management and the best way of make it possible for developing management clients (help wanted!). They can be developed using any language, as far as connect using a TCP/IP socket protocol ...

I will give a brief description of the current implemented commands, list that will grow (I gess) as I improve the mail server. I know, the command listing is too short, but that was the less important part (to me) of the server, so I moved that apart until the server started to work properly ...

There is more question: I have tried to 'control' the working process of SMTP and POP3, which means that I think that I control all the responses and possible errors in commands. But is not the same with remote management: remote management is developed using the following basis: EIG. What is EIG? EIG stands for: **Everyone Is Good**. Which means that everyone wont try to crash the process. Please, excuse the bugs for the moment, but the only objeive of remote management was to make the server work ...

Login Commands

The following commans are used to identificate to the remote management.

Login to the system

LOGIN <loginpassword>

Used to identificate to the system.

Parameters:

- **LOGIN** Password that you need to suply to access the remote management system.

User Commands

The following commans are used to manage user configuration entries:

Add a user

USER ADD NAME=<username> DOMAIN=<domainname> [DIR=<userdir>]
 [PASS=<userpassword>] [QUOTA=<spacequota>] [FORWARD=<forward>] [COPY=<copy>]
 [MAXINMAILSIZE=<size>] [MAXOUTMAILSIZE=<size>]

Used to add local users to the mailing system.

Parameters:

- **NAME** Intended name of the local user. The user will use this name plus de domain it belongs to as the POP3 identificative.
- **DOMAIN** Will be the local domain of the user.

- **DIR** The user mailbox directory. If it is not specified, will be the default mailbox directory specified in the eXtremail.conf file plus the user name. There is no need to specify a directory. By default, the configuration users mailbox directory plus the user name is used.
- **PASS** Password of the user. Used in the POP3 connections. If no password is specified, the user name is the default value.
- **QUOTA** Disk space allocated for the user. Specified in Kilobytes. Default zero, which means no disk quota allocated, no limit. By default, its value is no quota allocated.
- **FORWARD** Any possible email address where the mails should be forwarded. Default null.
- **COPY** Any possible email address to be copied with the mails delivered to the user. Default null.
- **MAXINMAILSIZE** If specified, it will be the maximum size (in Kbytes) allowed for an incoming mail for the user.
- **MAXOUTMAILSIZE** If specified, it will be the maximum size (in Kbytes) that the user is allowed to send.

Modify a user

**USER MOD NAME=<username> [DOMAIN=<domainname>] [DIR=<userdir>]
[PASS=<userpassword>] [QUOTA=<spacequota>] [FORWARD=<forward>] [COPY=<copy>]**

Modify the local users data into the mailing system.

Parameters:

- **NAME** Name of the user to modify.
- **DOMAIN** Will be the new local domain of the user.
- **DIR** The new user mailbox directory.
- **PASS** New password of the user. Used in the POP3 connections.
- **QUOTA** New disk space allocated for the user. Specified in Kilobytes.
- **FORWARD** Any possible email address where the mails should be forwarded, if specified.
- **COPY** Any possible email address to be copied with the mails delivered to the user, if specified.
- **MAXINMAILSIZE** If specified, it will be the maximum size (in Kbytes) allowed for an incoming mail for the user.
- **MAXOUTMAILSIZE** If specified, it will be the maximum size (in Kbytes) that the user is allowed to send.

List users

USER LIST ALL | NAME=<username> | DOMAIN=<domain>

List the user of the mail system. If 'ALL' is specified, the listing just show the mailbox and the domain of all users. If a NAME is specified, the list show all the information available for the user, and just that user is displayed. If 'DOMAIN' is specified, will display just the users belonging to that domain.

Parameters:

- **ALL** All the users
- **NAME** Local user
- **DOMAIN** Just users belonging to this domain

Format:

- ✓ All users

user@domain(crlf)

- ✓ Just one user

Name : <username>(crlf)
 Domain : <domain>(crlf)
 Dir : <userdir>(crlf)
 Pass : <pass>(crlf)
 Quota : <quota>(crlf)
 Forward: <forward mailbox>(crlf)
 Copy : <copy mailbox>(crlf)

- ✓ Just one domain

user@domain(crlf)

Delete a user

USER DEL NAME=<username> DOMAIN=<domainname>

Delete the specified user. If the user still have mails in its directory, they are deleted.

Parameters:

- **NAME** Local user to delete
- **DOMAIN** Domain where the user belongs to.

User commands help

USER HELP

Will display help about using USER commands.

Domain Commands

The following commans are used to manage domain configuration entries:

Add a domain

**DOMAIN ADD NAME=<domain> [DEFMAXINMAILSIZE=<size>]
 [DEFMAXOUTMAILSIZE=<size>] [MAXINMAILSIZE=<size>] [MAXOUTMAILSIZE=<size>]
 [DEFMAILBOX=<mailbox>] [MAILINFOOTER=<file>] [MAILOUTFOOTER=<file>]
 [SHOWFOOTER=1|2|3]**

Used to add local domains to the mailing system.

Parameters:

- **NAME** Name of the domain being added.

- **DEFMAXINMAILSIZE** If specified, it will be the default (copied to any user created inside this domain) maximum size (in Kbytes) of an incoming mail.
- **DEFMAXOUTMAILSIZE** If specified, it will be the default (copied to any user created inside this domain) maximum size (in Kbytes) of an outgoing mail.
- **MAXINMAILSIZE** If specified, it will be the maximum size (in Kbytes) of an incoming mail. (not yet working)
- **MAXOUTMAILSIZE** If specified, it will be the maximum size (in Kbytes) of an outgoing mail. (not yet working)
- **DEFAULTMAILBOX** If this parameter is specified, the mailbox specified will be considered like the mailbox used when a mail is addressed to a user of this domain that doesn't exist. The mailbox must be fully specified, i.e. [user@domain](#), and can be any remote or local domain.
- **MAILINFOOTER** If this parameter is specified, it should point to a file that will act like a footer of any incoming mail destined to this domain, no matter where it comes from.
- **MAILINFOOTER** If this parameter is specified, it should point to a file that will act like a footer of any outgoing mail from this domain, no matter where it goes to.
- **SHOWFOOTER** This parameter controls which footer will appear on the incoming (1), outgoing (2), or both (3) mails of this domain. Of course, MAILINFOOTER, MAILOUTFOOTER must point to a valid footer file.

Modify a domain

DOMAIN MOD NAME=<domain> [DEFMAXINMAILSIZE=<size>] [DEFMAXOUTMAILSIZE=<size>] [MAXINMAILSIZE=<size>] [MAXOUTMAILSIZE=<size>] [DEFMAILBOX=<mailbox>]

Used to modify already defined local domains of the mailing system.

Parameters:

- **NAME** Name of the domain being added.
- **DEFMAXINMAILSIZE** If specified, it will be the default (copied to any user created inside this domain) maximum size (in Kbytes) of an incoming mail.
- **DEFMAXOUTMAILSIZE** If specified, it will be the default (copied to any user created inside this domain) maximum size (in Kbytes) of an outgoing mail.
- **MAXINMAILSIZE** If specified, it will be the maximum size (in Kbytes) of an incoming mail. (not yet working)
- **MAXOUTMAILSIZE** If specified, it will be the maximum size (in Kbytes) of an outgoing mail. (not yet working)
- **DEFAULTMAILBOX** If this parameter is specified, the mailbox specified will be considered like the mailbox used when a mail is addressed to a user of this domain that doesn't exist. The mailbox must be fully specified, i.e. [user@domain](#), and can be any remote or local domain.

List domains

DOMAIN LIST ALL | NAME=<domain>

If the clause 'ALL' is used, list all the domains of the mail system. The listing just show the domain names. If a particular domain is specified, all of its data is displayed.

Parameters:

- **ALL** All the defined domains will be displayed.
- **NAME** Will just display information about this domain.

Format:

- ✓ All domains

domain(crlf)

- ✓ When a name is specified

Name : <domain>(crlf)
 DefaultMailbox : <default mailbox>(crlf)

Delete a domain

DOMAIN DEL NAME=<domain>

Delete the specified domain. If the domain contains users, first, the users belonging to that domain are deleted. Then, the domain is deleted.

Parameters:

- **NAME** The target domain to delete.

Domain commands help

DOMAIN HELP

Will display help about using DOMAIN commands.

Aliases Commands

The following commans are used to manage aliases entries:

Add an alias

**ALIAS ADD NAME=<username> DOMAIN=<domain> FORWARD=<mailbox> |
 PIPE=<externalprogram>**

Used to add aliases to the mailing system. The named [mailbox@domain](#) won't be an user but an association of one of two actions:

- Other well defined mailbox. If you specify a forward address, that fully specified mailbox ([user@domain](#)) will be used like the destination mailbox.
- Piping to an external program. The content of the mail will be sended to the starndard input of the external program especified. That could be a mailing list manager, for example ... If th

command line of the external program has spaces DONT FORGET TO USE quotation marks to define the entry. For example: ALIAS ADD NAME=me DOMAIN=local.com PIPE="/usr/bin/program -d -j"

Parameters:

- **NAME** Name of the user that will be used like an alias.
- **DOMAIN** Domain at which the alias will belong.
- **FORWARD** If specified, will be a full mailbox address ([user@domain](#)) that eXtremail will forward the mails addressed to [mailbox@domain](#) of the alias.
- **PIPE** If specified, the mail addressed to [mailbox@domain](#) will be used as the standard input for the external program.

Modify an alias

List aliases

ALIAS LIST ALL | NAME=<mailbox> DOMAIN=<domain>

If the clause 'ALL' is used, list all the aliases of the mail system.

Parameters:

- **ALL** All the defined domains will be displayed.
- **NAME** Will just display information about this alias
- **DOMAIN** Domain of the alias

Format:

- ✓ All aliases

Alias@domain(crlf)

- ✓ When a name is specified

```
Name      : <alias>(crlf)
Forward   : < mailbox>(crlf)
Pipe      : <externalprogram>(crlf)
```

Delete an alias

ALIAS DEL NAME=<mailbox> DOMAIN=<domain>

Delete the specified alias.

Parameters:

- **NAME** Alias to delete
- **DOMAIN** Domain where the alias is to be deleted.

Alias commands help

ALIAS HELP

Will display help about using ALIAS commands.

Deny Entries Commands

The following commands are used to manage deny entries:

Add a deny entry

DENY ADD IPIN=<ip/mask> | IPOUT=<ip/mask> | DOMAININ=<domain> | DOMAINOUT=<domain> | MAILBOXIN=<mailbox> | MAILBOXOUT=<mailbox>

This command will add a deny entry on the mail system. This entry can be of one of the following types:

- **IPIN/OUT.** Will set an IP or mask that will be denied to connect to the system (ipin) or connect from the system (ipout). The IP will be a number and dots plus an optional mask, like: 194.30.30.11 or 194.30.30.11/16. In the first case, the IP 194.30.30.11 will be denied. On the second, any IP starting with 194.30 will be denied.
- **DOMAININ/OUT.** Will set a domain that will be denied to connect to the system (domainin) or from the system (domainout).
- **MAILBOXIN/OUT.** Will set a domain that will be denied to connect to the system (mailboxin) or from the system (mailboxout).

Parameters:

- | | |
|---------------------|--------------------------------|
| ➤ IPIN | An IP and, optionally, a mask. |
| ➤ IPOUT | An IP and, optionally, a mask. |
| ➤ DOMAININ | A domain. |
| ➤ DOMAINOUT | A domain. |
| ➤ MAILBOXIN | A mailbox. |
| ➤ MAILBOXOUT | A mailbox. |

List deny entries

DENY LIST ALL | IPIN | IPOUT | DOMAININ | DOMAINOUT | MAILBOXIN | MAILBOXOUT

This command will list all or some of the defined deny entries on the mail system.

Format:

- ✓ All

Text: <deny entry> (crLf)

- ✓ ipin, ipout, domainin, domainout, mailboxin, mailboxout

<deny entry> (crLf)

Delete deny entries

DENY DEL ALL | IPIN | IPOUT | DOMAININ | DOMAINOUT | MAILBOXIN | MAILBOXOUT | IPIN=<ip/mask> | IPOUT=<ip/mask> | DOMAININ=<domain> | DOMAINOUT=<domain> | MAILBOXIN=<mailbox> | MAILBOXOUT=<mailbox>

This command will delete all, some of a class, or a particular entry defined the mail system.

Parameters:

- **IPIN** An IP and, optionally, a mask.
- **IPOUT** An IP and, optionally, a mask.
- **DOMAININ** A domain.
- **DOMAINOUT** A domain.
- **MAILBOXIN** A mailbox.
- **MAILBOXOUT** A mailbox.

Deny commands help

DENY HELP

Will display help about using DENY commands.

Mailing Lists Commands

The following commans are used to manage the eXtremail mailing lists:

Add a mailing list

MLIST ADD NAME=<name> DOMAIN=<domain> [ACCESS=<access>] [MEMBERS=<type>]

Used to add a new mailing list to eXtremail. The list will be name@domain.

Parameters:

- **NAME** Name of the mailing list.
- **DOMAIN** Domain of the mailing list.
- **ACCESS** This parameter defines the allowed access to the list:
 - Any user can send mails to the list (1).
 - Just the members of the list can send mails to it (2)
 - Just administrators of the list can send mails to it (4).
- **MEMBERS** This parameter controls which kind of users can be added to the list:
 - Any mailbox (1).
 - Just users belonging to a local domain (2).
 - Just users of the same domain of the list (4).

Modify a mailing list

MLIST MOD NAME=<username> DOMAIN=<domain> [ACCESS=<access>] [MEMBERS=<type>]

Modify mailing list data.

Parameters:

- **NAME** Name of the mailing list.
- **DOMAIN** Domain of the mailing list.
- **ACCESS** This parameter defines the allowed access to the list:

➤ **MEMBERS**

- Any user can send mails to the list (1).
 - Just the members of the list can send mails to it (2)
- Just administrators of the list can send mails to it (4).
This parameter controls which kind of users can be added to the list:

- Any mailbox (1).
 - Just users belonging to a local domain (2).
- Just users of the same domain of the list (4).

List mailing lists

MLIST LIST ALL | DOMAIN=<domain> | NAME=<name> DOMAIN=<domain>

List the defined mailing lists.

Parameters:

- **ALL** All the defined mailing lists
- **NAME** Name of the list
- **DOMAIN** Domain of the list

Format:

- ✓ All
name@domain(tab)access(tab)members(crlf)
- ✓ Just one list
- ✓ Just one domain
user@domain(crlf)

Delete a mailing list

MLIST DEL ALL | DOMAIN=<domain> | NAME=<name> DOMAIN=<domain>

Delete the specified mailing list.

Parameters:

- **NAME** Name of the list
- **DOMAIN** Domain of the list

Mailing lists help commands

MLIST HELP

Will display help about using MLIST commands.

Mailing Lists Users Commands

The following commans are used to manage the eXtremail mailing lists users:

Add a mailing list user

MLISTUSER ADD MAILBOX=<mailbox> MLISTNAME=<name> MLISTDOMAIN=<domain> [TYPE=<type>]

Used to add a new mailing list user to an existing mailing list.

Parameters:

- **MAILBOX** Mailbox of the user
- **MLISTNAME** Name of the existing mailing list.
- **MLISTDOMAIN** Domain of the existing mailing list.
- **TYPE** This parameter defines the type of the user:
 - Member of the list (1).
 - Administrator of the list (2)

Modify a mailing list user

MLISTUSER MOD MAILBOX=<mailbox> MLISTNAME=<name> MLISTDOMAIN=<domain> TYPE=<type>

Modify mailing list user data.

Parameters:

- **MAILBOX** Mailbox of the user.
- **MLISTNAME** Mailing list name.
- **MLISTDOMAIN** Mailing list domain.
- **TYPE** This parameter defines the type of the user:
 - Member of the list (1).
 - Administrator of the list (2)

List mailing lists users

MLISTUSER LIST ALL | MLISTNAME=<name> MLISTDOMAIN=<domain>

List the defined mailing lists.

Parameters:

- **ALL** All the defined mailing lists users.
- **MLISTNAME** Name of the list
- **MLISTDOMAIN** Domain of the list

Format:

✓ All

mailbox(tab)type(tab)mailinglist(crlf)

✓ Just one list user

✓ Just one domain

user@domain(crlf)

Delete a mailing list user

MLISTUSER DEL ALL | MLISTNAME=<name> MLISTDOMAIN=<domain> | MAILBOX=<mailbox> MLISTNAME=<name> MLISTDOMAIN=<domain>

Delete the specified mailing list.

Parameters:

- **ALL** All the defined mailing lists users.
- **MAILBOX** Mailbox of the user
- **MLISTNAME** Name of the list
- **MLISTDOMAIN** Domain of the list

Mailing lists users help commands

MLISTUSER HELP

Will display help about using USER commands.

Queue Commands

The following commans are used to manage the queues used to keep the mails that, for any reason, have not been delivered, so the server will try to resend them in the future.

Queue reports

QUEUE SHOW ALL | MAILBOX=<mailbox> | DOMAIN=<domainname>

Used to show the mails currently queued. If the ALL parameter is specified, it will display all the mails. If a mailbox is specified, just the mail addressed to that mailbox, if any, are displayed. If a domain name is specified, just the mails assdressed to that domain, if any, will be displayed.

Parameters:

- **ALL** All queued mails will be displayed
- **MAILBOX** Just the queued mails addressed to that mailbox will be displayed
- **DOMAIN** All the queued mails addressed to this domain will be displayed.

Format:

✓ All

```
<sendermailbox>(tab)<destinationmailbox>(tab)<entry date>(tab)<last retry date>(tab)<last attempt date>(tab)<secs in queue>(tab)<mailsize>(tab)<numattempts>(tab)<status>(crLf)
```

Queue management

QUEUE RESEND ALL | MAILBOX=<mailbox> | DOMAIN=<domainname>

Used to resend the mails queued now. If the ALL parameter is specified, it will resend all the mails. If a mailbox is specified, just the mail addressed to that mailbox, if any, are resent. If a domain name is specified, just the mails addressed to that domain, if any, will be resent.

Parameters:

- **ALL** All queued mails will be resent.
- **MAILBOX** Just the queued mails addressed to that mailbox will be resent.
- **DOMAIN** All the queued mails addressed to this domain will be resent.

Queue commands help

QUEUE HELP

Will show help about queue commands.

DNS Commands

The following commands are used to manage all the related actions that involve DNS (Domain Naming Services). Among them, we can find the possibility of display and flush the DNS cache data, resolve some external domain ...

Cache Show

DNS CACHE SHOW ALL | DOMAIN=<domain>]

Used to display the domains that are currently cached. There is a special flag in the cache: status. If the status is displayed like 'Active' means that the cache domain will be correctly resolved when queried. If the status is 'Not active' means that, for any reason, the domain is considered like banned for the server. This could be, for example, after a long lapse of time trying to deliver messages to the corresponding MX server without any positive response. To reset the data, just flush the cache.

Parameters:

- **ALL** Will display all the cache data.
- **DOMAIN** Will display just the data of this domain.

Format:

✓ All

```
<mailbox domain>(tab)<MX domain>(tab)<MX IP>(tab)<entry date>(tab)<TTL>(tab)<secs in cache>(tab)<status>(crlf)
```

Cache Flush

DNS CACHE FLUSH ALL | DOMAIN=<domain>]

Used to flush the data of the domains that are currently cached.

Parameters:

- **ALL** Will flush all the cache data.
- **DOMAIN** Will flush just the data of this domain.

Resolve domains

DNS RESOLV DOMAIN=<domain>

Will try to resolve the MX server for the domain specified. Besides, if the domain is correctly resolved, it will be added to the DNS cache data.

Parameters:

- **DOMAIN** Domain to look for.

Connections Status Commands

The following commans are used to

Connections reports

CONN SMTP SHOW

Used to show the current SMTP connections that the server is handleling.

Format:

- ✓ ALL

<helo>(tab)<IP>(tab)<mail from>(tab)<rcpt to>(tab)<date>(tab)<secs of connection>(crlf)

General Status Commands

Show Status

STATUS

Show the status of internal processes.

Format:

✓ ALL

Version:	<version>(crlf)
Date start:	<date>(crlf)
Time running:	<secs>(crlf)
Mails sent:	<mails sent>(crlf)
Mails received:	<mails received>(crlf)
Users:	<number of users>(crlf)
SMTP in connections:	<number connections>(crlf)
SMTP out:	<number connections>(crlf)
POP3:	<number connections>(crlf)
Active threads:	<number threads>(crlf)
Temporary files:	<number connections>(crlf)

Will display more ...

Help Command

Display general help.

HELP

Utilities

There are some utilities that has been incorporated to the eXtremail distribution:

adddomain

It can be used to add domains to eXtremail from the command line. It uses the following syntax:

```
addomain -h <remthost> -p <remtport> -l <remtgpas> -d <domain>
```

Where:

Parameter	Description
remthost	Host where the remote management is running
remtport	Port where the remote management is running (usually 4501)
remtpass	Remote management password
domain	Domain to be added

adduser

It can be used to add users to eXtremail from the command line. It uses the following syntax:

```
adduser -h <remthost> -p <remtport> -l <remtgpas> -u <user> -d <domain> -w <userpass>
```

Where:

Parameter	Description
remthost	Host where the remote management is running
remtport	Port where the remote management is running (usually 4501)
remtpass	Remote management password
user	User to be added
domain	Domain which the user is to belong to
userpass	User password

Versions History

- **Version 1.1.10**, February,22 of 2001

Bugs fixed:

There were still some bugs on the footer feature.

Some memory leaks have been fixed.

If the domain default mailbox were forwarded to any other mailbox didn't work ok.

There were a bug on the logging function that arised a SIG when a '%' was encountered on some strings

The command QUEUE RESEND didn't work properly.

A few more ...

New features:

Mailing lists.

Temporary mail files treatment has been improved, to avoid loosing mails.

Alias modify command.

Two new parameters that allow to specify different SMTP ports on incoming and outgoing connections.

New queued files processing.

A few more ...

- **Version 1.1.9**, February,22 of 2001

Bugs fixed:

Improved footer treatment.

Some memory leaks have been fixed.

A few more ...

New features:

The DNS cache now holds all the MX data, not just when the connection was successful.

Size of the mail on CONN SMTP command now appear

A few more ...

- **Version 1.1.8**, February,6 of 2001

Bugs fixed:

One more DNS bug: a SIGSEGV when a lot of responses from the DNS server where obtained. DNS parsing is really making me crazy...

CRLF at the end of the footer file.

A few more ...

New features:

Now, when a queued mail expires the queued time, eXtremail sends a DSN notifying it. There is some modifications that just allow the undeliverable mails to be queued under strict circumstances (when the socket fails).

The queued mails information thru the remote management has been improved. Now appears the sender data and the mail size.

A few more ...

- **Version 1.1.7**, January, 25 of 2001

Bugs fixed:

Some mails did not reach their destinations due to bad configured DNS servers. Anyway, eXtremail now is more fault tolerant ...

The RSET command did not work the way it should.

Some matters regarding chained forwardings of mails.

A few more ...

New features:

Now there is a counter on the queued mails. On a future, it will be possible to discard them not just on a matter of time.

It is possible to set a footer for the mails. There is the possibility of setting a different one for each local domain, and two different ones, depending if it is an incoming or outgoing domain.

The already popped mails using POP3 protocol are deleted even if the connection fails during the download.

That way, the next connection the mails aren't duplicated.

A few more ...

- **Version 1.1.6**, December, 26 of 2000

Bugs fixed:

Invalid processing of the SMTP 550 code error.

Maximum HELO, EHLO, MAIL and RCPT command length.

Still some problems with MX servers IP that included a zero value in their address.

A few more.

New features:

SMTP RSET command.

Some DNS new features.

Now there is a way of denying an incoming connection of a mailbox, domain or IP mask/address. There is also a way of denying outgoing connections. The REMT command is DENY.

A few more ...

- **Version 1.1.5**, November, 20 of 2000

Bugs fixed:

The DNS processing has been rewritten due to some errors.

A CRLF string was assumed at the end of any line. That was not so important at SMTP or POP3, but it was at the remote management. The windows Telnet client send each character like an independent call to write at the socket, thus making impossible to communicate with the remote management. Now, it is possible.

Some protections has been added to the POP3 line parsing.

A few more ...

New features:

Now the server has become older: it is an ESMTP server. The SIZE and HELP SMTP extensions have been added. It is possible to define maximum allowed (incoming and outgoing) mail sizes for the user.

New POP3 commands: TOP, RSET and NOOP.

New features for the management: Maximum incoming and outgoing mail sizes can be defined.

Aliases can now be used. It is possible to define a mail forward address or an external program that will receive the mail data thru the standard input channel.

A few more ...

- **Version 1.1.3**, October, 26 of 2000

Bugs fixed:

Some files remained open after use, like the used log files(!), domain file, pid file ...
A few more ...

New features:

POP before SMTP. The server keeps a track of the POP3 connections made, and, if it is configured that way, will allow SMTP connections to those IP during a configurable time.
A few more ...

- **Version 1.1.2**, October, 17 of 2000

Bugs fixed:

Cannot change the 'diskquota' in a 'user mod' command.
When a POP3 user is not authenticated, if there is any more POP3 users currently logged in, a SIGSEV signal is received.
A few more ...

New features:

The process of sending a mail has been totally rewritten, thus using less amount of memory. The memory problems still bothers me ...
Users with the same name can now be defined in different domains.
Some new domain characteristics (default user diskquota, max number of users, ...)
A few more ...

- **Version 1.1.1**, September, 23 of 2000

Bugs fixed:

Memory leaks sending mails in special situations.
Not proper DNS operation when the DNS server response was not correct.
Some errors queueing mails in certain occasions
Not proper closing of the remote socket SMTP connection when an error arises.
Errors deleting and adding some of the files data.
Some errors with queued mails.
A not ending loop when an SMTP remote connection is broken.
More file locks has been added.
A few more ...

New features:

Default mailbox added to the domain. If that is configured, any mail addressed to that domain that the mailbox cannot be found will be automatically forwarded to that default mailbox.
Version smtpd command (smtpd version)
Some new features at the domain and user command at the remote management (now it is possible to remove a user with mails, and removing a domain means removing ALL the users of the domain).
A dynamic DNS cache has been incorporated. It is dynamic because it just last as long as the server is running. If the server is stopped, the cache dies. I will add a file to keep the data.
The DSN messages has been translated to english.
A few more ...

- **Version 1.1.0**, September, 3 of 2000

Bugs fixed:

Time outs were not properly working.
Locks in some concurrent process.
Lock the POP3 user when she is retrieving mails. That is: not allow the same user connected twice.
Creation of a signal control thread that catches unwanted signals. Now, if a thread makes a coredump it dies alone, not stopping the server. This is really important.
The opened sockets where not properly closed sometimes.
The bind process just binded to ONE of the existings net interfaces.
If the host running the server had more than one card (like a gateway) there were problems to attach to it.
A few more ..

New features:

Multithreaded queued mails processor. They were sended one-by-one before this. Number of threads configurable.
Multithreaded of the sending process of a single mail. This way, if a single mail has a lot of RCPT's they are sended using more than just one thread (like before). Number of threads configurable.
A login feature has been added to the remote management. This way, access to that is restricted.
Local domain configuration.
Local IP configuration.
New remote management commands added:
 LOGIN. You must logn before doing anything.
 QUEUE: to control the queued mails.
 More STATS ...
 CONN: show current connections made to the server.
 CONF: to show the configuration parameters.
 HELP: Guess ...
Now, a new log file is created every day. This way, the log file doesn't grow for ever ...
Antirely. At last, there is an antirely feature incorporated to the server. Spamming really scare me.

- **Version 1.0.3**, June, 2 of 2000

Bugs fixed:

Coredump when then rcpt address is not understood.
Coredump when the remote SMTP conexion is aborted
The mail wasn't delivered when it came with a MAIL FROM:
Neither the MAIL FROM: or RCPT TO: clauses where understood when they came in three words instead of two.
A few more ...

New features:

A new control thread has been added and will take over all the management like DNS cache, queues management, and checking if any mail is still pending.

- **Version 1.0.2**, May, 29 of 2000

New features:

Well. Good performace but bad results. All the data of the mail were retained on memory during the transmission of the mail. Crash? Yes, we loose the mails currently being transmitted ... Sorry. I have fix it up. Now, there is a temporary file that holds the mail's data. If the systems crash, the mails will be resent on startup.

- **Version 1.0.1**, May, 23 of 2000

Bugs fixed:

It seems that there is some problems with the DSN's, regarding multipart mails. This version will try to fix them.

There are also some things I have to do with the errors codes when a message is undeliverable. I didn't finish that.

- **Version 1.0.0**, May, 22 of 2000</td>

As it was borned ...

Technical Specifications

RFC's

The following RFC's (Request For Comments) have been (at least intended) followed:

RFC	Description
RFC-822	Mail format
RFC-821	SMTP protocol
RFC-974	Mail routing and the domain system
RFC-1039	POP3 basic protocol
RFC-1034, RFC-1035	DNS implementation
RFC-1123	Requirements for Internet SMTP implementations
RFC-1734	POP3 AUTHentication command
RFC-1892	Multipart/report content type implementation
RFC-1893	Enhanced mail system status codes
RFC-1894	Delivery status notifications (DSN) message format
RFC-1957	Some Observations on Implementations of the Post Office Protocol (POP3)
RFC-2045,RFC-2046,RFC-2047,RFC-2048,RFC-2049	MIME (Multipurpose Internet Mail Extensions)