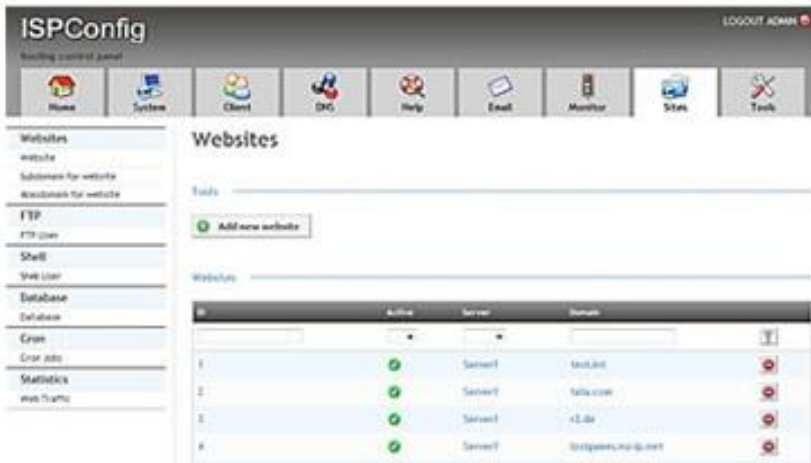




## ISPConfig 3 Manual

Version 1.0 for ISPConfig 3.0.3  
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ISPConfig 3 is an open source hosting control panel for Linux and is capable of managing multiple servers from one control panel. ISPConfig 3 is licensed under BSD license.



## Managed Services and Features

- Manage one or more servers from one control panel (multiserver management)
- Different permission levels (administrators, resellers and clients) + email user level provided by a roundcube plugin for ISPConfig
- Httpd (virtual hosts, domain- and IP-based)
- FTP, SFTP, SCP
- WebDAV
- DNS (A, AAAA, ALIAS, CNAME, HINFO, MX, NS, PTR, RP, SRV, TXT records)
- POP3, IMAP
- Email autoresponder
- Server-based mail filtering
- Advanced email spamfilter and antivirus filter
- MySQL client-databases
- Webalizer and/or AWStats statistics
- Harddisk quota
- Mail quota
- Traffic limits and statistics
- IP addresses

- SSL
- SSI
- PHP (available PHP modes: mod\_php, FCGI, CGI and suPHP)
- Shell access
- Jailed shell access
- Firewall
- Server monitoring module
- MySQL client-database access through phpMyAdmin
- Cron jobs (full cron jobs, jailed cron jobs, web cron jobs)

If you have comments or annotations or would like to contribute to this manual, please contact the author:

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# 1 Conventions Used In This Manual

## 1.1 Commands

Commands to be executed on the command line are formatted as follows in this document:

```
php -q install.php
```

## 1.2 Contents Of Files

Contents of files are displayed as follows in this document:

```
127.0.0.1 localhost.localdomain localhost
# Auto-generated hostname. Please do not remove this comment.
78.46.230.214 server1.example.com server1
```

## 1.3 File Names, Protocol Names, System Specifications, Technical Specifications, User Names, Etc.



File names, protocol names, system specifications, technical specifications, user names, names of form fields, etc. are displayed as follows:

```
http://<hostname>:8080/  
/var/vmail  
/etc/fstab  
admin  
Email > Spamfilter > Blacklist
```

## 1.4 Highlighting

Very important details are highlighted as follows:

Please note that this automatic network configuration works only on Debian/Ubuntu and only if you have one network card which must be eth0.

## 2 ISPConfig Users - Admin, Resellers, And Clients

ISPConfig offers three levels of users which are all fully customizable - admin, resellers, and clients. The default user and at the same time the user with the highest permissions is admin . The admin account is created automatically when you install ISPConfig; all other users have to be created within ISPConfig (see chapters 4.5.1.1 for clients, 4.5.2.1 for resellers, and 4.9.1.1 for further admin users). admin has full control over the ISPConfig control panel and all its functions.

Please don't mix up admin with the root account - root is a system user whereas admin is an ISPConfig user; ISPConfig users can just log into the ISPConfig control panel, nothing more, i.e., they don't have shell access, for example.

admin can create further administrators that have the same or similar rights (see chapter 4.9.1.1), for example you could create an administrator account with the rights to create web sites for clients, and you could create another administrator account that has full access to the DNS module only (for example if you have one web site specialist and another DNS specialist in your company).

admin can also create clients and resellers (resellers can then create clients themselves, but clients cannot create other clients - clients are the ISPConfig users with the lowest permissions). Resellers are companies or individuals that sell services (web hosting, email hosting, DNS hosting, etc.) to their clients without having to worry about the infrastructure behind it - this is all managed by admin . admin can impose limits on resellers so that they don't use up all of the server's resources. Reseller limits probably depend on what resellers are willing to pay for the service , but that is totally up to admin what limits he chooses.

Clients can be created by admin or resellers. They can have multiple web sites, email accounts, etc., but this depends on the client limits that admin and the reseller can set. You can have a client with 5GB of web space, 5 web sites and 10 email accounts, and you can have a client with 100GB of web space, 20 web sites, 100 email accounts and access to the DNS module.

All ISPConfig users (regardless of their role) can access ISPConfig 3 under  
`http://<hostname>:8080/` or `http://<ip_address>:8080/`

## 2.1 Summary

### 2.1.1 admin

- admin manages and has full control over the system.
- admin can add other control panel users (users with administrator functions, resellers and clients).
- admin can have his own clients independent of resellers.

### 2.1.2 Resellers

- Resellers can have access to almost all modules (except the system configuration) or only to a limited set of modules, depending on the permissions given by admin .
- Resellers can create clients.
- Depending on the limits set by admin , resellers can see a limited set of resources to their clients (web space, email accounts, etc.).

### 2.1.3 Clients

- Clients can create web sites, email accounts, etc., but that depends on the resources given to them by their reseller or admin .

## 3 Installation & Updating

In this chapter I will explain how you can install ISPConfig 3 on your server(s). As ISPConfig 3 is multiserver-capable, we have to differentiate between three scenarios:

- The most common setup is to have one web, email, DNS, MySQL database server, i.e. a single server that hosts all services, and install ISPConfig 3 on it (single server setup ).
- The second scenario is to control multiple servers from just one ISPConfig 3 installation, where each server can host all services (web, email, DNS, MySQL), but it is also possible to split up services (e.g. dedicated web servers, dedicated email servers, dedicated DNS servers, dedicated MySQL database servers) (multiserver setup ).
- The third scenario is to have slave servers or mirrors of the ISPConfig 3 server. In this case you cannot create any items on the mirror (this server cannot be selected when you create a new item in ISPConfig 3), but instead the configuration (web site configuration, email configuration, etc.) will be copied from the master to the mirror (just the configuration, not any web site contents, etc. - if you want this, you can achieve this by using [rsync](#) or using a cluster filesystem like [GlusterFS](#) or some kind of network-attached storage, and you'd have to use one of these techniques on the directories `/var/www` for the web sites' contents and `/var/vmail` for the emails - for MySQL databases, you'd have to use [MySQL master-master replication](#) ). If you select a master server in the `Is mirror of Server` field (see chapter 4.9.2.1), the server for which you select the master will act as a mirror, not as a full-fledged server. If you have a failover-IP address that you can switch between the master and the mirror (e.g. automatically with [heartbeat/keepalived](#) /etc. or manually, e.g. from your hoster's control panel), you can achieve high-availability because if the master fails, the mirror can take over (mirror setup ). Of course, this can be mixed with a multiserver setup (i.e., you can have a cluster with full-fledged servers like in the second scenario and with mirrors).

ISPConfig 3 has two installation modes called `standard` and `expert` . `expert` is needed only for multiserver and mirror setups (see chapters 3.2 and 3.3) - in most cases you should use `standard` mode. In `expert` mode the installer asks if the server should join an existing ISPConfig multiserver setup, and if you answer with yes (y ), the installer asks further questions about the master server (like database details).

## 3.1 Single Server Setup

You can find setup instructions for various versions of Debian, Ubuntu, CentOS, Fedora, and OpenSUSE on <http://www.ispconfig.org/ispconfig-3/documentation/> . It is strongly recommended to follow these to set up your Linux server before you install ISPConfig 3.

After you've set up the base system, you can install ISPConfig 3 as follows:

```
cd /tmp
wget http://www.ispconfig.org/downloads/ISPConfig-3-stable.tar.gz
```

```
tar xzf ISPConfig-3-stable.tar.gz
```

```
cd ispcfg3_install/install/
```

The next step is to run

```
php -q install.php
```

This will start the ISPConfig 3 installer. The installer will configure all services like postfix, sasl, courier, etc. for you.

```
root@server1:/tmp/ispcfg3_install/install# php -q install.php
```

```

  _____
 |  /  |  |  |  /  _  |  /  ( )
 ||  `|  ||  ||  /  _  |  |  _  _
 ||  `|  _/  ||  /  |  |  |  |  |
 |  ||  ||  |  |  /  ( )  |  |  |  |  |
 _/  _/  |  _/  _/  |  |  |  |  |  |
                               _/  |
                               |  /

```

>> Initial configuration

Operating System: Debian Squeeze/Sid or compatible

Following will be a few questions for primary configuration so be careful.

Default values are in [brackets] and can be accepted with <ENTER>.

Tap in "quit" (without the quotes) to stop the installer.

Select language (en,de) [en]: <-- ENTER

Installation mode (standard,expert) [standard]: <-- ENTER

Full qualified hostname (FQDN) of the server, eg server1.domain.tld [server1.example.com]: <-- ENTER

MySQL server hostname [localhost]: <-- ENTER

MySQL root username [root]: <-- ENTER  
MySQL root password []: <-- yourrootsqlpassword  
MySQL database to create [dbispcfg]: <-- ENTER  
MySQL charset [utf8]: <-- ENTER

Generating a 2048 bit RSA private key  
...+++

.+++  
writing new private key to 'smtpd.key'  
-----

You are about to be asked to enter information that will be incorporated into your certificate request.

What you are about to enter is what is called a Distinguished Name or a DN.

There are quite a few fields but you can leave some blank

For some fields there will be a default value,

If you enter '.', the field will be left blank.

-----  
Country Name (2 letter code) [AU]: <-- ENTER  
State or Province Name (full name) [Some-State]: <-- ENTER  
Locality Name (eg, city) []: <-- ENTER  
Organization Name (eg, company) [Internet Widgits Pty Ltd]: <-- ENTER  
Organizational Unit Name (eg, section) []: <-- ENTER  
Common Name (eg, YOUR name) []: <-- ENTER  
Email Address []: <-- ENTER

Configuring Jailkit  
Configuring SASL  
Configuring PAM  
Configuring Courier  
Configuring Spamassassin  
Configuring Amavisd  
Configuring Getmail  
Configuring Pureftpd  
Configuring BIND  
Configuring Apache  
Configuring vlogger  
Configuring Apps vhost  
Configuring Firewall  
Installing ISPConfig  
ISPConfig Port [8080]: <-- ENTER

Configuring DBServer  
Installing Crontab  
no crontab for root

no crontab for getmail

Restarting services ...

Rather than invoking init scripts through /etc/init.d, use the service(8) utility, e.g. service mysql restart

Since the script you are attempting to invoke has been converted to an Upstart job, you may also use the restart(8) utility, e.g. restart mysql mysql start/running, process 24840

```
* Stopping Postfix Mail Transport Agent postfix
...done.
* Starting Postfix Mail Transport Agent postfix
...done.
* Stopping SASL Authentication Daemon saslauthd
...done.
* Starting SASL Authentication Daemon saslauthd
...done.
Stopping amavisd: amavisd-new.
Starting amavisd: amavisd-new.
* Stopping ClamAV daemon clamd
...done.
* Starting ClamAV daemon clamd
...done.
* Stopping Courier authentication services authdaemond
...done.
* Starting Courier authentication services authdaemond
...done.
* Stopping Courier IMAP server...
...done.
* Starting Courier IMAP server...
...done.
* Stopping Courier IMAP-SSL server...
...done.
* Starting Courier IMAP-SSL server...
...done.
* Stopping Courier POP3 server...
...done.
* Starting Courier POP3 server...
...done.
* Stopping Courier POP3-SSL server...
...done.
* Starting Courier POP3-SSL server...
...done.
* Restarting web server apache2
... waiting ...done.
```

Restarting ftp server: Running: /usr/sbin/pure-ftpd-mysql-virtualchroot -l mysql:/etc/pure-ftpd/db/mysql.conf -l pam -H -E -b -O clf:/var/log/pure-ftpd/transfer.log -8

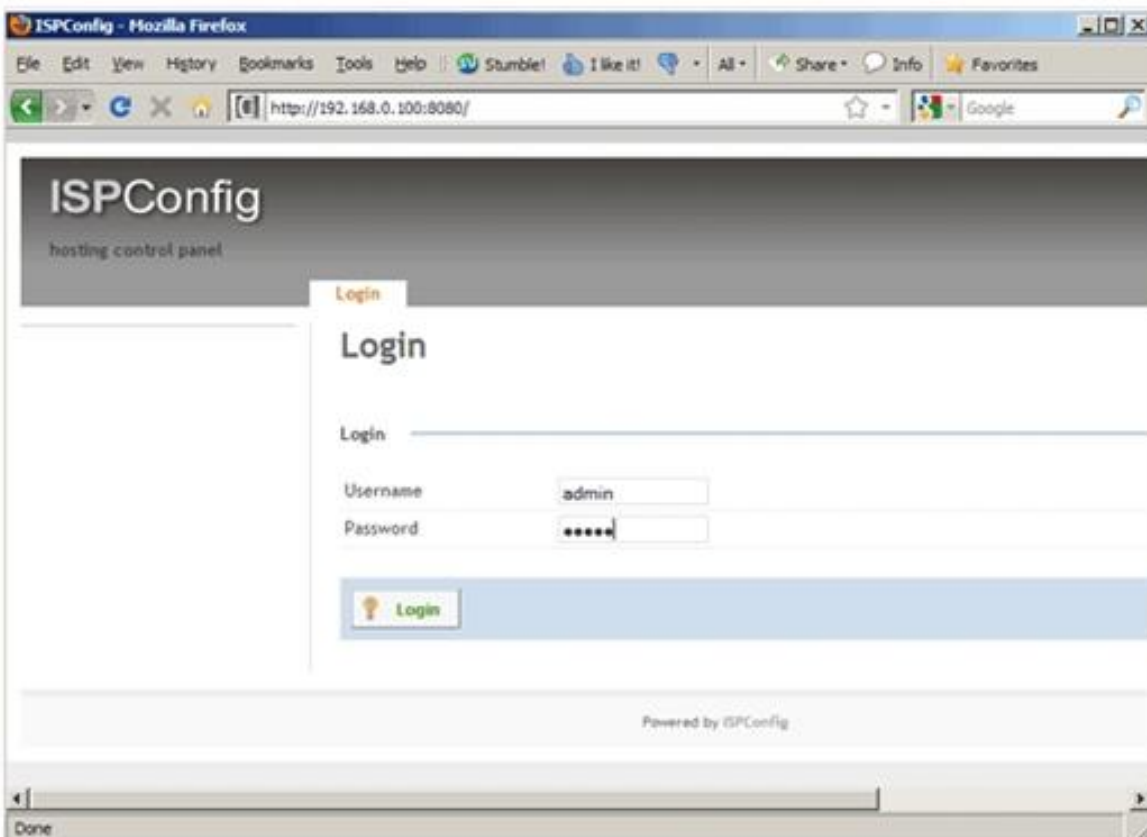
```
UTF-8 -u 1000 -A -B
```

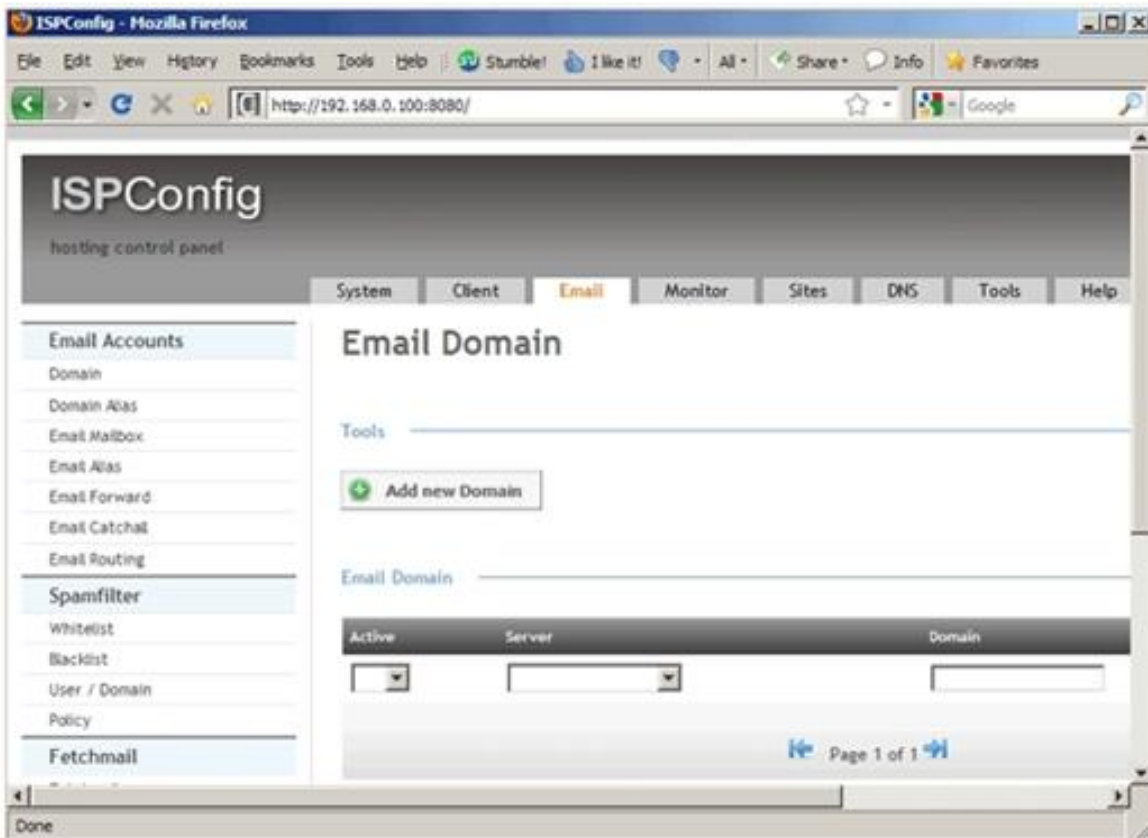
Installation completed.

```
root@server1:/tmp/ispconfig3_install/install#
```

The installer automatically configures all underlying services, so no manual configuration is needed.

Afterwards you can access ISPConfig 3 under `http://<hostname>:8080/` or `http://<ip_address>:8080/`. Log in with the username `admin` and the password `admin` (you should change the default password after your first login):





The system is now ready to be used.

## 3.2 Multiserver Setup

The best way to describe a multiserver setup is to do this through an example. Here is a tutorial about a Debian Lenny multiserver setup with dedicated web, email, DNS and MySQL database servers with ISPConfig 3 (i.e., the services are split up between the servers - of course, it is also possible to let all servers host all services instead of just one service).

### 3.2.1 Installing A Multiserver Setup With Dedicated Web, Email, DNS And MySQL Database Servers On Debian 5.0 With ISPConfig 3

This tutorial describes the installation of an ISPConfig 3 multiserver setup with dedicated web, email, database and two DNS servers all managed through a single ISPConfig 3 control panel. The setup described below uses five servers and can be extended easily to a higher number of servers by just adding more servers. E.g. if you want to have two mail servers, do the setup steps from chapter 3.2.1.3 on both of these servers. If you want to set up more web servers,



then install ISPConfig on all other web servers in expert mode except of the first one.

### 3.2.1.1 Installing The Five Debian Base Systems

In this setup there will be one master server (which runs the web server and ISPConfig control panel interface) and four slave servers for database, email, primary and secondary DNS.

To install the clustered setup, we need five servers (or virtual servers) with a Debian 5.0 minimal install. The base setup is described in the following tutorial in the steps 1 - 6:

<http://www.howtoforge.com/perfect-server-debian-lenny-ispconfig3>

Install only steps 1 - 6 of the perfect server tutorial and not the other steps as they differ for a clustered setup!

In my example I use the following hostnames and IP addresses for the five servers:

#### Web Server

Hostname: web.example.tld  
IP address: 192.168.0.105

#### Mail Server

Hostname: mail.example.tld  
IP address: 192.168.0.106

#### DB Server

Hostname: db.example.tld  
IP address: 192.168.0.107

#### DNS Server (primary)

Hostname: ns1.example.tld  
IP address: 192.168.0.108

#### DNS Server (secondary)

Hostname: ns2.example.tld  
IP address: 192.168.0.109

Whereever these hostnames or IP addresses occur in the next installation steps you will have to change them to match the IP's and hostnames of your servers.

### 3.2.1.2 Installing The Web Server

Edit the hosts file and add the IP addresses and hostnames for all servers. The hostnames and IP addresses have to be adjusted to match your setup.

```
vi /etc/hosts
```

```
127.0.0.1    localhost
192.168.0.105  web.example.tld
192.168.0.106  mail.example.tld
192.168.0.107  db.example.tld
192.168.0.108  ns1.example.tld
192.168.0.109  ns2.example.tld

# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
```

Set the hostname of the server:

```
echo web.example.tld > /etc/hostname
```

```
/etc/init.d/hostname.sh start
```

Edit the sources.list file...

```
vi /etc/apt/sources.list
```

... and ensure that it contains the following line to enable the volatile repository.

```
deb http://volatile.debian.org/debian-volatile lenny/volatile main contrib non-free
```

Run...

```
apt-get update
```

... to update the apt package database; then run...

```
apt-get upgrade
```

... to install the latest updates (if there are any).

It is a good idea to synchronize the system clock with an NTP (network time protocol) server over the Internet. Simply run...

```
apt-get -y install ntp ntpdate
```

... and your system time will always be in sync.

Install the MySQL server. A MySQL server instance is necessary on every server as ISPConfig uses it to sync the configuration between the servers.

```
apt-get -y install mysql-client mysql-server
```

Enter the new password for MySQL when requested by the installer.

We want MySQL to listen on all interfaces on the master server, not just localhost, therefore we edit `/etc/mysql/my.cnf` and comment out the line `bind-address = 127.0.0.1` :

```
vi /etc/mysql/my.cnf
```

```
[...]  
  
# Instead of skip-networking the default is now to listen only on  
# localhost which is more compatible and is not less secure.  
#bind-address      = 127.0.0.1  
  
[...]
```

Then restart MySQL:

```
/etc/init.d/mysql restart
```

Now install Apache2, PHP5, phpMyAdmin, CGI, suExec, Pear, and mcrypt as follows:

```
apt-get -y install apache2 apache2.2-common apache2-doc apache2-mpm-prefork apache2-utils  
libexpat1 ssl-cert libapache2-mod-php5 php5 php5-common php5-gd php5-mysql php5-imag  
phpmyadmin php5-cli php5-cgi libapache2-mod-fcgid apache2-suexec php-pear php-auth  
php5-mcrypt mcrypt php5-imagick imagemagick libapache2-mod-suphp libopenssl-ruby
```

```
libapache2-mod-ruby sudo
```

You will see the following question:

Web server to reconfigure automatically: [<-- apache2](#)

Then run the following command to enable the Apache modules suexec, rewrite, ssl, actions, and include:

```
a2enmod suexec rewrite ssl actions include ruby dav_fs dav_auth_digest
```

PureFTPd and quota can be installed with the following command:

```
apt-get -y install pure-ftpd-common pure-ftpd-mysql quota quotatool
```

Edit `/etc/fstab` . Mine looks like this (I added `,usrquota,grpquota` to the partition with the mount point `/`):

```
vi /etc/fstab
```

```
# /etc/fstab: static file system information.
#
# <file system> <mount point> <type> <options> <dump> <pass>
proc /proc proc defaults 0 0
/dev/sda1 / ext3 errors=remount-ro,usrquota,grpquota 0 1
/dev/sda5 none swap sw 0 0 /dev/hda
/media/cdrom0 udf,iso9660 user,noauto 0 0
/dev/fd0 /media/floppy0 auto rw,user,noauto 0 0
```

To enable quota, run these commands:

```
touch /quota.user /quota.group
```

```
chmod 600 /quota.*
```

```
mount -o remount /
```

```
quotacheck -avugm
```

```
quotaon -avug
```

Install vlogger, webalizer, and awstats:

```
apt-get -y install vlogger webalizer awstats
```

Install Jailkit: Jailkit is needed only if you want to chroot SSH users and cron jobs. It can be installed as follows (important: Jailkit must be installed before ISPConfig - it cannot be installed afterwards!):

```
apt-get -y install build-essential autoconf automake1.9 libtool flex bison
```

```
cd /tmp

wget http://olivier.sessink.nl/jailkit/jailkit-2.12.tar.gz

tar xvfz jailkit-2.12.tar.gz

cd jailkit-2.12

./configure

make

make install

cd ..

rm -rf jailkit-2.12*
```

Install fail2ban: This is optional but recommended, because the ISPConfig monitor tries to show the log:

```
apt-get install fail2ban
```

Next we will install ISPConfig 3. To get the download URL of the latest ISPConfig 3 stable release, please visit the ISPConfig website: <http://www.ispconfig.org/ispconfig-3/download/>

This server is the master server in our setup which runs the ISPConfig control panel interface. To allow the other MySQL instances to connect to the MySQL database on this node during installation, we have to add MySQL root user records in the master database for every slave server hostname and IP address. The easiest way to do this is to use the web based phpmyadmin administration tool that we installed already. Open the URL <http://192.168.0.105/phpmyadmin> in a web browser, log in as MySQL root user and execute these MySQL queries:

```
CREATE USER 'root'@'192.168.0.106' IDENTIFIED BY 'myrootpassword';
```

```
GRANT ALL PRIVILEGES ON * . * TO 'root'@'192.168.0.106' IDENTIFIED BY 'myrootpassword' WITH
GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

```
CREATE USER 'root'@'192.168.0.107' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'192.168.0.107' IDENTIFIED BY 'myrootpassword' WITH
GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

```
CREATE USER 'root'@'192.168.0.108' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'192.168.0.108' IDENTIFIED BY 'myrootpassword' WITH
GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

```
CREATE USER 'root'@'192.168.0.109' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'192.168.0.109' IDENTIFIED BY 'myrootpassword' WITH
GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

```
CREATE USER 'root'@'mail.example.tld' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'mail.example.tld' IDENTIFIED BY 'myrootpassword'
WITH GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

```
CREATE USER 'root'@'db.example.tld' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'db.example.tld' IDENTIFIED BY 'myrootpassword' WITH
GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

```
CREATE USER 'root'@'ns1.example.tld' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'ns1.example.tld' IDENTIFIED BY 'myrootpassword' WITH
GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

```
CREATE USER 'root'@'ns2.example.tld' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'ns2.example.tld' IDENTIFIED BY 'myrootpassword' WITH
GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

In the above sql commands, replace the IP addresses (192.168.0.106 - 192.168.0.109 ) with the IP addresses of your servers and replace mail.example.tld , db.example.tld , ns1.example.tld and ns2.example.tld with the hostnames of your servers and myrootpassword with the desired root password.

Click on the reload permissions button or restart MySQL. Then close phpmyadmin.

Go back to the shell of server1.example.tld and download the latest ISPConfig 3 stable release:

```
cd /tmp

wget http://www.ispconfig.org/downloads/ISPConfig-3-stable.tar.gz

tar xzf ISPConfig-3-stable.tar.gz

cd ispconfig3_install/install/
```

Then start the install script:

```
php -q install.php
```

```
Select language (en,de) [en]:          <-- en
Installation mode (standard,expert) [standard]:          <-- expert
Full qualified hostname (FQDN) of the server, eg server2.domain.tld
[web.example.tld]:          <-- web.example.tld
MySQL server hostname [localhost]:          <-- localhost
MySQL root username [root]:          <-- root
MySQL root password []:          <-- Enter your MySQL root password here
MySQL database to create [dbispconfig]:          <-- dbispconfig
MySQL charset [utf8]:          <-- utf8
Shall this server join an existing ISPConfig multiserver setup (y,n) [n]:          <-- n
Configure Mail (y,n) [y]:          <-- n
Configure Jailkit (y,n) [y]:          <-- y
Configure FTP Server (y,n) [y]:          <-- y
Configure DNS Server (y,n) [y]:          <-- n
Configure Apache Server (y,n) [y]:          <-- y
Configure Firewall Server (y,n) [y]:          <-- y
```

```
Install ISPConfig Web-Interface (y,n) [y]: <--y
ISPConfig Port [8080]: <-- 8080
```

Clean up the install directories:

```
rm -rf /tmp/ispconfig3_install/install
rm -f /tmp/ISPConfig-3-stable.tar.gz
```

### 3.2.1.3 Installing The Mail Server

Edit the hosts file and add the IP addresses and hostnames for all servers. The hostnames and IP addresses have to be adjusted to match your setup.

```
vi /etc/hosts
```

```
127.0.0.1    localhost
192.168.0.105    web.example.tld
192.168.0.106    mail.example.tld
192.168.0.107    db.example.tld
192.168.0.108    ns1.example.tld
192.168.0.109    ns2.example.tld

# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
```

Set the hostname of the server:

```
echo mail.example.tld > /etc/hostname

echo mail.example.tld > /etc/mailname

/etc/init.d/hostname.sh start
```

Edit the sources.list      file...



```
vi /etc/apt/sources.list
```

... and ensure that it contains the following line to enable the volatile repository.

```
deb http://volatile.debian.org/debian-volatile lenny/volatile main contrib non-free
```

Run...

```
apt-get update
```

... to update the apt package database; then run...

```
apt-get upgrade
```

... to install the latest updates (if there are any).

It is a good idea to synchronize the system clock with an NTP (network time protocol) server over the Internet. Simply run...

```
apt-get -y install ntp ntpdate
```

... and your system time will always be in sync.

Install postfix, dovecot and MySQL with one single command:

```
apt-get -y install postfix postfix-mysql postfix-doc mysql-client mysql-server openssl  
gmail4 rkhunter binutils dovecot-imapd dovecot-pop3d
```

Enter the new password for mysql when requested by the installer and answer the next questions as described below:

```
Create directories for web-based administration ?          <-- No  
General type of configuration?          <-- Internet site  
Mail name?          <-- mail.mydomain.tld  
SSL certificate required          <-- Ok
```

To install amavisd-new, SpamAssassin, and ClamAV, we run:

```
apt-get -y install amavisd-new spamassassin clamav clamav-daemon zoo unzip bzip2 arj nomarch lzop  
cabextract apt-listchanges libnet-ldap-perl libauthen-sasl-perl clamav-docs daemon  
libio-string-perl libio-socket-ssl-perl libnet-ident-perl zip libnet-dns-perl
```

Then install the commandline version of PHP to be able to run PHP-based shell scripts for ISPConfig:

```
apt-get -y install php5-cli php5-mysql php5-mcrypt mcrypt
```

Install fail2ban: This is optional but recommended, because the ISPConfig monitor tries to show the log:

```
apt-get install fail2ban
```

Now I will install ISPConfig 3 on this server. To get the download URL of the latest ISPConfig 3 stable release, please visit the ISPConfig website:

<http://www.ispconfig.org/ispconfig-3/download/>

Download the latest ISPConfig 3 stable release:

```
cd /tmp

wget http://www.ispconfig.org/downloads/ISPConfig-3-stable.tar.gz

tar xzf ISPConfig-3-stable.tar.gz

cd ispconfig3_install/install/
```

Then start the install script:

```
php -q install.php
```

```
Select language (en,de) [en]:          <-- en
Installation mode (standard,expert) [standard]:          <-- expert
Full qualified hostname (FQDN) of the server, eg server1.domain.tld
[mail.example.tld]:          <-- mail.example.tld
MySQL server hostname [localhost]:          <-- localhost
MySQL root username [root]:          <-- root
MySQL root password []:          <-- Enter your MySQL root password here
MySQL database to create [dbispconfig]:          <-- dbispconfig
MySQL charset [utf8]:          <-- utf8
Shall this server join an existing ISPConfig multiserver setup (y,n) [n]:          <-- y
MySQL master server hostname []:          <-- web.example.tld
MySQL master server root username [root]:          <-- root
MySQL master server root password []:          <-- Enter the root password of the master server here
MySQL master server database name [dbispconfig]:          <-- dbispconfig
Configure Mail (y,n) [y]:          <-- y
```

Country Name (2 letter code) [AU]: <-- DE (Enter the ISO country code where you live here)  
State or Province Name (full name) [Some-State]: <-- Niedersachsen (Enter the state where you live here)  
Locality Name (eg, city) []: <-- Lueneburg (Enter the city here)  
Organization Name (eg, company) [Internet Widgits Pty Ltd]: <-- ENTER  
Organizational Unit Name (eg, section) []: <-- ENTER  
Common Name (eg, YOUR name) []: <-- ENTER  
Email Address []: <-- ENTER

Configure Jailkit (y,n) [y]: <-- n  
Configure FTP Server (y,n) [y]: <-- n  
Configure DNS Server (y,n) [y]: <-- n  
Configure Apache Server (y,n) [y]: <-- n  
Configure Firewall Server (y,n) [y]: <-- y  
Install ISPConfig Web-Interface (y,n) [y]: <-- n

Run...

```
rm -f /var/www/ispconfig
```

... to remove the ISPConfig interface link in the `/var/www` directory.

Clean up the install directories:

```
rm -rf /tmp/ispconfig3_install/install
```

```
rm -f /tmp/ISPConfig-3-stable.tar.gz
```

## 3.2.1.4 Installing The MySQL Database Server

Edit the hosts file and add the IP addresses and hostnames for all servers. The hostnames and IP addresses have to be adjusted to match your setup.

```
vi /etc/hosts
```

```
127.0.0.1    localhost
192.168.0.105 web.example.tld
192.168.0.106 mail.example.tld
192.168.0.107 db.example.tld
192.168.0.108 ns1.example.tld
192.168.0.109 ns2.example.tld
```

```
# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
```

Set the hostname of the server:

```
echo db.example.tld > /etc/hostname
/etc/init.d/hostname.sh start
```

Edit the sources.list file...

```
vi /etc/apt/sources.list
```

... and ensure that it contains the following line to enable the volatile repository.

```
deb http://volatile.debian.org/debian-volatile lenny/volatile main contrib non-free
```

Run...

```
apt-get update
```

... to update the apt package database; then run...

```
apt-get upgrade
```

... to install the latest updates (if there are any).

It is a good idea to synchronize the system clock with an NTP (network time protocol) server over the Internet. Simply run...

```
apt-get -y install ntp ntpdate
```

... and your system time will always be in sync.

Install MySQL client and server:

```
apt-get -y install mysql-client mysql-server
```

Enter the new password for MySQL when requested by the installer.

We want MySQL to listen on all interfaces, not just localhost, therefore we edit

/etc/mysql/my.cnf and comment out the line bind-address = 127.0.0.1 :

```
vi /etc/mysql/my.cnf
```

```
[...]  
  
# Instead of skip-networking the default is now to listen only on  
# localhost which is more compatible and is not less secure.  
#bind-address      = 127.0.0.1  
  
[...]
```

Then restart MySQL:

```
/etc/init.d/mysql restart
```

Then install the commandline version of PHP to be able to run PHP-based shell scripts for ISPConfig:

```
apt-get -y install php5-cli php5-mysql php5-mcrypt mcrypt
```

Install fail2ban: This is optional but recommended, because the ISPConfig monitor tries to show the log:

```
apt-get install fail2ban
```

Next install ISPConfig 3 on this server. To get the download URL of the latest ISPConfig 3 stable release, please visit the ISPConfig website:

<http://www.ispconfig.org/ispconfig-3/download/>

Download the latest ISPConfig 3 stable release:

```
cd /tmp  
  
wget http://www.ispconfig.org/downloads/ISPConfig-3-stable.tar.gz
```

```
tar xzf ISPConfig-3-stable.tar.gz
cd ispcconfig3_install/install/
```

Then start the install script:

```
php -q install.php
```

```
Select language (en,de) [en]:          <-- en
Installation mode (standard,expert) [standard]:          <-- expert
Full qualified hostname (FQDN) of the server, eg server1.domain.tld
[db.example.tld]:          <-- db.example.tld
MySQL server hostname [localhost]:          <-- localhost
MySQL root username [root]:          <-- root
MySQL root password []:          <-- Enter your MySQL root password here
MySQL database to create [dbispcconfig]:          <-- dbispcconfig
MySQL charset [utf8]:          <-- utf8
Shall this server join an existing ISPConfig multiserver setup (y,n) [n]:          <-- y
MySQL master server hostname []:          <-- web.example.tld
MySQL master server root username [root]:          <-- root
MySQL master server root password []:          <-- Enter the root password of the master server here
MySQL master server database name [dbispcconfig]:          <-- dbispcconfig
Configure Mail (y,n) [y]:          <-- n
Configure Jailkit (y,n) [y]:          <-- n
Configure FTP Server (y,n) [y]:          <-- n
Configure DNS Server (y,n) [y]:          <-- n
Configure Apache Server (y,n) [y]:          <-- n
Configure Firewall Server (y,n) [y]:          <-- y
Install ISPConfig Web-Interface (y,n) [y]:          <-- n
```

Run...

```
rm -f /var/www/ispcconfig
```

... to remove the ISPConfig interface link in the `/var/www` directory.

Clean up the install directories:

```
rm -rf /tmp/ispcconfig3_install/install
rm -f /tmp/ISPConfig-3-stable.tar.gz
```

### 3.2.1.5 Installing The Primary DNS Server

Edit the hosts file and add the IP addresses and hostnames for all servers. The hostnames and IP addresses have to be adjusted to match your setup.

```
vi /etc/hosts
```

```
127.0.0.1    localhost
192.168.0.105  web.example.tld
192.168.0.106  mail.example.tld
192.168.0.107  db.example.tld
192.168.0.108  ns1.example.tld
192.168.0.109  ns2.example.tld

# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
```

Set the hostname of the server:

```
echo ns1.example.tld > /etc/hostname
```

```
/etc/init.d/hostname.sh start
```

Edit the sources.list file...

```
vi /etc/apt/sources.list
```

... and ensure that it contains the following line to enable the volatile repository.

```
deb http://volatile.debian.org/debian-volatile lenny/volatile main contrib non-free
```

Run...

```
apt-get update
```

... to update the apt package database; then run...

```
apt-get upgrade
```

... to install the latest updates (if there are any).

It is a good idea to synchronize the system clock with an NTP (network time protocol) server over the Internet. Simply run...

```
apt-get -y install ntp ntpdate
```

... and your system time will always be in sync.

Install MySQL client and server:

```
apt-get -y install mysql-client mysql-server
```

Enter the new password for MySQL when requested by the installer.

Then install the commandline version of PHP to be able to run PHP-based shell scripts for ISPConfig:

```
apt-get -y install php5-cli php5-mysql php5-mcrypt mcrypt
```

Install BIND DNS Server:

```
apt-get -y install bind9 dnstools
```

Next install ISPConfig 3 on the dns server. To get the download URL of the latest ISPConfig 3 stable release, please visit the ISPConfig website:

<http://www.ispconfig.org/ispconfig-3/download/>

Download the latest ISPConfig 3 stable release:

```
cd /tmp

wget http://www.ispconfig.org/downloads/ISPConfig-3-stable.tar.gz

tar xzf ISPConfig-3-stable.tar.gz

cd ispconfig3_install/install/
```

Then start the install script:



```
php -q install.php
```

Select language (en,de) [en]: <-- en  
Installation mode (standard,expert) [standard]: <-- expert  
Full qualified hostname (FQDN) of the server, eg server2.domain.tld  
[ns1.example.tld]: <-- ns1.example.tld  
MySQL server hostname [localhost]: <-- localhost  
MySQL root username [root]: <-- root  
MySQL root password []: <-- Enter your MySQL root password here  
MySQL database to create [dbispconfig]: <-- dbispconfig  
MySQL charset [utf8]: <-- utf8  
Shall this server join an existing ISPConfig multiserver setup (y,n) [n]: <-- y  
MySQL master server hostname []: <-- web.example.tld  
MySQL master server root username [root]: <-- root  
MySQL master server root password []: <-- Enter the root password of the master server here  
MySQL master server database name [dbispconfig]: <-- dbispconfig  
Configure Mail (y,n) [y]: <-- n  
Configure Jailkit (y,n) [y]: <-- n  
Configure FTP Server (y,n) [y]: <-- n  
Configure DNS Server (y,n) [y]: <-- y  
Configure Apache Server (y,n) [y]: <-- n  
Configure Firewall Server (y,n) [y]: <-- y  
Install ISPConfig Web-Interface (y,n) [y]: <-- n

Run...

```
rm -f /var/www/ispconfig
```

... to remove the ISPConfig interface link in the /var/www directory.

Clean up the install directories:

```
rm -rf /tmp/ispconfig3_install/install
```

```
rm -f /tmp/ISPConfig-3-stable.tar.gz
```

## 3.2.1.6 Installing The Secondary DNS Server

Edit the hosts file and add the IP addresses and hostnames for all servers. The hostnames and IP addresses have to be adjusted to match your setup.

```
vi /etc/hosts
```

```

127.0.0.1    localhost
192.168.0.105    web.example.tld
192.168.0.106    mail.example.tld
192.168.0.107    db.example.tld
192.168.0.108    ns1.example.tld
192.168.0.109    ns2.example.tld

# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts

```

Set the hostname of the server:

```

echo ns2.example.tld > /etc/hostname

/etc/init.d/hostname.sh start

```

Edit the sources.list      file...

```
vi /etc/apt/sources.list
```

... and ensure that it contains the following line to enable the volatile repository.

```
deb http://volatile.debian.org/debian-volatile lenny/volatile main contrib non-free
```

Run...

```
apt-get update
```

... to update the apt package database; then run...

```
apt-get upgrade
```

... to install the latest updates (if there are any).

It is a good idea to synchronize the system clock with an NTP (network time protocol) server over the Internet. Simply run...

```
apt-get -y install ntp ntpdate
```

... and your system time will always be in sync.

Install MySQL client and server:

```
apt-get -y install mysql-client mysql-server
```

Enter the new password for MySQL when requested by the installer.

Then install the commandline version of PHP to be able to run PHP-based shell scripts for ISPConfig:

```
apt-get -y install php5-cli php5-mysql php5-mcrypt mcrypt
```

Install BIND DNS Server:

```
apt-get -y install bind9 dnsutils
```

Next install ISPConfig 3 on the dns server. To get the download URL of the latest ISPConfig 3 stable release, please visit the ISPConfig website:

<http://www.ispconfig.org/ispconfig-3/download/>

Download the latest ISPConfig 3 stable release:

```
cd /tmp

wget http://www.ispconfig.org/downloads/ISPConfig-3-stable.tar.gz

tar xzf ISPConfig-3-stable.tar.gz

cd ispconfig3_install/install/
```

Then start the install script:

```
php -q install.php
```

Select language (en,de) [en]: [<-- en](#)

Installation mode (standard,expert) [standard]: [<-- expert](#)

Full qualified hostname (FQDN) of the server, eg server2.domain.tld

[ns2.example.tld]: [<-- ns2.example.tld](#)

```

MySQL server hostname [localhost]:      <-- localhost
MySQL root username [root]:            <-- root
MySQL root password []:                <-- Enter your MySQL root password here
MySQL database to create [dbispconfig]: <-- dbispconfig
MySQL charset [utf8]:                  <-- utf8
Shall this server join an existing ISPConfig multiserver setup (y,n) [n]:      <-- y
MySQL master server hostname []:       <-- web.example.tld
MySQL master server root username [root]: <-- root
MySQL master server root password []:  <-- Enter the root password of the master server here
MySQL master server database name [dbispconfig]: <-- dbispconfig
Configure Mail (y,n) [y]:              <-- n
Configure Jailkit (y,n) [y]:           <-- n
Configure FTP Server (y,n) [y]:        <-- n
Configure DNS Server (y,n) [y]:        <-- y
Configure Apache Server (y,n) [y]:     <-- n
Configure Firewall Server (y,n) [y]:   <-- y
Install ISPConfig Web-Interface (y,n) [y]: <-- n

```

Run...

```
rm -f /var/www/ispconfig
```

... to remove the ISPConfig interface link in the `/var/www` directory.

Clean up the install directories:

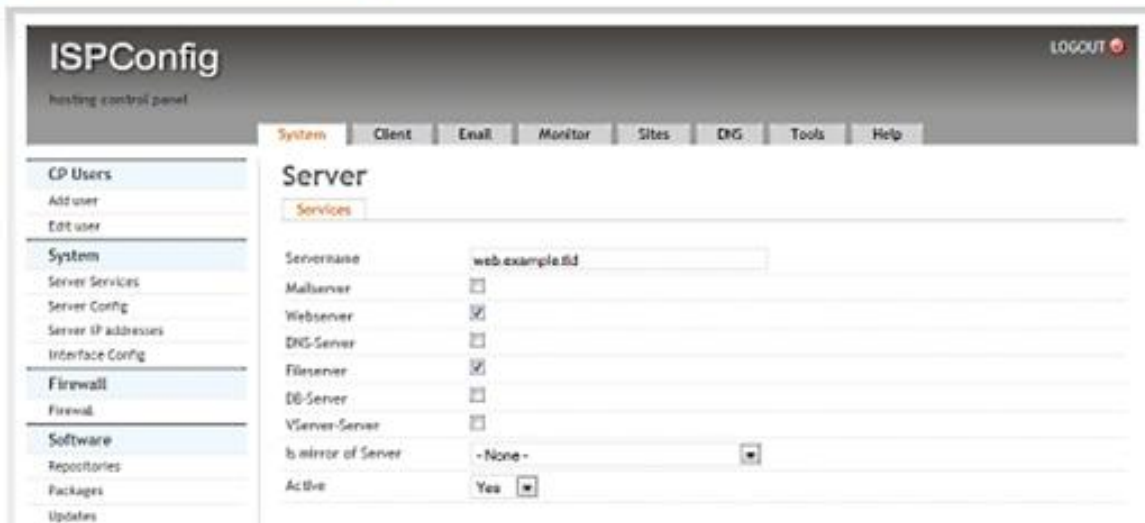
```
rm -rf /tmp/ispconfig3_install/install
rm -f /tmp/ISPConfig-3-stable.tar.gz
```

### 3.2.1.7 Adjust The Server Settings In ISPConfig

Log into ISPConfig on the master server with a web browser:

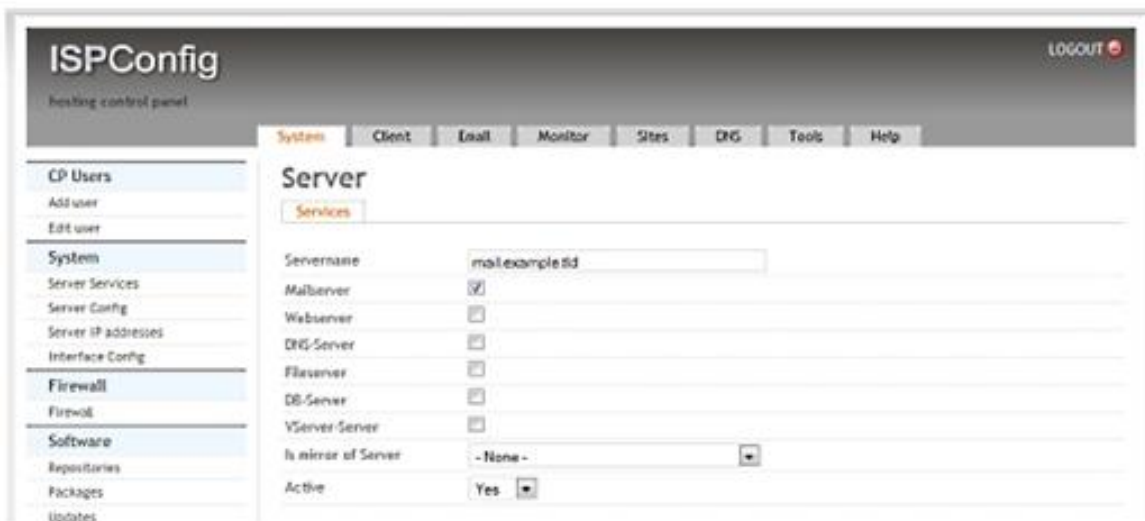
`http://192.168.0.105:8080`

Click on System > Server services > web.example.tld and disable all checkboxes except of the Webserver and Fileserver checkbox and click on Save .



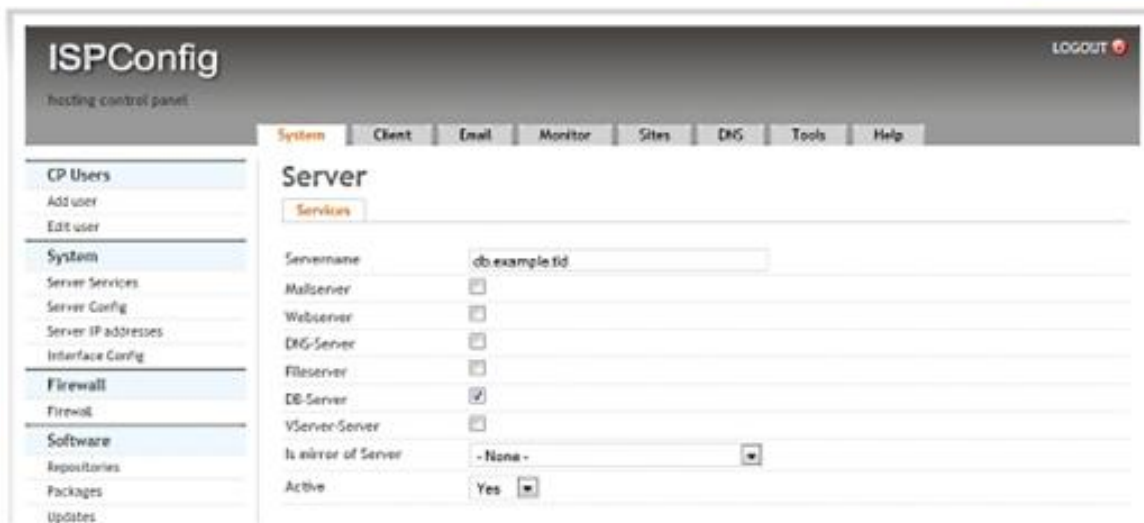
Click on System > Server services > mail.example.tld  
the Mailserver checkbox and click on Save .

and disable all checkboxes except of



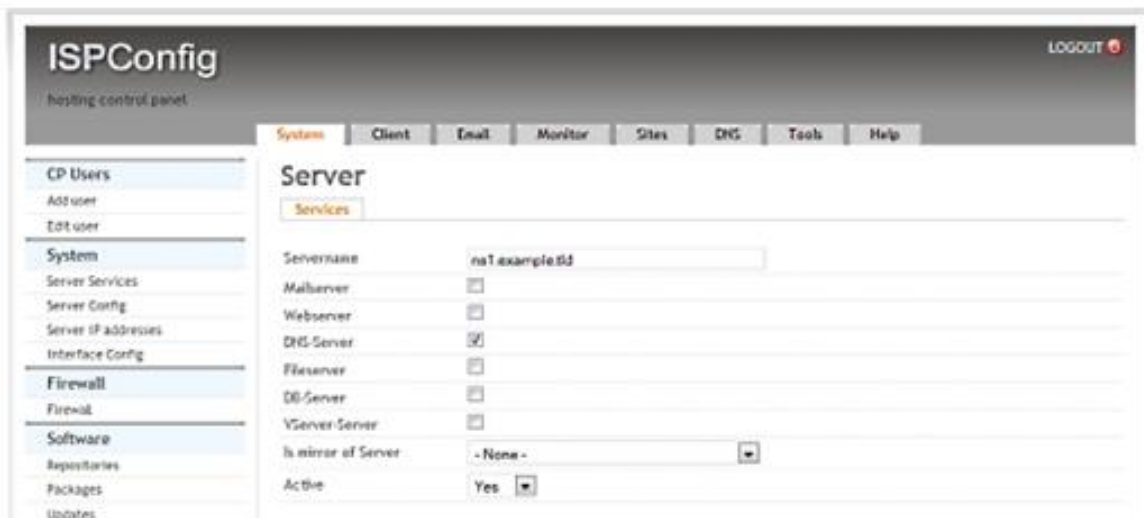
Click on System > Server services > db.example.tld  
the DB-Server checkbox and click on Save .

and disable all checkboxes except of



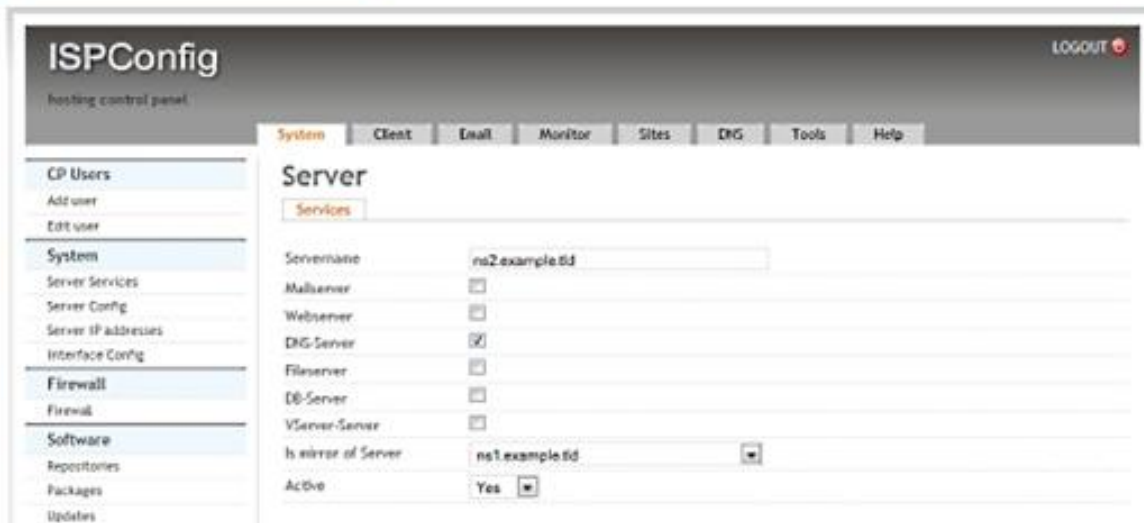
Click on System > Server services > ns1.example.tld  
the DNS-Server checkbox and click on Save .

and disable all checkboxes except of



Click on System > Server services > ns2.example.tld  
the DNS-Server checkbox and select ns1.example.com  
and click on Save .

and disable all checkboxes except of  
in the Is mirror of Server selectbox



### 3.3 Mirror Setup

In a mirror setup, ISPConfig will copy just the configuration (web site configuration, email configuration, etc.) from the master to the mirror (i.e., not any web site contents, etc.). If you want to copy contents from the master to the mirror as well, there are several techniques that you can use, and you are free to set this up the way you like and that suits your needs best. For example, you can achieve this by using [rsync](#) or using a cluster filesystem like [GlusterFS](#) or some kind of network-attached storage, and you'd have to use one of these techniques on the directories `/var/www` for the web sites' contents and `/var/vmail` for the emails - for MySQL databases, you'd have to use [MySQL master-master replication](#). If you have a failover-IP address that you can switch between the master and the mirror (e.g. automatically with [heartbeat](#) / [keepalived](#) /etc. or manually, e.g. from your hoster's control panel), you can achieve high-availability because if the master fails, the mirror can take over.

Again, it is best to demonstrate such a setup through an example. In the following tutorial, GlusterFS is used to share contents between the master and the slave server.

#### 3.3.1 Installing A Web, Email And MySQL Database Cluster On Debian 5.0 With ISPConfig 3

This tutorial describes the installation of a clustered Web, Email, Database and DNS server to be used for redundancy, high availability and load balancing on Debian 5 with the ISPConfig 3 control panel. GlusterFS will be used to mirror the data between the servers and ISPConfig for mirroring the configuration files. I will use a setup of two servers here for demonstration purposes but the setup can scale to a higher number of servers with only minor modifications in the GlusterFS configuration files.

There is currently one limitation in the MySQL cluster setup. The MySQL daemon has locking problems during the initial innodb check when the second server gets started. The current workaround that I use here is to start MySQL with myisam only. I've found several reports of successfully running MySQL servers with innodb on GlusterFS, so it must be possible with some finetuning of the GlusterFS and / or MySQL configuration file to use innodb as well. I will try to find a solution for the locking issues and update this tutorial. If someone knows a solution for innodb on GlusterFS, please contact me. If you want to use the second server only as hot standby system, then you should be able to use innodb as long as you start MySQL on the second server only when the first server is disconnected.

This is currently a proof of concept setup, so there is no experience how this setup scales in production systems yet. The only part that might cause problems is the shared MySQL data directory. Another solution for accessing MySQL databases from several servers simultaneously is to use a MySQL-cluster setup (<http://www.mysql.com/products/database/cluster/>) or MySQL master / master replication ([http://www.howtoforge.com/mysql\\_master\\_master\\_replication](http://www.howtoforge.com/mysql_master_master_replication)).

### 3.3.1.1 Setting Up The Two Base Systems

In this setup there will be one master server (which runs the ISPConfig control panel interface) and one slave server which mirrors the web (apache), email (postfix and dovecot) and database (MySQL) services of the master server.

To install the clustered setup, we need two servers with a Debian 5.0 minimal install. The base setup is described in the following tutorial in the steps 1 - 6:

<http://www.howtoforge.com/perfect-server-debian-lenny-ispconfig3>

[Install only steps 1 - 6 of the perfect server tutorial and not the other steps as they differ for a clustered setup!](#)

In my example I use the following hostnames and IP addresses for the two servers:

#### Master Server

Hostname: server1.example.tld  
IP address: 192.168.0.105

#### Slave server

Hostname: server2.example.tld  
IP address: 192.168.0.106

Whereever these hostnames or IP addresses occur in the next installation steps you will have to change them to match the IPs and hostnames of your servers.



### 3.3.1.2 Installing The Two Servers

The following steps have to be executed on the master and on the slave server. If a specific step is only for the master or slave, then I've added a note in the description in red.

```
vi /etc/hosts
```

```
127.0.0.1    localhost
192.168.0.105 server1.example.tld
192.168.0.106 server2.example.tld

# The following lines are desirable for IPv6 capable hosts
::1 localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
```

Set the hostname of the server:

```
echo server1.example.tld > /etc/hostname

/etc/init.d/hostname.sh start
```

User [server1.example.tld](http://server1.example.tld) on the first server and [server2.example.tld](http://server2.example.tld) on the second server.

Edit the sources.list file...

```
vi /etc/apt/sources.list
```

... and ensure that it contains the following two lines. The first one is for the debian volatile repository to get updated packages for the ClamAV antivirus software and SpamAssassin and the second one is for the backports repository which contains current GlusterFS packages.

```
deb http://volatile.debian.org/debian-volatile lenny/volatile main contrib non-free
deb http://www.backports.org/debian/ lenny-backports main contrib non-free
```

Run...

```
apt-get install debian-backports-keyring
```

```
apt-get update
```

... to install the backports repository key and update the apt package database; then run ...

```
apt-get upgrade
```

... to install the latest updates (if there are any).

It is a good idea to synchronize the system clock with an NTP (network time protocol) server over the Internet. Simply run...

```
apt-get -y install ntp ntpdate
```

... and your system time will always be in sync.

Install postfix, dovecot and mysql with one single command:

```
apt-get -y install postfix postfix-mysql postfix-doc mysql-client mysql-server openssl  
getmail4 rkhunter binutils dovecot-imapd dovecot-pop3d sudo
```

Enter the new password for mysql when requested by the installer and answer the next questions as described below:

```
Create directories for web-based administration ?           <-- No
General type of configuration?           <-- Internet site
Mail name?           <-- server1.mydomain.tld
SSL certificate required           <-- Ok
```

We want MySQL to listen on all interfaces, not just localhost, therefore we edit  
/etc/mysql/my.cnf and comment out the line bind-address = 127.0.0.1 :

```
vi /etc/mysql/my.cnf
```

```
[...]
# Instead of skip-networking the default is now to listen only on
# localhost which is more compatible and is not less secure.
#bind-address      = 127.0.0.1
[...]
```

Then restart MySQL:

```
/etc/init.d/mysql restart
```

To install amavisd-new, SpamAssassin, and ClamAV, we run:

```
apt-get -y install amavisd-new spamassassin clamav clamav-daemon zoo unzip bzip2 arj nomarch lzop  
cabextract apt-listchanges libnet-ldap-perl libauthen-sasl-perl clamav-docs daemon  
libio-string-perl libio-socket-ssl-perl libnet-ident-perl zip libnet-dns-perl
```

Then install Apache2, PHP5, phpMyAdmin, FCGI, suExec, Pear, and mcrypt as follows:

```
apt-get -y install apache2 apache2.2-common apache2-doc apache2-mpm-prefork apache2-utils  
libexpat1 ssl-cert libapache2-mod-php5 php5 php5-common php5-gd php5-mysql php5-imap  
phpmyadmin php5-cli php5-cgi libapache2-mod-fcgid apache2-suexec php-pear php-auth  
php5-mcrypt mcrypt php5-imagick imagemagick libapache2-mod-suphp libopenssl-ruby  
libapache2-mod-ruby sudo
```

You will see the following question:

Web server to reconfigure automatically: [<-- apache2](#)

Then run the following command to enable the Apache modules suexec, rewrite, ssl, actions, and include:

```
a2enmod suexec rewrite ssl actions include ruby dav_fs dav_auth_digest
```

PureFTPd and quota can be installed with the following command:

```
apt-get -y install pure-ftpd-common pure-ftpd-mysql quota quotatool
```

Edit `/etc/fstab` . Mine looks like this (I added `,usrquota,grpquota` to the partition with the mount point `/`):

```
vi /etc/fstab
```

```
# /etc/fstab: static file system information.  
#  
#<br># <file system> <mount point> <type> <options> <dump> <pass>  
proc /proc proc defaults 0 0  
<br>/dev/sda1 / ext3 errors=remount-ro,usrquota,grpquota 0 1
```

```
/dev/sda5 none swap sw 0 0 /dev/hda
/media/cdrom0 udf,iso9660 user,noauto 0 0
/dev/fd0 /media/floppy0 auto rw,user,noauto 0 0
```

To enable quota, run these commands:

```
touch /quota.user /quota.group
```

```
chmod 600 /quota.*
```

```
mount -o remount /
```

```
quotacheck -avugm
```

```
quotaon -avug
```

Install BIND DNS Server:

```
apt-get -y install bind9 dnstools
```

Install vlogger and webalizer and awstats:

```
apt-get -y install vlogger webalizer awstats
```

Install Jailkit: Jailkit is needed only if you want to chroot SSH users and cron jobs. It can be installed as follows (important: Jailkit must be installed before ISPConfig - it cannot be installed afterwards!):

```
apt-get -y install build-essential autoconf automake1.9 libtool flex bison
```

```
cd /tmp
```

```
wget http://olivier.sessink.nl/jailkit/jailkit-2.12.tar.gz
```

```
tar xvfz jailkit-2.12.tar.gz
```

```
cd jailkit-2.12
```

```
./configure
```

```
make
```

```
make install
```

```
cd ..  
  
rm -rf jailkit-2.12*
```

Install fail2ban: This is optional but recommended, because the ISPConfig monitor tries to show the log:

```
apt-get install fail2ban
```

Install GlusterFS and Fuse:

```
apt-get -y --force-yes -t lenny-backports install fuse-utils  
  
apt-get -y --force-yes install glusterfs-server glusterfs-client
```

Remove the GlusterFS example configuration files:

```
rm -f /etc/glusterfs/*.vol
```

Create the data directories for the GlusterFS volumes:

```
mkdir /data/  
  
mkdir /data/export-mysql  
  
mkdir /data/export-mysql-ns  
  
mkdir /data/export-vmail  
  
mkdir /data/export-vmail-ns  
  
mkdir /data/export-www  
  
mkdir /data/export-www-ns
```

Create the GlusterFS server configuration file:

```
vi /etc/glusterfs/glusterfsd.vol
```

```
# Configuration for the mysql server volume
```

```
volume posix-mysql
  type storage/posix
  option directory /data/export-mysql
option background-unlink yes
end-volume

volume locks-mysql
type features/locks
  option mandatory-locks on
subvolumes posix-mysql
end-volume

volume brick-mysql
  type performance/io-threads
option thread-count 8
subvolumes locks-mysql
end-volume

# Configuration for the vmail server volume
volume posix-vmail
  type storage/posix
  option directory /data/export-vmail
end-volume

volume locks-vmail
  type features/locks
  subvolumes posix-vmail
end-volume

volume brick-vmail
  type performance/io-threads
option thread-count 8
subvolumes locks-vmail
end-volume

# Configuration for the www server volume
volume posix-www
  type storage/posix
  option directory /data/export-www
end-volume

volume locks-www
  type features/locks
  subvolumes posix-www
end-volume

volume brick-www
```

```

type performance/io-threads
option thread-count 8
subvolumes locks-www
end-volume

# export all volumes
volume server
type protocol/server
option transport-type tcp
subvolumes brick-mysql brick-vmail brick-www

# authentication options for the mysql volume
option auth.addr.brick-mysql.allow 192.168.0.105,192.168.0.106
option auth.login.brick-mysql.allow user-mysql
option auth.login.user-mysql.password 7wQav7ExkFg6eW

# Authentication options for the vmail volume
option auth.addr.brick-vmail.allow 192.168.0.105,192.168.0.106
option auth.login.brick-vmail.allow user-vmail
option auth.login.user-vmail.password 7wQav7ExkFg6eW

# authentication options for www
option auth.addr.brick-www.allow 192.168.0.105,192.168.0.106
option auth.login.brick-www.allow user-www
option auth.login.user-www.password 7wQav7ExkFg6eW

end-volume

```

Replace the IP addresses with the IPs from your servers and replace the password 7wQav7ExkFg6eW with a password of your choice.

Start the GlusterFS server:

```
/etc/init.d/glusterfs-server start
```

Now we create the three client volume files that we need to mount the GlusterFS filesystems.

```
vi /etc/glusterfs/glusterfs-mysql.vol
```

```

volume remote1-mysql
type protocol/client
option transport-type tcp
option remote-host 192.168.0.105
option remote-subvolume brick-mysql

```

```
option username user-mysql
option password 7wQav7ExkFg6eW
end-volume

volume remote2-mysql
type protocol/client
option transport-type tcp
option remote-host 192.168.0.106
option remote-subvolume brick-mysql
option username user-mysql
option password 7wQav7ExkFg6eW
end-volume

volume replicate-mysql
type cluster/replicate
subvolumes remote1-mysql remote2-mysql
end-volume

volume cache-mysql
type performance/io-cache
option cache-size 25MB
subvolumes replicate-mysql
end-volume
```

```
vi /etc/glusterfs/glusterfs-vmail.vol
```

```
volume remote1-vmail
type protocol/client
option transport-type tcp
option remote-host 192.168.0.105
option remote-subvolume brick-vmail
option username user-vmail
option password 7wQav7ExkFg6eW
end-volume

volume remote2-vmail
type protocol/client
option transport-type tcp
option remote-host 192.168.0.106
option remote-subvolume brick-vmail
option username user-vmail
option password 7wQav7ExkFg6eW
end-volume

volume replicate-vmail
```



```
type cluster/replicate
subvolumes remote1-vmail remote2-vmail
end-volume
```

```
volume writebehind-vmail
type performance/write-behind
option window-size 1MB
subvolumes replicate-vmail
end-volume
```

```
volume cache-vmail
type performance/io-cache
option cache-size 256MB
subvolumes writebehind-vmail
end-volume
```

```
vi /etc/glusterfs/glusterfs-www.vol
```

```
volume remote1-www
type protocol/client
option transport-type tcp
option remote-host 192.168.0.105
option remote-subvolume brick-www
option username user-www
option password 7wQav7ExkFg6eW
end-volume
```

```
volume remote2-www
type protocol/client
option transport-type tcp
option remote-host 192.168.0.106
option remote-subvolume brick-www
option username user-www
option password 7wQav7ExkFg6eW
end-volume
```

```
volume replicate-www
type cluster/replicate
subvolumes remote1-www remote2-www
end-volume
```

```
volume writebehind-www
type performance/write-behind
option window-size 1MB
subvolumes replicate-www
```

```
end-volume

volume cache-www
  type performance/io-cache
  option cache-size 256MB
  subvolumes writebehind-www
end-volume
```

Before we mount our volumes to the directories, we will have to stop some services and back up current data:

```
/etc/init.d/mysql stop

/etc/init.d/apache2 stop

/etc/init.d/postfix stop

/etc/init.d/dovecot stop
```

```
mv /var/lib/mysql /var/lib/mysql_bak

mv /var/www /var/www_bak
```

```
mkdir /var/lib/mysql

mkdir /var/www

mkdir /var/vmail
```

```
vi /etc/fstab
```

Add the lines:

```
/etc/glusterfs/glusterfs-mysql.vol /var/lib/mysql glusterfs defaults 0 0
/etc/glusterfs/glusterfs-vmail.vol /var/vmail glusterfs defaults 0 0
/etc/glusterfs/glusterfs-www.vol /var/www glusterfs defaults 0 0
```

Now mount the drives by running:

```
mount -a
```

Chown the mysql directory to user and group mysql :

```
chown mysql:mysql /var/lib/mysql
```

Copy the mysql and www data back.

```
cp -prf /var/lib/mysql_bak/* /var/lib/mysql/
```

```
cp -prf /var/www_bak/* /var/www/
```

Copy back the data (only on the master server! Skip this step on the slave!).

Switch off innodb as it causes locking problems when MySQL starts.

```
vi /etc/mysql/my.cnf
```

Change the line:

```
#skip-innodb
```

to:

```
skip-innodb
```

and add the line

```
innodb_file_per_table
```

in the [mysqld] section of the my.cnf file.

When you set up the slave server, copy the file /etc/mysql/debian.cnf file from the master server to the slave server before you start MySQL again!

Now start the services again:

```
/etc/init.d/mysql start
```

```
/etc/init.d/apache2 start
```

```
/etc/init.d/postfix start
```

```
/etc/init.d/dovecot start
```

Change the GlusterFS boot order to ensure that the GlusterFS server gets always started before MySQL.

```
mv /etc/rc2.d/S20glusterfs-server /etc/rc2.d/S19glusterfs-server

mv /etc/rc3.d/S20glusterfs-server /etc/rc3.d/S16glusterfs-server

mv /etc/rc4.d/S20glusterfs-server /etc/rc4.d/S16glusterfs-server

mv /etc/rc5.d/S20glusterfs-server /etc/rc5.d/S16glusterfs-server
```

### 3.3.1.3 Installing ISPConfig On The First (Master) Server

In this step we will install ISPConfig on the master server. To get the download URL of the latest ISPConfig 3 stable release, please visit the ISPConfig website:

<http://www.ispconfig.org/ispconfig-3/download/>

Now we have to add two new MySQL root user records in the master database to allow root access from the slave server hostname and IP address. The easiest way to do this is to use the webbased phpmyadmin administration tool that we installed already. Open the URL <http://192.168.0.105/phpmyadmin> in a webbrowser, log in as MySQL root user and execute these MySQL queries:

```
CREATE USER 'root'@'192.168.0.106' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'192.168.0.106' IDENTIFIED BY 'myrootpassword' WITH
GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

```
CREATE USER 'root'@'server2.example.tld' IDENTIFIED BY 'myrootpassword';

GRANT ALL PRIVILEGES ON * . * TO 'root'@'server2.example.tld' IDENTIFIED BY 'myrootpassword'
WITH GRANT OPTION MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0 ;
```

In the above sql commands, replace 192.168.0.106 with the IP address of the second server, replace server2.example.tld with the hostname of the second server and myrootpassword with the desired root password.

Click on the reload permissions button or restart MySQL. Then close phpmyadmin.

Go back to the shell of server1.example.tld and download the latest ISPConfig 3 stable release:

```
cd /tmp

wget http://www.ispconfig.org/downloads/ISPConfig-3-stable.tar.gz

tar xzf ISPConfig-3-stable.tar.gz

cd ispconfig3_install/install/
```

Start the install script:

```
php -q install.php
```

Select language (en,de) [en]: <-- en  
Installation mode (standard,expert) [standard]: <-- standard  
Full qualified hostname (FQDN) of the server, eg server1.domain.tld  
[server1.example.tld]: <-- server1.example.tld  
MySQL server hostname [localhost]: <-- localhost  
MySQL root username [root]: <-- root  
MySQL root password []: <-- Enter your mysql root password here  
MySQL database to create [dbispconfig]: <-- dbispconfig1 (the local ISPConfig database name of the master and slave must be different, as both servers share the same data directory)  
MySQL charset [utf8]: <-- utf8

Country Name (2 letter code) [AU]: <-- DE (Enter the ISO country code where you live here)  
State or Province Name (full name) [Some-State]: <-- Niedersachsen (Enter the state where you live here)  
Locality Name (eg, city) []: <-- Lueneburg (Enter the city here)  
Organization Name (eg, company) [Internet Widgits Pty Ltd]: <-- ENTER  
Organizational Unit Name (eg, section) []: <-- ENTER  
Common Name (eg, YOUR name) []: <-- ENTER  
Email Address []: <-- ENTER

ISPConfig Port [8080]: <-- 8080

Clean up the install directories:

```
rm -rf /tmp/ispconfig3_install/install

rm -f /tmp/ISPConfig-3-stable.tar.gz
```

### 3.3.1.4 Installing ISPConfig 3 On The Second Server

In this step we will install ISPConfig on the slave server (server2.example.tld ). This time we use the **expert** mode of the ISPConfig installer to add this node to the master ISPConfig server and database. To get the download URL of the latest ISPConfig 3 stable release, please visit the ISPConfig website: <http://www.ispconfig.org/ispconfig-3/download/>

Download the latest ISPConfig 3 stable release:

```
cd /tmp

wget http://www.ispconfig.org/downloads/ISPConfig-3-stable.tar.gz

tar xzf ISPConfig-3-stable.tar.gz

cd ispconfig3_install/install/
```

Start the install script:

```
php -q install.php
```

```
Select language (en,de) [en]:          <-- en
Installation mode (standard,expert) [standard]:          <-- expert
Full qualified hostname (FQDN) of the server, eg server2.domain.tld
[server2.example.tld]:          <-- server2.example.tld
MySQL server hostname [localhost]:          <-- localhost
MySQL root username [root]:          <-- root
MySQL root password []:          <-- Enter your mysql root password here
MySQL database to create [dbispconfig]:          <-- dbispconfig2 (the local ISPConfig database name
of the master and slave must be different, as both servers share the same data directory)
MySQL charset [utf8]:          <-- utf8
Shall this server join an existing ISPConfig multiserver setup (y,n) [n]:          <-- y
MySQL master server hostname []:          <-- server1.example.tld
MySQL master server root username [root]:          <-- root
MySQL master server root password []:          <-- Enter the root password of the master
server here
MySQL master server database name [dbispconfig]:          <-- dbispconfig1
Configure Mail (y,n) [y]:          <-- y

Country Name (2 letter code) [AU]:          <-- DE (Enter the ISO country code where you live here)
State or Province Name (full name) [Some-State]:          <-- Niedersachsen (Enter the state where
you live here)
Locality Name (eg, city) []:          <-- Lueneburg (Enter the city here)
```

Organization Name (eg, company) [Internet Widgits Pty Ltd]: <- ENTER  
Organizational Unit Name (eg, section) []: <- ENTER  
Common Name (eg, YOUR name) []: <- ENTER  
Email Address []: <- ENTER

Configure Jailkit (y,n) [y]: <-- y  
Configure FTP Server (y,n) [y]: <-- y  
Configure DNS Server (y,n) [y]: <-- y  
Configure Apache Server (y,n) [y]: <-- y  
Configure Firewall Server (y,n) [y]: <-- y  
Install ISPConfig Web-Interface (y,n) [y]: <-- n

Run:

```
rm -f /var/www/ispconfig
```

to remove the ISPConfig interface link in the /var/www directory.

Clean up the install directories:

```
rm -rf /tmp/ispconfig3_install/install
```

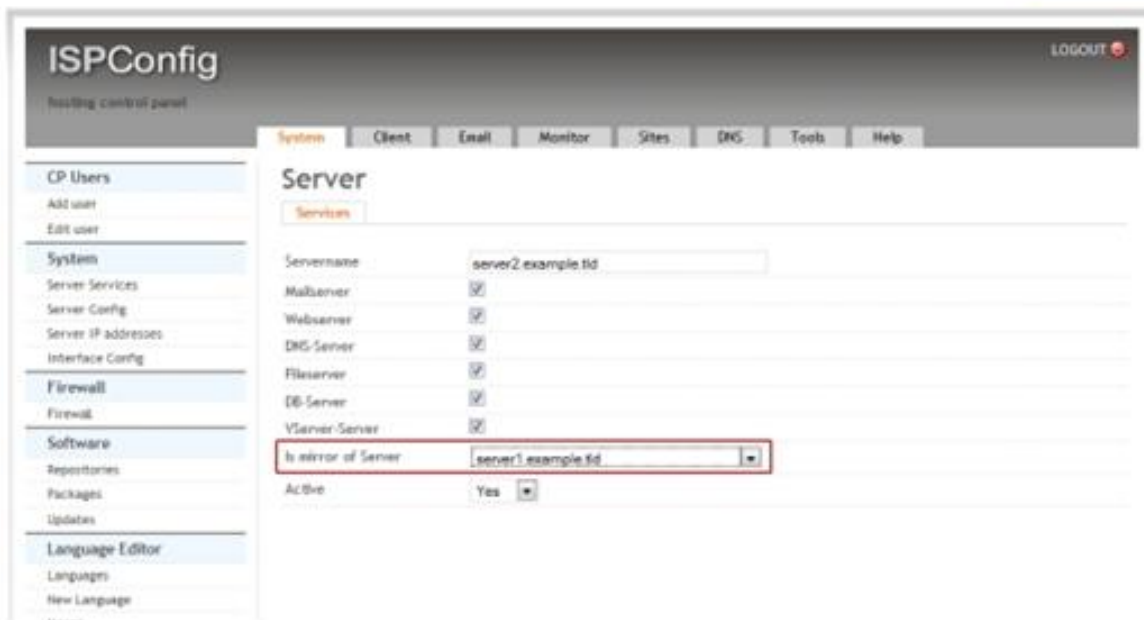
```
rm -f /tmp/ISPConfig-3-stable.tar.gz
```

## 3.3.1.5 Configure Replication In ISPConfig

Log in to ISPConfig on the master server with a web browser:

<http://192.168.0.105:8080>

Click on System > Server services > server2.example.tld :



Selecte server1.example.tld in the Is mirror of Server field and click on Save .

### 3.3.1.6 Additional Notes

When you want to activate a firewall on the master or slave server, ensure that you open port 6996 for GlusterFS on both servers.

## 3.4 Updating

Whenever there is a new ISPConfig 3 release, you can either update ISPConfig from within ISPConfig itself (see chapter 4.9.7.2) or from the command line which is strongly recommended right now. The procedure described in chapter 4.9.7.2 is considered experimental and should not be used on production systems.

Please note that with the command line update, you can update only the server on which you run the update, not the whole cluster (in case you run a multiserver/mirror setup). This is different from the procedure described in chapter 4.9.7.2 where you can update the whole cluster at once.

If you use the command line update to update multiple servers, it is strongly recommended to run the update on the slaves first and afterwards on the master!



### 3.4.1 Creating A Backup

Also, as a measure of precaution, you should make a backup of your ISPConfig installation before you do the update. The following items should be backed up:

- /usr/local/ispconfig directory
- /etc directory (contains configuration files of all services managed through ISPConfig)
- the ISPConfig MySQL database

You can back up these items as follows:

```
cd /usr/local
tar -pczf ispcfg.tar.gz ispcfg/
```

This creates the backup `ispcfg.tar.gz` in the `/usr/local` directory. In case you need to restore the backup, do the following:

```
cd /usr/local
rm -fr ispcfg/
tar xvfz ispcfg.tar.gz
```

To create a backup of the `/etc` directory, do the following:

```
cd /
tar -pczf etc.tar.gz etc/
```

This creates the backup `etc.tar.gz` in the `/` directory. In case you need to restore the backup, do the following:

```
cd /
rm -fr etc/
tar xvfz etc.tar.gz
```

To create a backup of your ISPConfig database in the `/usr/local` directory, do the following

(assuming that your ISPCONFIG database is called dbispconfig ):

```
cd /usr/local

mysqldump -h localhost -u root -p[database password] -c --add-drop-table --add-locks --all
--quick --lock-tables dbispconfig > dbispconfig.sql
```

Please note: there's no space between -p and the password! To

restore the database from the SQL dump, run:

```
cd /usr/local

mysql -h localhost -u root -p[database password] dbispconfig < dbispconfig.sql
```

Please note: there's no space between -p and the password!

### 3.4.2 Command Line Update

To update ISPCONFIG from the command line, just run the command

```
ispconfig_update.sh
```

as root.

You can update to the last stable version or to the last version from svn. For production systems select `stable`. The update from svn is only for development systems and may break your current setup (if you want to use the svn update, please make sure that Subversion is installed on the system - on Debian/Ubuntu, you can install it as follows:

```
aptitude install subversion
```

).

It is also strongly recommended to let the update script reconfigure all services controlled by ISPCONFIG and also the crontab to make sure your system can make use of new ISPCONFIG features that come with the update.

Here is a sample output from the `ispconfig_update.sh` script (by pressing ENTER you accept the default value which is displayed in square brackets `[]`):

server1:~# ispconfig\_update.sh

```

_ _ _ _ _ _ _ _ _ _
|_| _/ _| _ _ / _ _ _ _ / _(\)
|| `.| ||//|| / _ _ _ _ |L_ _ _ _
|| `.-_ / || /_||'_| _|V'_|
_||_//|| |_/(\)|)|)|)|)|)|(|
_/_/_/| | _/_/||)|||)|)|)|
_/_|
_|/
    
```

>> Update

Please choose the update method. For production systems select 'stable'.  
The update from svn is only for development systems and may break your current setup

Select update method (stable,svn) [stable]: <-- ENTER

```

[...]
# The update script downloads the new ISPConfig release here.
[...]
    
```

```

_ _ _ _ _ _ _ _ _ _
|_| _/ _| _ _ / _ _ _ _ / _(\)
|| `.| ||//|| / _ _ _ _ |L_ _ _ _
|| `.-_ / || /_||'_| _|V'_|
_||_//|| |_/(\)|)|)|)|)|(|
_/_/_/| | _/_/||)|||)|)|)|
_/_|
_|/
    
```

>> Update

Operating System: Debian Lenny or compatible

This application will update ISPConfig 3 on your server.

MySQL root password []: <-- yourrootsqlpassword

Reconfigure Services? (yes,no) [yes]: <-- ENTER

Configuring Postfix  
 Configuring Jailkit  
 Configuring SASL  
 Configuring PAM  
 Configuring Courier  
 Configuring Spamassassin  
 Configuring Amavisd  
 Configuring Getmail  
 Configuring Pureftpd  
 Configuring BIND  
 Configuring Apache  
 Configuring vlogger  
 Configuring Apps vhost  
 Configuring Database  
 Configuring Firewall  
 Updating ISPConfig  
 ISPConfig Port [8080]: <-- ENTER

Reconfigure Crontab? (yes,no) [yes]: <-- ENTER

Updating Crontab  
 Restarting services ...  
 Stopping MySQL database server: mysqld.  
 Starting MySQL database server: mysqld.  
 Checking for corrupt, not cleanly closed and upgrade needing tables..  
 Stopping Postfix Mail Transport Agent: postfix.  
 Starting Postfix Mail Transport Agent: postfix.  
 Stopping SASL Authentication Daemon: saslauthd.  
 Starting SASL Authentication Daemon: saslauthd.  
 Stopping amavisd: (not running).  
 Starting amavisd: amavisd-new.  
 Stopping ClamAV daemon: clamd.  
 Starting ClamAV daemon: clamd .  
 Stopping Courier authentication services: authdaemond.  
 Starting Courier authentication services: authdaemond.  
 Stopping Courier IMAP server: imapd.  
 Starting Courier IMAP server: imapd.  
 Stopping Courier IMAP-SSL server: imapd-ssl.  
 Starting Courier IMAP-SSL server: imapd-ssl.  
 Stopping Courier POP3 server: pop3d.  
 Starting Courier POP3 server: pop3d.  
 Stopping Courier POP3-SSL server: pop3d-ssl.  
 Starting Courier POP3-SSL server: pop3d-ssl.  
 Restarting web server: apache2 ... waiting .  
 Restarting ftp server: Running: /usr/sbin/pure-ftpd-mysql-virtualchroot -l mysql:/etc/pure-ftpd/db/mysql.conf -l pam -O clf:/var/log/pure-ftpd/transfer.log -E -H -b -A -u 1000 -B

Update finished.  
server1:~#

## 4 Reference

In the reference I explain all modules, functions, and forms in the ISPConfig control panel, i.e., I describe all input fields and give examples of what to fill in.

### 4.1 Tabs

ISPConfig 3 has the following tabs, depending on the modules that are enabled for the account that you used to log in:

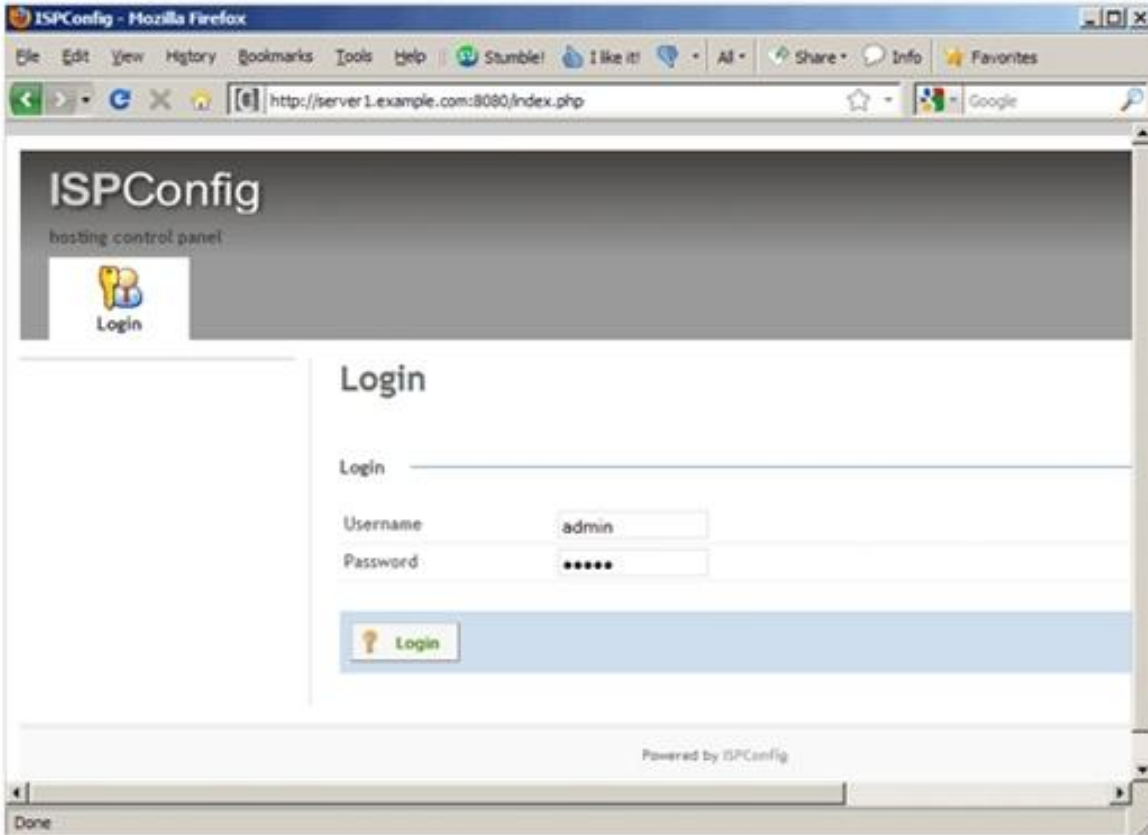
- Login (only visible before login)
- Home
- Sites
- Email
- Monitor
- System
- DNS
- Help
- Domains (usually not enabled by default)
- Client
- Tools

The order might differ for you. In the following the tabs and their submenus will be described in functional order, i.e., in the order that allows you to create client accounts, email accounts, web sites, etc.

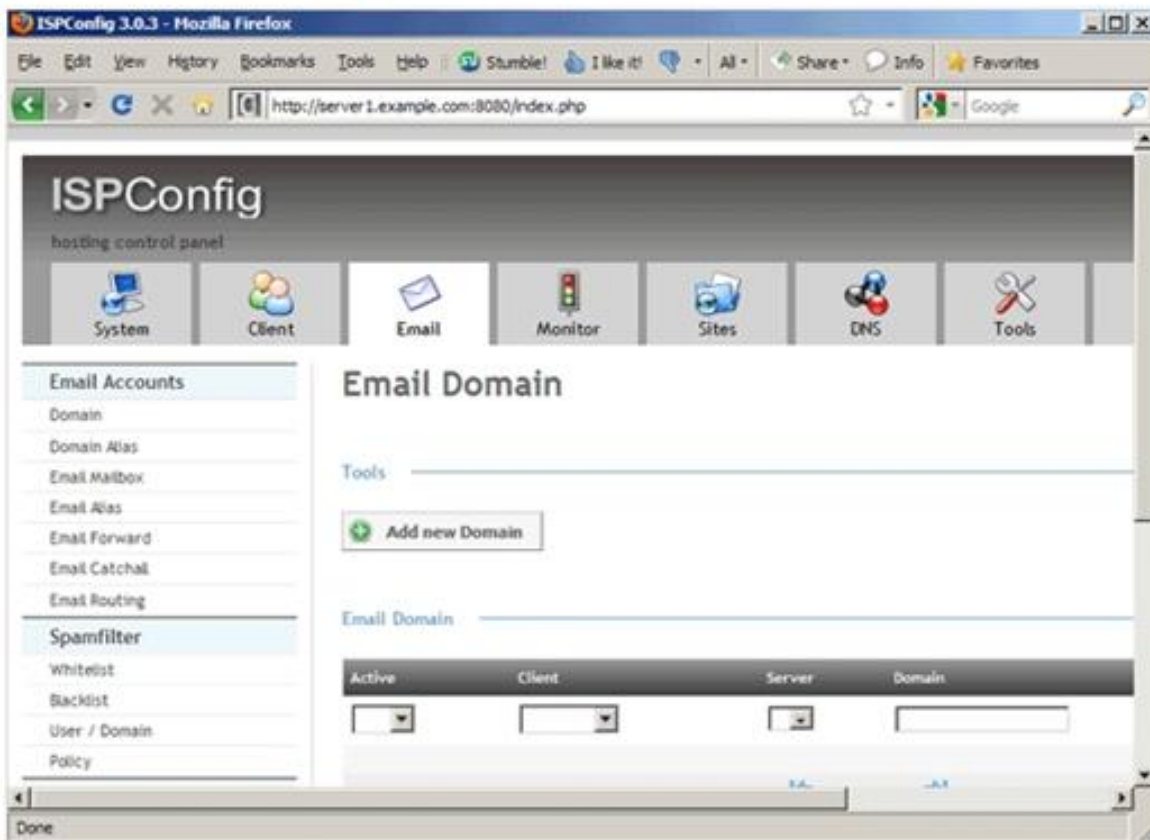
### 4.2 Login

The ISPConfig 3 web interface can be accessed on port 8080 . Go to <http://server1.example.com:8080> and log in with the default username and password:

- Username: admin
- Password: admin



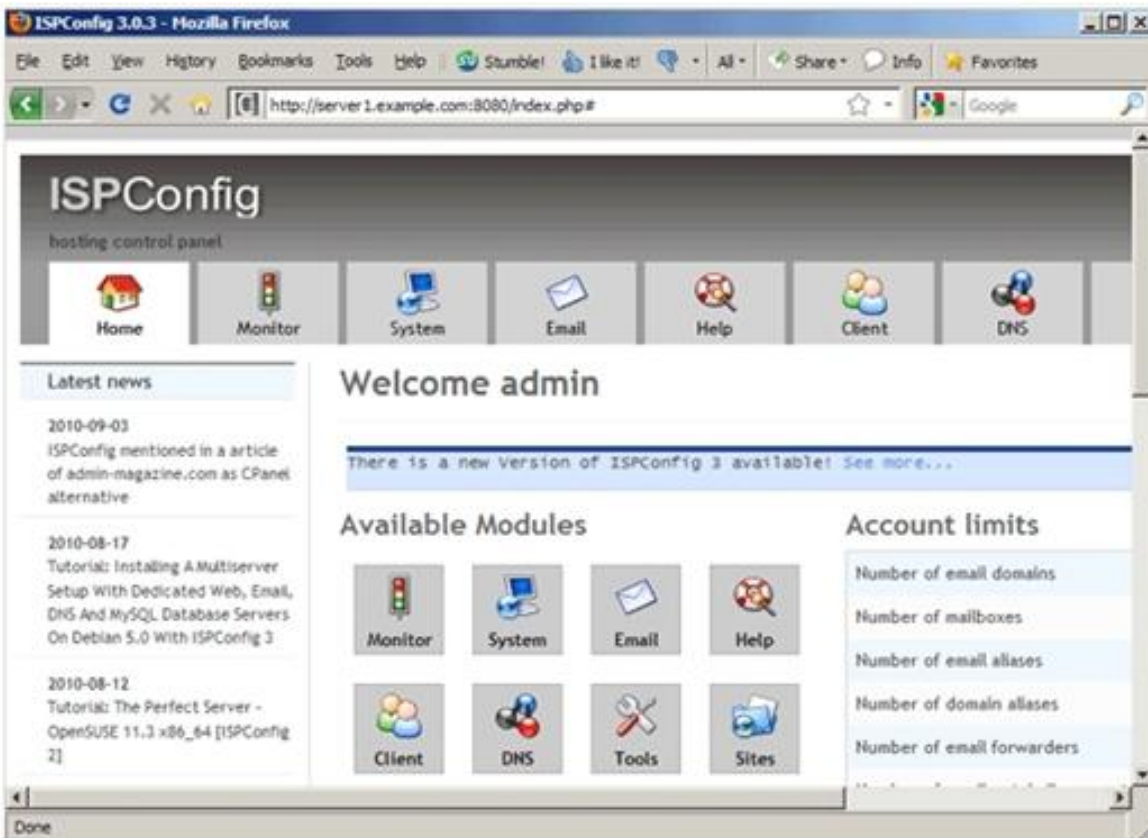
This is how the ISPConfig 3 control panel looks after your first login:



After your first login, you should immediately change the password - to do this, go to Tools > User Settings > Password and Language

## 4.3 Home

Under the Home tab, you can find the ISPConfig 3 dashboard with links to all available modules, an overview of your account limits, and the latest news about ISPConfig (new ISPConfig releases, new tutorials, etc.). If a new ISPConfig 3 version is available, this will also be shown on the dashboard so that you can upgrade your ISPConfig installation if you like.



## 4.4 Tools

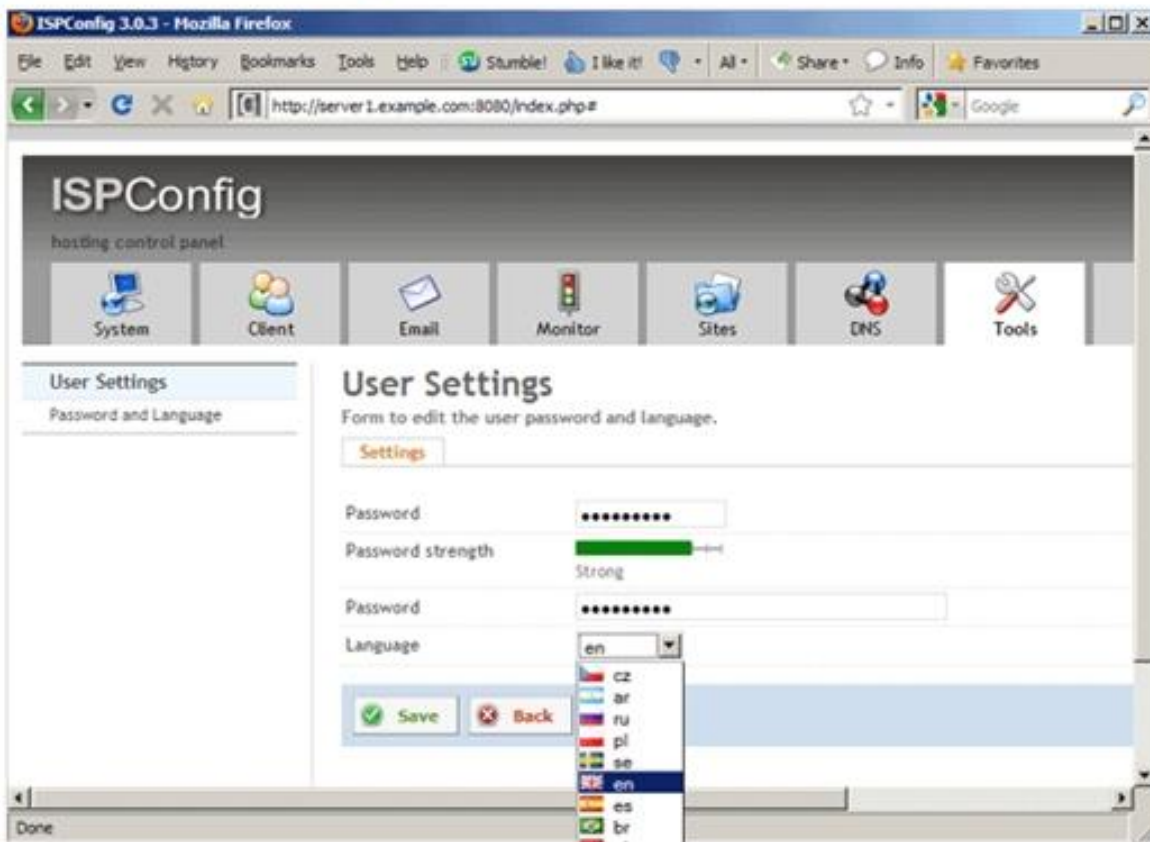
### 4.4.1 User Settings

#### 4.4.1.1 Password and Language

Here you can change the password and the language of the currently logged in ISPConfig user. If you log in for the first time, it is strongly recommended to immediately change the default password.

- Password : Type in the new password.
- Password strength : This field shows how strong the new password is (a strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information).
- Password : Type in the new password again to make sure you made no typo.
- Language : Select the desired interface language of the ISPConfig control panel. If you change the language, you must log out and log back in for the changes to take effect.





## 4.5 Client

### 4.5.1 Clients

A client is a company or individual that buys web hosting services from either you (i.e., the company or individual that runs the ISPConfig server) or from a reseller (see chapter 4.5.2). You should create at least one client before you go on and create web sites, email accounts, etc. because all these hosting services must have a client that they can be assigned to.

#### 4.5.1.1 Add Client

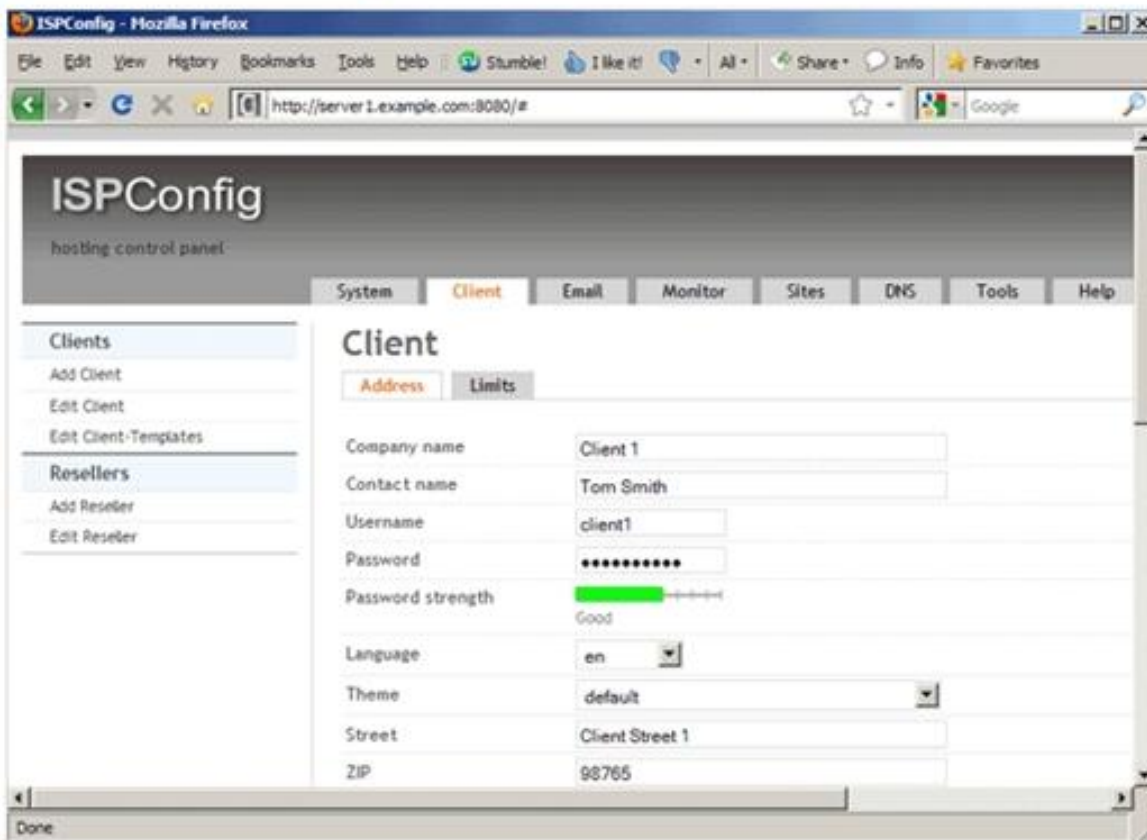
You can create clients using this form. Clients can log into ISPConfig and manage their own web hosting services, like web sites, email accounts, etc. a client can belong either to a reseller or directly to the company/individual that runs the ISPConfig server.

The Add Client form is split up into two tabs, Address and Limits :

## Address

This is where you type in the name, address, and login details of the client. The form has the following fields:

- Company name (optional): Fill in the name of the company.
- Contact name : Fill in the name of the person that is responsible for this ISPCConfig account.
- Username : Fill in the desired ISPCConfig username for the client. This is the username that is used to log into ISPCConfig.
- Password : Type in a password for the user.
- Password strength : This field shows how strong the new password is (a strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information).
- Language : Select the desired interface language of the ISPCConfig control panel.
- Theme: Here you can select the theme of the ISPCConfig control panel.
- Street (optional): Specify the street of the client.
- ZIP (optional): Fill in the client's postcode.
- City (optional): Fill in the client's city.
- State (optional): Specify the client's state, e.g. California, Bavaria, etc.
- Country : Select the client's country from the drop-down menu.
- Telephone (optional): Specify the client's landline number.
- Mobile (optional): Specify the client's mobile number.
- Fax (optional): Specify the client's fax number.
- Email (optional): Fill in the client's email address.
- Internet (optional): Fill in the URL of the client's web site (beginning with `http://` or `https://` ).
- ICQ (optional): Specify the client's ICQ number.
- Notes (optional): Here you can add notes and comments.



## Limits

This is where the resources are defined that the client can use. If you select a master or addon template, click on Save , and the values in the rest of the form will be adjusted according to the templates. To select or de-select an addon template, it is not enough to click on Save - you must click on the Add additional template or Delete additional template button before. If you select the Custom template in the Master template field, you have to enter your limits manually.

There are two kinds of templates, main templates and additional templates. In a main template you can define a basic set of limits. An additional template differs from a main template in that the values of the additional template are added to the value of the main template. For example, if you define in a main template with a max. number of two web domains and an additional template with a max. number of five web domains, and you select that main template and additional template for the client/reseller, the client/reseller can have the sum of both, i.e., seven web domains.

- Master template : If you have defined a template for client limits that you want to apply to this client (so that you don't have to define all the client limits manually in the following fields), you can select that template here. Select Custom if you want to define the client limits manually.
- Addon template : If you have defined an additional template that you want to add to the main

template, select that template here. To select or de-select an addon template, it is not enough to click on Save - you must click on the Add additional template or Delete additional template button before.

- Default Mailserv : Select the default mailserv for the client. The default mailserv will be pre-selected for this client when email items (email accounts, etc.) are created for the client, but this selection can be changed in the appropriate form.
- Max. number of email domains : Specify the max. amount of email domains that this client can create. -1 means unlimited.
- Max. number of mailboxes : Specify the max. amount of mailboxes that this client can create. -1 means unlimited.
- Max. number of email aliases : Specify the max. amount of email aliases that this client can create. -1 means unlimited.
- Max. number of domain aliases : Specify the max. amount of domain aliases that this client can create. -1 means unlimited.
- Max. number of email forwarders : Specify the max. amount of email forwarders that this client can create. -1 means unlimited.
- Max. number of email catchall accounts : Specify the max. amount of email catchall accounts that this client can create. -1 means unlimited.
- Max. number of email routes : Specify the max. amount of email routes that this client can create. -1 means unlimited.
- Max. number of email filters : Specify the max. amount of email filters that this client can create. -1 means unlimited.
- Max. number of fetchmail accounts : Specify the max. amount of fetchmail accounts that this client can create. -1 means unlimited.
- Mailbox quota : Specify the max. hard drive space (in MB) that this client's email accounts can use. -1 means unlimited.
- Max. number of spamfilter white / blacklist filters : Specify the max. amount of whitelist and blacklist filters for the spamfilter that this client can create. -1 means unlimited.
- Max. number of spamfilter users : Specify the max. amount of spamfilter users that this client can create. -1 means unlimited.
- Max. number of spamfilter policies : Specify the max. amount of spamfilter policies that this client can create. -1 means unlimited.
- Default Webserver : Select the default webserver for the client. The default webserver will be pre-selected for this client when web items (web sites, etc.) are created for the client, but this selection can be changed in the appropriate form.
- Max. number of web domains : Specify the max. amount of web domains that this client can create. -1 means unlimited.
- Web Quota : Specify the max. hard drive space (in MB) that this client's web sites can use. -1

means unlimited.

• PHP Options : Specify which PHP modes should be available for the client when he creates/modifies a web site. The following four modes are available: Fast-CGI, CGI, Mod-PHP, SuPHP.

• Fast-CGI:

Advantages:

- Scripts will be executed with user privileges of the web site;
- More than one PHP version can be run as FastCGI;
- Might be better in speed compared to CGI and suPHP.

Disadvantages:

- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

• CGI:

Advantages:

- Scripts will be executed with user privileges of the web site;
- More than one PHP version can be run as CGI.

Disadvantages:

- CGI might use a little more memory (RAM) - therefore, it's not recommended to run PHP as CGI on slow virtual servers;
- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

• Mod-PHP:

Advantages:

- Speed;
- Needs less memory (RAM) than CGI;
- php.ini values can be changed via PHP scripts, vhost files, .htaccess files.

Disadvantages:

- Scripts are being executed with Apache privileges, which might lead to some

security related problems;

- Only one version of PHP can be installed as Apache module;
- You cannot use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

- SuPHP:

Advantages:

- Scripts will be executed with user privileges of the web site;
- Each vhost can have its own php.ini file;
- Needs less memory (RAM) than CGI;
- More than one PHP version can be run as suPHP.

Disadvantages:

- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1);
- SuPHP might be a little slower than mod\_php.

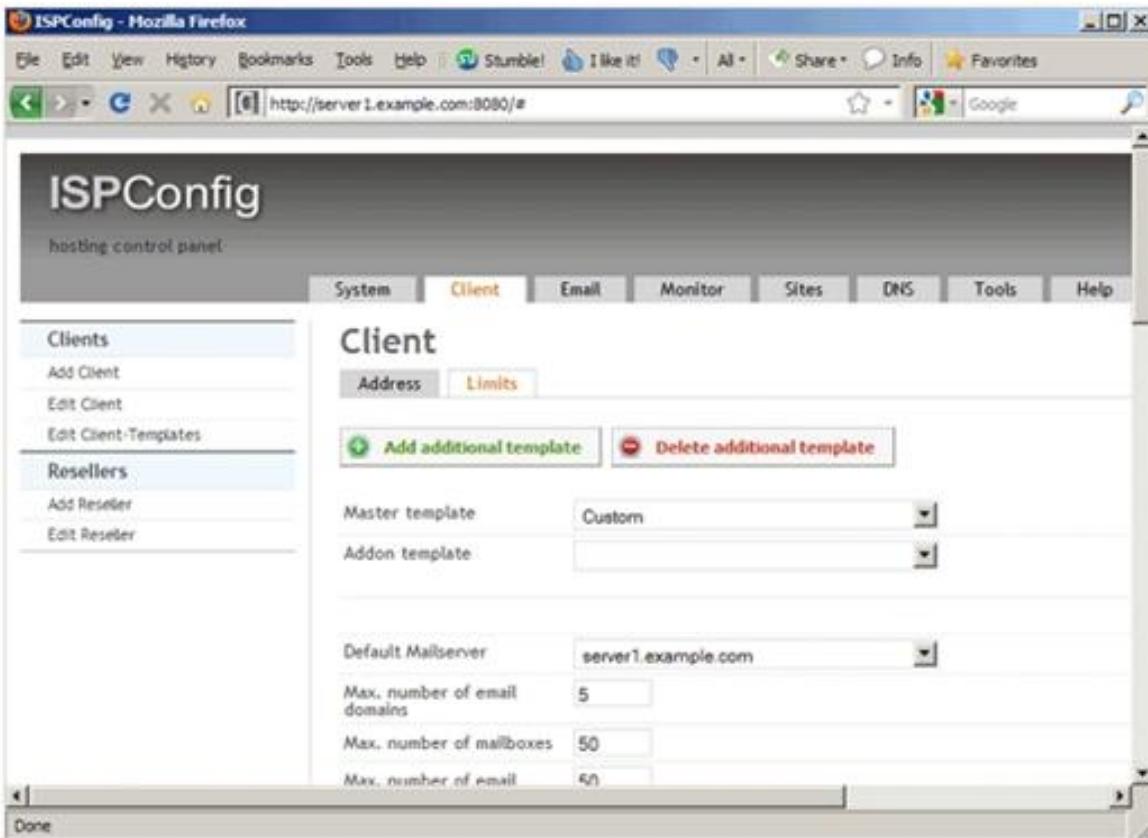
- Recommendations:

- High-Traffic Web Sites: Fast-CGI + suExec
- Low-Traffic Web Sites: CGI + suExec or SuPHP

- Max. number of web aliasdomains : Specify the max. amount of web aliasdomains that this client can create. -1 means unlimited.
- Max. number of web subdomains : Specify the max. amount of web subdomains that this client can create. -1 means unlimited.
- Max. number of FTP users : Specify the max. amount of FTP users that this client can create. -1 means unlimited.
- Max. number of Shell users : Specify the max. amount of shell users that this client can create. -1 means unlimited.
- SSH-Chroot Options : Specify which SSH modes should be available for the client when he creates/modifies a shell account. The None mode means that the shell user can browse the whole file system and is limited only by file/directory permissions - this can be a security risk.

The Jailkit mode means that the shell user will be limited to his home directory (chrooted) and can only browse directories inside his home directory.

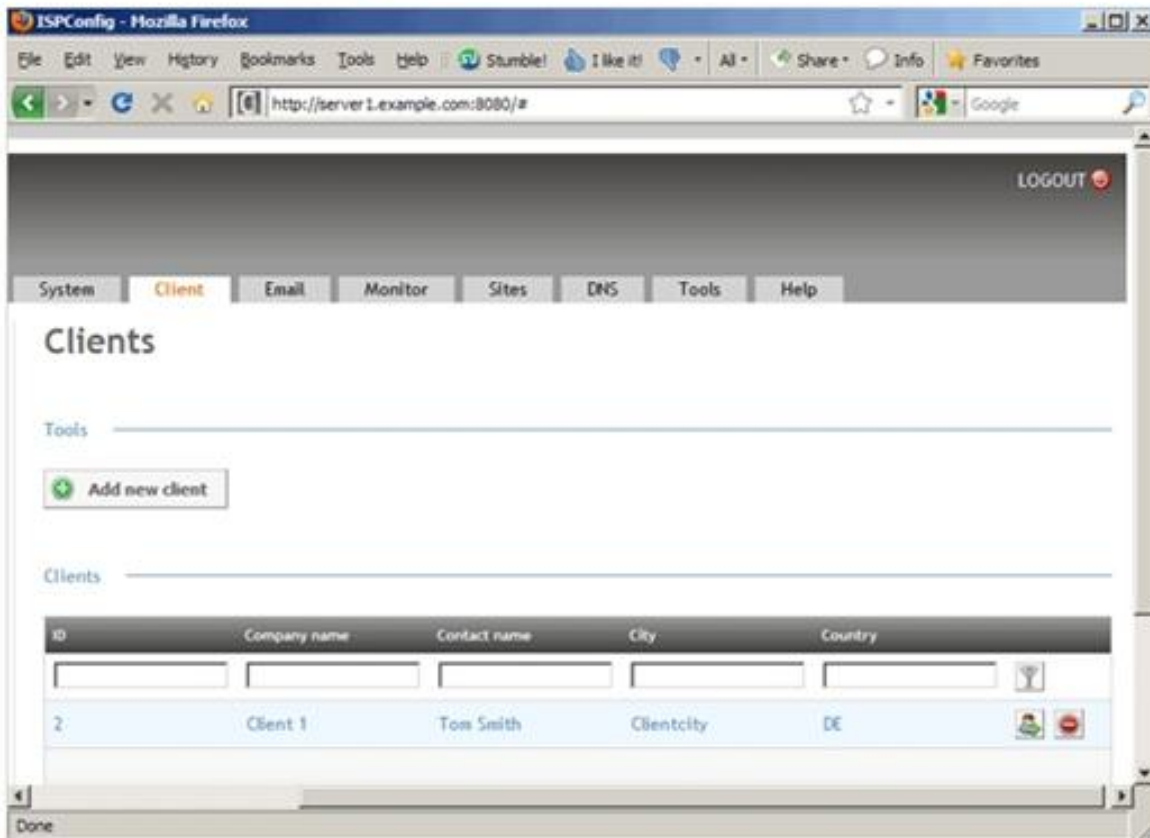
- Max. number of Webdav users : Specify the max. amount of WebDAV users that this client can create. -1 means unlimited.
- Default DNS Server : Select the default DNS server for the client. The default DNS server will be pre-selected for this client when DNS items (zones, etc.) are created for the client, but this selection can be changed in the appropriate form (if you are logged in as admin).
- Max. number of DNS zones : Specify the max. amount of DNS zones that this client can create. -1 means unlimited.
- Max. number of secondary DNS zones : Specify the max. amount of secondary DNS zones that this client can create. -1 means unlimited.
- Max. number DNS records : Specify the max. amount of DNS records that this client can create. -1 means unlimited.
- Default Database Server : Select the default database server for the client. The default database server will be pre-selected for this client when a database is created for the client, but this selection can be changed in the appropriate form (if you are logged in as admin).
- Max. number of Databases : Specify the max. amount of databases that this client can create. -1 means unlimited.
- Max. number of cron jobs : Specify the max. amount of cron jobs that this client can create. -1 means unlimited.
- Max. type of cron jobs (chrooted and full implies url) : Specify which kind of cron jobs should be available for the client when he creates/modifies a cron job.
  - Full Cron : Full Cron means that you can use any command for the cron job, and it will not run in a chroot environment.
  - Chrooted Cron : If Chrooted Cron is selected in the limits of the client that owns the cron job, the cron jobs are chrooted (using Jailkit).
  - URL Cron : This means that the client can only create wget cron jobs, i.e., he specifies a URL in the cron job command line, and that URL will be accessed via wget.
- Min. delay between executions : This specifies the minimal delay (in minutes) how often a cron job can be executed. If you specify 5 here, for example, a cron job cannot be run every minute, but only every five minutes.
- Traffic Quota : Specify the max. monthly traffic (in MB) that this client can use. -1 means unlimited.



#### 4.5.1.2 Edit Client

Under Edit Client you can find a list of existing clients:





By clicking any of them, you will get to the Address and Limits tabs of that client (that you already know from chapter 4.5.1.1) where you can modify the settings of that client.

Above the list you can find filters that allow you to search for specific parameters in all clients. The following filters are available:

- ID
- Company name
- Contact name
- City
- Country

Click the



button to start a search.

From the client list, it is also possible to directly log in as a client - just click the



button next to the client.

To delete a client, click the



button. A confirmation message will pop up, asking you if you really want to delete the record.

### 4.5.1.3 Edit Client-Templates

You can edit and create client templates here. A template is a pre-defined set of limits that can be assigned to a client. Let's assume you sell five different hosting plans to your clients - instead of defining limits manually whenever you create a new client, you could create five templates (one for each hosting plan) and use such a template when you create a new client. That way, creating clients is less error-prone and time-consuming.

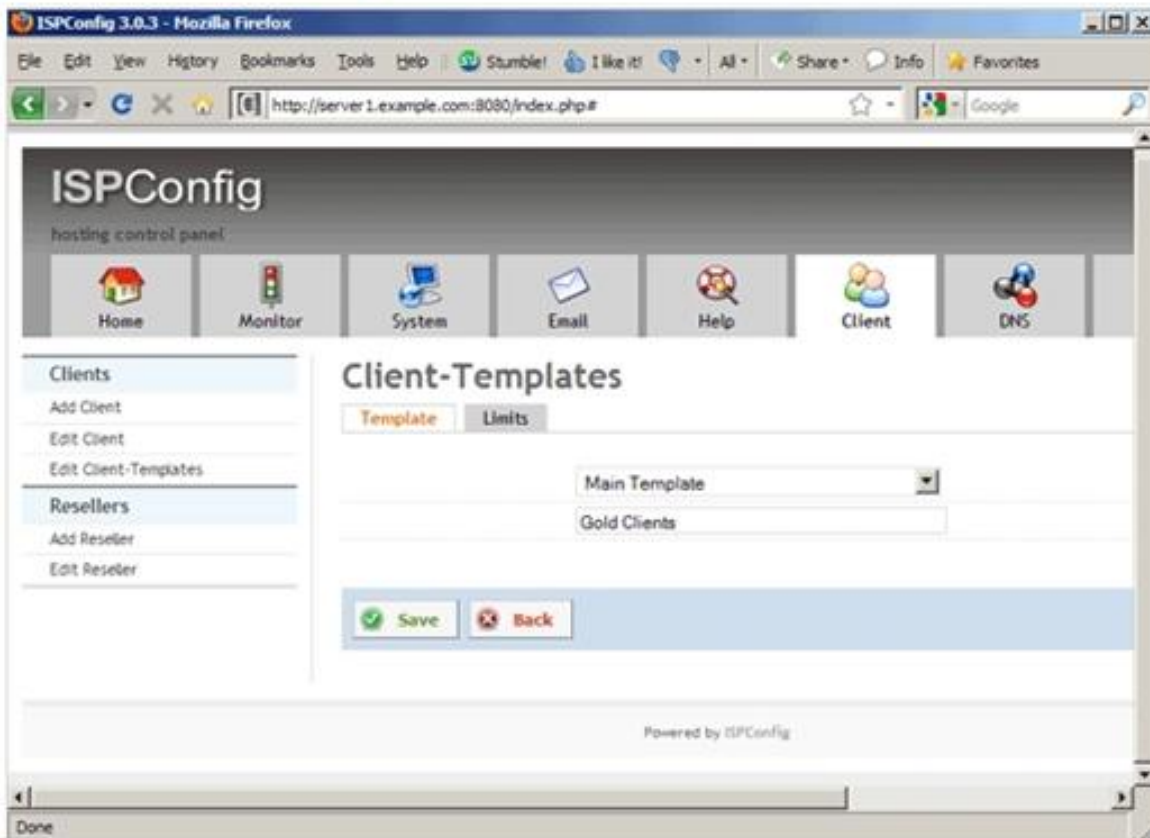
There are two kinds of templates, main templates and additional templates. In a main template you can define a basic set of limits. An additional template differs from a main template in that the values of the additional template are added to the value of the main template. For example, if you define in a main template with a max. number of two web domains and an additional template with a max. number of five web domains, and you select that main template and additional template for the client/reseller, the client/reseller can have the sum of both, i.e., seven web domains.

## Creating A Template

Click the Add new record button in the Tools section. You will get to the Client-Templates form that consists out of two tabs, Template and Limits

## Template

Here you can enter a name for the template and select if it's a Main Template or an Additional Template .



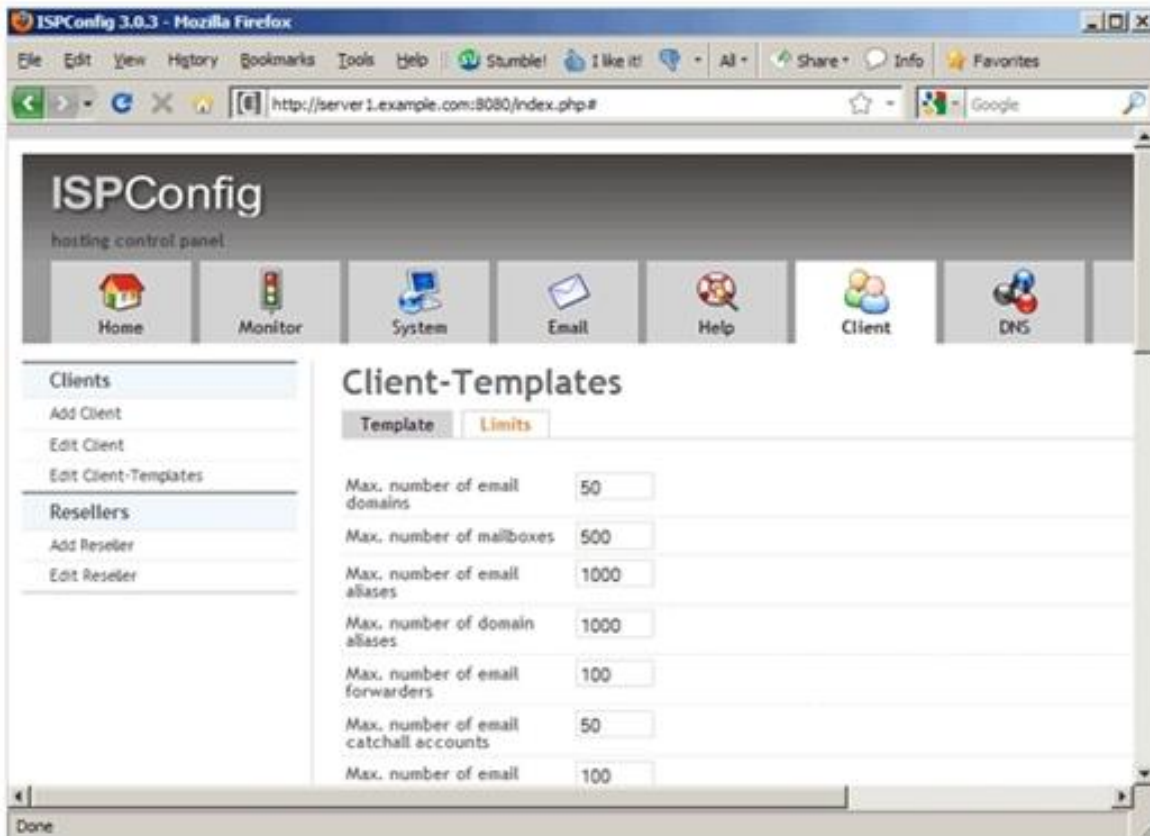
## Limits

You can define the following limits for your template:

- Max. number of email domains : Specify the max. amount of email domains. -1 means unlimited.
- Max. number of mailboxes : Specify the max. amount of mailboxes. -1 means unlimited.
- Max. number of email aliases : Specify the max. amount of email aliases. -1 means unlimited.
- Max. number of domain aliases : Specify the max. amount of domain aliases. -1 means unlimited.
- Max. number of email forwarders : Specify the max. amount of email forwarders. -1 means unlimited.
- Max. number of email catchall accounts : Specify the max. amount of email catchall accounts. -1 means unlimited.
- Max. number of email routes : Specify the max. amount of email routes. -1 means unlimited.
- Max. number of email filters : Specify the max. amount of email filters. -1 means unlimited.

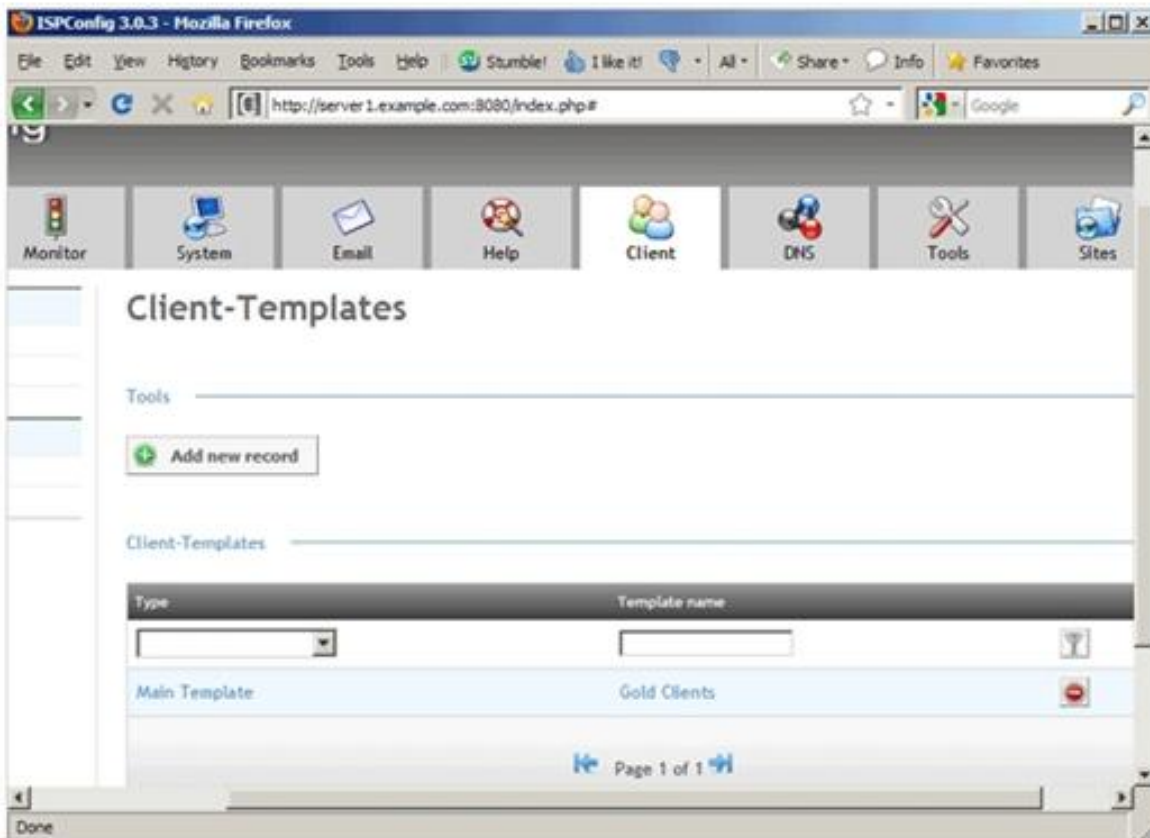
- Max. number of fetchmail accounts : Specify the max. amount of fetchmail accounts. -1 means unlimited.
- Mailbox quota : Specify the max. hard drive space (in MB). -1 means unlimited.
- Max. number of spamfilter white / blacklist filters : Specify the max. amount of whitelist and blacklist filters for the spamfilter. -1 means unlimited.
- Max. number of spamfilter users : Specify the max. amount of spamfilter users. -1 means unlimited.
- Max. number of spamfilter policies : Specify the max. amount of spamfilter policies. -1 means unlimited.
- Max. number of web domains : Specify the max. amount of web domains that this client can create. -1 means unlimited.
- Web Quota : Specify the max. hard drive space (in MB). -1 means unlimited.
- Max. number of web aliasdomains : Specify the max. amount of web aliasdomains. -1 means unlimited.
- Max. number of web subdomains : Specify the max. amount of web subdomains. -1 means unlimited.
- Max. number of FTP users : Specify the max. amount of FTP users. -1 means unlimited.
- Max. number of Shell users : Specify the max. amount of shell users. -1 means unlimited.
- Max. number of Webdav users : Specify the max. amount of WebDAV users. -1 means unlimited.
- Max. number of DNS zones : Specify the max. amount of DNS zones. -1 means unlimited.
- Max. number of secondary DNS zones : Specify the max. amount of secondary DNS zones. -1 means unlimited.
- Max. number DNS records : Specify the max. amount of DNS records. -1 means unlimited.
- Max. number of Databases : Specify the max. amount of databases. -1 means unlimited.
- Max. number of cron jobs : Specify the max. amount of cron jobs. -1 means unlimited.
- Max. type of cron jobs (chrooted and full implies url) : Specify which kind of cron jobs should be available for the client when he creates/modifies a cron job.
  - Full Cron : Full Cron means that you can use any command for the cron job, and it will not run in a chroot environment.
  - Chrooted Cron : If Chrooted Cron is selected in the limits of the client that owns the cron job, the cron jobs are chrooted (using Jailkit).
  - URL Cron : This means that the client can only create wget cron jobs, i.e., he specifies a URL in the cron job command line, and that URL will be accessed via wget.

- Min. delay between executions : This specifies the minimal delay (in minutes) how often a cron job can be executed. If you specify 5 here, for example, a cron job cannot be run every minute, but only every five minutes.
- Traffic Quota : Specify the max. monthly traffic (in MB). -1 means unlimited.



## Editing A Template

In the Client Templates section you can find a list of existing templates:



By clicking any of them, you will get to the Template and Limits tabs of that template (that you already know from the "Creating A Template" chapter) where you can modify the settings of that template.

Above the list you can find filters that allow you to search for specific parameters in all templates. The following filters are available:

- Type
- Template name

Click the



button to start a search.

To delete a template, click the



button. A confirmation message will pop up, asking you if you really want to delete the record.

## 4.5.2 Resellers

ISPConfig allows you to create resellers. A reseller is a company or individual that purchases bulk hosting from a supplier (i.e., from the company or the individual that runs the ISPConfig server) with the intention of reselling it to a number of consumers (clients) at a profit.

### 4.5.2.1 Add Reseller

Here you can add resellers (e.g. hosting companies) that can have clients and sell hosting services to these clients. These resellers can log into ISPConfig 3 and manage clients, clients' web sites, email accounts etc.

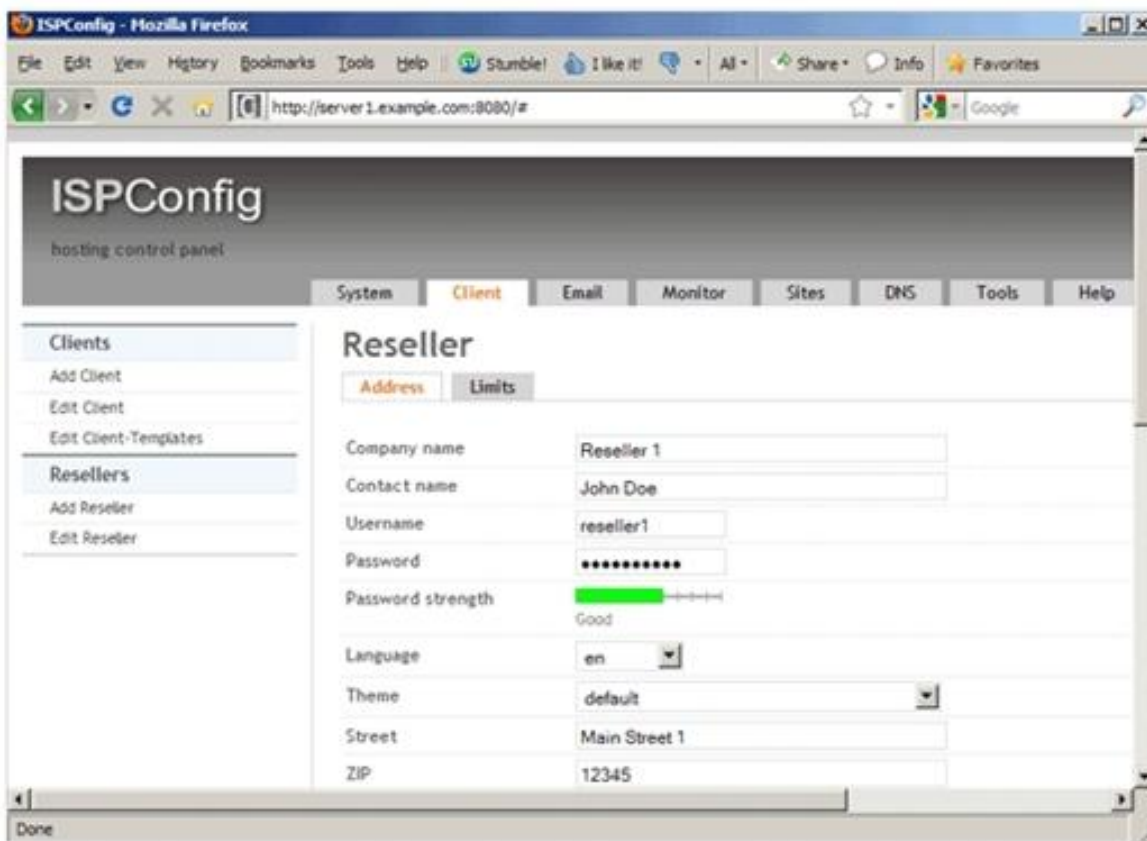
The Add Reseller form is split up into two tabs, Address and Limits :

#### Address

This is where you type in the name, address, and login details of the reseller:

- Company name (optional): Fill in the name of the company.
- Contact name : Fill in the name of the person that is responsible for this ISPConfig account.
- Username : Fill in the desired ISPConfig username for the reseller. This is the username that is used to log into ISPConfig.
- Password : Type in a password for the user.
- Password strength : This field shows how strong the new password is (a strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information).
- Language : Select the desired interface language of the ISPConfig control panel.
- Theme: Here you can select the theme of the ISPConfig control panel.
- Street (optional): Specify the street of the reseller.
- ZIP (optional): Fill in the reseller's postcode.
- City (optional): Fill in the reseller's city.
- State (optional): Specify the reseller's state, e.g. California, Bavaria, etc.
- Country : Select the reseller's country from the drop-down menu.
- Telephone (optional): Specify the reseller's landline number.

- Mobile (optional): Specify the reseller's mobile number.
- Fax (optional): Specify the reseller's fax number.
- Email (optional): Fill in the reseller's email address.
- Internet (optional): Fill in the URL of the reseller's web site (beginning with http:// or https:// ).
- ICQ (optional): Specify the reseller's ICQ number.
- Notes (optional): Here you can add notes and comments.



## Limits

This is where the resources are defined that the reseller can pass on to his clients. These limits define the total amount of resources available to the reseller - the reseller must split these resources up between his clients. If you select a master or addon template, click on Save , and the values in the rest of the form will be adjusted according to the templates. To select or de-select an addon template, it is not enough to click on Save - you must click on the Add additional template or Delete



additional template button before. If you select the Custom template in the Master template field, you have to enter your limits manually.

There are two kinds of templates, main templates and additional templates. In a main template you can define a basic set of limits. An additional template differs from a main template in that the values of the additional template are added to the value of the main template. For example, if you define in a main template with a max. number of two web domains and an additional template with a max. number of five web domains, and you select that main template and additional template for the client/reseller, the client/reseller can have the sum of both, i.e., seven web domains.

- Master template : If you have defined a template for reseller limits that you want to apply to this reseller (so that you don't have to define all the reseller limits manually in the following fields), you can select that template here. Select Custom if you want to define the reseller limits manually.
- Addon template : If you have defined an additional template that you want to add to the main template, select that template here. To select or de-select an addon template, it is not enough to click on Save - you must click on the Add additional template or Delete additional template button before.
- Default Mailserver : Select the default mailserver for the reseller. The default mailserver will be pre-selected for this reseller when email items (email accounts, etc.) are created for the reseller, but this selection can be changed in the appropriate form.
- Max. number of email domains : Specify the max. amount of email domains that this reseller can create. -1 means unlimited.
- Max. number of mailboxes : Specify the max. amount of mailboxes that this reseller can create. -1 means unlimited.
- Max. number of email aliases : Specify the max. amount of email aliases that this reseller can create. -1 means unlimited.
- Max. number of domain aliases : Specify the max. amount of domain aliases that this reseller can create. -1 means unlimited.
- Max. number of email forwarders : Specify the max. amount of email forwarders that this reseller can create. -1 means unlimited.
- Max. number of email catchall accounts : Specify the max. amount of email catchall accounts that this reseller can create. -1 means unlimited.
- Max. number of email routes : Specify the max. amount of email routes that this reseller can create. -1 means unlimited.
- Max. number of email filters : Specify the max. amount of email filters that this reseller can create. -1 means unlimited.
- Max. number of fetchmail accounts : Specify the max. amount of fetchmail accounts that this reseller can create. -1 means unlimited.
- Mailbox quota : Specify the max. hard drive space (in MB) that this reseller's email accounts

can use. -1 means unlimited.

- Max. number of spamfilter white / blacklist filters : Specify the max. amount of whitelist and blacklist filters for the spamfilter that this reseller can create. -1 means unlimited.
- Max. number of spamfilter users : Specify the max. amount of spamfilter users that this reseller can create. -1 means unlimited.
- Max. number of spamfilter policies : Specify the max. amount of spamfilter policies that this reseller can create. -1 means unlimited.
- Default Webserver : Select the default webserver for the reseller. The default webserver will be pre-selected for this reseller when web items (web sites, etc.) are created for the reseller, but this selection can be changed in the appropriate form.
- Max. number of web domains : Specify the max. amount of web domains that this reseller can create. -1 means unlimited.
- Web Quota : Specify the max. hard drive space (in MB) that this reseller's web sites can use. -1 means unlimited.
- PHP Options : Specify which PHP modes should be available for the reseller when he creates/modifies a web site. The following four modes are available: Fast-CGI, CGI, Mod-PHP, SuPHP.

- Fast-CGI:

Advantages:

- Scripts will be executed with user privileges of the web site;
- More than one PHP version can be run as FastCGI;
- Might be better in speed compared to CGI and suPHP.

Disadvantages:

- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

- CGI:

Advantages:

- Scripts will be executed with user privileges of the web site;
- More than one PHP version can be run as CGI.

Disadvantages:

- CGI might use a little more memory (RAM) - therefore, it's not recommended to run PHP as CGI on slow virtual servers;

- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

- Mod-PHP:  
Advantages:

- Speed;
- Needs less memory (RAM) than CGI;
- php.ini values can be changed via PHP scripts, vhost files, .htaccess files.

Disadvantages:

- Scripts are being executed with Apache privileges, which might lead to some security related problems;
- Only one version of PHP can be installed as Apache module;
- You cannot use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

- SuPHP:  
Advantages:

- Scripts will be executed with user privileges of the web site;
- Each vhost can have its own php.ini file;
- Needs less memory (RAM) than CGI;
- More than one PHP version can be run as suPHP.

Disadvantages:

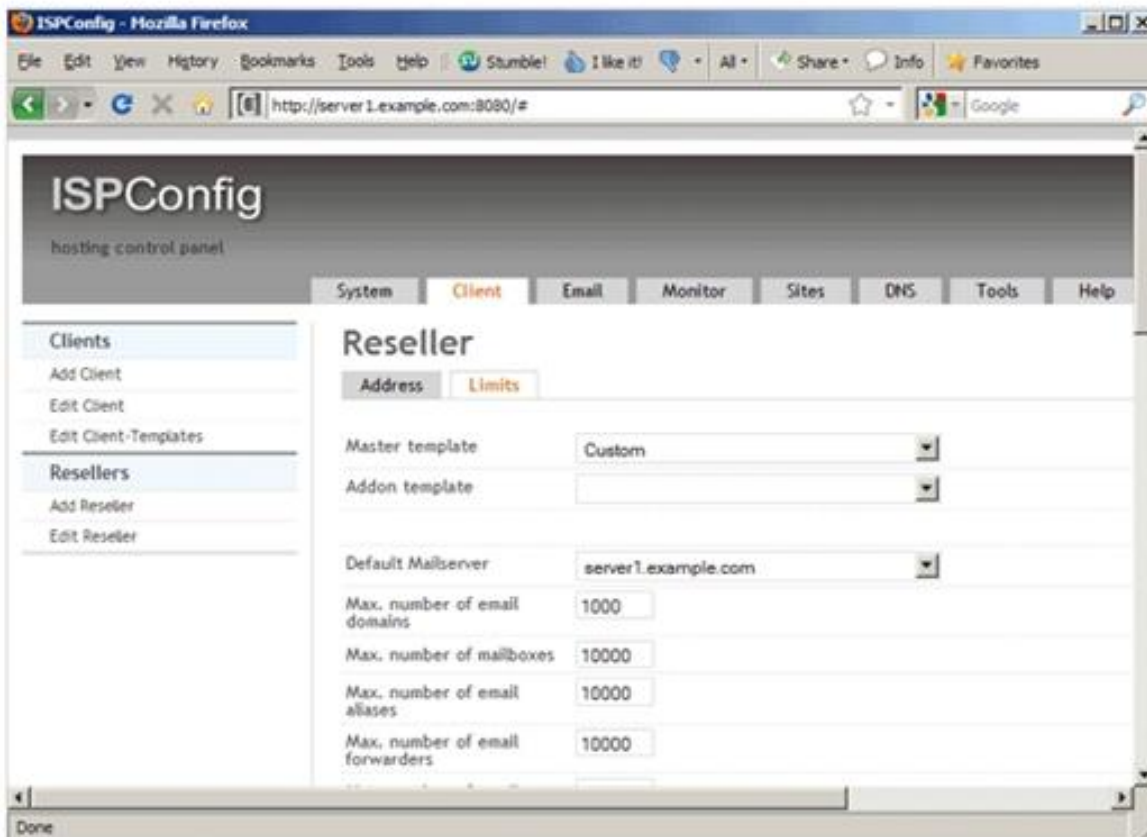
- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1);
- SuPHP might be a little slower than mod\_php.

- Recommendations:

- High-Traffic Web Sites: Fast-CGI + suExec
- Low-Traffic Web Sites: CGI + suExec or SuPHP

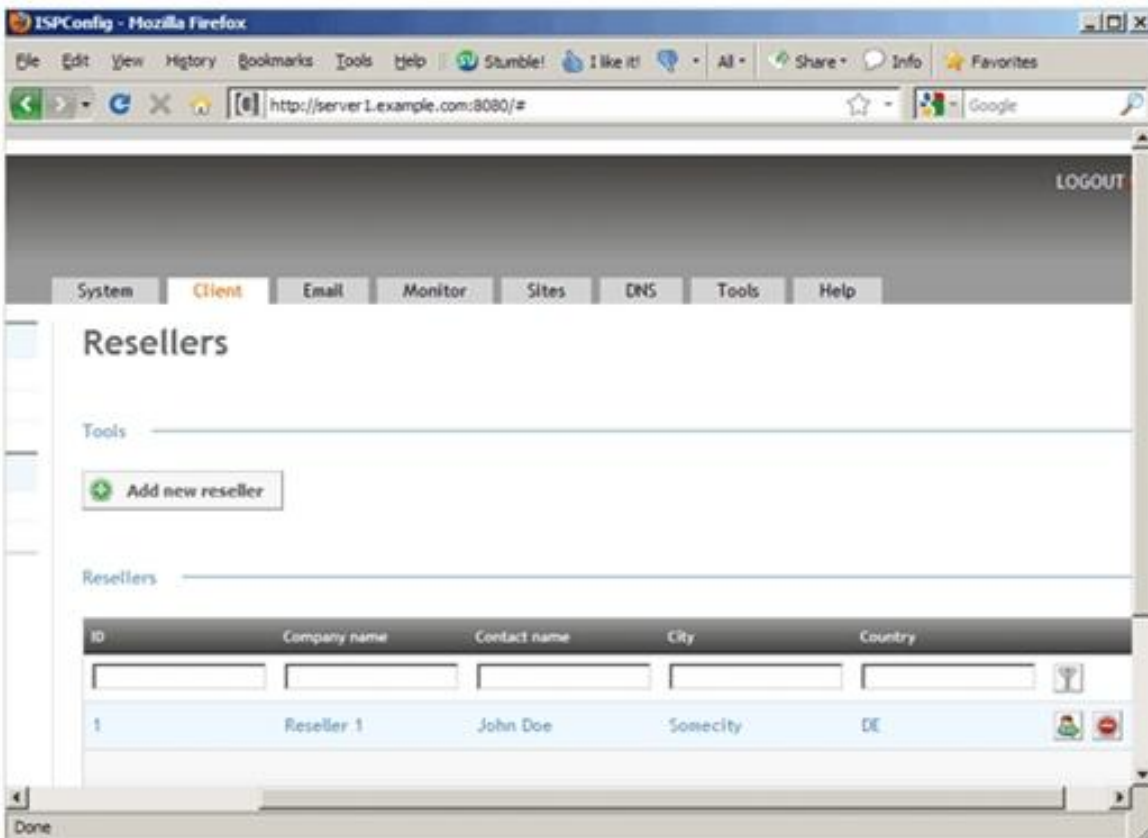
- Max. number of web aliasdomains : Specify the max. amount of web aliasdomains that this reseller can create. -1 means unlimited.
- Max. number of web subdomains : Specify the max. amount of web subdomains that this reseller can create. -1 means unlimited.
- Max. number of FTP users : Specify the max. amount of FTP users that this reseller can create. -1 means unlimited.
- Max. number of Shell users : Specify the max. amount of shell users that this reseller can create. -1 means unlimited.
- SSH-Chroot Options : Specify which SSH modes should be available for the reseller when he creates/modifies a shell account. The None mode means that the shell user can browse the whole file system and is limited only by file/directory permissions - this can be a security risk. The Jailkit mode means that the shell user will be limited to his home directory (chrooted) and can only browse directories inside his home directory.
- Max. number of Webdav users : Specify the max. amount of WebDAV users that this reseller can create. -1 means unlimited.
- Default DNS Server : Select the default DNS server for the reseller. The default DNS server will be pre-selected for this reseller when DNS items (zones, etc.) are created for the reseller, but this selection can be changed in the appropriate form.
- Max. number of DNS zones : Specify the max. amount of DNS zones that this reseller can create. -1 means unlimited.
- Max. number of secondary DNS zones : Specify the max. amount of secondary DNS zones that this reseller can create. -1 means unlimited.
- Max. number DNS records : Specify the max. amount of DNS records that this reseller can create. -1 means unlimited.
- Max. number of Clients : Specify the max. amount of clients that this reseller can create. -1 means unlimited.
- Default Database Server : Select the default database server for the reseller. The default database server will be pre-selected for this reseller when a database is created for the reseller, but this selection can be changed in the appropriate form.
- Max. number of Databases : Specify the max. amount of databases that this reseller can create. -1 means unlimited.
- Max. number of cron jobs : Specify the max. amount of cron jobs that this reseller can create. -1 means unlimited.
- Max. type of cron jobs (chrooted and full implies url) : Specify which kind of cron jobs should be available for the reseller when he creates/modifies a cron job.

- Full Cron : Full Cron means that you can use any command for the cron job, and it will not run in a chroot environment.
  - Chrooted Cron : If Chrooted Cron is selected in the limits of the reseller that owns the cron job, the cron jobs are chrooted (using Jailkit).
  - URL Cron : This means that the reseller can only create wget cron jobs, i.e., he specifies a URL in the cron job command line, and that URL will be accessed via wget.
- 
- Min. delay between executions : This specifies the minimal delay (in minutes) how often a cron job can be executed. If you specify 5 here, for example, a cron job cannot be run every minute, but only every five minutes.
  - Traffic Quota : Specify the max. monthly traffic (in MB) that this reseller can use. -1 means unlimited.



### 4.5.2.2 Edit Reseller

Under Edit Reseller you can find a list of existing resellers:



By clicking any of them, you will get to the Address and Limits tabs of that reseller (that you already know from chapter 4.5.2.1) where you can modify the settings of that reseller.

Above the list you can find filters that allow you to search for specific parameters in all resellers. The following filters are available:

- ID
- Company name
- Contact name
- City
- Country

Click the



button to start a search.

From the reseller list, it is also possible to directly log in as a reseller - just click the



button next to the reseller.

To delete a reseller, click the



button. A confirmation message will pop up, asking you if you really want to delete the record.

## 4.6 Sites

On this tab we can create web sites, subdomains, FTP accounts, shell users, MySQL databases, and cron jobs, and take a look at traffic statistics.

### 4.6.1 Websites

#### 4.6.1.1 Website

This is where we can create new and edit/delete existing web sites.

To create a new web site, click the Add new website button. This will lead you to the Web Domain form with the tabs Domain , Redirect , SSL, Statistics , and Options

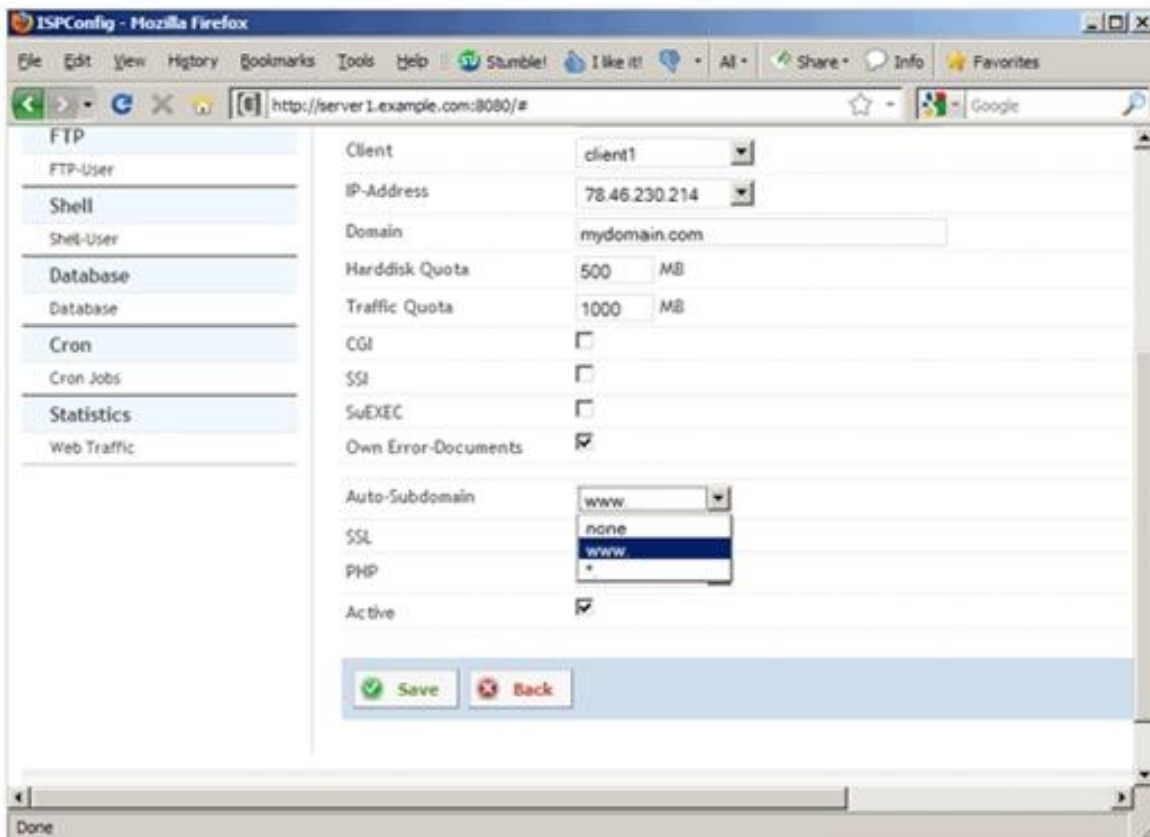
### Web Domain

#### Domain

This is where the web site is actually created. Here you specify the web site domain, the client who owns the web site, the IP address, quota, the features (like PHP, CGI, SSL, etc.) that the web site will have, etc. The form has the following fields:

- **Server** : If more than one server is available, you can select the server on which the web site will be created.
- **Client** : Here you select the client that owns the new web site.
- **IP-Address** : Select the IP address on which the web site will respond. \* means all available IP addresses. Please note that you still might have to create the appropriate DNS records for your domains so that they point to the correct IP address.
- **Domain** : This is the main domain of your web site, e.g. example.com (without subdomain like www).

- **Harddisk Quota** : This is the max. amount of web space (in MB) that is available for the web site. -1 means unlimited.
- **Traffic Quota** : This is the max. amount of traffic per month (in MB) that is available for the web site. -1 means unlimited.
- **CGI**: Allows the web server to execute cgi scripts in a certain directory (cgi-bin ).
- **SSI** : Activates Server Side Includes (SSI) (file extension .shtml).
- **SuEXEC**: This makes that CGI scripts (including PHP scripts that are executed as Fast-CGI or CGI) are executed as the user and group of the current web site. You should check this checkbox for security reasons. This does not apply to PHP scripts that are executed under Mod-PHP and SuPHP.
- **Own Error-Documents** : Allows to define your own error pages instead of using the standard ones.
- **Auto-Subdomain** : Here you can define whether you want no automatic subdomain for the web site (in this case you can access the site only by using the domain, e.g. http://example.com ), an automatic www subdomain (you can then access the site using http://example.com and http://www.example.com ), or a wildcard subdomain (\*. ) which means you can access the site with any subdomain that does not point to another web site.



- **SSL**: With this checkbox you can enable SSL for this web site. Please note that you can have



only one SSL web site per IP address, and it is not possible to use a wildcard ( \* ) in the IP-Address field.

- PHP: You can disable/enable PHP for this web site here. If you want to enable PHP, the following four modes are available: Fast-CGI, CGI, Mod-PHP, SuPHP.

- Fast-CGI:

Advantages:

- Scripts will be executed with user privileges of the web site;
- More than one PHP version can be run as FastCGI;
- Might be better in speed compared to CGI and suPHP.

Disadvantages:

- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

- CGI:

Advantages:

- Scripts will be executed with user privileges of the web site;
- More than one PHP version can be run as CGI.

Disadvantages:

- CGI might use a little more memory (RAM) - therefore, it's not recommended to run PHP as CGI on slow virtual servers;
- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

- Mod-PHP:

Advantages:

- Speed;
- Needs less memory (RAM) than CGI;
- php.ini values can be changed via PHP scripts, vhost files, .htaccess files.

Disadvantages:

- Scripts are being executed with Apache privileges, which might lead to some

security related problems;

- Only one version of PHP can be installed as Apache module;
- You cannot use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1).

- SuPHP:

Advantages:

- Scripts will be executed with user privileges of the web site;
- Each vhost can have its own php.ini file;
- Needs less memory (RAM) than CGI;
- More than one PHP version can be run as suPHP.

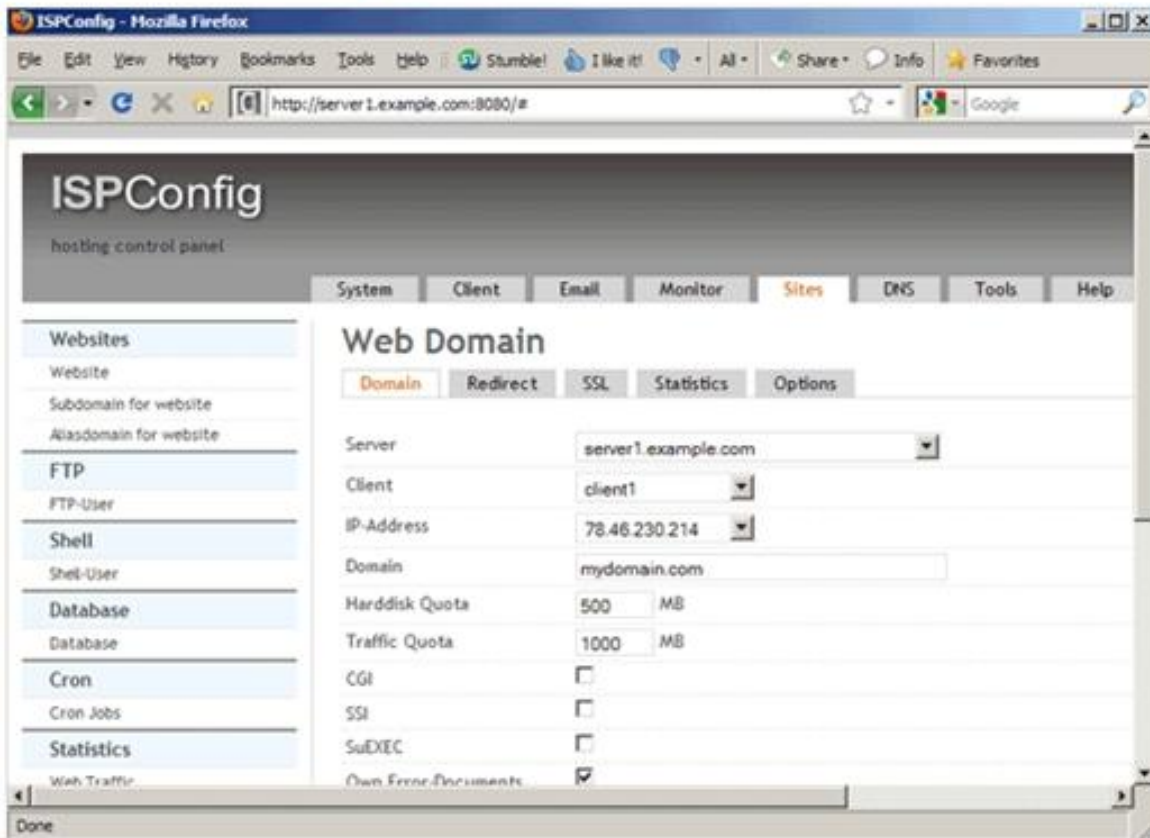
Disadvantages:

- php.ini values cannot be changed via PHP scripts, vhost files, .htaccess files. But it is possible to use the Custom php.ini settings field on the Options tab of a web site in ISPConfig to specify custom php.ini settings (see chapter 4.6.1.1);
- SuPHP might be a little slower than mod\_php.

- Recommendations:

- High-Traffic Web Sites: Fast-CGI + suExec
- Low-Traffic Web Sites: CGI + suExec or SuPHP

- Active : Defines whether this web site is active or not.



## Redirect

This form allows you to redirect the web site to another web site or to a specific directory on the server. This is done by using Apache rewrite rules.

- Redirect Type : Here you can specify if you want to disable/enable a redirect, and if decide to use a redirect, which flag to use.

Flags:

- No flag: Don't use any flags.
- R: Use of the [R] flag causes a HTTP redirect to be issued to the browser. If a fully-qualified URL is specified (that is, including `http://servername/` ) then a redirect will be issued to that location. Otherwise, the current servername will be used to generate the URL sent with the redirect.
- L: The [L] flag causes `mod_rewrite` to stop processing the rule set. In most contexts, this means that if the rule matches, no further rules will be processed.
- R,L: You will almost always want to use [R] in conjunction with [L] (that is, use [R,L]) because on its own, the [R] flag prepends `http://thishost[:thisport]` to the URI, but then passes this on to the next rule in the ruleset, which can often result in 'Invalid URI in

request' warnings.

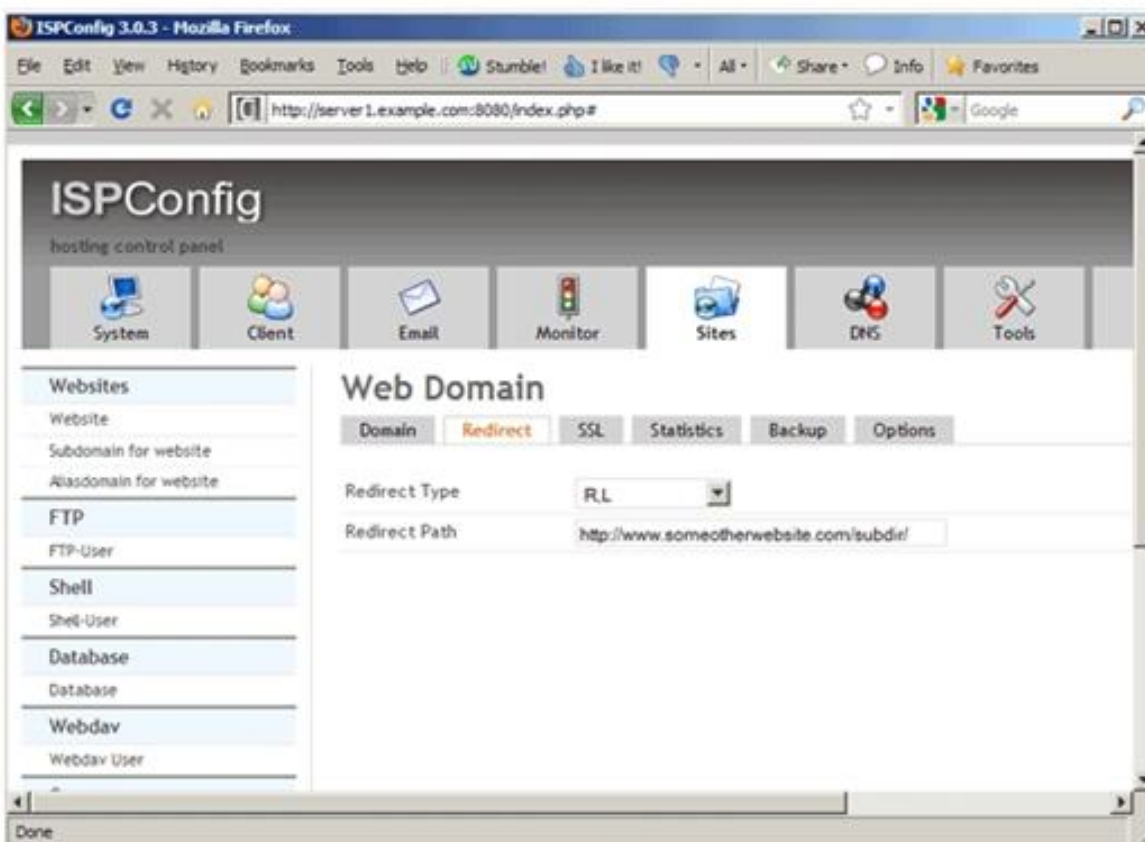
More details about flags can be found here:

[http://httpd.apache.org/docs/2.2/rewrite/rewrite\\_flags.html](http://httpd.apache.org/docs/2.2/rewrite/rewrite_flags.html)

- Redirect Path : This is the target, i.e., the path (full path or path relative to the document root) or URL where the redirect should point to.

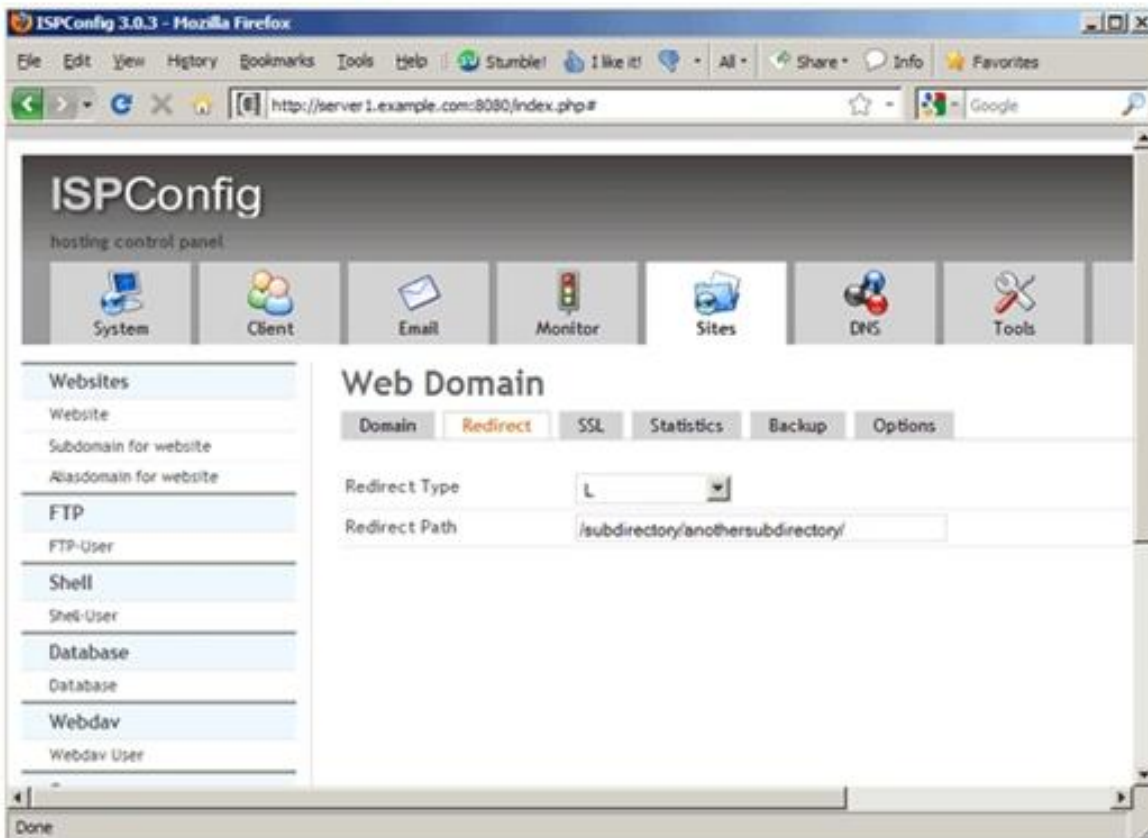
If you want to do a URL redirect, you should use the R,L flags, while for a directory redirect it is recommended to just use the L flag.

If you want to do a URL redirect, please specify the redirect target URL in the Redirect Path field (e.g. `http://www.someotherwebsite.com/subdir/` or `http://www.someotherwebsite.com/` ). Please note that the URL should have a trailing slash:



If you want to do a redirect to a subdirectory of your web site, please specify the subdirectory or the path to the subdirectory (relative to the document root of your web site) in the Redirect Path field. Please note that the path must begin and end with a slash (e.g.

`/subdirectory/anothersubdirectory/` ):

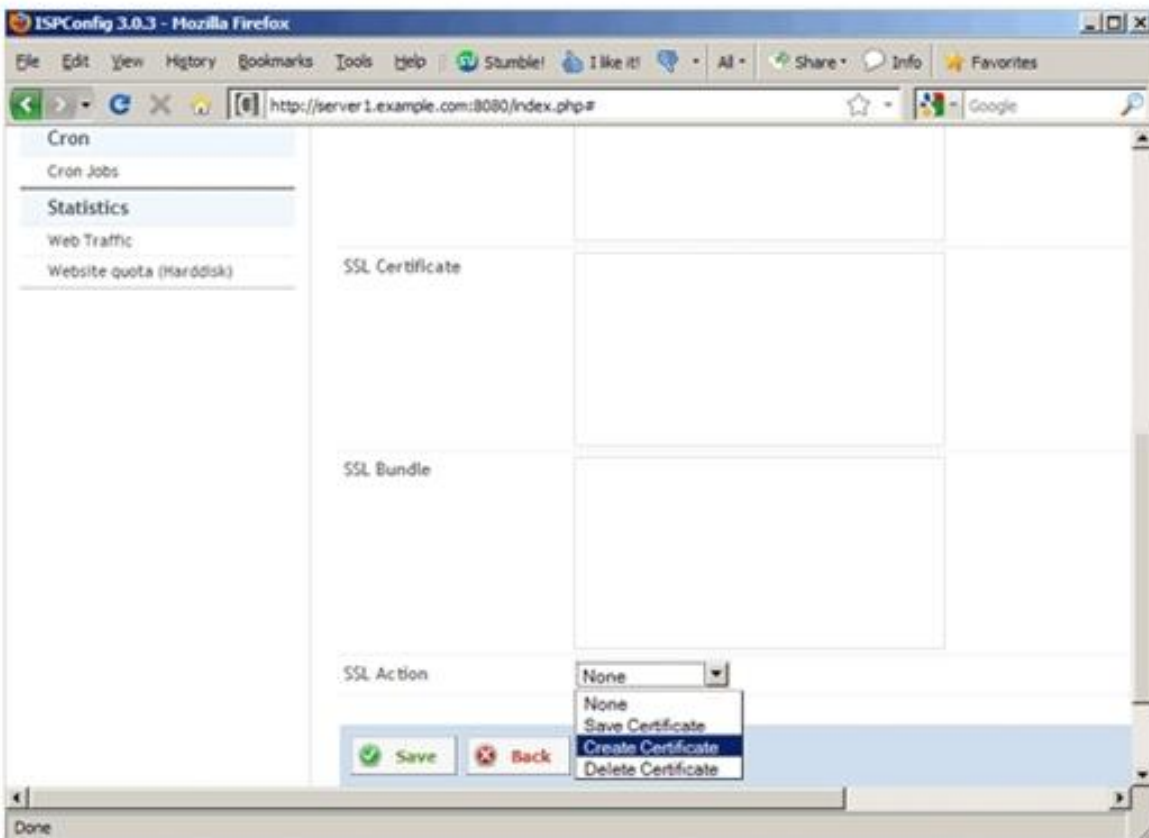
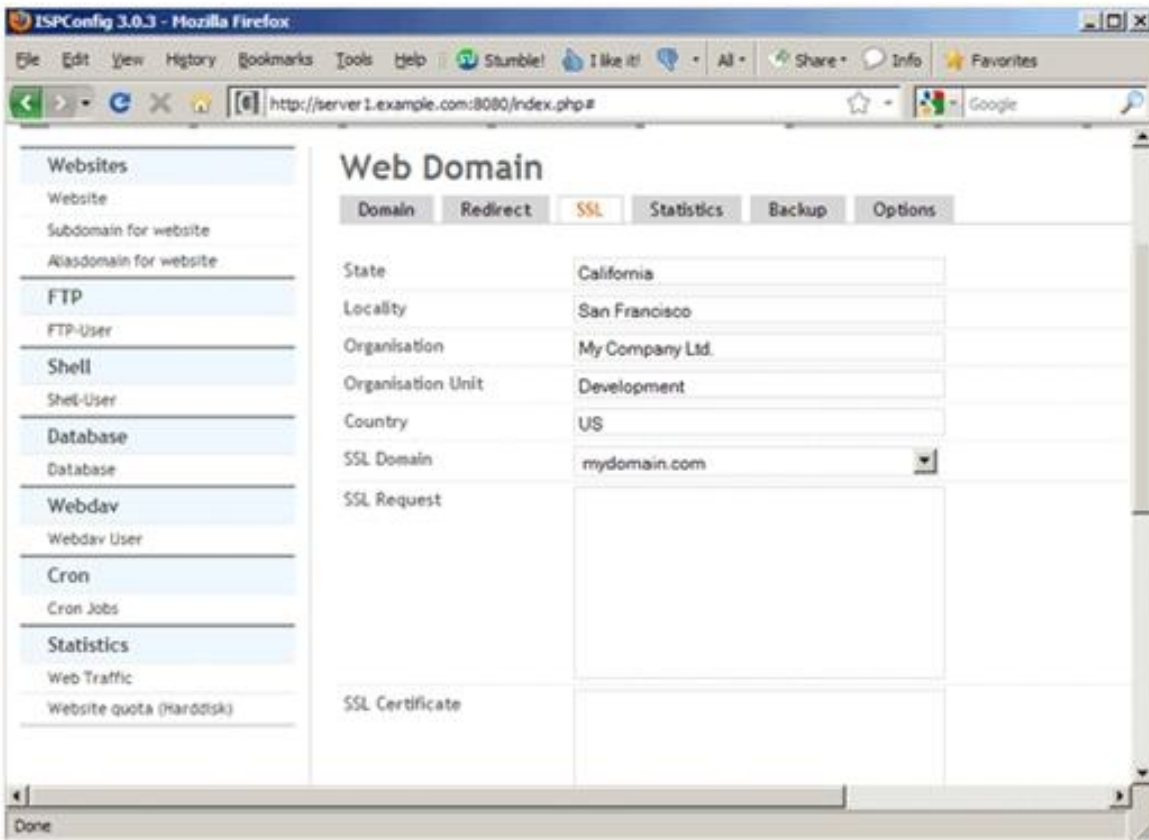


## SSL

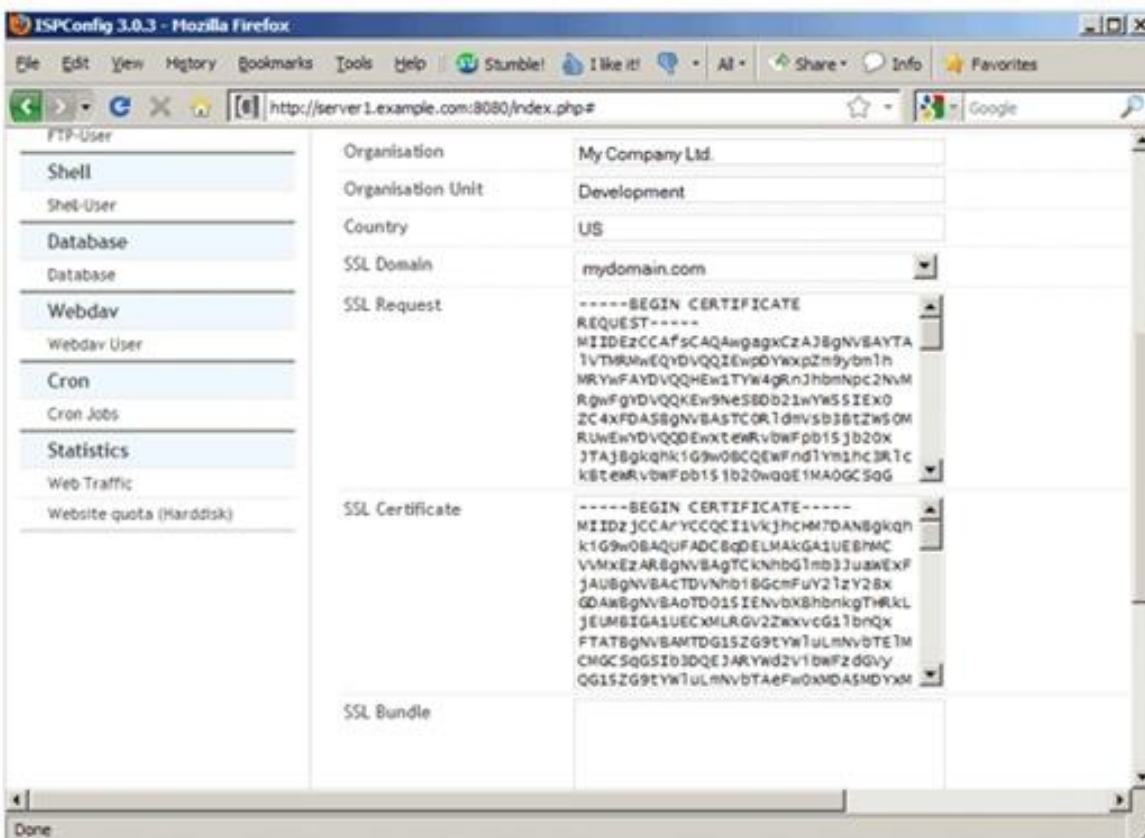
On the SSL tab you can create a self-signed SSL certificate together with a certificate signing request (CSR) that you can use to apply for an SSL certificate that is signed by a trusted certificate authority (CA) such as Verisign, Comodo, Thawte, etc. It's not necessary to buy such a trusted SSL certificate, but you should note that if you use a self-signed SSL certificate, browsers will display a warning to your visitors.

Please note that you can have just one SSL web site per IP address.

To create a self-signed certificate, please fill out the fields State , Locality , Organisation , Organisation Unit , Country , and SSL Domain , and then select Create Certificate from the SSL Action drop-down menu, and click on Save . Leave the fields SSL Request , SSL Certificate , and SSL Bundle empty - the fields SSL Request and SSL Certificate will be filled out by the system.



After the self- signed certificate was created, you will find data in the SSL Request and SSL Certificate fields (it can take one or two minutes until the data appears in the fields):



If you want to buy an SSL certificate from a trusted CA, you have to copy the data from the SSL Request field - this is the certificate signing request (CSR). With this CSR, you can apply for a trusted SSL certificate at your CA - the CA will create an SSL certificate from this CSR, and you can paste the trusted SSL certificate into the SSL Certificate field. Sometimes your CA will also give you an SSL bundle - paste this into the SSL Bundle field. Select Save Certificate from the SSL Action drop-down menu and click on the Save button. You have just replaced your self-signed certificate with a trusted SSL certificate.

To delete a certificate, select Delete Certificate from the SSL Action drop-down menu and click on the Save button.

Here's the meaning of the other fields on the SSL tab:

- State : The state or province where your organization is located. Can not be abbreviated. Examples: Florida, Bavaria, Noord-Holland, etc.
- Locality : The city where your organization is located. Examples: London, Paris, Seattle, Hamburg, etc.
- Organisation : The exact legal name of your organization. Do not abbreviate your

organization name. Examples: Internet Widgets Pty Ltd, My Company GmbH, etc.

- **Organisation Unit** : This entry is for the name of the unit in your organization. Examples: Marketing, Sales, Development, etc.
- **Country** : The two-letter ISO abbreviation for your country. Examples: AU for Australia, DE for Germany, US for the United States, NL for The Netherlands, etc.
- **SSL Domain** : A fully qualified domain name that resolves to the SSL web site. For example, if you intend to secure the URL `https://ssl.example.com`, then the SSL Domain must be `ssl.example.com`. This must be an exact match.

## Statistics

ISPConfig 3 creates web statistics for your web sites automatically - these will be generated once a day (at 0.30h) and are available in the `/stats` folder of your web site (e.g.

`http://www.example.com/stats`). You can password-protect that directory by specifying a password in the `Webstatistics password` field (the `Webstatistics` username is defined by ISPConfig, it's `admin`).

In the `Webstatistics` program drop-down menu, you can select the software that will create the statistics for you - you have the choice between [Webalizer](#) and [AWStats](#).

## Backup

(This tab is visible only for the ISPConfig admin user.)

On the Backup tab you can specify whether you want to create backups of the current web site. If the document root of the web site is `/var/clients/client1/web1/web`, the contents of the `/var/clients/client1/web1` directory (including the `web` folder, but excluding the `log` folder) will be zipped (extension `.zip`) and stored in the backup directory that is specified under `System > Server Config > Backup directory` (the default directory is `/var/backup`). For `web1` ISPConfig would create the subdirectory `/var/backup/web1` and store the backups in that directory. That directory would be symlinked to `/var/clients/client1/web1/backup` (the backup doesn't include `/var/clients/client1/web1/backup` either to avoid a circular backup) so that the backups can be downloaded by FTP.

- **Backup interval** : Select whether you want ISPConfig to create backups for this web site, and if so, how often (daily/weekly/monthly).
- **Number of backup copies** : Specify how many backups should be kept on the system. For example, if you select to have a daily backup and pick 10 in the `Number of backup copies` field, the system will keep backups of the last ten days; backups that are older will



automatically be deleted.

To restore a backup, download it from the `backup` folder via FTP, unpack it on your client PC, and upload the contents via FTP again.

## Options

(This tab is visible only for the ISPConfig admin user.)

- **Linux User** : This shows the Linux user under which this web site is run. If you have chosen PHP Fast-CGI + SuEXEC, PHP CGI + SuEXEC or SuPHP, this is the user under which your PHP scripts will be executed. This setting cannot be changed.
- **Linux Group** : This shows the Linux group under which this web site is run. If you have chosen PHP Fast-CGI + SuEXEC, PHP CGI + SuEXEC or SuPHP, this is the group under which your PHP scripts will be executed. This setting cannot be changed.
- **Apache AllowOverride** : Specifies what directives are allowed in `.htaccess` files. Possible values: All|None|AuthConfig|FileInfo|Indexes|Limit|Options[= Option ,...] See <http://httpd.apache.org/docs/2.2/mod/core.html#allowoverride> for more details.
- **PHP open\_basedir** : The `open_basedir` directive in `php.ini` limits PHP file accesses (such as file opening, writing and deleting) within a designated directory so that it doesn't endanger the rest of the system in any way. With proper Apache permissions and PHP installed as an Apache module, PHP inherits whatever privileges Apache has. You can specify multiple directories here, separated by a colon (:).
- **Custom php.ini settings** : If this web site needs special PHP settings that differ from what's in the system's global `php.ini`, you can override the global PHP settings here. You can use normal `php.ini` syntax here. Please specify one directive per line. Please note that you can use this field only with Fast-CGI, CGI, or SuPHP - you cannot use it if you have enabled Mod-PHP for this web site. Also note that if you use this field and change your global `php.ini` afterwards, the changes in the global `php.ini` will not be available to this web site immediately - only after you modify settings of this web site in ISPConfig so that this web site's configuration gets rewritten.

Examples:

```
memory_limit = 32M
magic_quotes_gpc = Off
file_uploads = Off
```

- **Apache directives** : This field offers you the opportunity to write additional Apache directives into the site's virtual host container manually, one directive per line ([Directive Quick Reference](#)).

Examples:

```
<Location '/wiki/images'>
php_admin_flag engine off
```

```
AddType text/plain .html .htm .shtml .php
```

```
</Location>
```

```
php_flag register_globals off
```

```
Options -Indexes
```

```
Options +FollowSymLinks
```

```
ErrorDocument 404 /index.php
```

(As you can see, you can change PHP settings here as well using `php_admin_flag` and `php_flag`, but this works only if you use Mod-PHP. You can find more details about this here: <http://php.net/manual/en/configuration.changes.php> )

#### 4.6.1.2 Subdomain for website

This is where we can create new and edit/delete existing subdomains. With this feature, you can add subdomains to an existing web site so that the subdomain shows the same content as the web site's main domain. It is also possible to point the subdomain to a subdirectory of the web site - this is done using Apache rewrite rules. Please note that you should not use such a rewrite rule if you plan to install a CMS such as Wordpress, Joomla, Drupal, etc. in that subdirectory because most modern CMS systems also use rewrite rules that will most likely collide with the rewrite rules that redirect the subdomain to the subdirectory. If you want to install a CMS in a directory of its own and use a subdomain for that directory, you should create a whole new web site for that subdomain and install the CMS in that web site. But if you plan to place static HTML files in the subdirectory or other stuff that doesn't come with any rewrite rules, you can create a subdomain and redirect it to that subdirectory without any problem.

The difference between a subdomain and an aliasdomain is that the subdomain uses the same domain name as the main domain of the web site, whereas an aliasdomain uses a different domain name. For example, if the web site's main domain is `example.com`, and you want to point the hostname `sub.example.com` to the same web site, you'd use a subdomain, whereas if you have a totally different domain such as `yourseconddomain.com` that you want to point to the `example.com` web site, you'd use an aliasdomain.

To create a new subdomain, click the `Add new subdomain` button. This will lead you to the `Subdomain for website` form with the tab `Domain`.

#### Subdomain for website

##### Domain

Here you can create/edit the subdomain. The form has the following fields:

- **Host** : This is where you enter the hostname, i.e., the subdomain without the main domain

name. For example, if you want to create the subdomain `sub.example.com` , you enter `sub` in this field.

- **Domain** : Here you select the main domain. If you want to create the subdomain `sub.example.com` , this would be `example.com` .
- **Redirect Type** : Here you can specify if you want to disable/enable a redirect, and if decide to use a redirect, which flag to use. (Redirects work exactly as shown for web sites in chapter 4.6.1.1.)

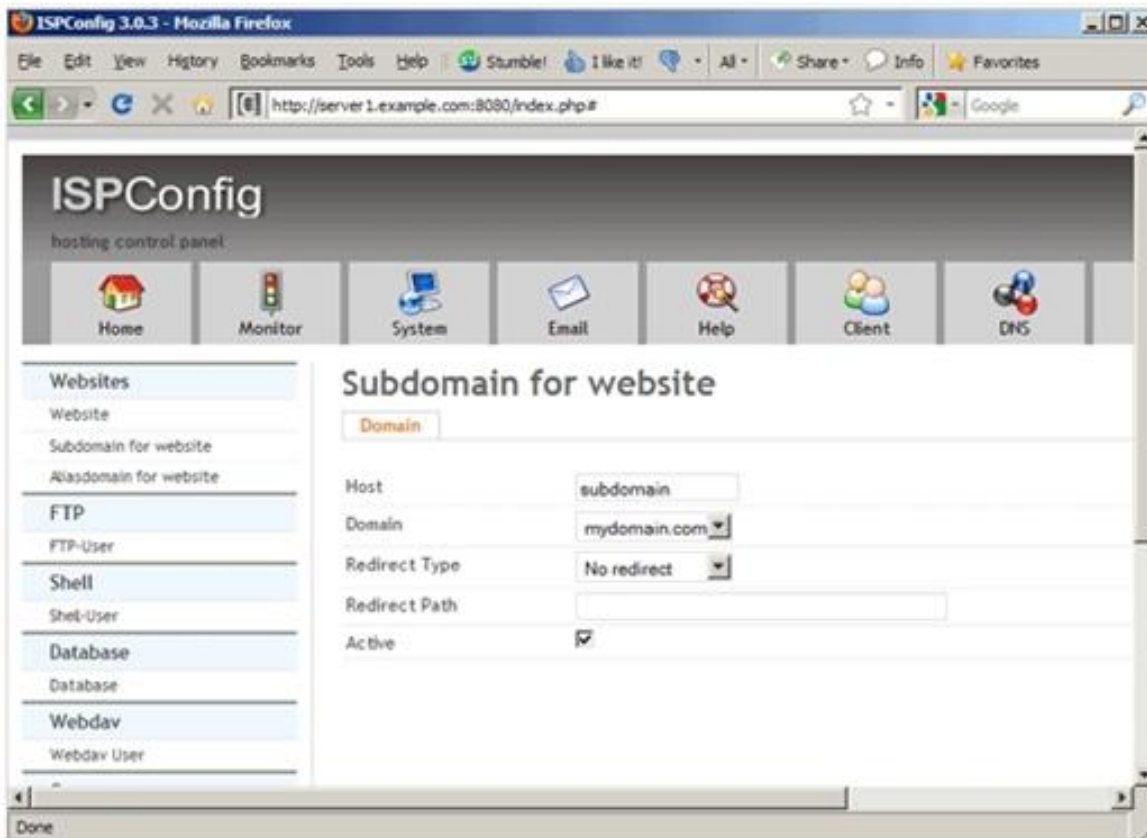
Flags:

- **No flag**: Don't use any flags.
- **R**: Use of the [R] flag causes a HTTP redirect to be issued to the browser. If a fully-qualified URL is specified (that is, including `http://servername/` ) then a redirect will be issued to that location. Otherwise, the current servername will be used to generate the URL sent with the redirect.
- **L**: The [L] flag causes `mod_rewrite` to stop processing the rule set. In most contexts, this means that if the rule matches, no further rules will be processed.
- **R,L**: You will almost always want to use [R] in conjunction with [L] (that is, use [R,L]) because on its own, the [R] flag prepends `http://thishost[:thisport]` to the URI, but then passes this on to the next rule in the ruleset, which can often result in 'Invalid URI in request' warnings.

More details about flags can be found here:

[http://httpd.apache.org/docs/2.2/rewrite/rewrite\\_flags.html](http://httpd.apache.org/docs/2.2/rewrite/rewrite_flags.html)

- **Redirect Path** : This is the target, i.e., the path (full path or path relative to the document root) or URL where the redirect should point to.
- **Active** : This defines if the subdomain is active or not.



#### 4.6.1.3 Aliasdomain for website

This is where we can create new and edit/delete existing aliasdomains. With this feature, you can add aliasdomains to an existing web site so that the aliasdomain shows the same content as the web site's main domain. It is also possible to point the aliasdomain to a subdirectory of the web site - this is done using Apache rewrite rules. Please note that you should not use such a rewrite rule if you plan to install a CMS such as Wordpress, Joomla, Drupal, etc. in that subdirectory because most modern CMS systems also use rewrite rules that will most likely collide with the rewrite rules that redirect the aliasdomain to the subdirectory. If you want to install a CMS in a directory of its own and use an aliasdomain for that directory, you should create a whole new web site for that aliasdomain and install the CMS in that web site. But if you plan to place static HTML files in the subdirectory or other stuff that doesn't come with any rewrite rules, you can create an aliasdomain and redirect it to that subdirectory without any problem.

The difference between a subdomain and an aliasdomain is that the subdomain uses the same domain name as the main domain of the web site, whereas an aliasdomain uses a different domain name. For example, if the web site's main domain is `example.com`, and you want to point the hostname `sub.example.com` to the same web site, you'd use a subdomain, whereas if you have a totally different domain such as `yourseconddomain.com` that you want to point to the `example.com` web site, you'd use an aliasdomain.

To create a new aliasdomain, click the **Add new aliasdomain** button. This will lead you to the **Web Aliasdomain** form with the tab **Domain** .

### Web Aliasdomain

#### Domain

Here you can create/edit the aliasdomain. The form has the following fields:

- **Domain** : This is where you enter the aliasdomain, e.g. `yourseconddomain.com` . It is also possible to specify a subdomain, e.g. `sub.yourseconddomain.com`
- **Parent Website** : Here you select the parent web site, i.e.. the web site that the aliasdomain should point to.
- **Redirect Type** : Here you can specify if you want to disable/enable a redirect, and if decide to use a redirect, which flag to use. (Redirects work exactly as shown for web sites in chapter 4.6.1.1.)

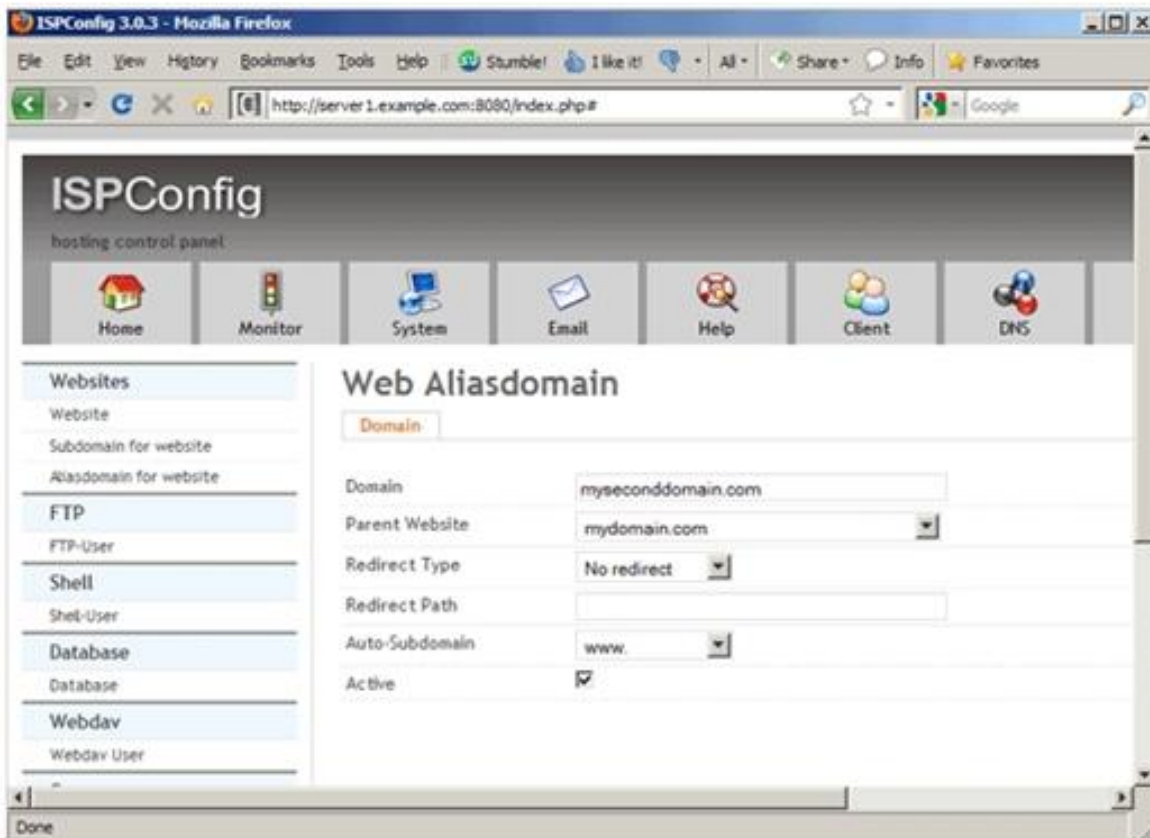
Flags:

- **R**: Use of the [R] flag causes a HTTP redirect to be issued to the browser. If a fully-qualified URL is specified (that is, including `http://servername/` ) then a redirect will be issued to that location. Otherwise, the current servername will be used to generate the URL sent with the redirect.
- **L**: The [L] flag causes `mod_rewrite` to stop processing the rule set. In most contexts, this means that if the rule matches, no further rules will be processed.
- **R,L**: You will almost always want to use [R] in conjunction with [L] (that is, use [R,L]) because on its own, the [R] flag prepends `http://thishost[:thisport]` to the URI, but then passes this on to the next rule in the ruleset, which can often result in 'Invalid URI in request' warnings.

More details about flags can be found here:

[http://httpd.apache.org/docs/2.2/rewrite/rewrite\\_flags.html](http://httpd.apache.org/docs/2.2/rewrite/rewrite_flags.html)

- **Redirect Path** : This is the target, i.e., the path (full path or path relative to the document root) or URL where the redirect should point to.
- **Auto-Subdomain** : Here you can define whether you want no automatic subdomain for the aliasdomain (in this case you can access the site only by using the domain, e.g. `http://yourseconddomain.com` ), an automatic `www` subdomain (you can then access the site using `http://yourseconddomain.com` and `http://www.yourseconddomain.com` ), or a wildcard subdomain (`*` ) which means you can access the site with any subdomain that does not point to another web site.
- **Active** : This defines if the aliasdomain is active or not.



## 4.6.2 FTP

### 4.6.2.1 FTP-User

This is where we create new FTP users or modify/delete existing FTP users. FTP users can upload/download/delete files for a website with an FTP client such as [FileZilla](#).

To create a new FTP user, click the **Add new FTP-User** button. This will lead you to the FTP User form with the tabs **FTP User** and **Options**

### FTP User

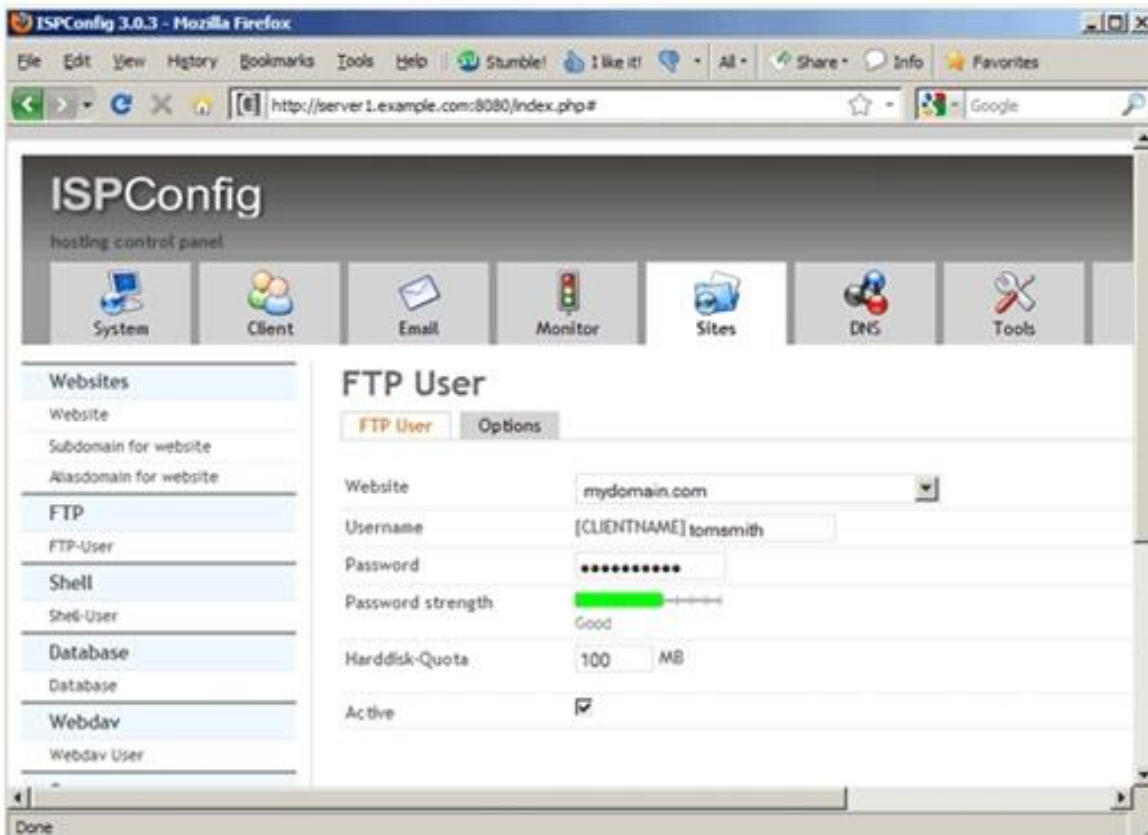
### FTP User

The form to create/modify an FTP user has the following fields:

- **Website** : This is the web site for which you define the FTP user.
- **Username** : This is the username of the FTP user. The string in square brackets before the

username will be replaced appropriately, for example [CLIENT] will be replaced with client1 , client2 , etc. So if the current client is client1 , and you type in johndoe in the Username field, the actual FTP username will be client1johndoe . The FTP user prefix can be defined under System > Interface Config , however it is not recommended to change the default value.

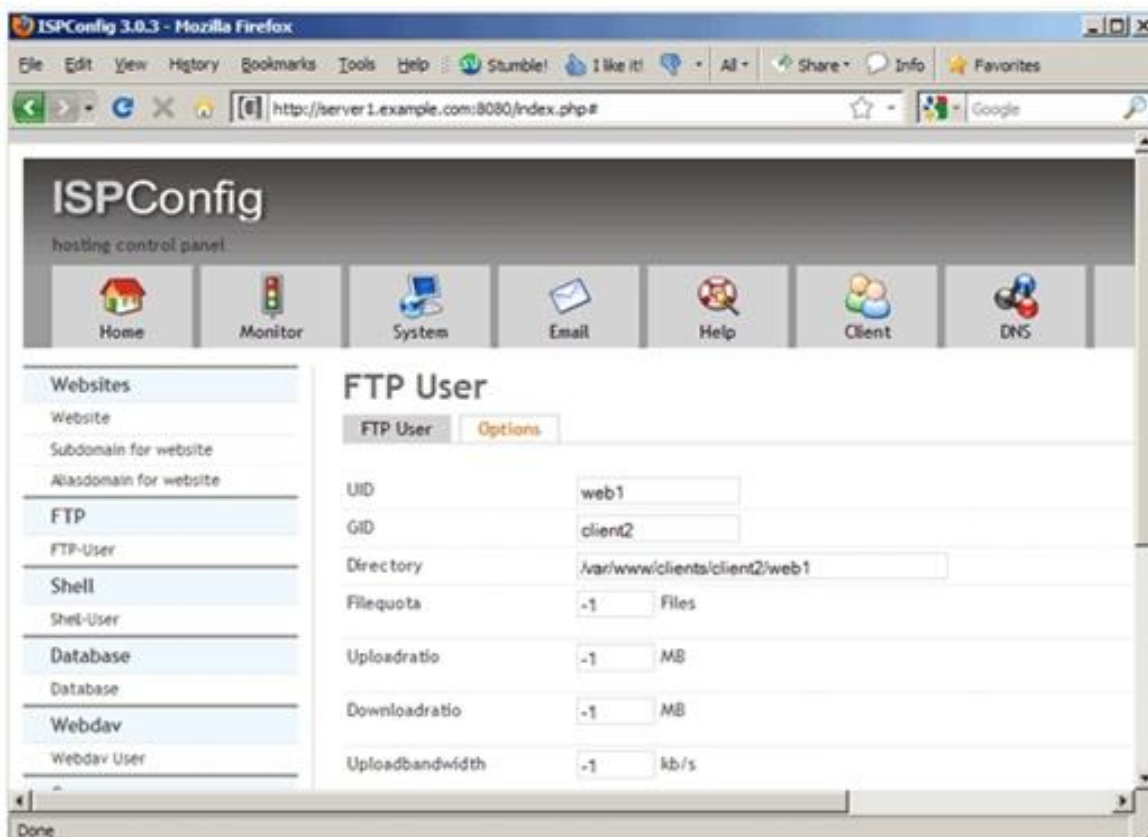
- Password : Type in a password for the FTP user. The Password strength field will show how weak or strong your password is. A strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information.
- Harddisk-Quota : This is the max. amount of disk space (in MB) that is available for the FTP user.
- Active : This defines if this FTP user account is active or not.



## Options

On the Options tab you can fine-tune the FTP account. The form has the following fields:

- **UID** : The FTP account is a virtual account, i.e., it is no system user, but a user that is stored in a MySQL database. The UID field specifies under which system user account the FTP user does uploads and downloads. Normally this should be the same user that is shown in the `Linux User` field on the `Options` tab of the web site.
- **GID**: This is the system group that the (virtual) FTP users uses to do uploads and downloads. Normally this should be the same group that is shown in the `Linux Group` field on the `Options` tab of the web site.
- **Directory** : This is the home directory of the FTP user, i.e., the FTP user can do uploads and downloads in this directory and all subdirectories thereof.
- **Filequota** : This is the amount of files that the FTP user is allowed to upload. -1 means unlimited.
- **Uploadratio** : This defines the upload ratio in MB. -1 means unlimited.
- **Downloadratio** : This defines the download ratio in MB. -1 means unlimited.
- **Uploadbandwidth** : This defines the bandwidth with which the FTP user can upload files (in kb/s). -1 means unlimited.
- **Downloadbandwidth** : This defines the bandwidth with which the FTP user can download files (in kb/s). -1 means unlimited.





## 4.6.3 Shell

### 4.6.3.1 Shell-User

This is where we create new shell users (i.e., system users) or modify/delete existing shell users. Shell users can log into the system via SSH (e.g. by using an SSH client such as [PuTTY](#)) and do secure uploads/downloads by using an SCP client (such as [WinSCP](#)).

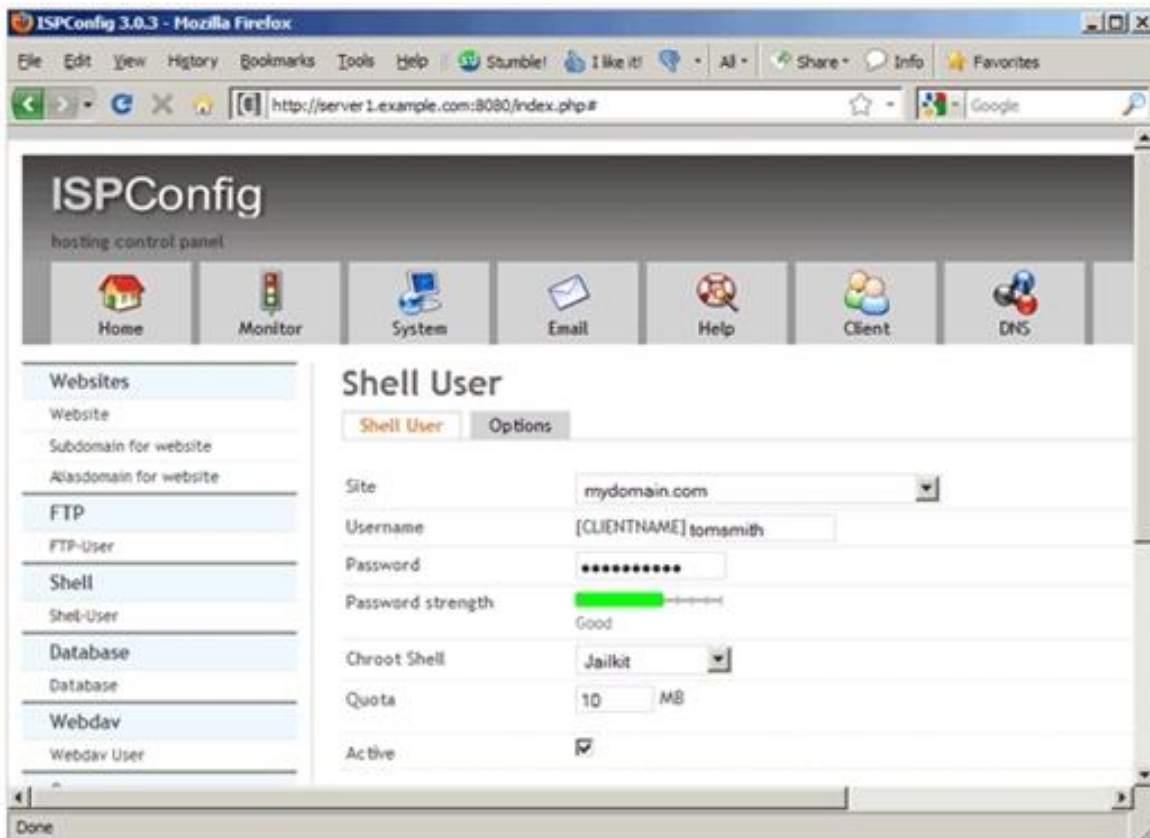
To create a new shell user, click the **Add new Shell-User** button. This will lead you to the Shell User form with the tabs **Shell User** and **Options**

#### Shell User

#### Shell User

The form to create/modify a shell user has the following fields:

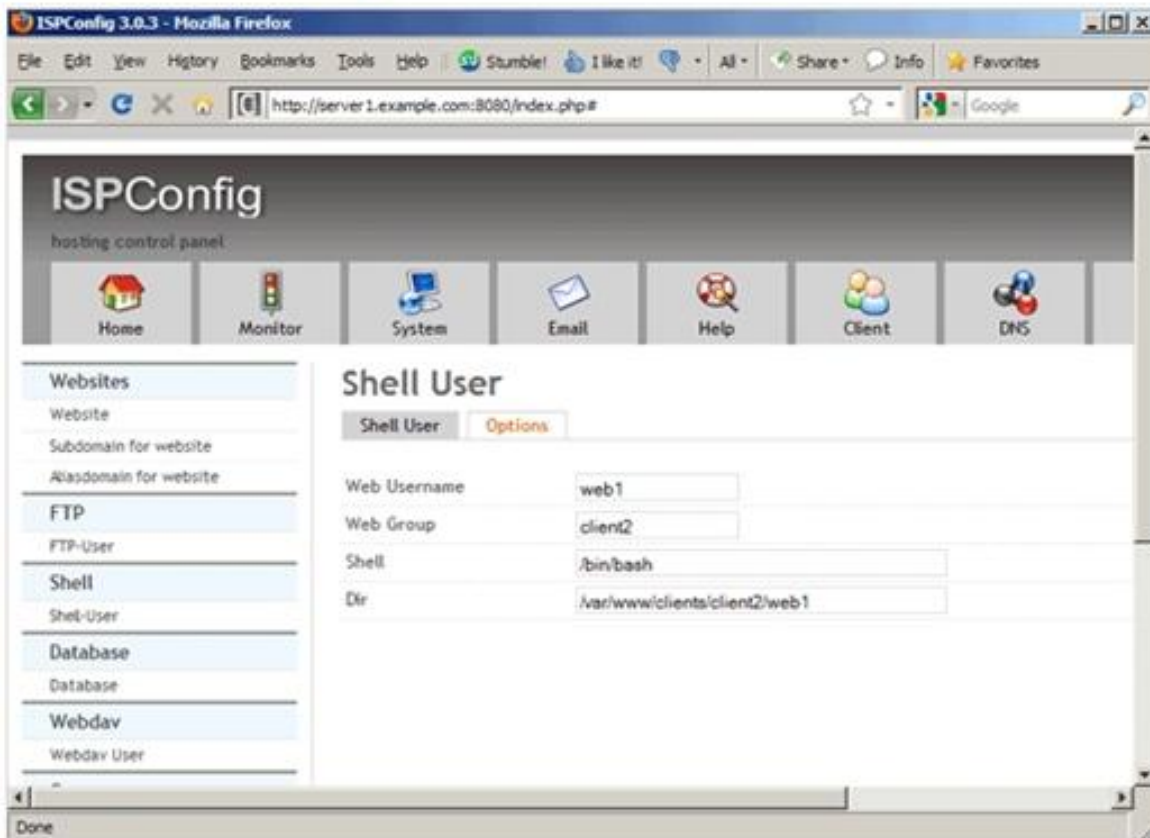
- **Site** : This is the web site for which you define the shell user.
- **Username** : This is the username of the shell user. The string in square brackets before the username will be replaced appropriately, for example `[CLIENT]` will be replaced with `client1`, `client2`, etc. So if the current client is `client1`, and you type in `johndoe` in the Username field, the actual shell username will be `client1johndoe`. The shell user prefix can be defined under `System > Interface Config`, however it is not recommended to change the default value.
- **Password** : Type in a password for the shell user. The Password strength field will show how weak or strong your password is. A strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information.
- **Chroot Shell** : This defines if this shell user is chrooted or not. If you select `None`, the shell user can browse the whole file system and is limited only by file/directory permissions - this can be a security risk. If you select to chroot the shell user (by selecting `Jalikit` from the drop-down menu), the shell user will be limited to his home directory and can only browse directories inside his home directory.
- **Quota** : This is the max. amount of disk space (in MB) that is available for the shell user.
- **Active** : This defines if this shell user account is active or not.



## Options

On the Options tab you can fine-tune the shell user account. The form has the following fields:

- **UID** : The shell user account is a "virtual" account. The UID field specifies to which system user this virtual account is mapped. Normally this should be the same user that is shown in the Linux User field on the Options tab of the web site.
- **GID**: This is the system group that the (virtual) shell user is mapped to. Normally this should be the same group that is shown in the Linux Group field on the Options tab of the web site.
- **Shell** : This is the shell that the user uses to log in. Possible values are, for example: `/bin/bash` or `/bin/sh` . It's also possible to give a shell user a shell that doesn't allow him to log in, such as `/bin/false` or `/usr/sbin/nologin`
- **Dir** : This is the home directory of the shell user. If you have chrooted the shell user, he cannot break out of this directory.



## 4.6.4 WebDAV

### 4.6.4.1 WebDAV User

WebDAV stands for Web-based Distributed Authoring and Versioning and is a set of extensions to the HTTP protocol that allow users to directly edit files on the Apache server so that they do not need to be downloaded/uploaded via FTP. Of course, WebDAV can also be used to upload and download files.

To create a new WebDAV user, click the **Add new WebDAV-User** button. This will lead you to the WebDAV User form with the tab **WebDAV User**.

### WebDAV User

### WebDAV User

The form to create/modify a WebDAV user has the following fields:

- **Website** : This is the web site for which you define the WebDAV user.

- Username : This is the username of the WebDAV user. The string in square brackets before the username will be replaced appropriately, for example [CLIENT] will be replaced with client1 , client2 , etc. So if the current client is client1 , and you type in johndoe in the Username field, the actual WebDAV username will be client1johndoe . The WebDAV user prefix can be defined under System > Interface Config , however it is not recommended to change the default value.
- Password : Type in a password for the WebDAV user. The Password strength field will show how weak or strong your password is. A strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information.
- Active : This defines if this WebDAV user account is active or not.
- Directory : This defines the subdirectory of your document root that you want to access with WebDAV. If you leave it empty, you can access the whole document root and its subdirectories with the WebDAV URL `http://example.com:80/webdav` . If you type in a subdirectory, e.g. images , you can access the images subdirectory as follows:  
`http://example.com:80/webdav/images`

This link explains how you can access a WebDAV share from a Windows PC: [Configure A Windows XP Client To Connect To The WebDAV Share](#)

This link shows how you can access a WebDAV share from a Linux desktop (GNOME): [Configure A Linux Client \(GNOME\) To Connect To The WebDAV Share](#)

## 4.6.5 Database

### 4.6.5.1 Database

This is where you can create databases for your web sites. Currently, only MySQL databases are supported.

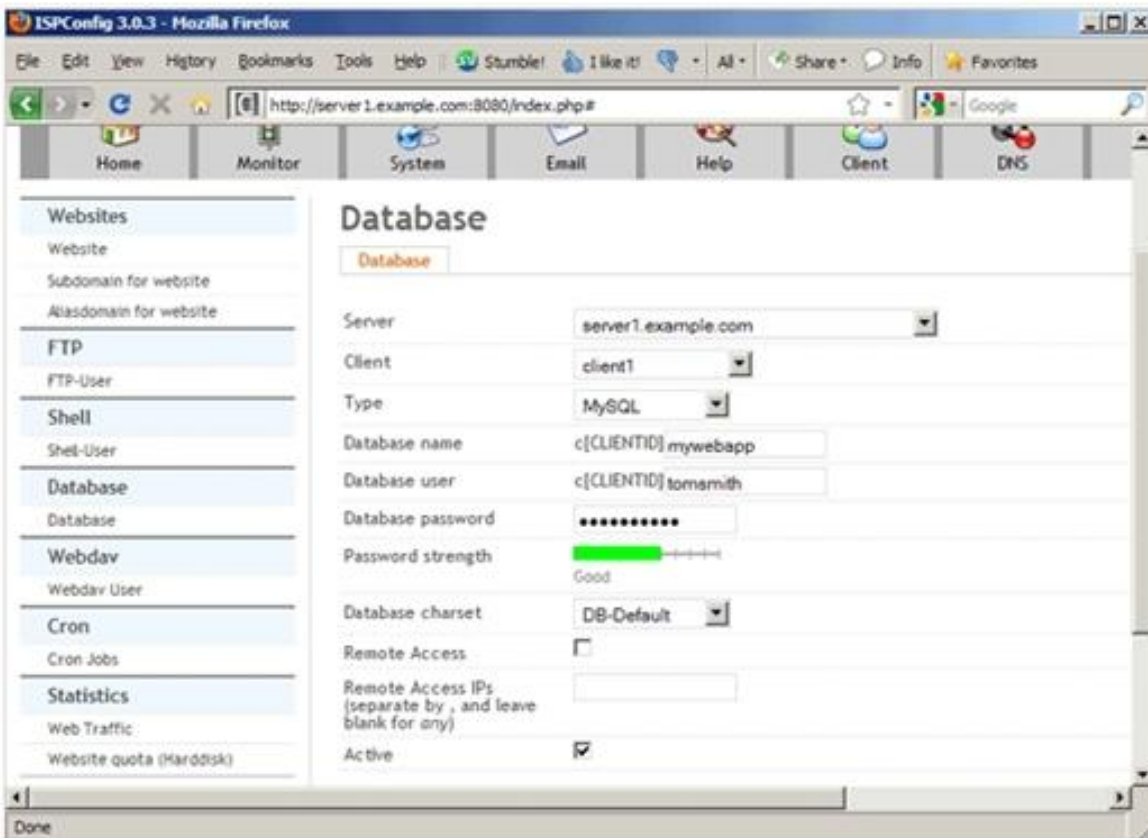
To create a new database, click on the Add new Database button. This will lead you to the Database form with the tab Database .

## Database

## Database

The form to create/modify a database has the following fields:

- **Server** : If more than one server is available, you can select the server on which the database will be created.
- **Client** : Here you select the client that owns the database.
- **Type** : Select the database type. Currently only MySQL is supported.
- **Database name** : This is the name of the database. The string in square brackets before the database name will be replaced appropriately, for example [CLIENTID] will be replaced with the ID of the client, i.e., 1, 2, 3, etc. So if the current client is client1 , and you type in wordpress in the Database name field, the actual database name will be c1wordpress . The database name prefix can be defined under System > Interface Config , however it is not recommended to change the default value. Please note that database names must not be longer than 16 characters - MySQL doesn't support longer database names!
- **Database user** : This is the name of the database user. The string in square brackets before the database username will be replaced appropriately, for example [CLIENTID] will be replaced with the ID of the client, i.e., 1, 2, 3, etc. So if the current client is client1 , and you type in johndoe in the Database user field, the actual database username will be c1johndoe . The database user prefix can be defined under System > Interface Config , however it is not recommended to change the default value. Please do not use underscores (\_) in the username.
- **Database password** : Type in a password for the database user. The Password strength field will show how weak or strong your password is. A strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information.
- **Database charset** : Select the character set of the database. MySQL includes character set support that enables you to store data using a variety of character sets and perform comparisons according to a variety of collations. You can learn more about [MySQL's character set support here](#)
- **Remote Access** : This specifies if the MySQL should allow only local access to the database, or if connections from remote places should be allowed as well (which can be a security risk because intruders don't need access to the local system to connect to the database; all they need is the database username and password).
- **Remote Access IPs** : If you've enable remote access and want to allow just a few remote hosts to connect to this database, you can enter the IPs of the remote hosts here. Multiple IPs must be seperated with a comma ( , ). To allow connections from all remote hosts, leave this field empty.
- **Active** : This defines if this database is active or not.



## 4.6.6 Cron

### 4.6.6.1 Cron Jobs

A cron job is a scheduled task that is executed by the system at a specified time/date.

To create a new cron job, click on the [Add new Cron job](#) button. This will lead you to the Cron Job form with the tab Cron Job

### Cron Job

### Cron Job

The form to create/modify a cron job has the following fields:

- Parent website : This is the web site for which you define the cron job.
- Minutes : The minute to run the cron job. Allowed values: 0-59 . \* means every minute.
- Hours : The hour to run the cron job. Allowed values: 0-23 . \* means every hour.

- Days of month : The day of the month to run the cron job. Allowed values: 1-31 . \* means every day of the month.
- Months : The month to run the cron job. Allowed values: 1-12 (or names, see below). \* means every month.
- Days of week : The day of the week to run the cron job. Allowed values: 0-7 (0 or 7 is Sun , or use names). \* means every day of the week.
- Command to run : This is the command to execute. Shell scripts will be run by /bin/sh , URLs will be executed by wget .
- Active : This defines if the cron job is active or not.

When specifying day of week, both day 0 and day 7 will be considered Sunday. A

field may be an asterisk (\*), which always stands for first-last.

Names can also be used for the "month" and "day of week" fields. Use the first three letters of the particular day or month (case doesn't matter), e.g. sun or SUN for Sunday or mar /MAR for March..

Let's take a look at two sample cron jobs:

```
* * /usr/local/ispconfig/server/server.sh > /dev/null 2>>
/var/log/ispconfig/cron.log
```

This means: execute /usr/local/ispconfig/server/server.sh > /dev/null 2>>  
/var/log/ispconfig/cron.log once per minute.

```
30 00 * * * /usr/local/ispconfig/server/cron_daily.sh > /dev/null 2>>
/var/log/ispconfig/cron.log
```

This means: execute /usr/local/ispconfig/server/cron\_daily.sh > /dev/null 2>>  
/var/log/ispconfig/cron.log once per day at 00:30h.

The day of a command's execution can be specified by two fields: day of month, and day of week. If both fields are restricted (i.e., aren't \*), the command will be run when either field matches the current time. For example, 30 4 1,15 \* 5 would cause a command to be run at 4:30h on the 1st and 15th of each month, plus every Friday.

You can use ranges to define cron jobs:

Examples:

1,2,5,9 - means every first, second, fifth, and ninth (minute, hour, month, ...).

0-4,8-12 - means all (minutes, hours, months,...) from 0 to 4 and from 8 to 12.

\*/5 - means every fifth (minute, hour, month, ...).

1-9/2 is the same as 1,3,5,7,9

Ranges or lists of names are not allowed (if you are using names instead of numbers for months and days - e.g., Mon-Wed is not valid).

1,7,25,47 \*/2 \* \* \* command

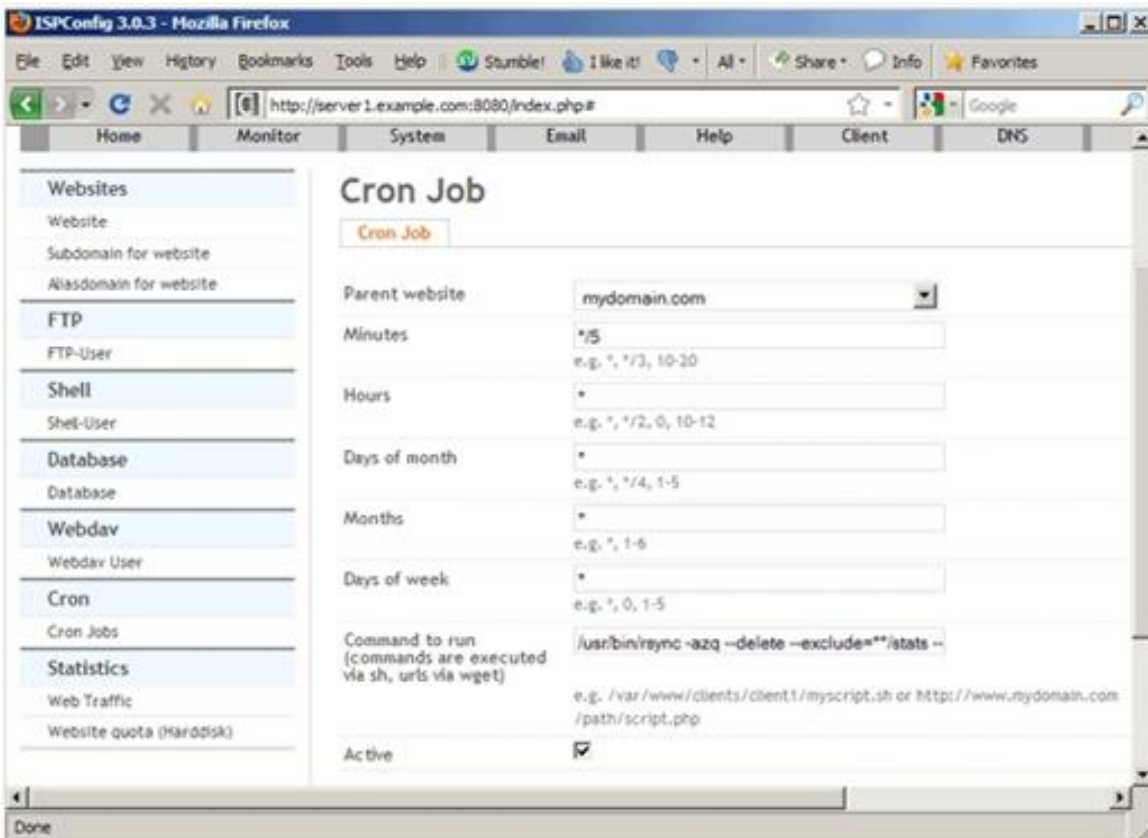
means: run command every second hour in the first, seventh, 25th, and 47th minute.

Instead of the first five fields, one of eight special strings may appear:

string	meaning
@reboot	Run once, at startup.
@yearly	Run once a year, "0 0 1 1 *".
@annually	(same as @yearly)
@monthly	Run once a month, "0 0 1 * *".
@weekly	Run once a week, "0 0 * * 0".
@daily	Run once a day, "0 0 * * *".
@midnight	(same as @daily)
@hourly	Run once an hour, "0 * * * *".

You can learn more about cron jobs here: [A Short Introduction To Cron Jobs](#)





## 4.6.7 Statistics

The Statistics section is a bit special in that there's nothing that you can configure here. This section just displays statistics for your web sites.

### 4.6.7.1 Web traffic

Under Web traffic you can see traffic statistics (in MB) for your web sites for the current month, the month before, the current year, and the year before.

These statistics are realtime (updated once per minute).

### 4.6.7.2 Website quota (Harddisk)

Under Website quota (Harddisk) you can see the hard disk usage (Used Space, in MB) for your web sites, as well as the current quota soft limits and hard limits.

Soft limit indicates the maximum amount of disk usage a quota user has on a partition. When combined with "grace period", it acts as the border line, which a quota user is issued warnings about his impending quota violation when passed. Hard limit works only when "grace period" is set. It specifies the absolute limit on the disk usage, which a quota user can't go beyond his "hard limit".

These statistics are near realtime (updated every five minutes).

## 4.7 Email

On this tab we can create email accounts, define email forwards and spamfilter settings, configure the system to fetch mail from remote POP3 and/or IMAP servers, set up content filters and black- and whitelists, etc.

### 4.7.1 Email Accounts

#### 4.7.1.1 Domain

Here we can define the domains for which we want to set up email accounts later on.

To create a new email domain, click on the **Add new Domain** button. This will lead you to the **Mail Domain** form with the tab **Domain**.

#### Mail Domain

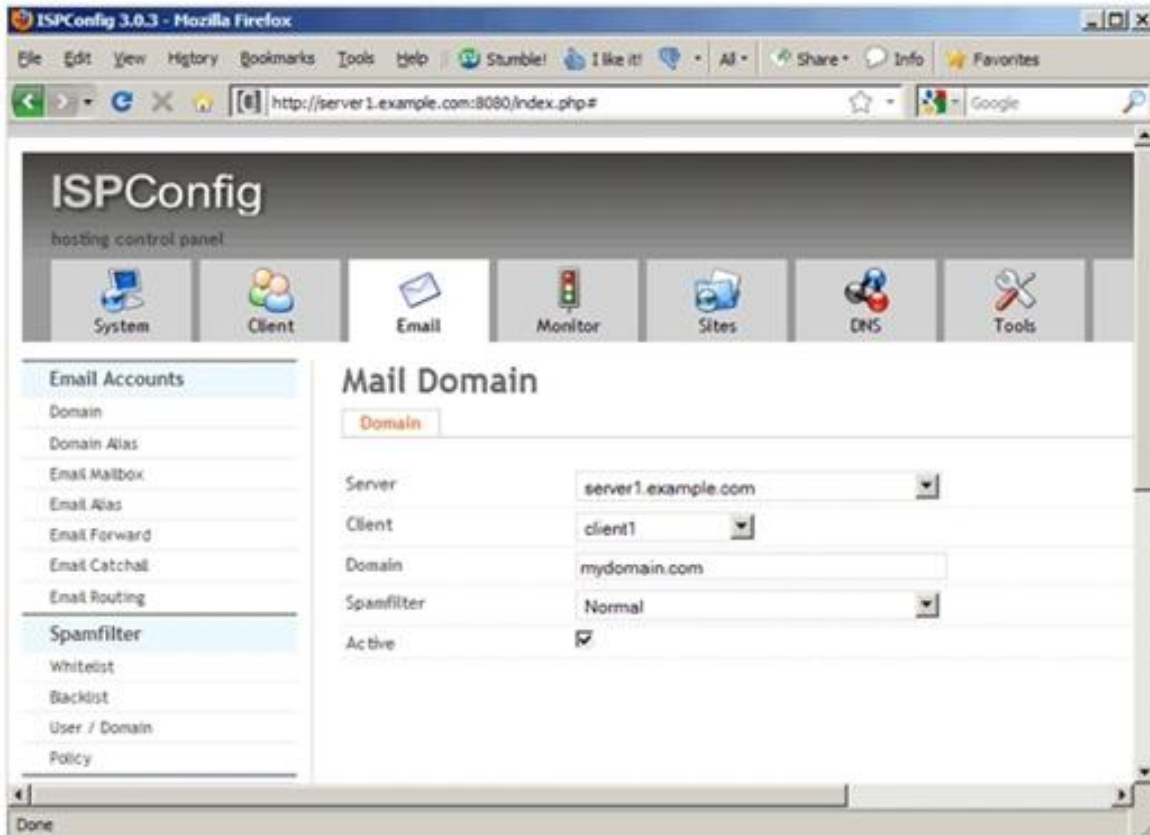
##### Domain

This form contains the following fields:

- **Server** : If more than one server is available, you can select the server on which the email domain will be located. It is possible that the email domain is located on another server than the web site domain.
- **Client** : Here you select the client that owns the email domain.
- **Domain** : Type in the email domain, e.g. `example.com` (this would lead to email addresses such as `user@example.com`). It is also possible to fill in subdomains, e.g. `sub.example.com`, which would result in email addresses such as `user@sub.example.com`
- **Spamfilter** : Here you can specify if you want to enable the spamfilter for this domain, and if so, what spamfilter level to use: `Non-Paying`, `Uncensored`, `Wants all spam`, `Wants viruses`, `Normal`, `Trigger happy`, `Permissive`. The settings for each of these levels are defined under

Email > Spamfilter > Policy

- Active : This defines whether this email domain is active or not.



#### 4.7.1.2 Domain Alias

With domain aliases, you can map one email domain to another one. Let's assume you have created the email domains `example.com` and `yourseconddomain.com`, and have also created the email accounts `user1@example.com` and `user2@example.com`. Now you want to use the exact same mail boxes for `yourseconddomain.com` as well, i.e., `user1@example.com` and `user1@yourseconddomain.com` as well as `user2@example.com` and `user2@yourseconddomain.com` should be identical mail boxes. This can be achieved by mapping `yourseconddomain.com` to `example.com` - it can be imagined as a kind of symlink from `yourseconddomain.com` to `example.com`.

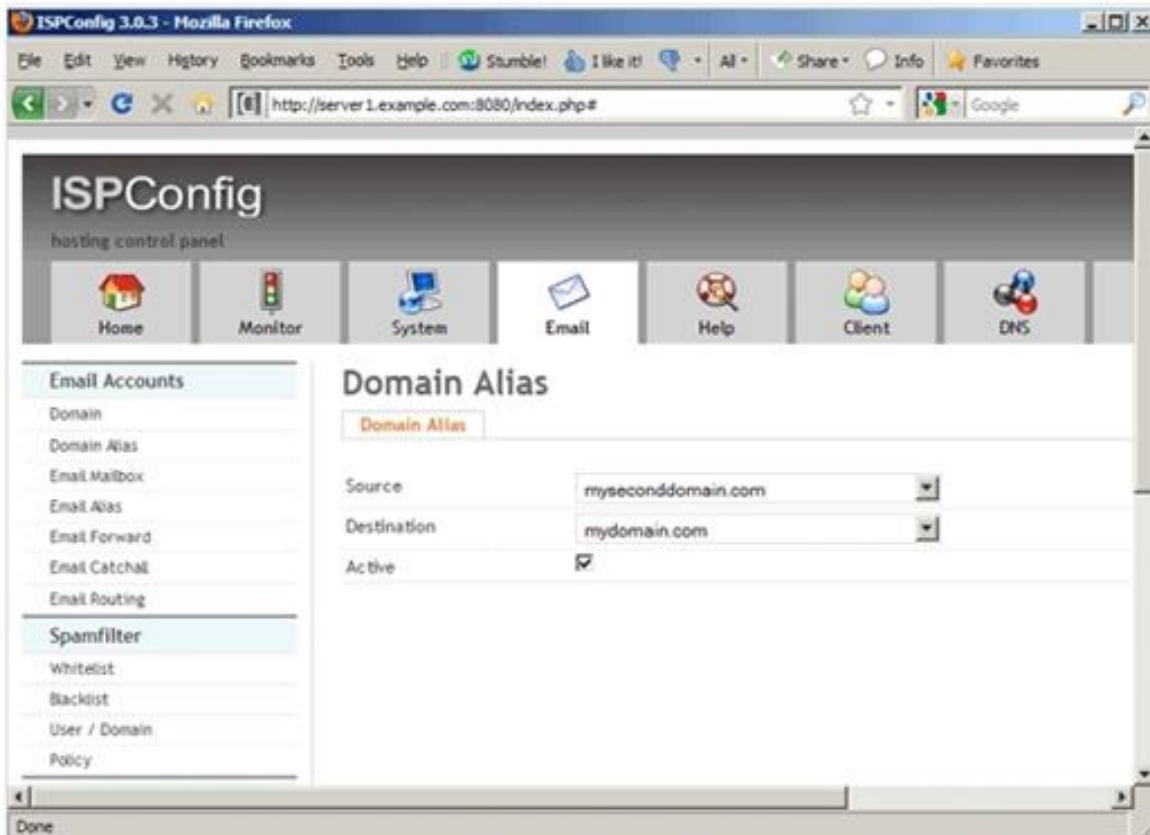
To create a new domain alias, click on the [Add new Domain alias](#) button. This will lead you to the [Domain Alias](#) form with the tab [Domain Alias](#)

## Domain Alias

### Domain Alias

This form has the following fields:

- **Source** : This is the domain that you want to map to another email domain. In our above example, this would be yourseconddomain.com
- **Destination** : This is the email domain that the source domain should be mapped to. In our above example, this would be example.com .
- **Active** : This defines whether this domain alias is active or not.



### 4.7.1.3 Email Mailbox

This is where we create/modify/delete email accounts.

To create a new email account, click on the Add new Mailbox button. This will lead you to the

Mailbox form with the tabs Mailbox , Autoresponder , Mail Filter , and Custom Rules

## Mailbox

### Mailbox

This form has the following fields:

- Realname : Type in the real name of the email user, e.g. John Doe . This field is optional.
- Email : This specification is split up in two fields, Alias and Domain . Alias contains the part in front of the @ sign (the "local part"), and in the Domain drop-down menu, you select the email domain. For example, if you want to create the email account john.doe@example.com , you'd fill in john.doe in the Alias field and select example.com from the Domain drop-down menu. The email address is also the SMTP/POP3/IMAP username for the email account.

The local-part of an e-mail address may be up to 64 characters long and the domain name may have a maximum of 255 characters. However, the maximum length of a forward or reverse path length of 256 characters restricts the entire e-mail address to be no more than 254 characters. Some mail protocols, such as X.400, may require larger objects, however. The SMTP specification recommends that software implementations impose no limits for the lengths of such objects.

The local-part of the e-mail address may use any of these ASCII characters:

\* Uppercase and lowercase English letters (a&ndash;z , A&ndash;Z ) \*

Digits 0 to 9

\* Characters ! # \$ % & ' \* + - / = ? ^ \_ ` { | } ~

\* Character . (dot, period, full stop) provided that it is not the first or last character, and provided also that it does not appear two or more times consecutively (e.g. John..Doe@example.com ).

Additionally, quoted-strings (e.g. "John Doe"@example.com ) are permitted, thus allowing characters that would otherwise be prohibited, however they do not appear in common practice. RFC 5321 also warns that "a host that expects to receive mail SHOULD avoid defining mailboxes where the Local-part requires (or uses) the Quoted-string form".

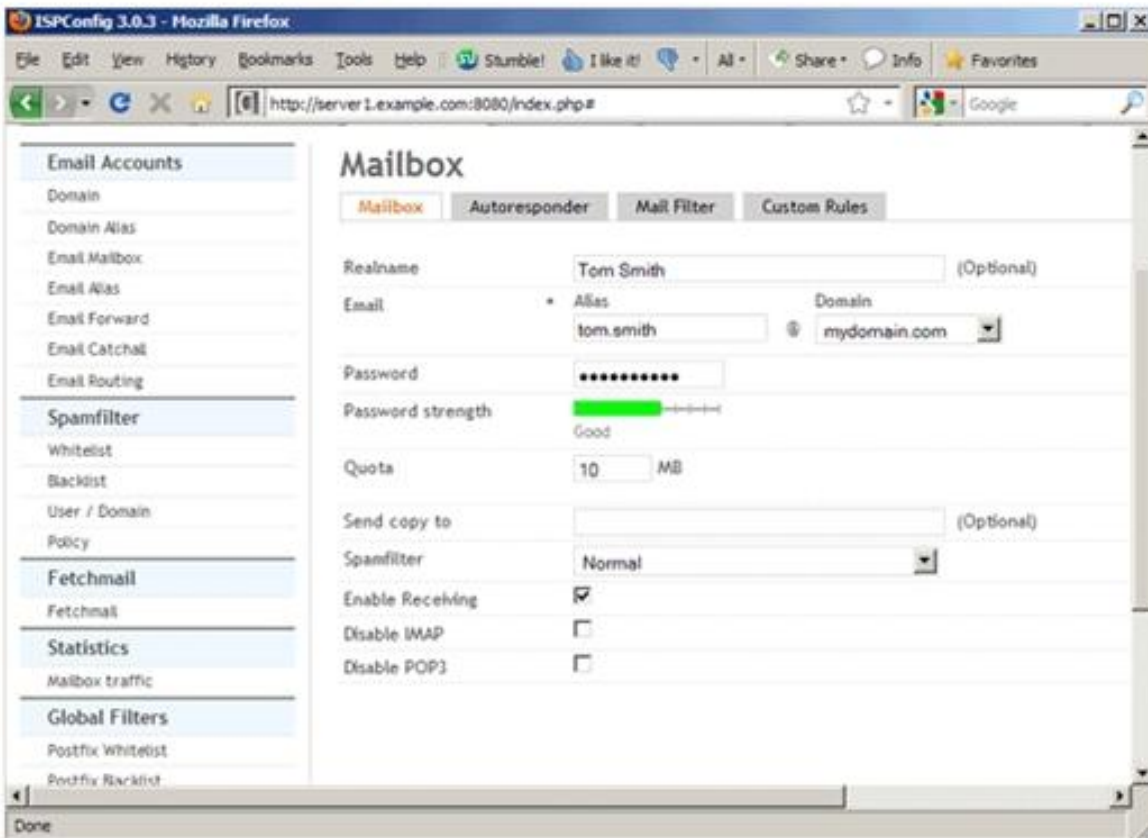
The local-part is case sensitive, so "jsmith@example.com" and "JSmith@example.com" may be delivered to different people. This practice is discouraged by RFC 5321. However, only the authoritative mail servers for a domain may make that decision (if you have set up your server according to one of the "Perfect Server" tutorials from HowtoForge.com, then the local part is not case sensitive ). The only exception is for a local-part value of "postmaster" which is case insensitive, and should be forwarded to the server's administrator.

Within the rules set out in the RFCs, organisations are free to restrict the forms their own e-mail addresses take however they wish, e.g. many organizations do not use certain

characters, e.g. space, ?, and ^, and most organizations treat uppercase and lowercase letters as equivalent. Hotmail, for example, only allows creation of e-mail addresses using alphanumerics, dot (.), underscore (\_) and hyphen (-).

Systems that send mail, of course, must be capable of handling outgoing mail for all addresses. Contrary to the relevant standards, some defective systems treat certain legitimate addresses as invalid and fail to handle mail to these addresses. Hotmail, for example, incorrectly refuses to send mail to any address containing any of the following legitimate characters: ! # \$ % \* / ? ^ ` { | } ~

- Password : Type in a password for the email account. The Password strength field will show how weak or strong your password is. A strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information.
- Quota : This is the max. amount of disk space (in MB) that is available for this email account.
- Send copy to : Here you can specify an email address that should receive a copy of all incoming mails for this email account. This field is optional.
- Spamfilter : Here you can specify if you want to enable the spamfilter for this email account, and if so, what spamfilter level to use: Non-Paying , Uncensored , Wants all spam , Wants viruses , Normal , Trigger happy , Permissive . The settings for each of these levels are defined under Email > Spamfilter > Policy . Please note that this setting overrides the spamfilter setting of the mail domain (no matter what spamfilter level you chose for the mail domain; this is true even if you disabled the spamfilter for the mail domain), with one exception: If you choose to not enable the spamfilter for this email account, but the spamfilter is enabled for the mail domain, then the spamfilter setting of the mail domain is used for this email account. Use Uncensored to disable the spamfilter.
- Enable Receiving : If you don't check this box, then incoming emails for this mail account will be rejected. This makes sense if you want to use this account only for sending mail, but not for receiving.
- Disable IMAP : If you check this box, you cannot use IMAP to access the mails of this mailbox.
- Disable POP3 : If you check this box, you cannot use POP3 to access the mails of this mailbox.

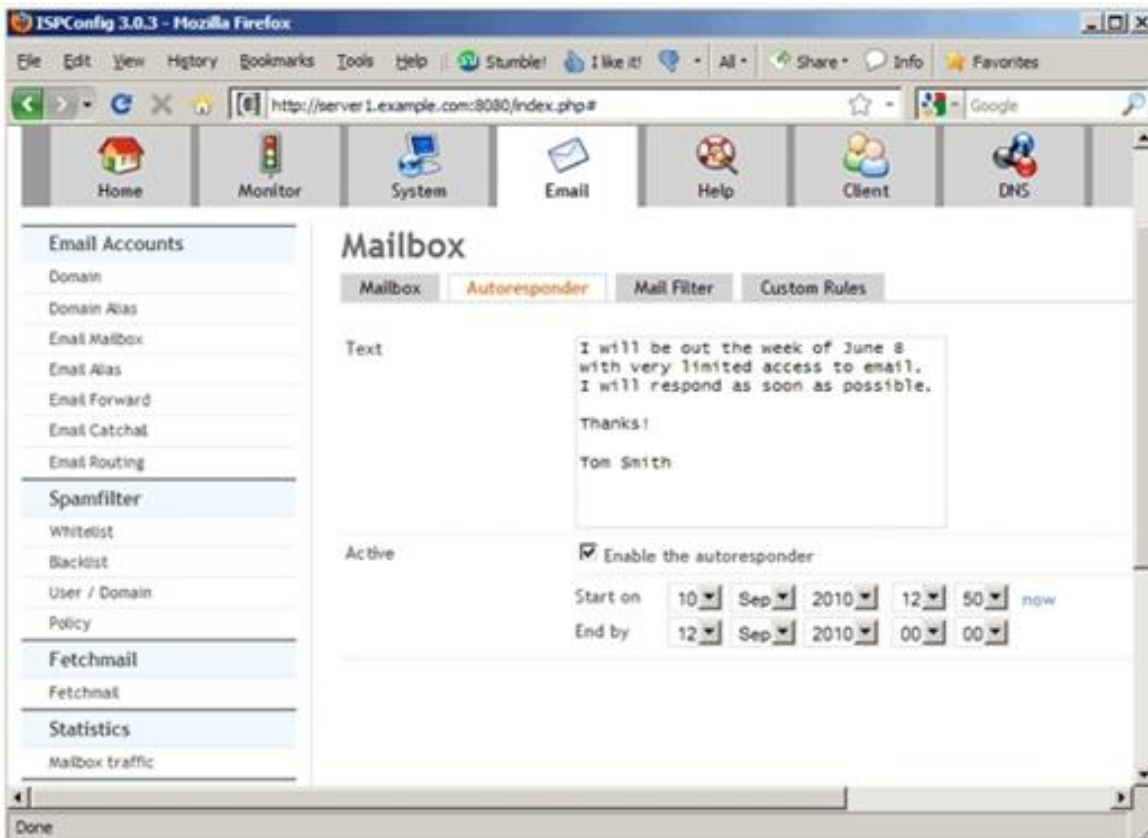


## Autoresponder

With the autoresponder you have the possibility to automatically send replies to incoming mails (e.g. if you are on holidays).

The form has the following fields:

- Text : Enter your autoresponder message in this field.
- Active : This defines whether this autoresponder is currently active or not.
- Start on : Here you can define when the autoresponder should start (day - month - year - hour - minute). If you don't specify a start date, the autoresponder becomes active immediately. If you click on now, ISPConfig will fill in the current start date, and the end date will be the end of the next day.
- End by : Here you can define when the autoresponder should stop (day - month - year - hour - minute). If you don't specify an end date, the autoresponder will be active forever.



## Mail Filter

On this tab you can define filters for incoming emails. One common filter has already been defined for you:

- Move Spam Emails to Junk directory : If you check this, emails that are tagged as spam by the spamfilter will automatically be moved to the junk folder. Please note that you can access the junk folder only if you use IMAP. This filter is active only if the spamfilter is active for this email account (i.e., a spamfilter level other than `Uncensored` must be selected, either for the whole mail domain or specifically for this email account).

To create custom email filters, click on the `Add new Filter` button. This will lead you to the `Email filter` form with the `Filter` tab

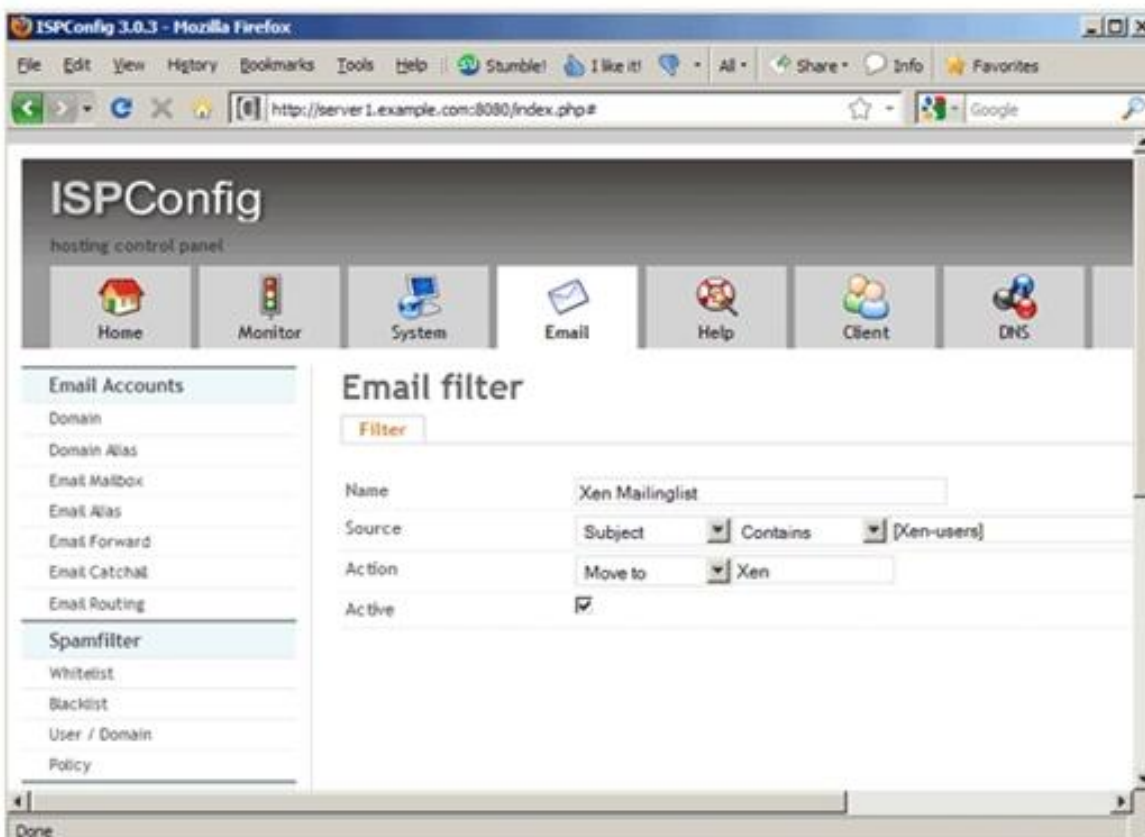
## Email filter

### Filter



The form to create a custom email filter has the following fields:

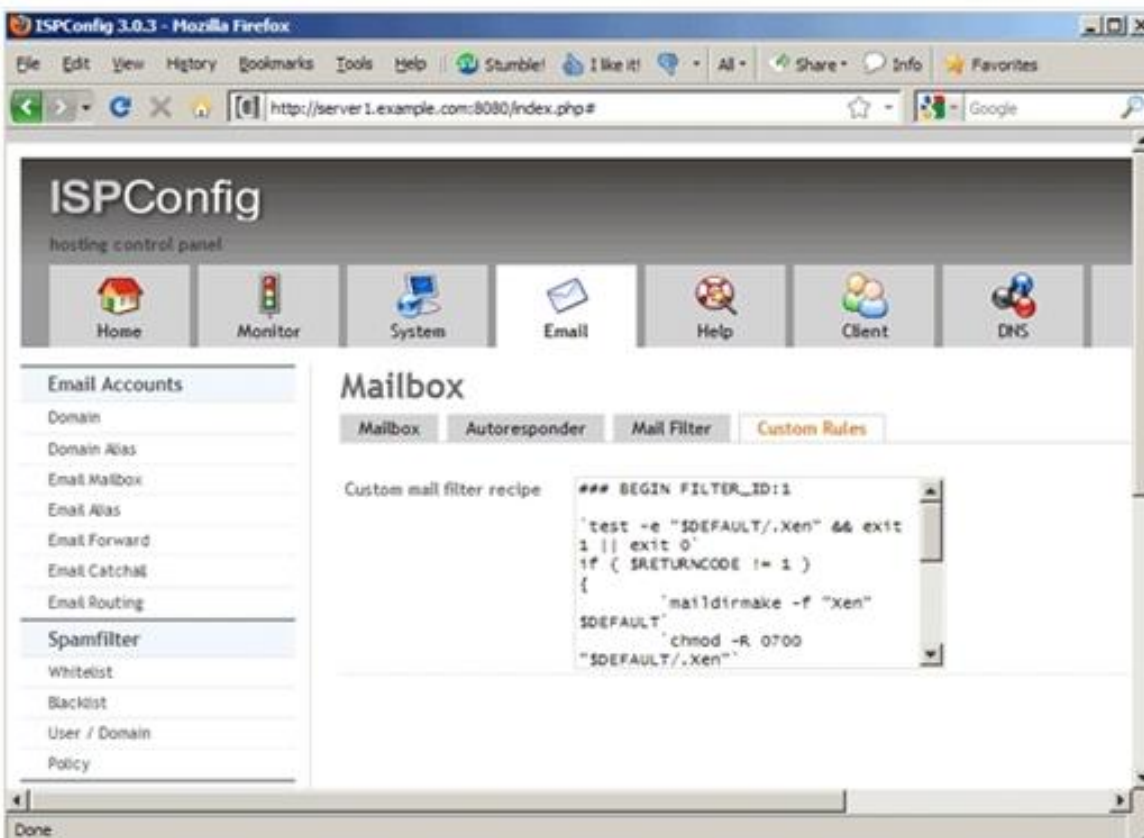
- **Name:** Specify a name for this filter rule. Examples: Spam, Work, Private , HowtoForge Newsletter , Xen Mailinglist , etc.
- **Source :** This defines the criteria based on which emails will be filtered. Select the field from the email header that should be examined (Subject , From, To), then select when this filter should be used (if the field Contains , Is , Begins with , Ends with the string that you specify), and finally specify a search string. If you select From or To in the first field and we assume that the email address is specified as John Doe <john.doe@example.com> , you can specify an email address here (john.doe@example.com ) or a name (John Doe ) - in both cases you should select Contains instead of Is .
- **Action :** Specify what to do with the emails if the filter applies. If you select Move to , you must also specify a folder name in the field right of the drop-down menu. If this folder doesn't exist, it will automatically be created. Please note that you can access this folder only if you use IMAP. If you select Delete , the emails will be deleted, and there's no need to specify a folder.
- **Active :** This defines whether this filter rule is currently active or not.



## Custom Rules

(This tab is visible only for the ISPConfig admin user.)

- Custom mail filter recipe : Depending on if you use Courier + Maildrop or Dovecot + Sieve, you can fill in custom directives either in [Maildrop syntax](#) or in [Sieve syntax](#), one directive per line. If you have created a mail filter on the Mail Filter tab, you will notice that there are already directives in the text area - that is your mail filter translated into Maildrop or Sieve syntax. You can add further directives, if you like.



### 4.7.1.4 Email Alias

An email alias is the same as a domain alias, except that it is used to map an email address to another email address instead of mapping a whole email domain to another email domain.

To create a new email alias, click on the Add new Email alias button. This will lead you to the Email Alias form with the tab Email Alias

## Email Alias

### Email Alias

This form has the following fields:

- **Email** : This specification is split up in two fields, **Alias** and **Domain** . **Alias** contains the part in front of the @ sign (the "local part") - it should be an alias that doesn't already exist for this domain -, and in the **Domain** drop-down menu, you select the email domain. For example, if you want to create the email alias `info@example.com` , you'd fill in `info` in the **Alias** field and select `example.com` from the **Domain** drop-down menu.

The local-part of an e-mail address may be up to 64 characters long and the domain name may have a maximum of 255 characters. However, the maximum length of a forward or reverse path length of 256 characters restricts the entire e-mail address to be no more than 254 characters. Some mail protocols, such as X.400, may require larger objects, however. The SMTP specification recommends that software implementations impose no limits for the lengths of such objects.

The local-part of the e-mail address may use any of these ASCII characters:

\* Uppercase and lowercase English letters (a&ndash;z , A&ndash;Z ) \*

Digits 0 to 9

\* Characters ! # \$ % & ' \* + - / = ? ^ \_ ` { | } ~

\* Character . (dot, period, full stop) provided that it is not the first or last character, and provided also that it does not appear two or more times consecutively (e.g. `John..Doe@example.com` ).

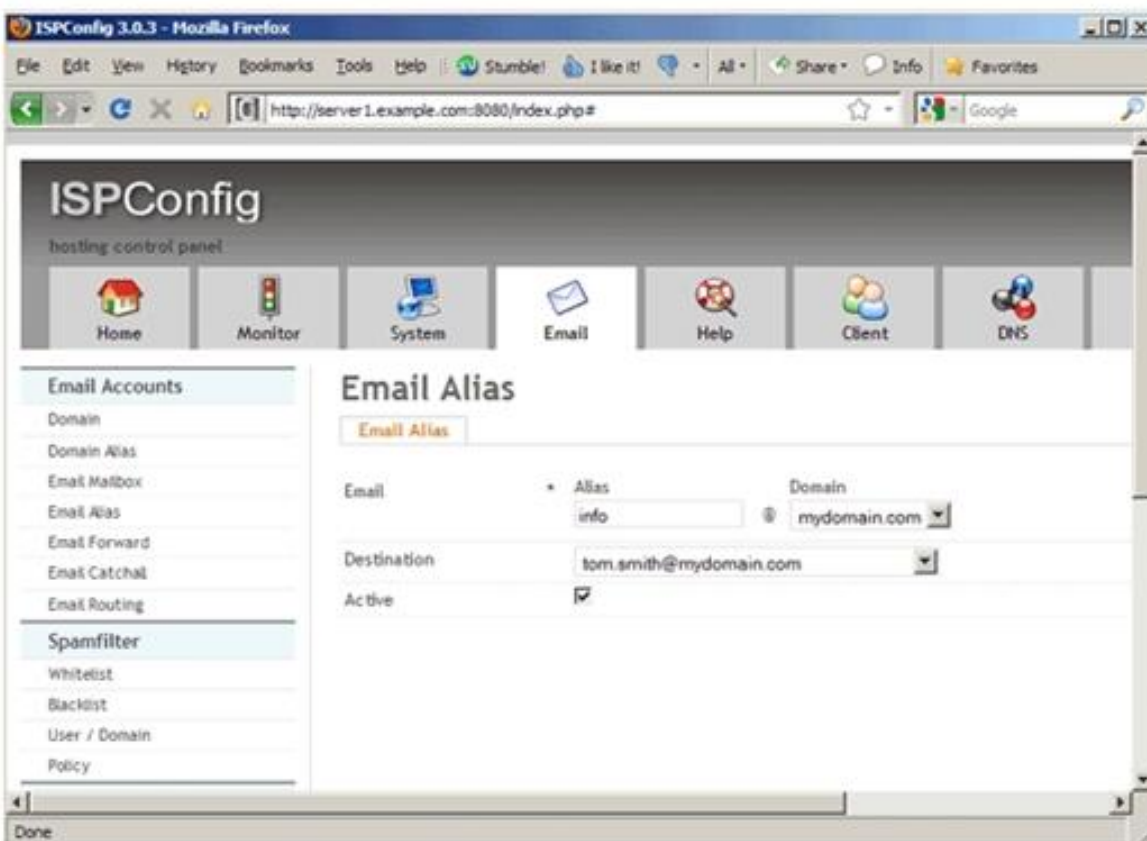
Additionally, quoted-strings (e.g. `"John Doe"@example.com` ) are permitted, thus allowing characters that would otherwise be prohibited, however they do not appear in common practice. RFC 5321 also warns that "a host that expects to receive mail SHOULD avoid defining mailboxes where the Local-part requires (or uses) the Quoted-string form".

The local-part is case sensitive, so `"jsmith@example.com"` and `"JSmith@example.com"` may be delivered to different people. This practice is discouraged by RFC 5321. However, only the authoritative mail servers for a domain may make that decision (if you have set up your server according to one of the "Perfect Server" tutorials from [HowtoForge.com](http://HowtoForge.com), then the local part is not case sensitive ). The only exception is for a local-part value of "postmaster" which is case insensitive, and should be forwarded to the server's administrator.

Within the rules set out in the RFCs, organisations are free to restrict the forms their own e-mail addresses take however they wish, e.g. many organizations do not use certain characters, e.g. space, ?, and ^ , and most organizations treat uppercase and lowercase letters as equivalent. Hotmail, for example, only allows creation of e-mail addresses using alphanumerics, dot ( . ), underscore ( \_ ) and hyphen ( - ).

Systems that send mail, of course, must be capable of handling outgoing mail for all addresses. Contrary to the relevant standards, some defective systems treat certain legitimate addresses as invalid and fail to handle mail to these addresses. Hotmail, for example, incorrectly refuses to send mail to any address containing any of the following legitimate characters: ! # \$ % \* / ? ^ ` { | } ~

- **Destination** : Select the email account that you want to map this email alias to. If you want to map `info@example.com` to `john.doe@example.com`, you'd select `john.doe@example.com` here. The destination email address is also the SMTP/POP3/IMAP username for the email account.
- **Active** : This defines whether this email alias is active or not.



#### 4.7.1.5 Email Forward

With this feature you can make the mail system automatically forward emails for an email address to one or more other email accounts. For example, you can use this function to define an email address for a group of people, e.g. `danceclass@mydancestudio.com`, and forward emails to that address to all members of the dance class, like `dancer1@firstdomain.com`,

dancer2@someotherdomain.com , dancer3@yetanotherdomain.com , etc.

To create a new email forward, click on the Add new Email forward button. This will lead you to the Email Forward form with the tab Email Forward

## Email Forward

### Email Forward

The form has the following fields:

- Email : This specification is split up in two fields, Alias and Domain . Alias contains the part in front of the @ sign (the "local part") - it should be an alias that doesn't already exist for this domain -, and in the Domain drop-down menu, you select the email domain. For example, if you want to create an email forward for the email address danceclass@mydancestudio.com , you'd fill in danceclass in the Alias field and select mydancestudio.com from the Domain drop-down menu.

The local-part of an e-mail address may be up to 64 characters long and the domain name may have a maximum of 255 characters. However, the maximum length of a forward or reverse path length of 256 characters restricts the entire e-mail address to be no more than 254 characters. Some mail protocols, such as X.400, may require larger objects, however. The SMTP specification recommends that software implementations impose no limits for the lengths of such objects.

The local-part of the e-mail address may use any of these ASCII characters:

\* Uppercase and lowercase English letters (a&ndash;z , A&ndash;Z ) \*

Digits 0 to 9

\* Characters ! # \$ % & ' \* + - / = ? ^ \_ ` { | } ~

\* Character . (dot, period, full stop) provided that it is not the first or last character, and provided also that it does not appear two or more times consecutively (e.g.

John..Doe@example.com ).

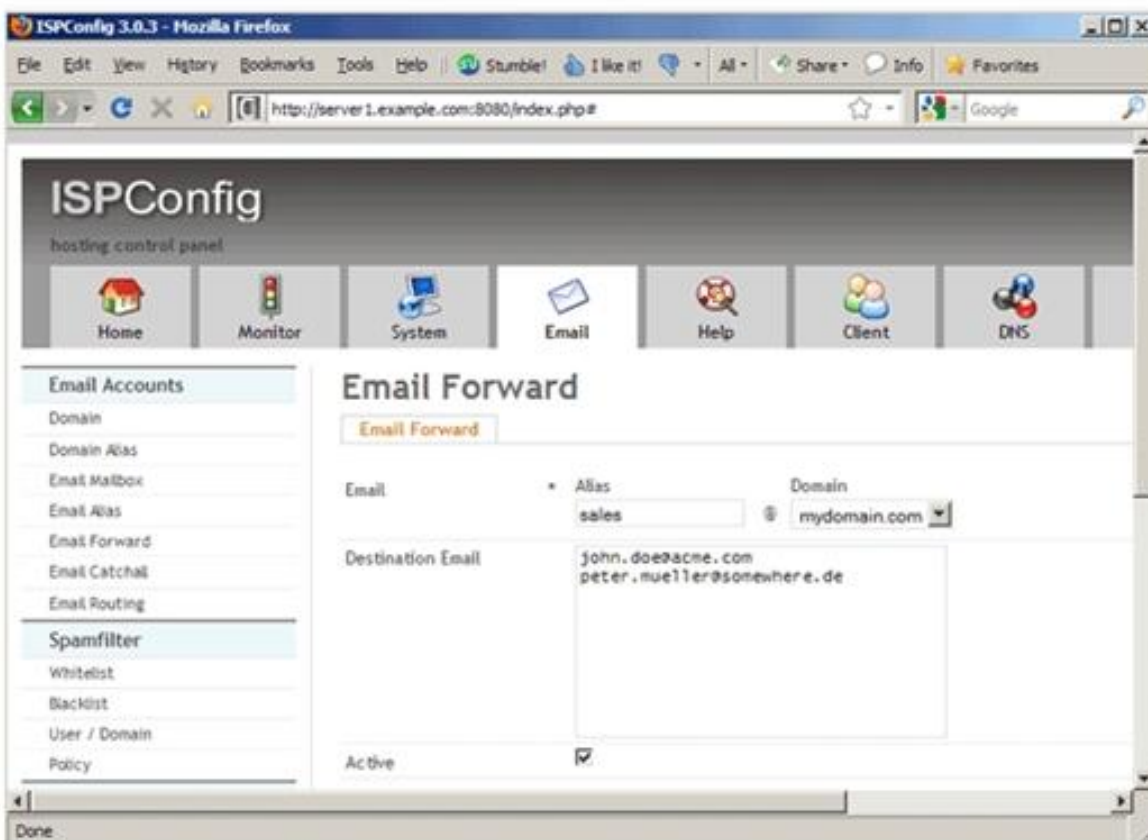
Additionally, quoted-strings (e.g. "John Doe"@example.com ) are permitted, thus allowing characters that would otherwise be prohibited, however they do not appear in common practice. RFC 5321 also warns that "a host that expects to receive mail SHOULD avoid defining mailboxes where the Local-part requires (or uses) the Quoted-string form".

The local-part is case sensitive, so "jsmith@example.com" and "JSmith@example.com" may be delivered to different people. This practice is discouraged by RFC 5321. However, only the authoritative mail servers for a domain may make that decision (if you have set up your server according to one of the "Perfect Server" tutorials from HowtoForge.com, then the local part is not case sensitive ). The only exception is for a local-part value of "postmaster" which is case insensitive, and should be forwarded to the server's administrator.

Within the rules set out in the RFCs, organisations are free to restrict the forms their own e-mail addresses take however they wish, e.g. many organizations do not use certain characters, e.g. space, ?, and ^, and most organizations treat uppercase and lowercase letters as equivalent. Hotmail, for example, only allows creation of e-mail addresses using alphanumerics, dot (.), underscore (\_) and hyphen (-).

Systems that send mail, of course, must be capable of handling outgoing mail for all addresses. Contrary to the relevant standards, some defective systems treat certain legitimate addresses as invalid and fail to handle mail to these addresses. Hotmail, for example, incorrectly refuses to send mail to any address containing any of the following legitimate characters: ! # \$ % \* / ? ^ ` { | } ~

- Destination Email : Fill in one or more email addresses (one email address per line) that the email should be forwarded to.
- Active : This defines whether this email forward is active or not.



#### 4.7.1.6 Email Catchall

If you want all emails that are addressed to non-existing mail boxes of a domain to arrive in an existing email box of this domain, you can create a catchAll for this email account. Example: You have configured the email address `info@example.com`. Someone sends an email to `abc@example.com` which does not exist. If `info@example.com` is a catchAll email address the email arrives here. If there is no catchAll email address for this domain the sender of the mail to `abc@example.com` gets back an error message ("error: no such user here"). Please note: Per domain there can be only one catchAll email address.

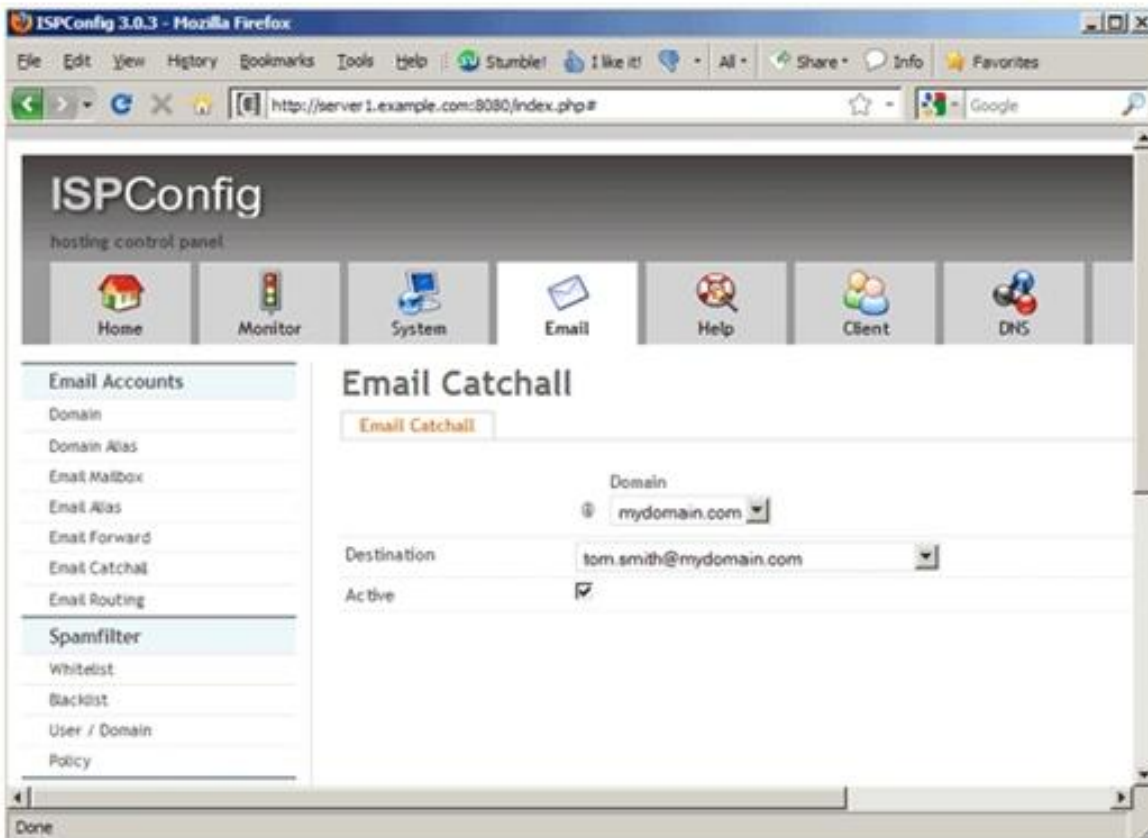
To create a new email catchAll, click on the Add new Catchall button. This will lead you to the Email Catchall form with the tab Email Catchall

### Email Catchall

### Email Catchall

The form has the following fields:

- Domain : Select the domain for which you want to create a catchAll.
- Destination : Select the catchAll email account - i.e., the email account that should receive all emails to non-existing email addresses of this domain.
- Active : This defines whether this email catchAll is active or not.



#### 4.7.1.7 Email Routing

With the email routing feature, you can define what server mail for a given domain will be forwarded to and by what transport. (This feature is based on [Postfix' transport\\_maps](#).) This makes it possible to route emails for one domain to a totally different server.

**Please note that you have create one or more Relay Recipients** (Email > Global Filters > Relay Recipients ) for each route that you create so that the system knows it should accept the emails before routing them to another server.

To create a new email route, click on the Add new transport button. This will lead you to the Email Routing form with the tab Email transport

#### Email Routing

#### Email transport

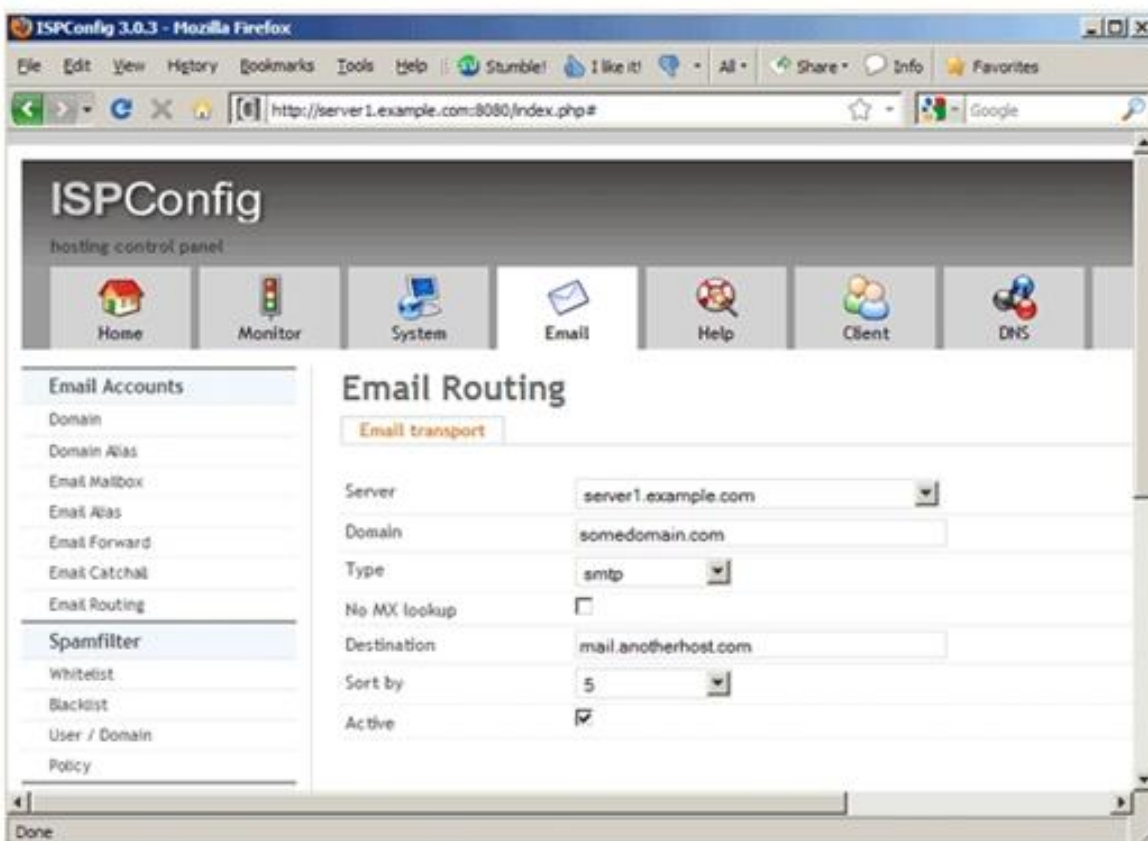
This form has the following fields:



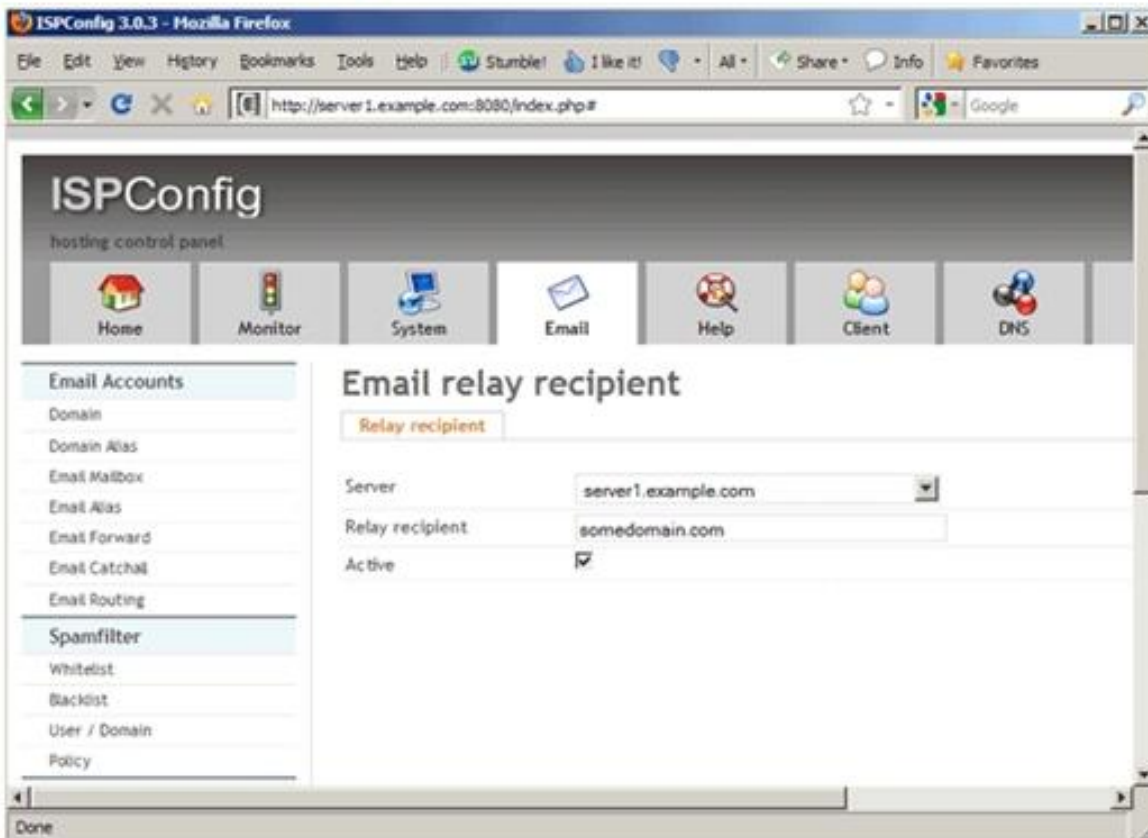
- **Server** : If more than one server is available, you can select the server on which the email transport will be located. You should select the server that handles emails for the domain that you want to route to another server (i.e., the server that the domain's MX record points to).
- **Domain** : Type in the email domain or email address that you want to route to another server. You can also use an asterisk ( \* ) as a wildcard. You can have just one routing rule per domain (ISPConfig will show you an error message if you try to add a second rule with the exact same domain), however if you use an asterisk there can be more than just one routing rule that applies to a domain.
- **Type** : Select the transport type (in almost all cases you should use `smtp` ). Refers to an entry from `/etc/postfix/master.cf` , so make sure that what you select here exists in `/etc/postfix/master.cf`
  - `smtp` : The Internet standard for transferring email. It uses TCP/IP port 25 and allows for file attachments. You can use the `Destination` field to specify the destination host. When no `Destination` is specified, the domain name from the `Domain` field is used instead.
  - `uucp` : A UNIX protocol and set of programs most often used to copy files across serial connections and telephone lines. UUCP was often used to transfer email and Usenet news over phone lines when direct Internet connectivity was scarce in small and medium-sized companies. You can use the `Destination` field to specify the UUCP destination host. When no `Destination` is specified, the domain name from the `Domain` field is used instead.
  - `slow` : This transport has to be defined in your `/etc/postfix/master.cf` before you can select it. Depending on how your `slow` transport looks, you might or might not have to specify a `Destination`
  - `error` : The special error transport causes all mail to be rejected. You can use the `Destination` field to specify an error message such as `mail for *.example.com is not deliverable` (optional).
  - `custom` : If you specify a custom transport in `/etc/postfix/master.cf` , you can use it for your email routing. Depending on how your `custom` transport looks, you might or might not have to specify a `Destination`
  - `null` : If you select this transport type, all emails will be deleted. You can leave the `Destination` field empty.
- **No MX lookup** : This defines whether Postfix will perform an MX lookup for the destination host or not (see the explanation of the next field, `Destination` ).
- **Destination** : The destination host for delivery of messages. The host is used only with `inet` transports such as SMTP and LMTP. Postfix treats the hostname like any destination domain. It performs an MX lookup to determine where to deliver messages. If there are no MX records, Postfix delivers to the A record IP address. If you know that Postfix should deliver directly to the IP in the A record for the specified host, you can have Postfix skip the check for

MX records by checking the No MX lookup checkbox. If you use an IP address, it is required that you check the No MX lookup checkbox. When no Destination is specified, the domain name from the Domain field is used instead. IF you use the error transport, you can specify an error message such as mail for \*.example.com is not deliverable here (optional).

- Sort by : Postfix will process all routing rules from top to bottom and use the first one that applies and will stop then. If you have multiple routing rules that might match a certain situation, you can define the order with this field. A higher number means a higher priority, i.e., if you have two rules that apply, and the first has a priority of 8 and the second a priority of 5, then the first rule will be used by Postfix.
- Active : This defines whether this email transport is active or not.



**Please note that you have create one or more Relay Recipients** (Email > Global Filters > Relay Recipients ) for each route that you create so that the system knows it should accept the emails before routing them to another server.



## 4.7.2 Spamfilter

### 4.7.2.1 Whitelist

The whitelist allows you to "whitelist" email sender addresses, i.e., emails from such addresses will never be tagged as spam.

To create a new whitelist, click on the Add Whitelist record button. This will lead you to the Spamfilter Whitelist form with the tab Whitelist

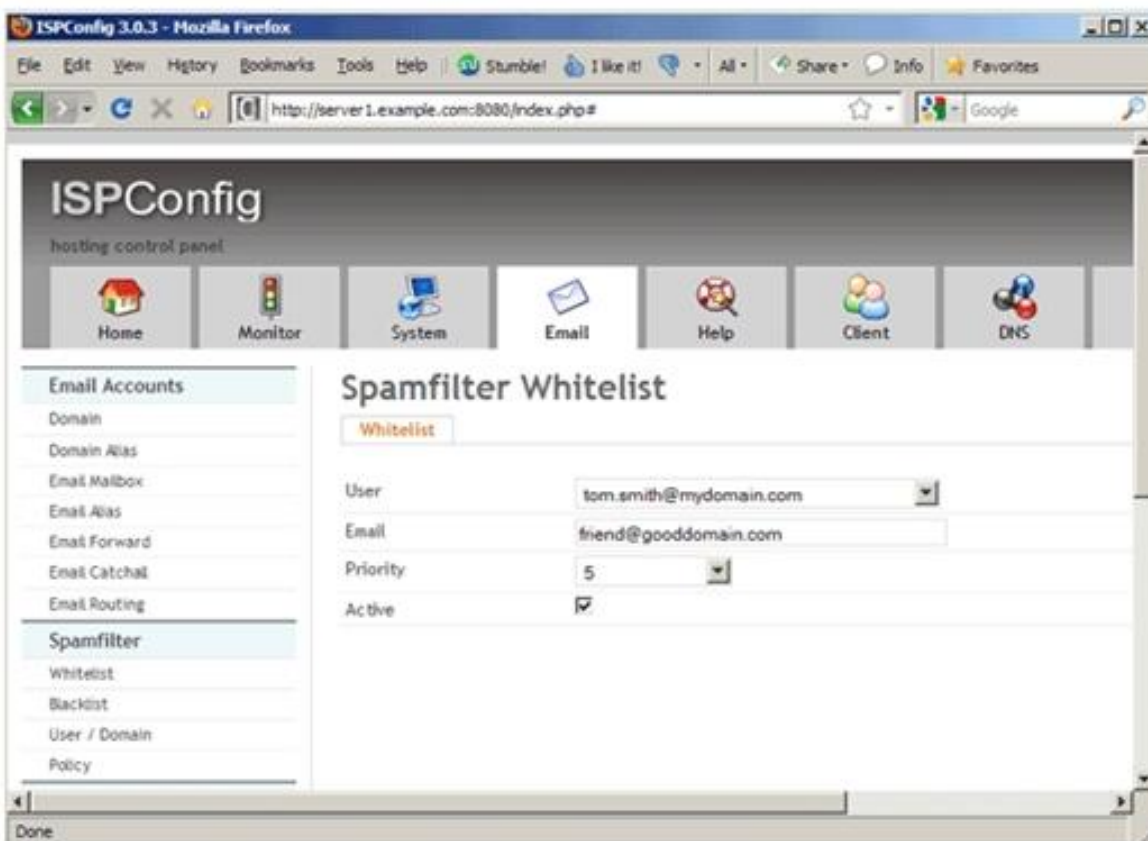
### Spamfilter Whitelist

#### Whitelist

The form has the following fields:

- User : Here you can select the recipient email account or even the whole recipient domain for which this whitelist record will be valid - this whitelist record will not be used for other recipient email accounts or domains.

- **Email** : Specify the email address whose emails should be whitelisted. You can even whitelist a whole domain by leaving out the local part of the email address - i.e., if you want to whitelist emails from the domain example.com , type @example.com in this field.
- **Priority** : If multiple whitelist/blacklist records apply, this field specifies which rule to use first (10 = highest priority, 1 = lowest priority). For example, if you blacklist @example.com with a priority of 5, you could whitelist user@example.com with a priority of 6 so that user@example.com 's mails get through while @example.com is blacklisted.
- **Active** : This defines whether this whitelist record is active or not.



#### 4.7.2.2 Blacklist

The blacklist allows you to "blacklist" email sender addresses, i.e., emails from such addresses will always be tagged as spam.

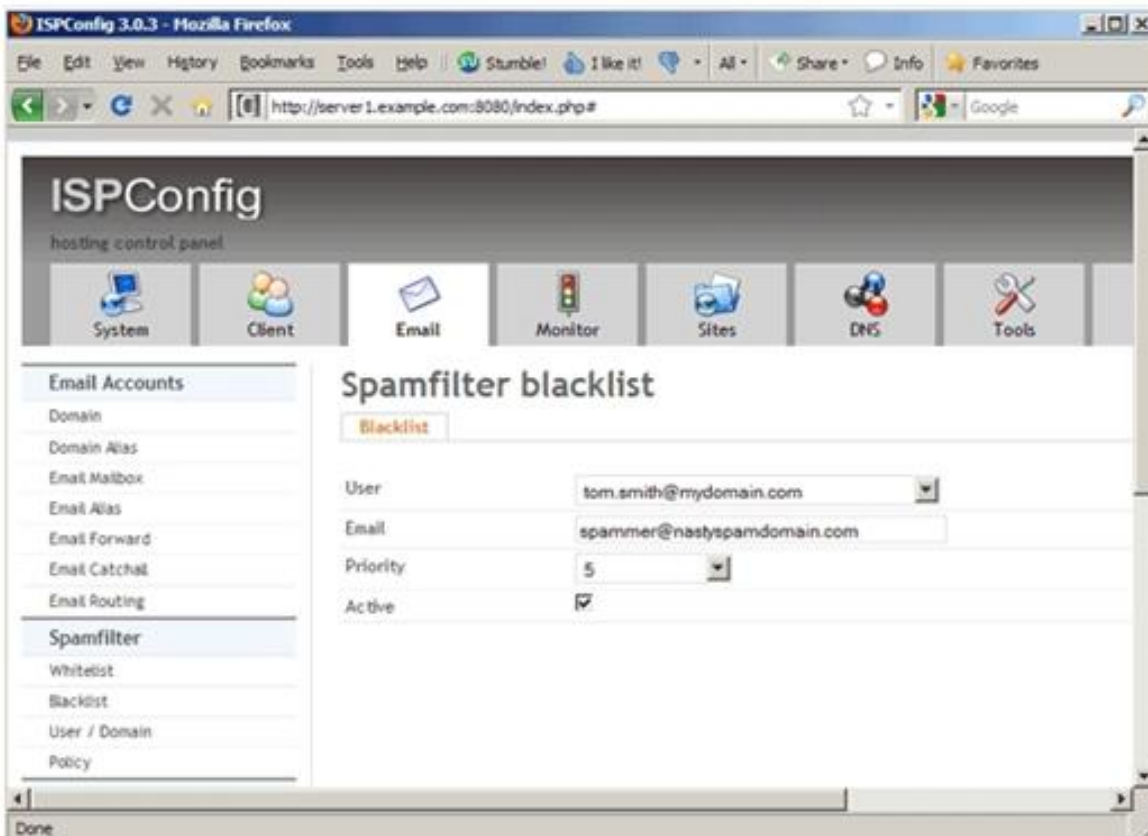
To create a new blacklist, click on the Add Blacklist record button. This will lead you to the Spamfilter blacklist form with the tab Blacklist

## Spamfilter blacklist

### Blacklist

The form has the following fields:

- **User** : Here you can select the recipient email account or even the whole recipient domain for which this blacklist record will be valid - this blacklist record will not be used for other recipient email accounts or domains.
- **Email** : Specify the email address whose emails should be blacklisted. You can even blacklist a whole domain by leaving out the local part of the email address - i.e., if you want to blacklist emails from the domain example.com , type @example.com in this field.
- **Priority** : If multiple whitelist/blacklist records apply, this field specifies which rule to use first (10 = highest priority, 1 = lowest priority). For example, if you blacklist @example.com with a priority of 5, you could whitelist user@example.com with a priority of 6 so that user@example.com 's mails get through while @example.com is blacklisted.
- **Active** : This defines whether this blacklist record is active or not.



### 4.7.2.3 User / Domain

The records that you find here are created automatically by ISPConfig when you create a new email domain or email account (not, when you create a domain alias or an email alias), i.e., for all items that have a Spamfilter drop-down menu. These settings tell amavisd when it should scan emails for spam. You can modify these settings here, however, this is usually not necessary. You can also create new records which makes sense for email transports (see "Email Routing") , domain aliases, and email aliases.

If you create a record for an email transport, this allows the system to scan emails even if those emails will be forwarded to another server. Normally, such mails would not be scanned.

For domain aliases, there's no automatic record here, and because the record for the target domain doesn't apply to the domain alias, you should create a record if you want emails targetted at the domain alias to be scanned for spam as well.

For email aliases, there's no automatic record here either, and the record for the target email account doesn't apply to the email alias. If there's a record here for the domain of the email alias, then this record applies for the email alias - if there's no record for the domain either, then there's no spam scanning for the email alias at all. If you want spam-scanning settings for the email alias that differ from the domain record or if there's no domain record at all, you can create a record for the email alias here.

What I wrote about the domain aliases and email aliases is true because spam scanning takes place before addresses are rewritten. So if you have the email account `user@example.com` with spam scanning enabled and the email alias for this mailbox `alias@example.com` , spam scanning would take place before `alias@example.com` is rewritten to `user@example.com` , and because there's no record for `alias@example.com` , no spam scanning takes place for `alias@example.com` , while mails for `user@example.com` are scanned. You can change this behaviour by commenting out or removing the line

```
receive_override_options = no_address_mappings
```

from `/etc/postfix/main.cf` (don't forget to restart Postfix) - in this case address rewriting takes place before spam scanning, which means you don't need extra rules for aliases because the records for the main domain/main email account apply.

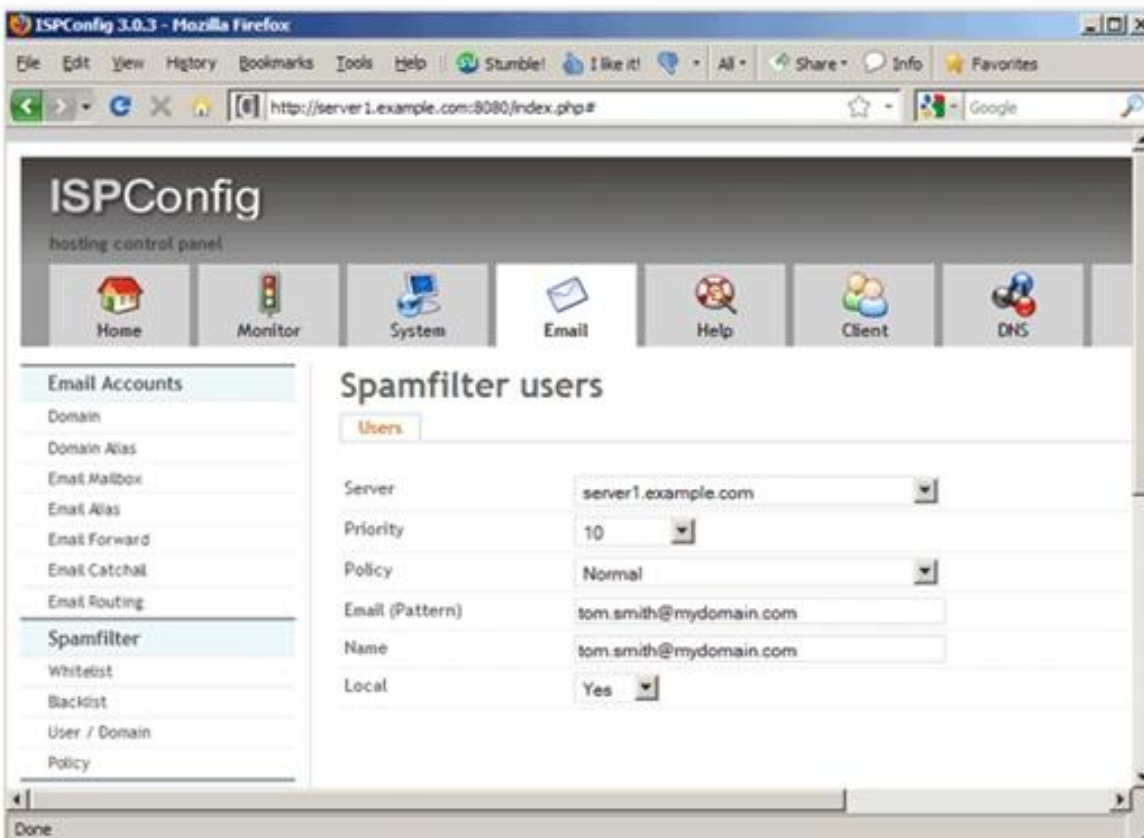
To create a new record, click on the **Add Spamfilter User** button. This will lead you to the **Spamfilter users** form with the tab **Users** .

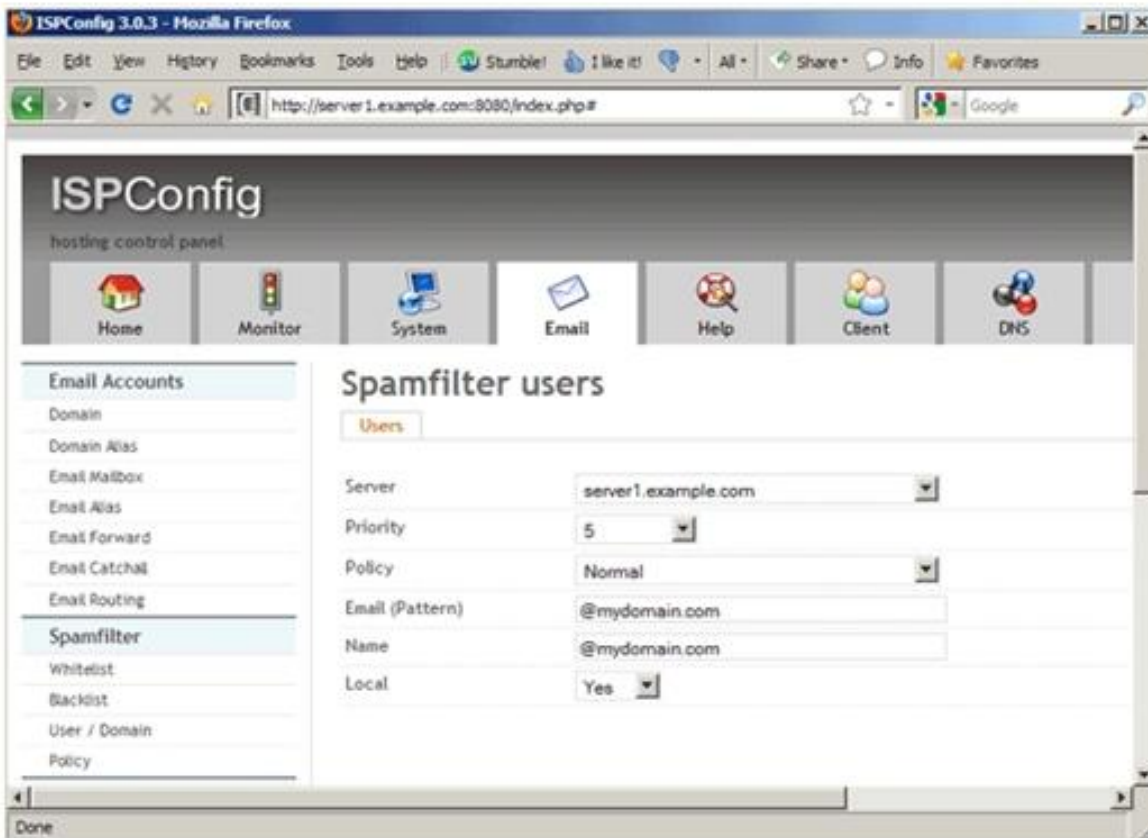
## Spamfilter users

### Users

This form has the following fields:

- **Server** : If more than one server is available, you can select the server on which the record will be located.
- **Priority** : If multiple records apply, this field specifies which rule to use first (10 = highest priority, 1 = lowest priority). For example, if you have a record for a whole domain with the priority 5 and a record for a specific email account (from the same domain) with the priority 10 , Then the record with priority 10 will override the record with priority 5.
- **Policy** : Here you can specify the spamfilter level to use: Non-Paying , Uncensored , Wants all spam, Wants viruses , Normal , Trigger happy , Permissive . The settings for each of these levels are defined under Email > Spamfilter > Policy
- **Email (Pattern)** : Fill in the email address (e.g. user@example.com ) or the domain (with the @ in front, e.g. @example.com ), to which the rule should apply.
- **Name**: Specify a name for the rule. You can use the email address or domain, but you can as well fill in something else, such as Rule1 etc. This is just for you so that you can distinguish the rules.
- **Local** : This specifies if this record is active (Yes ) or not (No).





#### 4.7.2.4 Policy

Here you can modify existing spam levels (Non-Paying , Uncensored , Wants all spam , Wants viruses , Normal , Trigger happy , Permissive ) and create new levels, if needed.

To create a new policy, click on the Add Policy record button. This will lead you to the Spamfilter policy form with the tabs Policy , Quarantine , Tag-Level , Other .

### Spamfilter policy

#### Policy

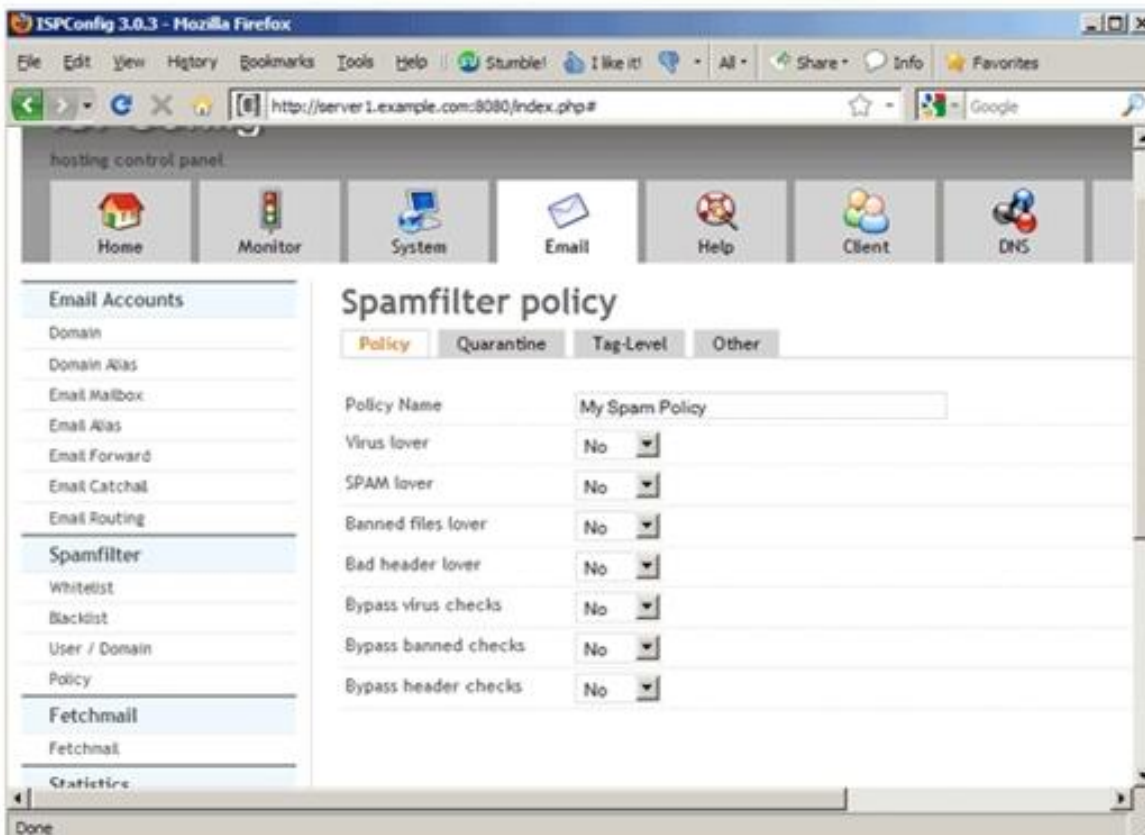
On this tab you find the following fields:

- Policy Name : Specify the name of the rule.
- Virus lover : Select if viruses should be allowed through this filter (Yes ) or not (No). Emails will still be scanned for viruses, but results of virus checks are ignored.
- SPAM lover : Select if spam should be allowed through this filter (Yes ) or not (No). Emails will



still be scanned for spam, but results of spam checks are ignored.

- **Banned files lover** : Select if banned files (like, for example, .exe ) should be allowed through this filter (Yes ) or not (No). Emails will still be scanned for banned files, but results of banned files checks are ignored. Please note that this setting applies only if banned names and types checks are enabled in your amavisd configuration (see <http://www.ijs.si/software/amavisd/amavisd-new-docs.html#checks> ).
- **Bad header lover** : Select if mails with bad headers should be allowed through this filter (Yes ) or not (No). Emails will still be scanned for bad headers, but results of bad header checks are ignored.
- **Bypass virus checks** : Similar in concept to Virus lover , this is used to skip entirely the decoding, unpacking and virus checking.
- **Bypass banned checks** : Similar in concept to Banned files lover , this is used to skip entirely the decoding, unpacking and banned files checking.
- **Bypass header checks** : Similar in concept to Bad header lover , this is used to skip entirely the decoding, unpacking and bad header checking.

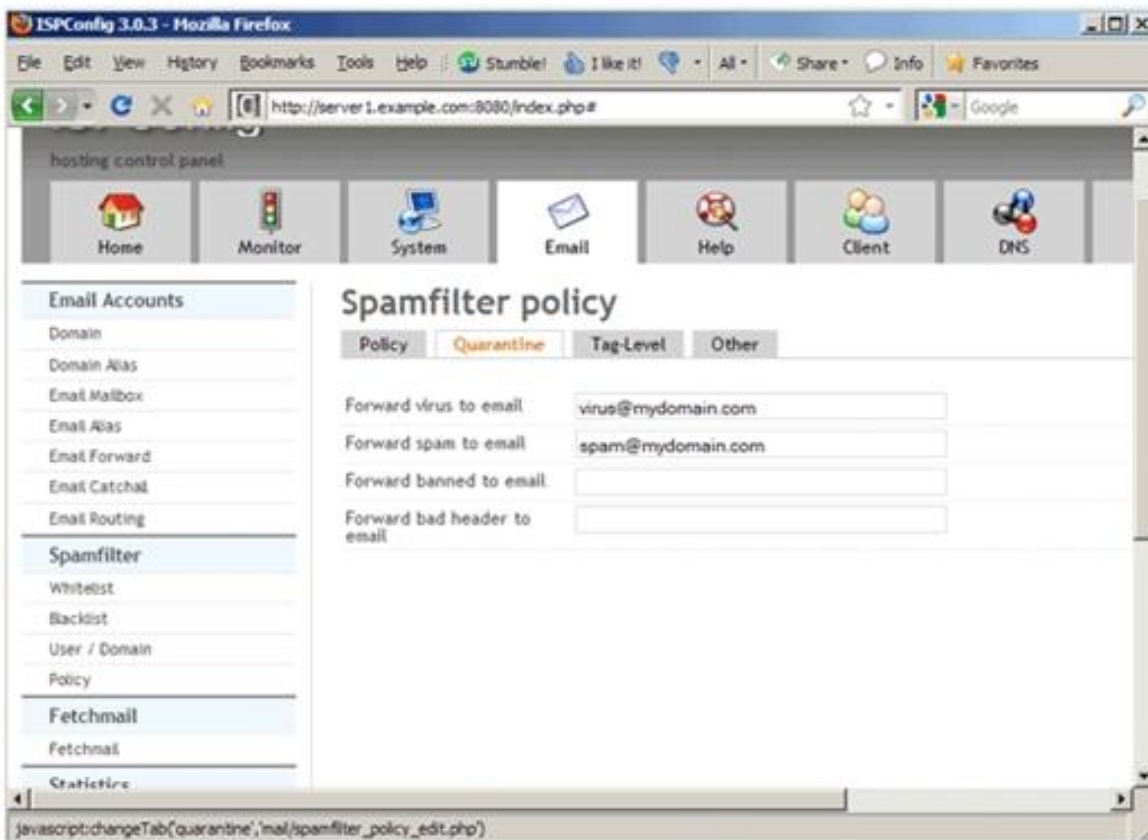


## Quarantine

Here you can define quarantine settings for emails containing viruses, spam, banned files, and bad headers.

The form contains the following fields:

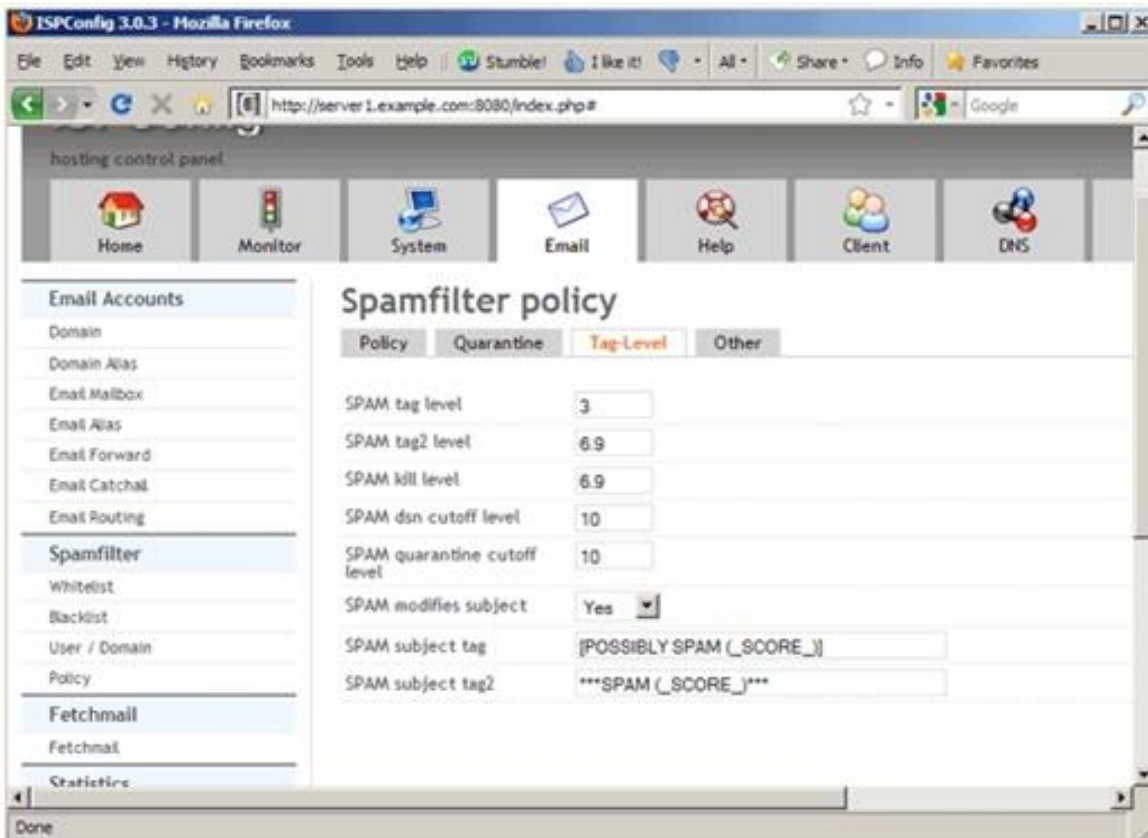
- Forward virus to email : If you want to quarantine virus emails, specify an email address here to which the virus mails will be forwarded.
- Forward spam to email : If you want to quarantine spam emails, specify an email address here to which the spam mails will be forwarded.
- Forward banned to email : If you want to quarantine emails that contain banned files, specify an email address here to which these mails will be forwarded.
- Forward bad header to email : If you want to quarantine emails with bad headers, specify an email address here to which these mails will be forwarded.



## Tag-Level

On this tab you can define spam scores and how spam mails will be tagged in the subject line. The form has the following fields:

- **SPAM tag level** : The system will add spam info headers to the email if at, or above that level. Should be a value  $> 0$ ; for ISPConfig's Normal spam level, the score is 3. Decimal numbers such as 2.4 are allowed.
- **SPAM tag2 level** : The system will add 'spam detected' headers at that level. The value should be  $>$  SPAM tag level . For ISPConfig's Normal spam level, the score is 6.9. Decimal numbers are allowed.
- **SPAM kill level** : The system will trigger spam evasive actions (e.g. blocks mail) at that level. The value should be  $\geq$  SPAM tag2 level . For ISPConfig's Normal spam level, the score is 6.9. Decimal numbers are allowed. Important: if SPAM kill level = SPAM tag2 level , spam will be blocked and not delivered to the user's mailbox, so it doesn't make sense to specify a SPAM subject tag2 (see below).
- **SPAM dsn cutoff level** : This is the spam score beyond which a DSN (Delivery Status Notification) is not sent. Given the fact that almost all spam emails have a fake sender address, it is arguable if you should send a DSN at all. To not send a DSN, specify a low score such as 0.
- **SPAM quarantine cutoff level** : This is the spam score beyond which quarantine is off. Use a low score (e.g. 0) if you don't want quarantine.
- **SPAM modifies subject** : Select if you want the system to tag the email's subject line with a spam tag if it is categorized as spam. The spam tag can be set in the two below fields, SPAM subject tag and SPAM subject tag2
- **SPAM subject tag** : This applies only if the spam score is  $\geq$  SPAM tag level , i.e., if spam info headers are added to the mail, but it is not sure if it is really spam. Normally you leave this field empty. If you don't want to leave this empty, a suitable tag could be [POSSIBLY SPAM] . It is also possible to include the spam score in the spam tag by using `_SCORE_`, e.g. [POSSIBLY SPAM (`_SCORE_`)] . In the end it would result in something like [POSSIBLY SPAM (Score: 3.1)]
- **SPAM subject tag2** : This is the field you usually use to tag spam in the subject field. This setting applies if the spam score is  $\geq$  SPAM tag2 level , i.e. if this mail is almost certainly spam. Usual strings are [SPAM] or \*\*\*SPAM\*\*\* . The string will be prepended to the email's subject, for example the subject Buy Cialis would become [SPAM] Buy Cialis . You can use this spam tag to filter emails in your email client. It is also possible to include the spam score in the spam tag by using `_SCORE_`, e.g. \*\*\*SPAM (`_SCORE_`)\*\*\* . In the end it would result in something like \*\*\*SPAM (Score: 7.5)\*\*\* . Important: if SPAM kill level = SPAM tag2 level , spam will be blocked and not delivered to the user's mailbox, so it doesn't make sense to specify a SPAM subject tag2



## Other

On this tab you can configure various other settings, e.g. "plus addressing".

From the [amavisd-new documentation](#) :

Amavisd-new can tag passed malware by appending an address extension to a recipient address. An address extension is usually a short string (such as 'spam') appended to the local part of the recipient address, delimited from it by a single character delimiter, often a '+' (or sometimes a '-'). This is why address extensions are also known as "plus addressing". Examples of such mail addresses belonging to user jim@example.com are: jim+spam@example.com , jim+cooking@example.com , jim+health@example.com , jim+postfix@example.com .

Most mailers (MTA), including Postfix and sendmail, have some provision to put address extensions to good use. Similarly, local delivery agents (LDA) such as Cyrus or LDAs that come with MTA, can be configured to recognize and make use of address extensions.

The most common application for address extensions is to provide additional information to LDA to store mail into a separate mail folder. Users may for example

choose to use this feature to let LDA automatically file messages from mailing lists to a dedicated subfolder, or to file spam to a spam folder, just by letting LDA simply and quickly examine the envelope recipient address, without having to parse mail header or having to configure and run filters such as procmail or Sieve.

Mailers (MTA and LDA) usually attempt first to examine (to check for validity, to lookup in virtual or aliases maps) a full unmodified recipient address. If the attempt is unsuccessful, they strip away the extension part, and try again. This way a presence of some unknown address extension is simply ignored. For example, a delivery for jim+health@example.com would deliver the mail to the main Jim's inbox if he hasn't provided a subfolder health in his mailbox.

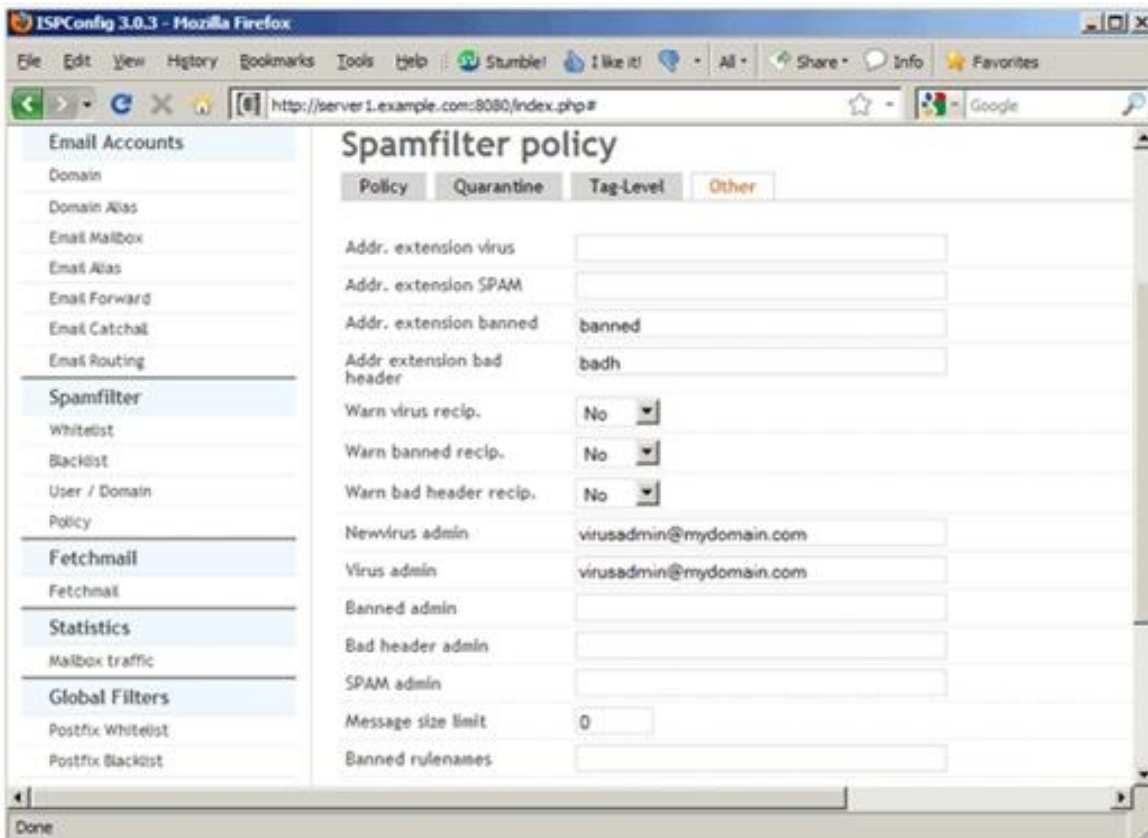
For this fallback to work (to ignore unknown extensions), it is important that all components that need to deal with address extensions (MTA, LDA, content filters) have the same notion of the delimiter in use on the system. For Postfix the configuration option is recipient\_delimiter=+ (see also propagate\_unmatched\_extensions), for amavisd-new the option is \$recipient\_delimiter='+'.

The form contains the following fields:

- Addr. extension virus : Specify an address extension for virus mails. For example, if you specify virus (without + at the beginning), the email address would be rewritten to user+virus@example.com , and viruses would be delivered to the virus folder of the user@example.com mailbox. It is possible to access that folder via IMAP. Please note that viruses are delivered only if you've set Virus lover Or Bypass virus checks to Yes on the Policy tab.
- Addr. extension SPAM : Specify an address extension for spam mails. For example, if you specify spam (without + at the beginning), the email address would be rewritten to user+spam@example.com , and spam would be delivered to the spam folder of the user@example.com mailbox. It is possible to access that folder via IMAP. Please note that spam is delivered only if you've set Spam lover to Yes on the Policy tab, or if the spam score is > SPAM tag2 level and < SPAM kill level (see the Tag-Level tab).
- Addr. extension banned : Specify an address extension for mails containing banned files. For example, if you specify banned (without + at the beginning), the email address would be rewritten to user+banned@example.com , and mails containing banned files would be delivered to the banned folder of the user@example.com mailbox. It is possible to access that folder via IMAP. Please note that mails containing banned files are delivered only if you've set Banned files lover Or Bypass banned checks to Yes on the Policy tab.
- Addr extension bad header : Specify an address extension for mails containing bad headers. For example, if you specify badh (without + at the beginning), the email address would be rewritten to user+badh@example.com , and mails containing bad headers would be delivered to the badh folder of the user@example.com mailbox. It is possible to access that folder via IMAP. Please note that mails containing bad headers are delivered only if you've set Bad header lover Or Bypass header checks to Yes on the Policy tab.
- Warn virus recip. : Set this to Yes if you want the system to send a warning email to the

recipient whenever a virus email is sent.

- Warn banned recip. : Set this to Yes if you want the system to send a warning email to the recipient whenever an email containing banned files is sent.
- Warn bad header recip. : Set this to Yes if you want the system to send a warning email to the recipient whenever an email containing bad headers is sent.
- Newvirus admin : Here you can specify an email address to which notifications of newly encountered viruses since amavisd startup are sent.
- Virus admin : Here you can specify an email address to which notifications of detected viruses are sent.
- Banned admin : Here you can specify an email address to which notifications of banned content are sent.
- Bad header admin : Here you can specify an email address to which notifications of bad headers are sent.
- SPAM admin : Here you can specify an email address to which notifications of received spam are sent.
- Message size limit : This is the maximum size of an email (in bytes) beyond which amavisd-new performs no checks (to save system resources). 0 means that amavisd-new does not care about the mail size.
- Banned rulenames : In this field you can specify SpamAssassin rules that should not be used to find out if an email is spam or not. Multiple names can be specified comma-separated (or whitespace-separated), e.g. HTML\_MESSAGE, MIME\_QP\_LONG\_LINE.



## 4.7.3 Fetchmail

### 4.7.3.1 Fetchmail

This feature can be used to retrieve emails from a remote POP3 or IMAP account and put them into a local mailbox. Although this feature is called "Fetchmail" here, ISPConfig uses [getmail](#) instead of [fetchmail](#) under the hood.

To create a new Fetchmail account, click on the Add new Account button. This will lead you to the Get Email form with the tab Get Email

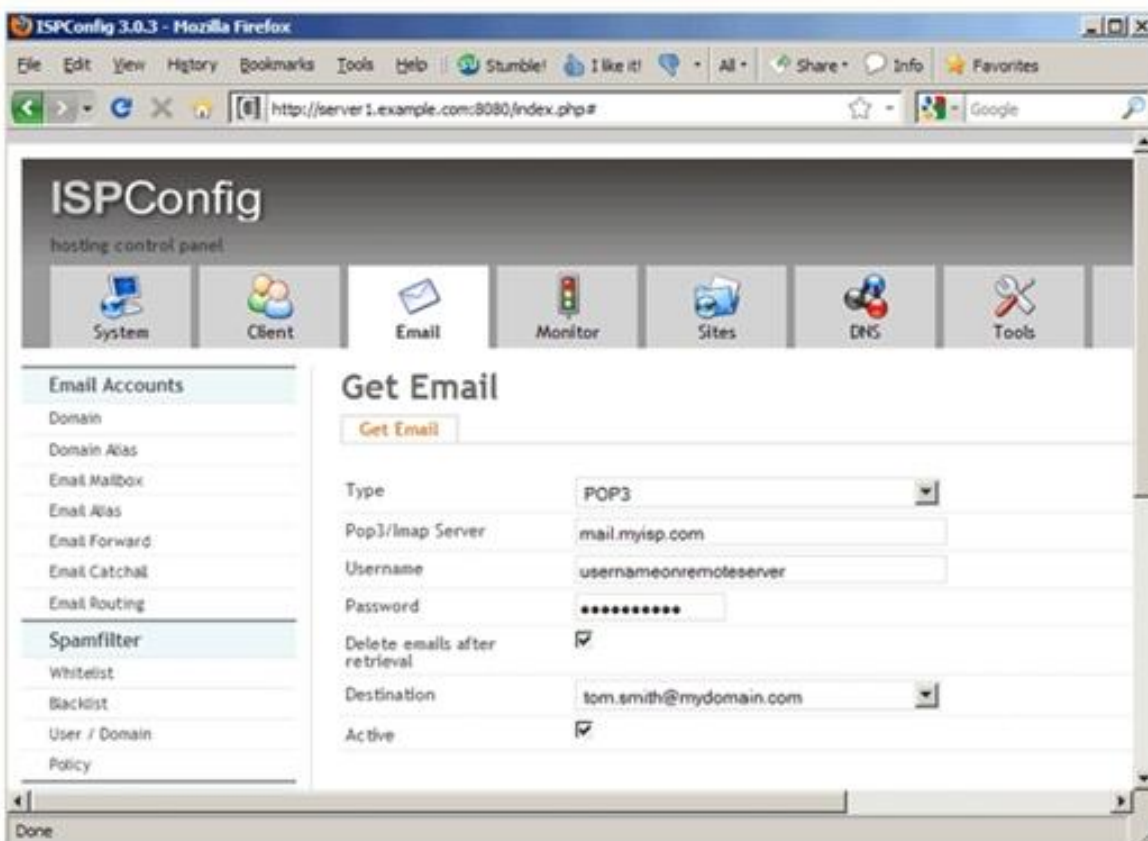
## Get Email

## Get Email

This form has the following fields:

- Type : Select the protocol to use to retrieve emails from the remote account (POP3, IMAP, POP3SSL, IMAPSSL).

- Pop3/Imap Server : Specify the hostname of the remote mail server, e.g. mail.example.com
- Username : Specify the username of the remote email account.
- Password : Specify the user's password.
- Delete emails after retrieval : Select if you want emails to be automatically deleted on the remote host after they have been retrieved.
- Destination : Select the destination mailbox for the retrieved emails.
- Active : This defines whether this Fetchmail account is active or not.



#### 4.7.4 Statistics

The Statistics section is a bit special in that there's nothing that you can configure here. This section just displays statistics for your email accounts.



#### 4.7.4.1 Mailbox traffic

Under Mailbox traffic you can see traffic statistics (in MB) for your email accounts for the current month, the month before, the current year, and the year before. Please note that this traffic covers only incoming traffic, not outgoing emails. Traffic statistics are available only if you use Courier; traffic cannot be counted if you use Dovecot.

These statistics are updated once per night.

#### 4.7.5 Global Filters

(This tab is visible only for the ISPConfig admin user.)

In this section you can define Postfix whitelists, blacklists, content filters (header/body, etc.), and relay recipients.

##### 4.7.5.1 Postfix Whitelist

The whitelist feature must be seen in conjunction with the blacklist feature. If you use the blacklist to block whole domains, for example, you can use the whitelist to allow certain email addresses (for example) from that domain.

To create a new whitelist record, click on the Add new Whitelist record button. This will lead you to the Email Whitelist form with the tab Whitelist

#### Email Whitelist

##### Whitelist

The form has the following fields:

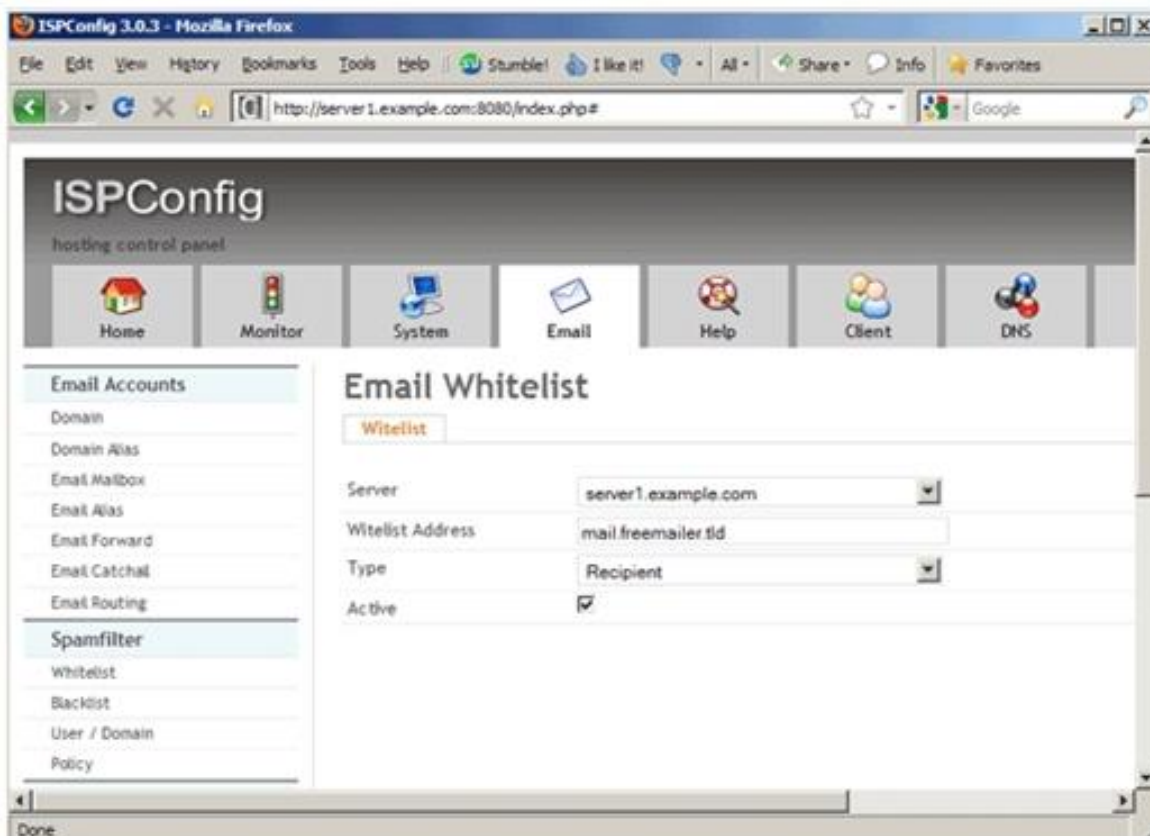
- Server : If more than one server is available, you can select the server on which the whitelist record will be located.
- Whitelist Address : Specify an email address, domain, parent domains, or localpart@.  
Exmaples: user@somedomain.com , somedomain.com , mail.freemailer.tld , 1.2.3.4 , sales@ .
- Type : Select between Recipient (refers to the Postfix directive smtpd\_recipient\_restrictions ) , Sender (refers to smtpd\_sender\_restrictions ) , and Client (refers to smtpd\_client\_restrictions ).
  - smtpd\_recipient\_restrictions : SMTPD recipient restrictions will put restrictions on

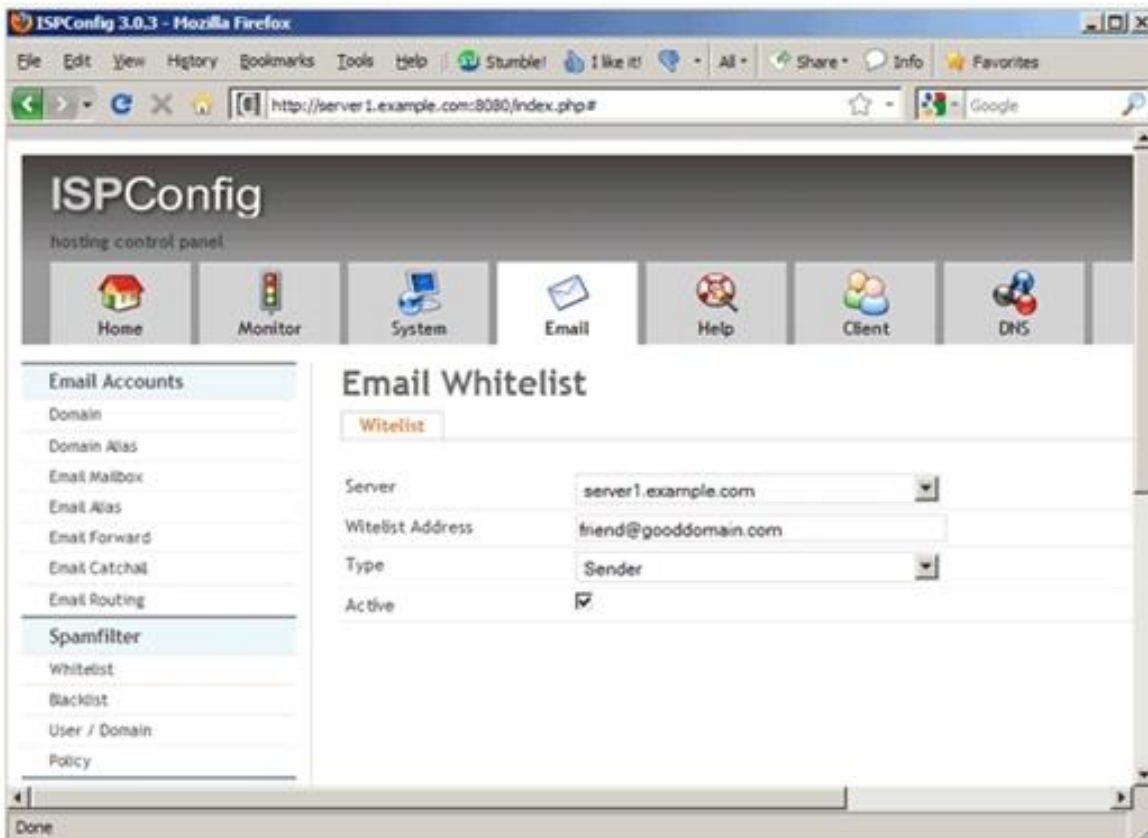
what messages will be accepted into your server based on the recipient email address (RCPT TO:). Postfix will check whether the message sender (email address, domain, mail server) is included in the whitelist table. If the sender is listed, the mail is delivered. If the sender is not listed in the whitelist, the message is rejected with an error code of 554, Recipient address rejected: Access denied (in reply to RCPT TO command)

To whitelist the sending mail server, you can type in its hostname (e.g.

mail.freemailer.tld ) or IP address in the Whitelist Address field. You can find more details here: [How To Whitelist Hosts/IP Addresses In Postfix](#)

- `smtpd_sender_restrictions` : SMTPD sender restrictions will put restrictions on what addresses will be able to send mail through your server based on the sender email address (MAIL FROM:). You can use sender email addresses, domains, and localpart@ in the Whitelist Address field.
- `smtpd_client_restrictions` : SMTPD client restrictions will put restrictions on what systems will be able to send mail through your server based on the client IP and host information (name). For example, if you have a user whose client PC has the IP address 1.2.3.4 , you can put 1.2.3.4 in the Whitelist Address field.
- `Active` : This defines whether this whitelist record is active or not.





#### 4.7.5.2 Postfix Blacklist

The blacklist feature can be used to blacklist email addresses, domains, parent domains, or localpart@.

To create a new blacklist record, click on the Add new Blacklist record button. This will lead you to the Email Blacklist form with the tab Blacklist

#### Email Blacklist

##### Blacklist

The form has the following fields:

- **Server** : If more than one server is available, you can select the server on which the blacklist record will be located.
- **Blacklist Address** : Specify an email address, domain, parent domains, or localpart@.  
Exmaples: user@somedomain.com , somedomain.com , mail.freemailer.tld , 1.2.3.4 , sales@ .

- **Type** : Select between Recipient (refers to the Postfix directive `smtpd_recipient_restrictions`), Sender (refers to `smtpd_sender_restrictions`), and Client (refers to `smtpd_client_restrictions`).
- `smtpd_recipient_restrictions` : SMTPD recipient restrictions will put restrictions on what messages will be rejected based on the recipient email address (RCPT TO:). Postfix will check whether the message sender (email address, domain, mail server) is included in the blacklist table. If the sender is listed, the mail is rejected with an error code of 554, Recipient address rejected: Access denied (in reply to RCPT TO command). To blacklist the sending mail server, you can type in its hostname (e.g. `mail.freemailer.tld`) or IP address in the Blacklist Address field. You can find more details here: [How To Whitelist Hosts/IP Addresses In Postfix](#)
- `smtpd_sender_restrictions` : SMTPD sender restrictions will put restrictions on what addresses will be able to send mail through your server based on the sender email address (MAIL FROM:). You can use sender email addresses, domains, and localpart@ in the Blacklist Address field.
- `smtpd_client_restrictions` : SMTPD client restrictions will put restrictions on what systems will be able to send mail through your server based on the client IP and host information (name). For example, if you have a user that sends out viruses (intended or unintended) and you know his client PC has the IP address `1.2.3.4`, you can put `1.2.3.4` in the Blacklist Address field.
- **Active** : This defines whether this blacklist record is active or not.

#### 4.7.5.3 Content Filter

The content filter allows you to block emails based on their content, e.g. you can block emails that contain a certain string in the subject or in the body. Postfix supports a built-in filter mechanism that examines message header and message body content, one line at a time, before it is stored in the Postfix queue.

To create a new content filter, click on the Add new Content Filter button. This will lead you to the Mail Content Filter form with the tab Filter

### Mail Content Filter

#### Filter

The form contains the following fields:

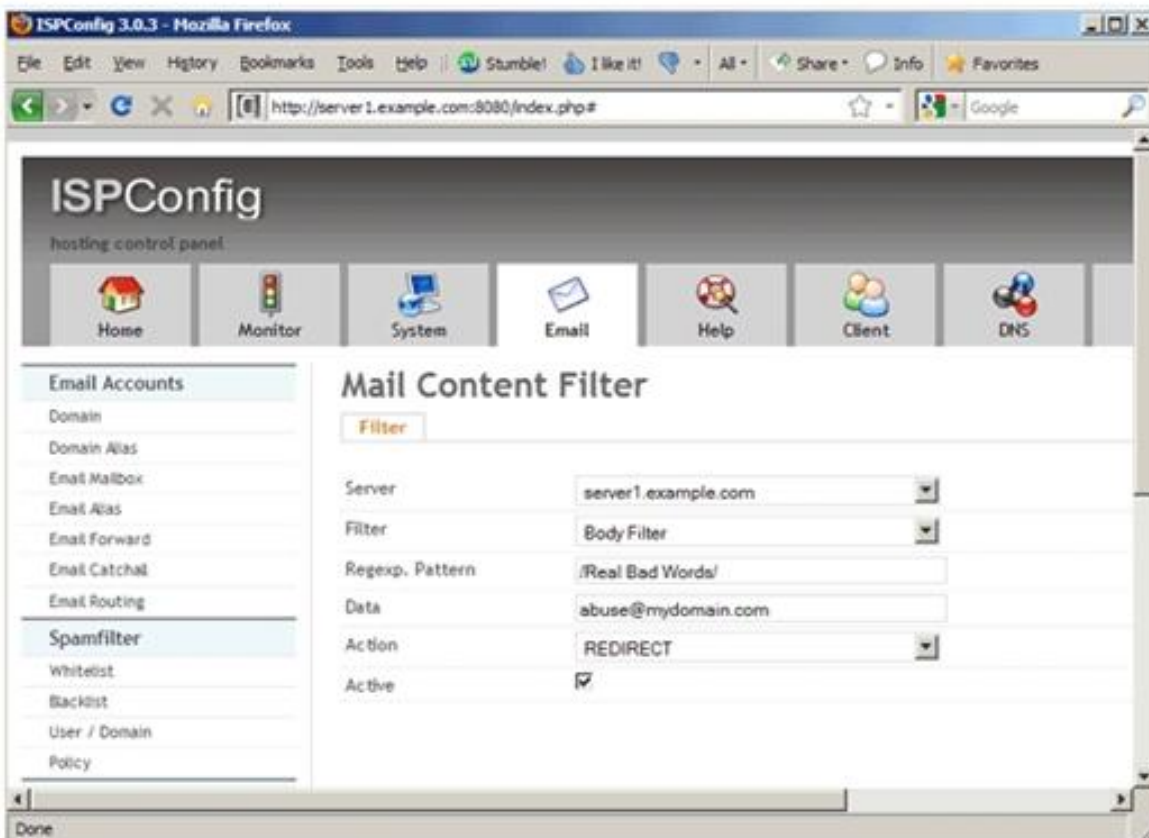
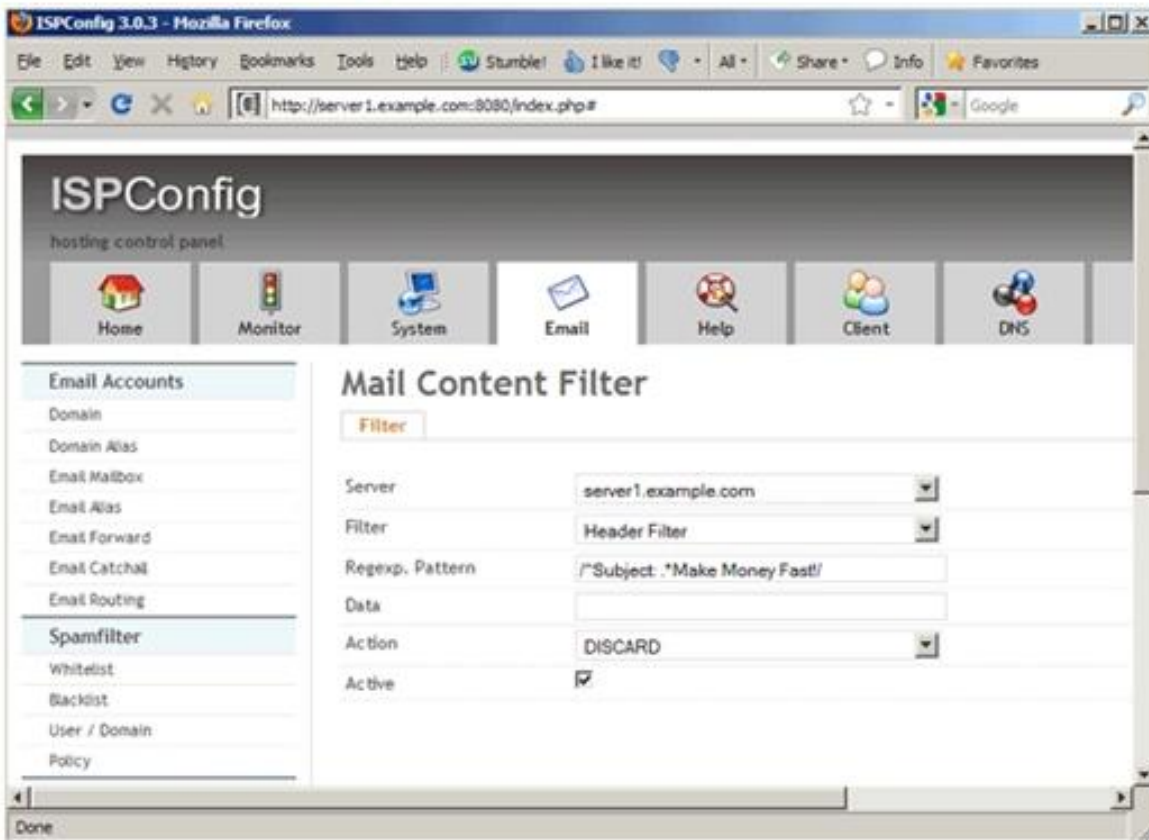
- **Server** : If more than one server is available, you can select the server on which the content filter will be located.
- **Filter** : Select what part of the email message you want to inspect:
  - **Header Filter** : These are applied to initial message headers (except for the headers that are processed with MIME-Header Filter ).
  - **MIME-Header Filter** : These are applied to MIME related message headers only.
  - **Nested-Header Filter** : These are applied to message headers of attached email messages (except for the headers that are processed with MIME-Header Filter ).
  - **Body Filter** : These are applied to all other content, including multi-part message boundaries.

Note: message headers are examined one logical header at a time, even when a message header spans multiple lines. Body lines are always examined one line at a time.

- **Regexp. Pattern** : Fill in the search pattern. Usually the best performance is obtained with pcre (Perl Compatible Regular Expression), but the slower regexp (POSIX regular expressions) support is more widely available. Use the command `postconf -m` to find out what lookup table types your Postfix system supports - usually it will be `regexp`. Here are a few examples:
 

Regexp. Pattern:	Filter Type:	Explanation:
<code>/^Subject: .*Make Money Fast!/</code>	Header Filter	Searches for the string Make Money Fast! in the Subject line.
<code>/name=[^&gt;]*.(bat com exe dll)/</code>	MIME-Header Filter	This will match all messages that have attachments whose files end in .bat , .com , .exe or .dll
<code>/^&lt;iframe src=(3D)?cid:.* height=(3D)?0 width=(3D)?0&gt;\$/</code>	Body Filter	Body pattern to stop a specific HTML browser vulnerability exploit.
<code>/^From: joe@example.com/</code>	Header Filter	Matches all messages sent by joe@example.com
<code>/^From: .*@example.com/</code>	Header Filter	Matches all messages sent from the example.com domain.
<code>/Real Bad Words/</code>	Body Filter	This matches "real bad words" in any case (upper, lower, or mixed).
<code>/^Date: .* 200[0-2]/</code>	Header Filter	This matches all emails sent in the years 2000 - 2002.
<code>/^Date: .* 19[0-9][0-9]/</code>	Header Filter	This matches all emails sent between 1900 and 1999.
<code>/^To: postmaster@yourdom.ain/</code>	Header Filter	Matches all messages sent to postmaster@yourdom.ain
- **Data** : You can specify an action for each filter (see below). Some actions allow or require you to specify an additional text or destination. The Data field is where you place this information.
- **Action** : Here you can select what should happen to an email if a filter applies:

- DISCARD (optional text can be specified in the Data field): Claim successful delivery and silently discard the message. Log the optional text if specified, otherwise log a generic message.
  - DUNNO Pretend that the input line did not match any pattern, and inspect the next input line. This action can be used to shorten the table search.
  - FILTER (required transport:destination must be specified in the Data field): After the message is queued, send the entire message through the specified external content filter. The transport name specifies the first field of a mail delivery agent definition in master.cf; the syntax of the next-hop destination is described in the manual page of the corresponding delivery agent. More information about external content filters is in the Postfix [FILTER README](#) file.
  - HOLD (optional text can be specified in the Data field): Arrange for the message to be placed on the hold queue, and inspect the next input line. The message remains on hold until someone either deletes it or releases it for delivery. Log the optional text if specified, otherwise log a generic message.
  - IGNORE: Delete the current line from the input, and inspect the next input line.
  - PREPEND(required text must be specified in the Data field): Prepend one line with the specified text, and inspect the next input line.
  - REDIRECT (required user@domain must be specified in the Data field): Write a message redirection request to the queue file, and inspect the next input line. After the message is queued, it will be sent to the specified address instead of the intended recipient(s). Note: this action overrides the FILTER action, and affects all recipients of the message. If multiple REDIRECT actions fire, only the last one is executed.
  - REPLACE(required text must be specified in the Data field): Replace the current line with the specified text, and inspect the next input line.
  - REJECT (optional text can be specified in the Data field): Reject the entire message. Reply with optional text... when the optional text is specified, otherwise reply with a generic error message.
  - WARN(optional text can be specified in the Data field): Log a warning with the optional text... (or log a generic message), and inspect the next input line. This action is useful for debugging and for testing a pattern before applying more drastic actions.
- Active : This defines whether this content filter is active or not.



#### 4.7.5.4 Relay Recipients

If you have created email transports under Email > Email Accounts > Email Routing , you must also create Relay Recipients so that the server knows that it should accept those emails before routing them to another server. If you have created a route for a single email address, you must create a relay recipient for that email address. If you have create a route for a whole domain, and you know all existing email accounts of that domain, it is recommended to create relay recipients for all these email addresses; if you don't know all the email addresses of a domain, or there are simply too many, you can create a relay recipient for the whole domain, but you should keep in mind that the destination server can become a source of [backscatter](#) in this case because if a mail is sent to a non-existing address of the domain, the forwarding server will route it to its destination server, and because the destination server doesn't know that email address, it might send a bounce.

To create a new relay recipient, click on the Add new relay recipient button. This will lead you to the Email relay recipient form with the tab Relay recipient

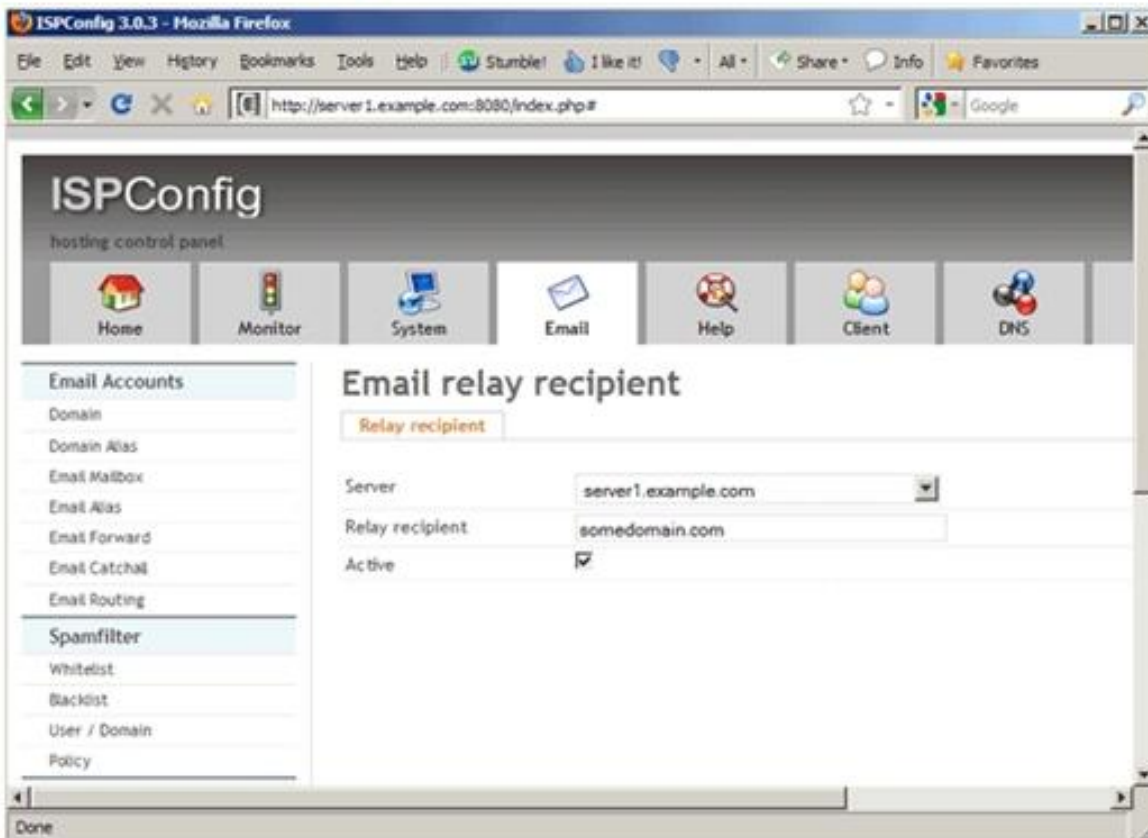
#### Email relay recipient

#### Relay recipient

The form has the following fields:

- Server : If more than one server is available, you can select the server on which the relay recipient will be located.
- Relay recipient : Fill in the email address or email domain, e.g. user@example.com or example.com .
- Active : This defines whether this relay recipient is active or not.





## 4.8 DNS

On this tab you can create zones and DNS records for your domains. You can either do this by using the DNS Wizard (DNS > DNS Wizard > Add DNS Zone ) which will automatically create a set of common DNS records for your domain (like www, mail , ns records, etc.), or you create the zones and records manually under DNS > DNS > Zones - you will also have to go there if you want to create further DNS records that are not created by the DNS Wizard.

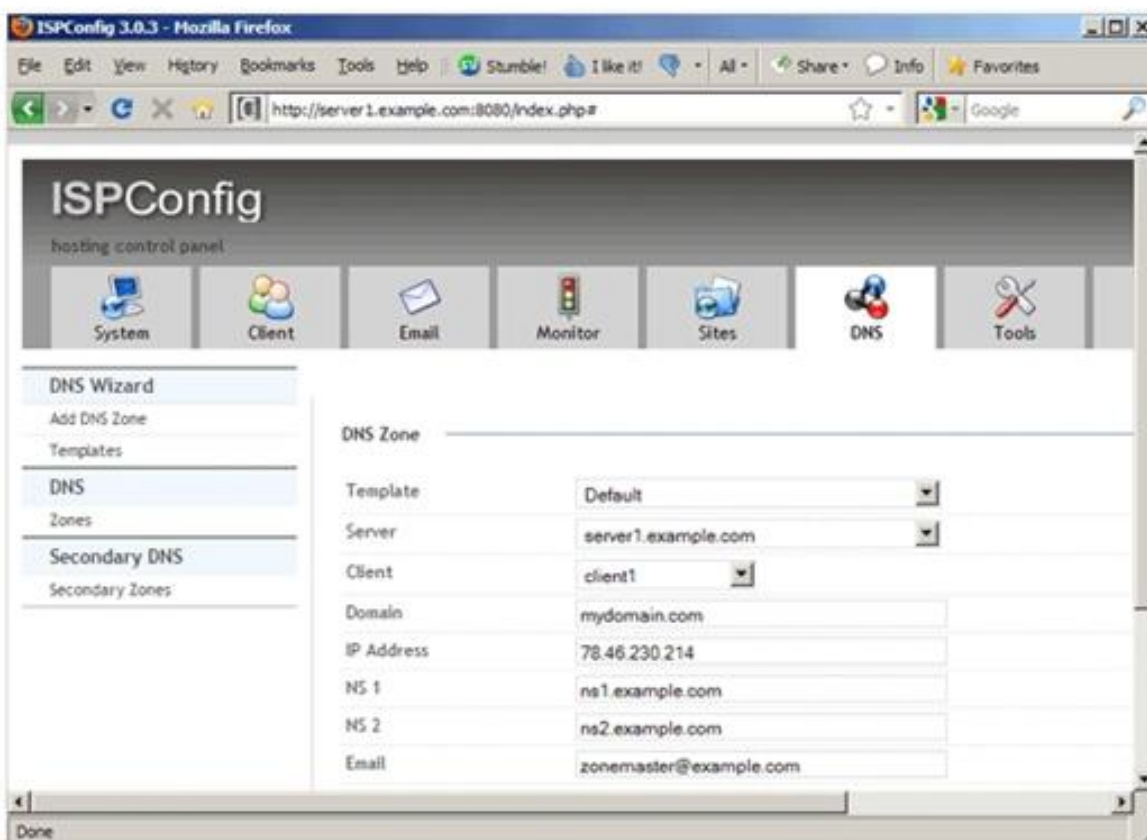
### 4.8.1 DNS Wizard

#### 4.8.1.1 Add DNS Zone

This is the wizard to create a new DNS zone. The form has the following fields:

- **Template** : This refers to the templates that exist under DNS > DNS Wizard > Templates . These templates define what records will be created by default if you use the DNS Wizard. Let's assume we create a zone for the domain example.com - the Default template will create A records for example.com , www.example.com , and mail.example.com , two NS (nameserver) records, plus an MX (mail exchanger) record for example.com that points to mail.example.com

- **Server** : If more than one server is available, you can select the server on which the DNS zone will be located.
- **Client** : Here you select the client that owns the new DNS zone.
- **Domain** : Fill in the domain for which you want to create the zone, e.g. example.com - please note that you don't need a dot at the end, i.e., example.com. would work as well, but example.com (without the trailing dot) is sufficient.
- **IP Address** : Fill in the IP address that example.com should point to - please note that www.example.com and mail.example.com will also point to that IP address (you can change that later on under DNS > DNS > Zones ).
- **NS 1** : Specify the hostname of the primary nameserver for the domain, e.g. ns1.somedomain.com . Again, no trailing dot is needed. ns1.somedomain.com must point to the server that you selected in the Server field.
- **NS 2** : Specify the hostname of the secondary nameserver for the domain, e.g. ns2.somedomain.com . Again, no trailing dot is needed.
- **Email** : Specify the email address of the zone administrator, e.g. zonemaster@somedomain.com



## 4.8.1.2 Templates

Here you can create templates for the DNS Wizard. A template defines what records will be created by default if a new zone is created with the DNS Wizard.

To create a new template, click on the **Add new record** button. This will lead you to the DNS Wizard template form with the tab **DNS Template**.

### DNS Wizard template

#### DNS Template

The form contains the following fields:

- **Name:** Specify a name for the template.
- **Fields :** Here you can select what fields will be visible in the DNS Wizard form (Domain , IP Address , NS 1 , NS 2 , Email ). For example, if you decide to hard-code the nameservers and the zonemaster email address into the template, it doesn't make sense to show those fields in the DNS Wizard.
- **Template :** Fill in your template. As an example, here is the **Default** template:

#### [ZONE]

```
origin={DOMAIN}.
ns={NS1}.
mbox={EMAIL}.
refresh=28800
retry=7200
expire=604800
minimum=86400
ttl=86400
```

#### [DNS\_RECORDS]

```
A|{DOMAIN}|{IP}|0|86400
A|www|{IP}|0|86400
A|mail|{IP}|0|86400
NS|{DOMAIN}|{NS1}|0|86400
NS|{DOMAIN}|{NS2}|0|86400
MX|{DOMAIN}|mail.{DOMAIN}|10|86400
```

As you see, a template consists out of two stanzas, [ZONE] and [DNS\_RECORDS].

In the [ZONE] stanza, you specify values for `origin` , `ns1` , `mbox` , `refresh` , `retry` , `expire` , `minimum` , and `ttl` in the form `name=value`.

- `origin` : The name of this zone. Make sure you use a trailing dot, e.g. `example.com .` or `{DOMAIN} .`
- `ns`: The name of the name server that is the original or primary source of data for this zone. Make sure you use a trailing dot.
- `mbox`: A name which specifies the mailbox of the person responsible for this zone. If you don't use the `{EMAIL}` placeholder, this should be specified in the `mailbox-as-domain-name` format where the `@` character is replaced with a dot, e.g. `zonemaster.example.com .` (for `zonemaster@example.com` ). Make sure you use a trailing dot.
- `refresh` : The number of seconds after which slave nameservers should check to see if this zone has been changed. If the zone's serial number has changed, the slave nameserver initiates a zone transfer.
- `retry` : This specifies the number of seconds a slave nameserver should wait before retrying if it attempts to transfer this zone but fails.
- `expire` : If for `expire` seconds the primary server cannot be reached, all information about the zone is invalidated on the secondary servers (i.e., they are no longer authoritative for that zone).
- `minimum` : The minimum TTL field that should be exported with any record from this zone. If any record has a lower TTL, this TTL is sent instead.
- `ttd` : The number of seconds that this zone may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the zone should not be cached.

In the `[DNS_RECORDS]` stanza, you specify all records that should be created by default, one record per line. A line has the following format:

```
type|name|data|aux|ttl
```

As you see, there are five fields, separated by a pipe character ( `|` ). This is the meaning of the five fields:

- `type` : The type of record (A, AAAA, ALIAS, CNAME, HINFO, MX, NS, PTR, RP, SRV, TXT).
  - A: An IPv4 host address. The `data` column should contain the IP address (in numbers-and-dots format) associated with the `name`.

Example: `192.168.1.88`

- AAAA: An IPv6 host address. The `data` column should contain the IPv6 address associated with the `name`.

Example: 3ffe:b00:c18:3::a

- **ALIAS** : A server side alias. An alias is like a **CNAME**, only it is handled entirely by the server. The `data` column should contain the hostname aliased by name. Aliases can be used in place of **A** records. The client will only see **A** records and will not be able to tell that aliases are involved. The hostname specified by `data` must exist in the database. It can be useful to use aliases for everything. Use **A** records for the canonical name of the machine and use aliases for any additional names. This is especially useful when combined with automatic **PTR** records. If a single IP address is only used for one **A** record, then there will never be any confusion over what the **PTR** record should be.

Example: albuquerque.example.com (FQDN)  
Example: albuquerque (hostname only)

- **CNAME** The canonical name for an alias. The `data` column should contain the real name of the machine specified by name. `data` may be a hostname or an FQDN.

Example: porcini.example.com (FQDN)  
Example: porcini (hostname only)

- **HINFO**: Host information. The `data` column should contain two strings which provide information about the host specified by name. The first string specifies the CPU type, and the second string describes the operating system type. The two strings should be separated by a space. If either string needs to contain a space, enclose it in quotation marks.

Example: "Pentium Pro" Linux

- **MX**: Mail exchanger. The `data` column should contain the hostname or FQDN of a mail server which will accept mail for the host specified by name. The `aux` column should contain a preference for this mail server. Mail transfer agents prefer **MX** records with lower values in `aux`.

Example: mail.example.com (FQDN)  
Example: mail (hostname only)

- **NS**: An authoritative nameserver. The `data` column should contain the hostname or FQDN of a server which should be considered authoritative for the zone listed in `name`.

Example: ns1.example.com (FQDN)  
Example: ns1 (hostname only)

- **PTR**: A domain name pointer. These records, used only with **IN-ADDR.ARPA** zones, should contain the canonical hostname of the machine referred to by `name` in `data`.

Example: webserver.example.com -

- **RP:** A responsible person. The `data` column should contain the DNS-encoded email address of the person responsible for the name requested, then a space, then a hostname that should return a TXT record containing additional information about the responsible person. If there is no such TXT record, the second value should contain a dot (.).

Example: `webmaster.example.com. contactinfo.example.com.`

- **SRV:** Server location. Specifies the location of the server(s) for a specific protocol and domain. The `data` column must contain three space-separated values. The first value is a number specifying the `weight` for this entry. The second field is a number specifying the `port` on the target host of this service. The last field is a name specifying the `target` host. The `aux` column should contain the `priority` of this target host. Targets with a lower priority are preferred.

For more information, read [RFC 2782](#).

Example: `0 9 server.example.com . (FQDN)`

Example: `0 9 server (hostname only)`

- **TXT:** A text string. The `data` column contains a text string that is returned only when a TXT query is issued for the host specified by `name`. TXT records can be used for

[SPF records](#).

Example: This is a string.

Example: `v=spf1 a mx ptr -all (SPF record)`

- **name:** The name that this record describes. Wildcard values such as `*` or `*.sub` are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot. It may contain out-of-zone data if this is a glue record.

Examples:

- `foo`
- `foo.example.com.`
- `{DOMAIN}.`
- `www`

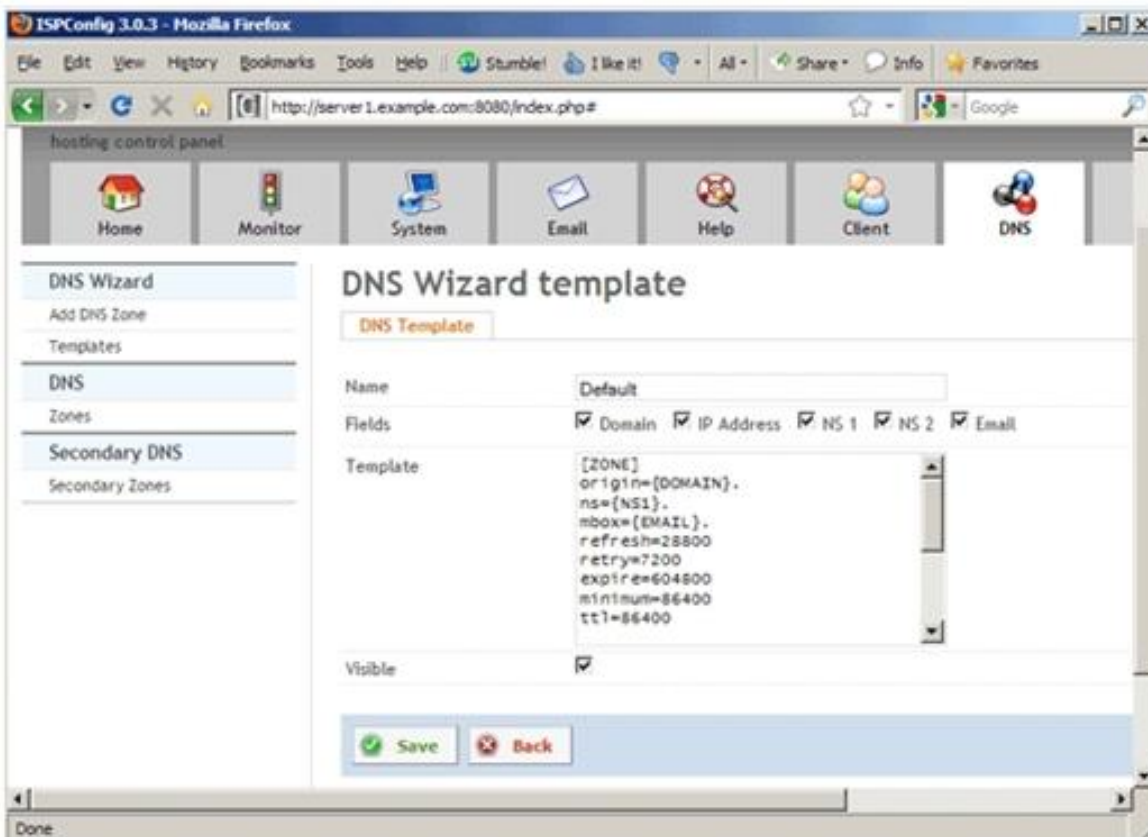
- **data :** The data associated with this record, e.g. an IP address for A records, a hostname/FQDN for CNAME/MX/NS records, etc. Please note that an MX record must always point to a hostname/FQDN that has an A record - CNAME records are not allowed.
- **aux :** An auxiliary numeric value in addition to `data`. For MX records, this field specifies the

preference. For SRV records, this field specifies the priority. Specify 0 for all other records.

- **ttl** : The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.

The following placeholders are available in a template and will be replaced with the value of the corresponding field in the DNS Wizard: {DOMAIN} , {IP} , {NS1} , {NS2} , and {EMAIL} .

- **Visible** : This defines whether this template is visible (i.e., can be selected) in the DNS Wizard or not.



## 4.8.2 DNS

### 4.8.2.1 Zones

Here you can create DNS zones manually (if you are experienced enough with DNS and don't

want to use the DNS Wizard) and modify existing DNS zones (that were created, for example, with the DNS Wizard).

To create a new DNS zone, click on the **Add new DNS Zone (SOA)** button. This will lead you to the **DNS Zone** form with the tabs **DNS Zone** and **Records**.

## DNS Zone

### DNS Zone

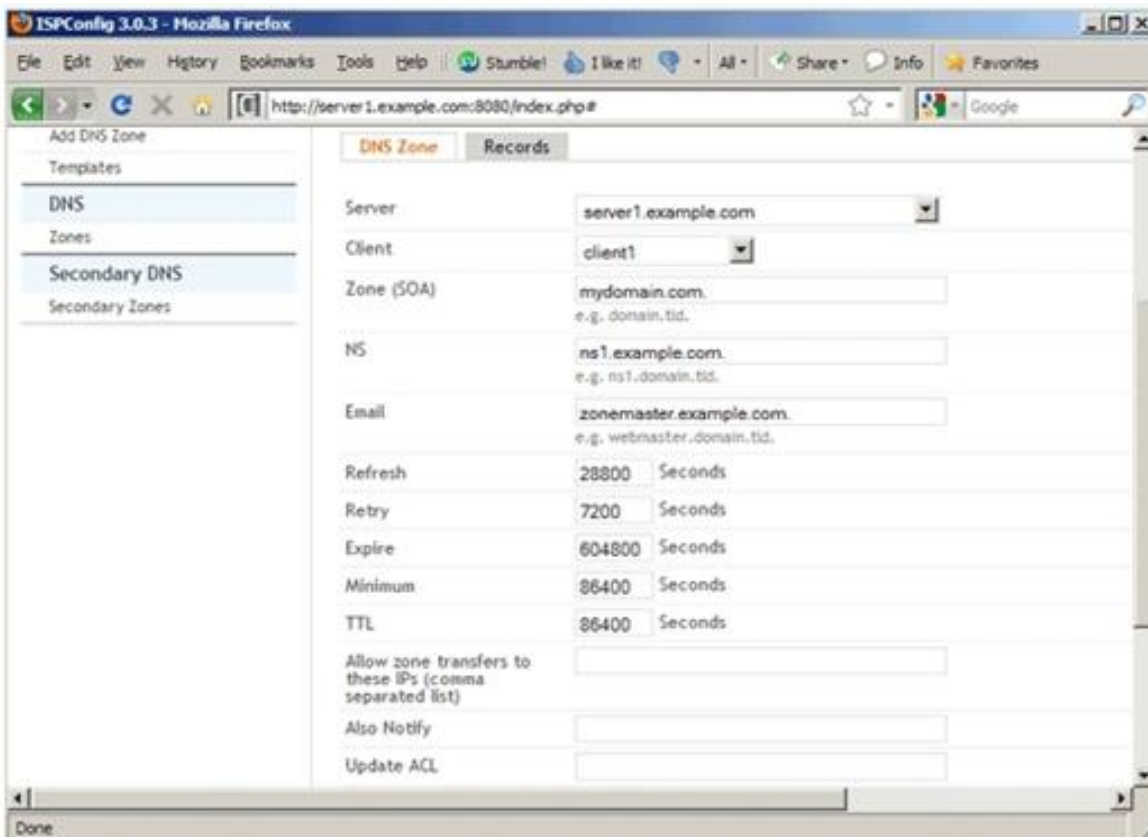
On this tab you specify the SOA (start of authority) record. It contains authoritative information about a DNS zone, including the primary name server, the email of the domain administrator, the domain serial number, and several timers relating to refreshing the zone.

The form contains the following fields:

- **Server** : If more than one server is available, you can select the server on which the DNS zone will be located.
- **Client** : Here you select the client that owns the new DNS zone.
- **Zone (SOA)** : Fill in the domain for which you want to create the zone, e.g. `example.com.` - please note that other than in the DNS Wizard you need a dot at the end.
- **NS**: Specify the hostname of the primary nameserver for the domain, e.g. `ns1.somedomain.com.` - again, a trailing dot is needed. `ns1.somedomain.com` must point to the server that you selected in the **Server** field.
- **Email** : Specify the email address of the zone administrator. This should be specified in the mailbox-as-domain-name format where the @ character is replaced with a dot, e.g. `zonemaster.somedomain.com.` - again, you need a trailing dot.
- **Refresh** : The number of seconds after which slave nameservers should check to see if this zone has been changed. If the zone's serial number has changed, the slave nameserver initiates a zone transfer.
- **Retry** : This specifies the number of seconds a slave nameserver should wait before retrying if it attempts to transfer this zone but fails.
- **Expire** : If for expire seconds the primary server cannot be reached, all information about the zone is invalidated on the secondary servers (i.e., they are no longer authoritative for that zone).
- **Minimum** : The minimum TTL field that should be exported with any record from this zone. If any record has a lower TTL, this TTL is sent instead.
- **TTL**: The number of seconds that this zone may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the zone should not be cached.



- Allow zone transfers to these IPs (comma separated list) : This field can contain one or more IP addresses separated by commas. These IP addresses will be allowed to connect to the server to transfer the zone. If no IP is specified, any server is allowed to connect. Usually, you should list your slave DNS servers for this zone here.
- Also Notify : This optional field should contain one or more IP addresses separated by commas. These IP addresses will be used to send NOTIFY messages to additional name servers. Notification is sent to all name servers that have NS records in the zone plus any mentioned in this field.
- Update ACL : This is an optional specifying the ACL (access control list) controlling who can update a zone. You can specify one or more IP addresses separated by commas. This field is useful if the zone contains dynamic IP addresses and you want to allow dynamic DNS updates from a client. If no IP is specified, then dynamic DNS updates are disabled.
- Active : This defines whether this DNS zone is active or not.



## Records

On this tab you can create the following types of records:

- A
- AAAA
- ALIAS
- CNAME
- HINFO
- MX
- NS
- PTR
- RP
- SRV
- TXT

## A Records

An A record is an IPv4 host address. The IP-Address field should contain the IP address (in numbers-and-dots format) associated with the Hostname .

Example: 192.168.1.88

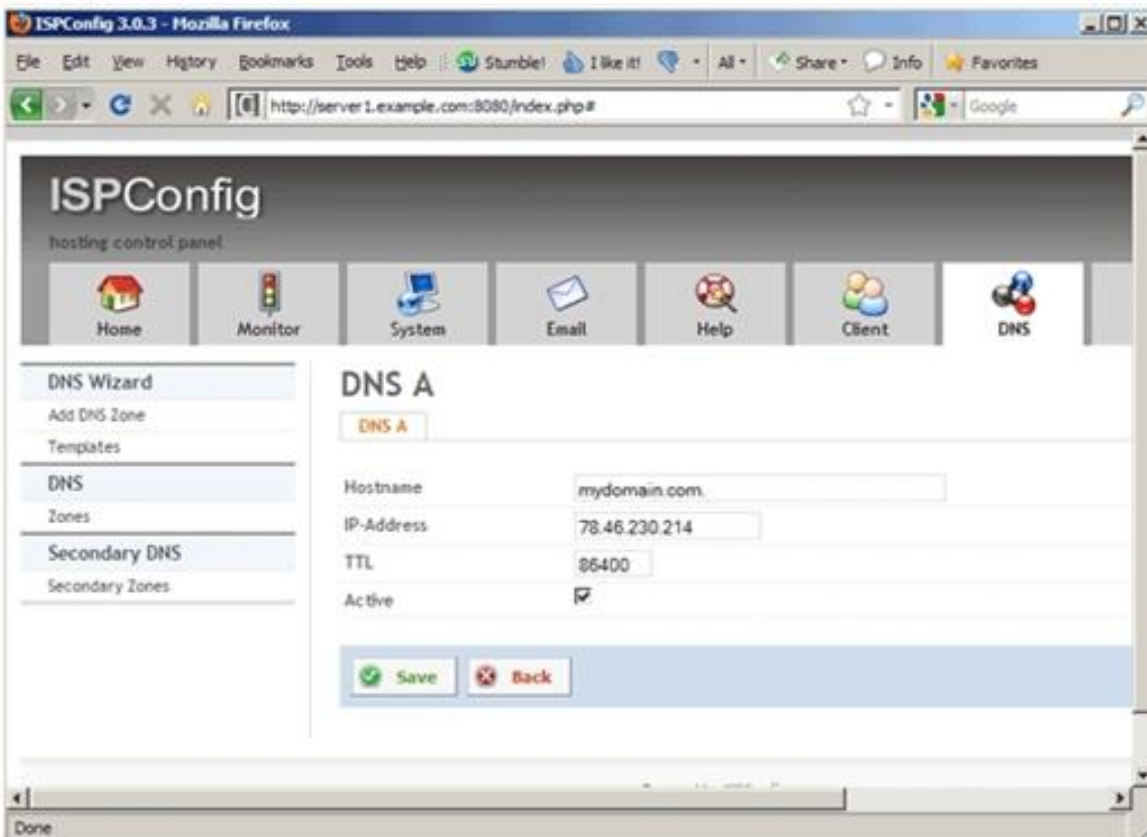
The form contains the following fields:

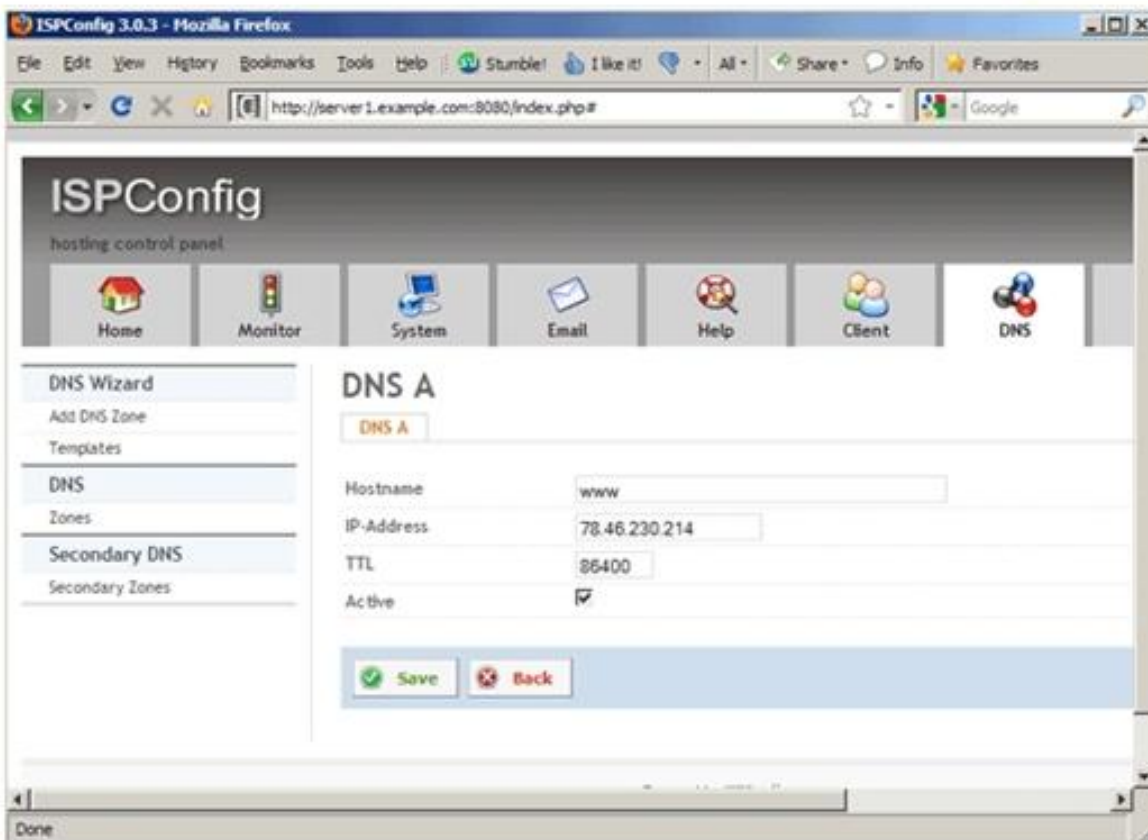
- Hostname : The name that this record describes. Wildcard values such as \* or \*.sub are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

Examples:

- foo
- foo.example.com.
- www
- example.com.
- You can also leave the field empty which has the same meaning as if you'd fill in example.com

- IP-Address : Fill in the IPv4 IP address that the hostname should point to. Example: 192.168.1.88
- TTL: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
- Active : This defines whether this A record is active or not.





## AAAA Records

An AAAA record is an IPv6 host address. The IPv6-Address field should contain the IPv6 address associated with the Hostname .

Example: 3ffe:b00:c18:3::a

The form contains the following fields:

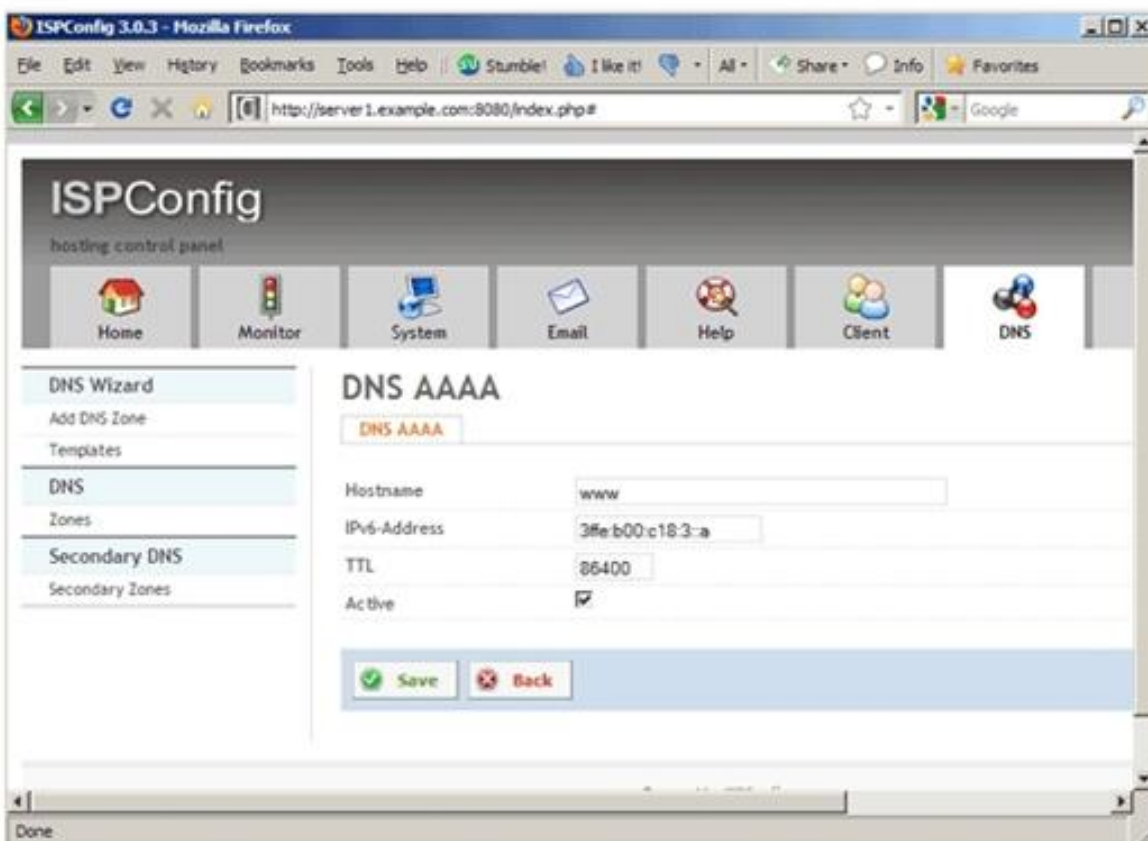
- Hostname : The name that this record describes. Wildcard values such as \* or \*.sub are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

Examples:

- foo
- foo.example.com.
- www
- example.com.

- You can also leave the field empty which has the same meaning as if you'd fill in example.com

- IPv6-Address : Fill in the IPv6 IP address that the hostname should point to. Example: 3ffe:b00:c18:3::a
- TTL: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
- Active : This defines whether this AAAA record is active or not.



## ALIAS Records

(Please note the ALIAS records are supported by the MyDNS name server, but not by the BIND name server. If you use BIND, ALIAS records are identical to CNAME records, i.e., if you create an ALIAS record, actually a CNAME record will be created.)

An ALIAS record is a server side alias. An alias is like a CNAME, only it is handled entirely by the server. The Target Hostname field should contain the hostname aliased by Hostname . Aliases can be used in place of A records. The client will only see A records and will not be able to tell that aliases are involved. The target hostname must exist in the database. It can be useful to use aliases for everything. Use A records for the canonical name of the machine and use aliases for any additional names. This is especially useful when combined with automatic PTR records. If a single IP address is only used for one A record, then there will never be any confusion over what the PTR record should be.

Example: albuquerque.example.com. (FQDN)

Example: albuquerque (hostname only)

The field contains the following fields:

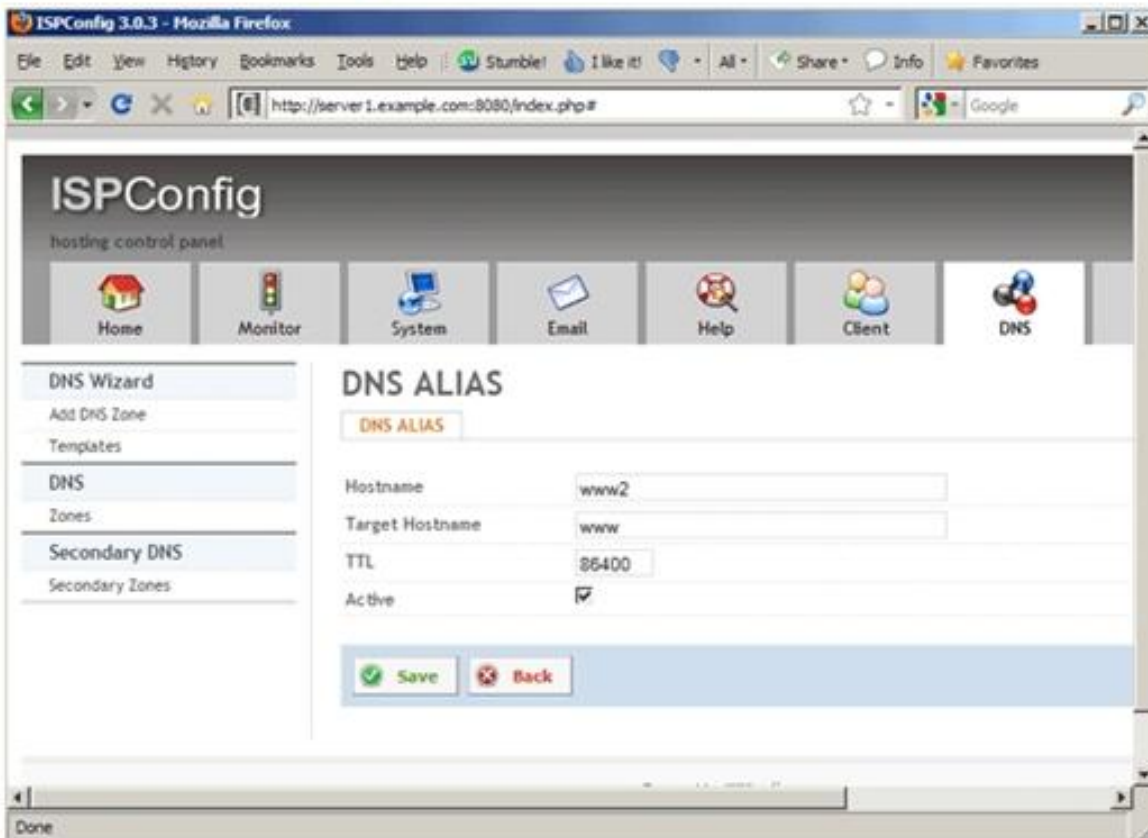
- Hostname : The name that this record describes. Wildcard values such as \* or \*.sub are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

Examples:

- foo
- foo.example.com.
- www
- example.com.
- You can also leave the field empty which has the same meaning as if you'd fill in example.com
- Target Hostname : The hostname that is aliased by the hostname in the Hostname field. Wildcard values such as \* or \*.sub are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

Examples:

- albuquerque
- albuquerque.example.com.
- TTL: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
- Active : This defines whether this ALIAS record is active or not.



## CNAME Records

A CNAME record is the canonical name for an alias. The Target Hostname field should contain the real name of the machine specified by Hostname . Target Hostname may be a hostname or an FQDN.

Example: porcini.example.com (FQDN)

Example: porcini (hostname only)

The field contains the following fields:

- Hostname : The name that this record describes. Wildcard values such as \* or \*.sub are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

Examples:

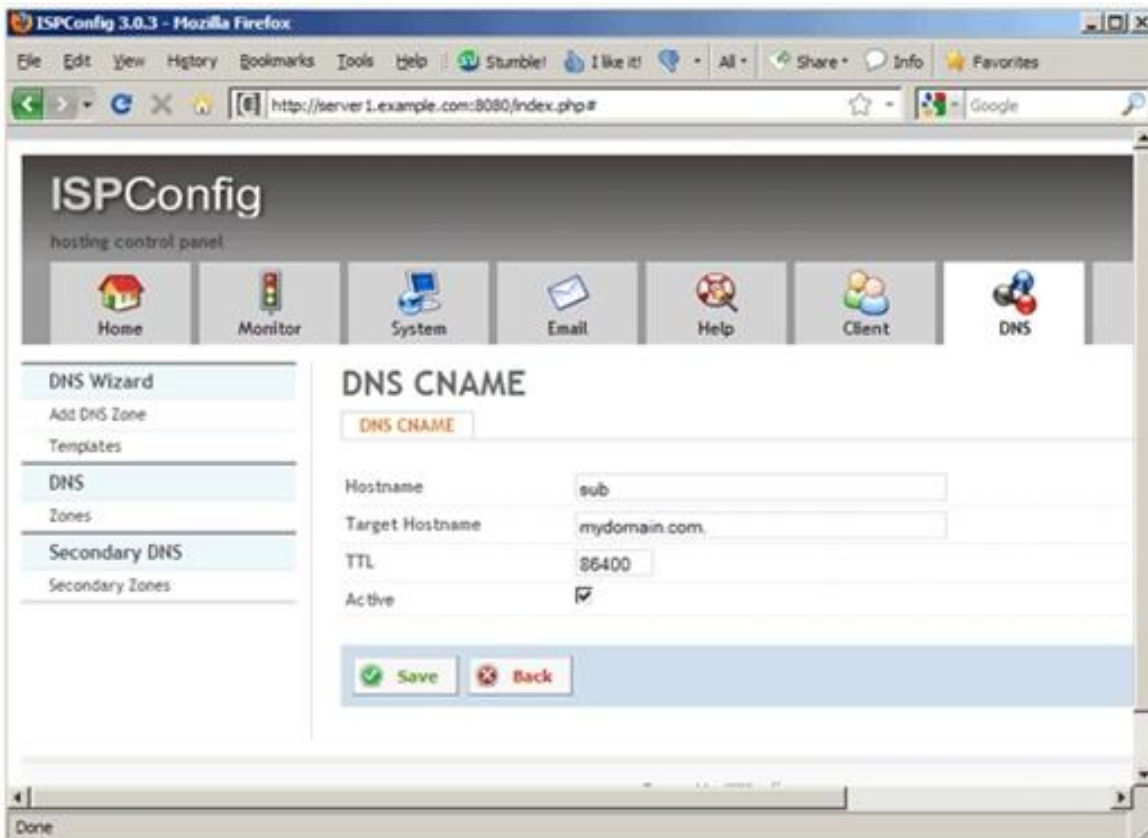
- foo
- foo.example.com.
- www

- `example.com.`
- You can also leave the field empty which has the same meaning as if you'd fill in `example.com`
- **Target Hostname** : The real name of the machine that the hostname in the Hostname field points to. Wildcard values such as `*` or `*.sub` are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

#### Examples:

- `porcini`
- `porcini.example.com.`
- **TTL**: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
- **Active** : This defines whether this CNAME record is active or not.





## HINFO Records

A HINFO record contains host information. The Host Information field should contain two strings which provide information about the host specified by Hostname . The first string specifies the CPU type, and the second string describes the operating system type. The two strings should be separated by a space. If either string needs to contain a space, enclose it in quotation marks.

Example: "Pentium Pro" Linux

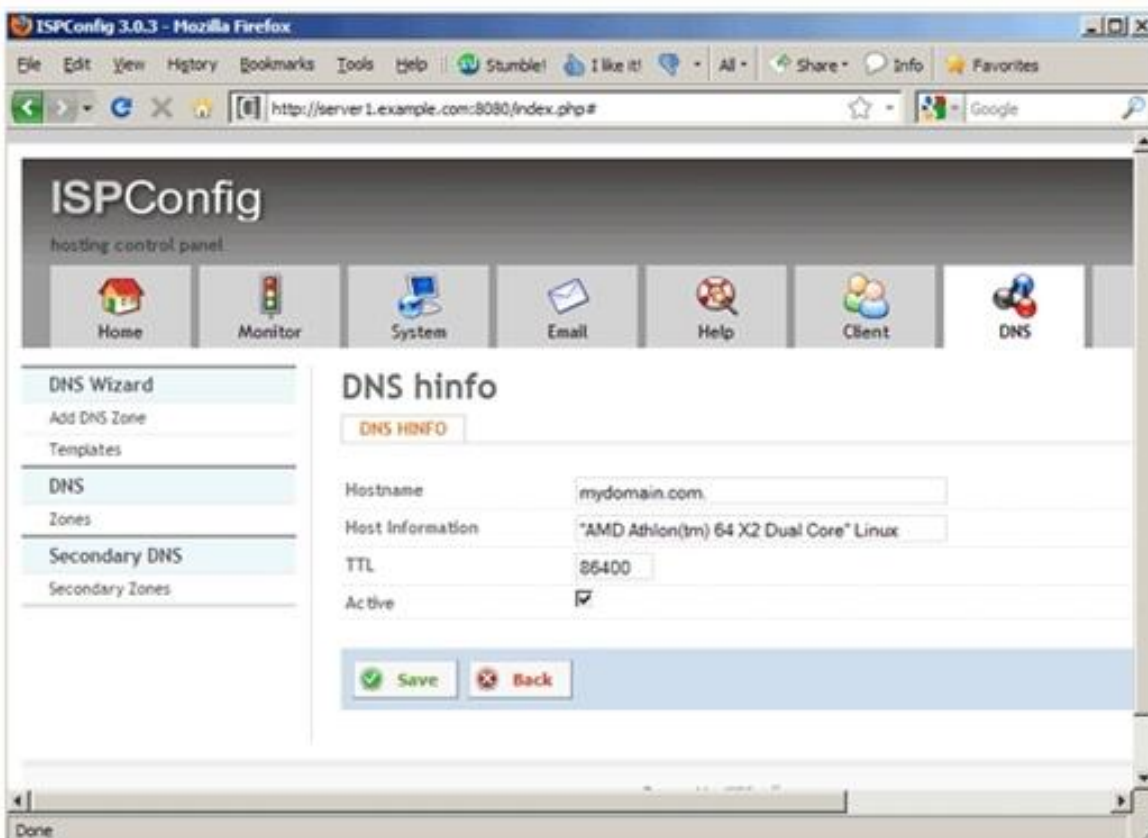
The form contains the following fields:

- Hostname : The name that this record describes. Wildcard values such as \* or \*.sub are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

Examples:

- foo
- foo.example.com.

- www
  - example.com.
  - You can also leave the field empty which has the same meaning as if you'd fill in example.com .
- Host Information : Specify two strings which provide information about the host specified by Hostname . The first string specifies the CPU type, and the second string describes the operating system type. The two strings should be separated by a space. If either string needs to contain a space, enclose it in quotation marks.
- Example: "Pentium Pro" Linux
- TTL: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
  - Active : This defines whether this HINFO record is active or not.



## MX Records

An MX record describes the mail exchanger for a domain or hostname. The Mailserv hostname field should contain the hostname or FQDN of a mail server which will accept mail for the host specified by Hostname . The Priority field should contain a preference for this mail server. Mail transfer agents prefer MX records with lower values in Priority

Example: mail.example.com (FQDN)

Example: mail (hostname only)

The form contains the following fields:

- **Hostname** : The name that this record describes. Wildcard values such as \* or \*.sub are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot. If you want email addresses of the form user@example.com , you must fill in example.com . in the Hostname field (or leave it empty); if you want email addresses of the form user@sub.example.com , you must fill in sub or sub.example.com . in the Hostname field.

Examples:

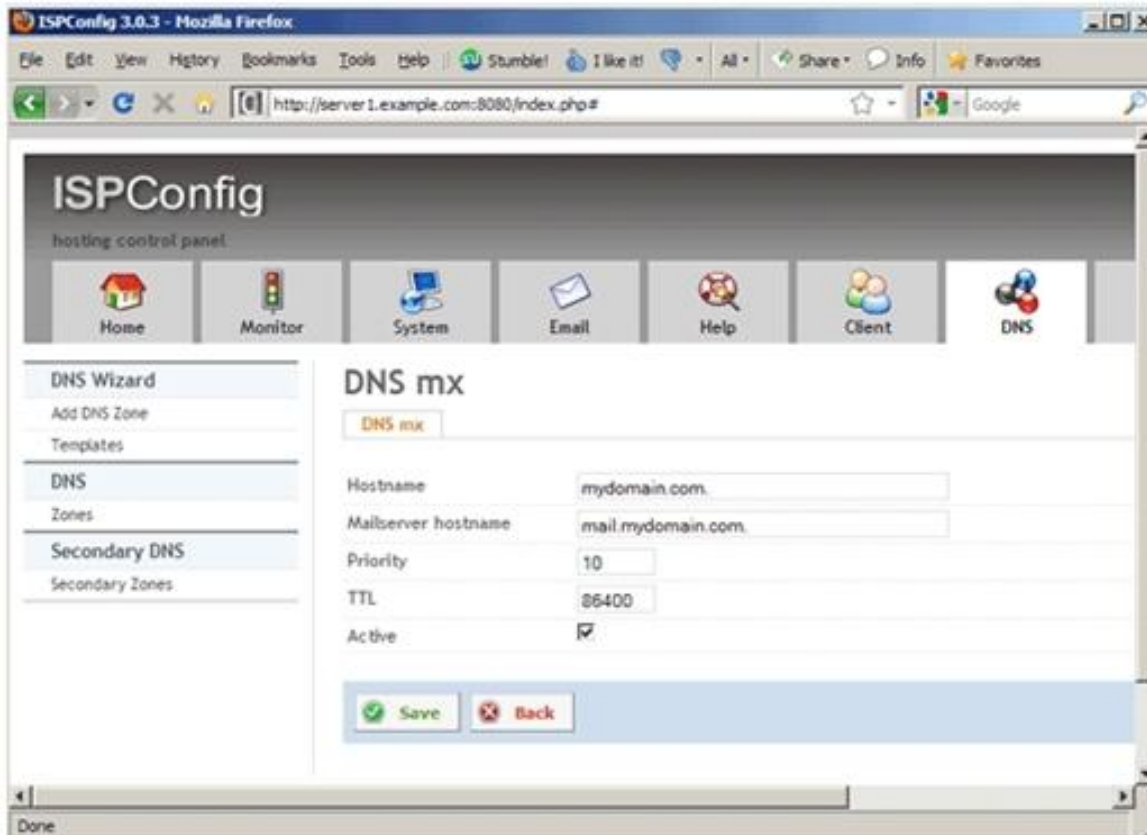
- foo
- foo.example.com.
- www
- example.com.
- You can also leave the field empty which has the same meaning as if you'd fill in example.com .
- **Mailserv hostname** : The Mailserv hostname field should contain the hostname or FQDN of a mail server which will accept mail for the host specified by Hostname . Please note that this Mailserv hostname must always be an A record - CNAME records are not allowed.

Examples:

- mail.example.com (FQDN)
- mail (hostname only)
- **Priority** : The Priority field should contain a preference for this mail server, usually between 0 and 100 . Mail transfer agents prefer MX records with lower values in Priority
- **TTL**: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record

can only be used for the transaction in progress, and should not be cached.

- Active : This defines whether this MX record is active or not.



## NS Records

An NS record describes an authoritative nameserver of a zone. A zone can have more than one authoritative nameserver (usually it has at least two so that if one nameserver fails, the zone can still be resolved from the other nameserver), so there can be multiple NS records. The Nameserver Hostname field should contain the hostname or FQDN of a server which should be considered authoritative for the zone listed in Zone .

Example: ns1.example.com (FQDN)

Example: ns1 (hostname only)

The form contains the following fields:

- Zone : Fill in the name of the zone, i.e., the domain.

### Examples:

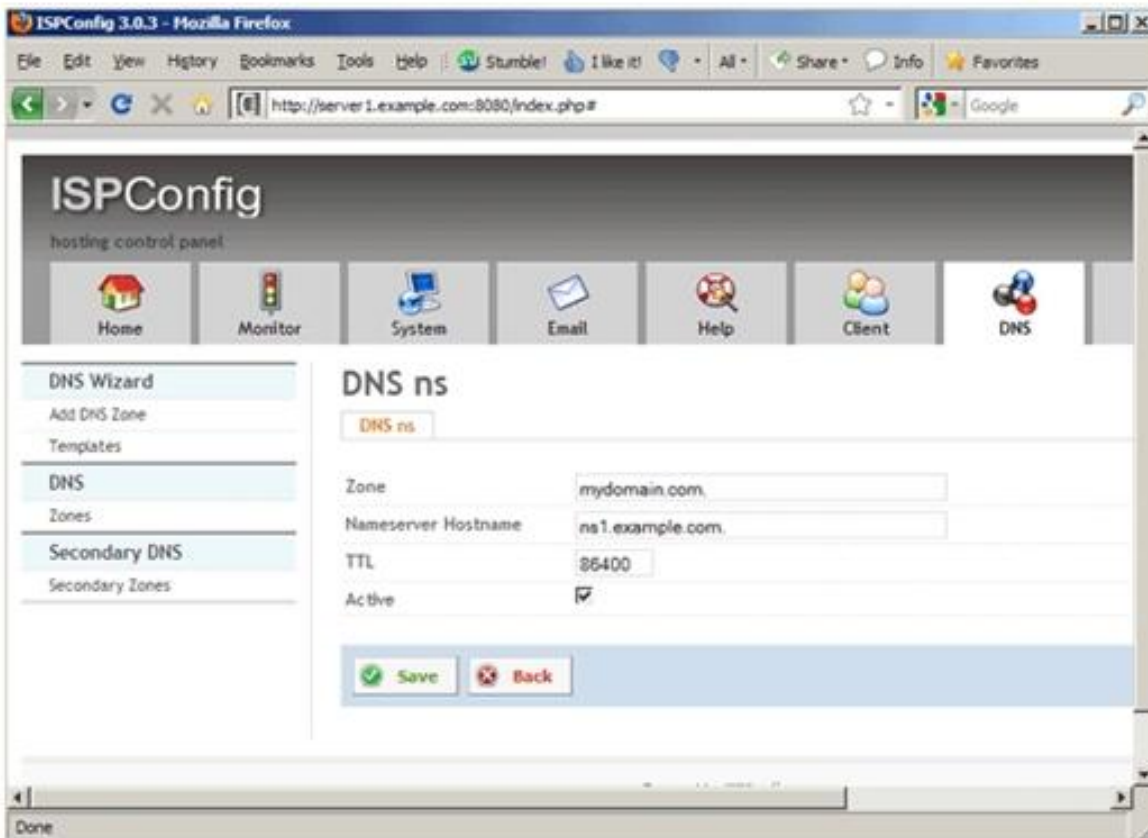
- example.com.
- You can also leave the field empty which has the same meaning as if you'd fill in example.com .
- Nameserver Hostname : The Nameserver Hostname field should contain the hostname or FQDN of a server which should be considered authoritative for the zone listed in Zone .

### Examples:

- ns1.somedomain.com . (FQDN)
- ns1.example.com . (FQDN)
- ns1 (hostname only)

If the nameserver is in the same zone (i.e., if the zone is example.com . and you fill in ns1.example.com . or just ns1 in the Nameserver Hostname field), you also need a [glue record](#) which you can usually create at your domain registrar.

- TTL: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
- Active : This defines whether this NS record is active or not.

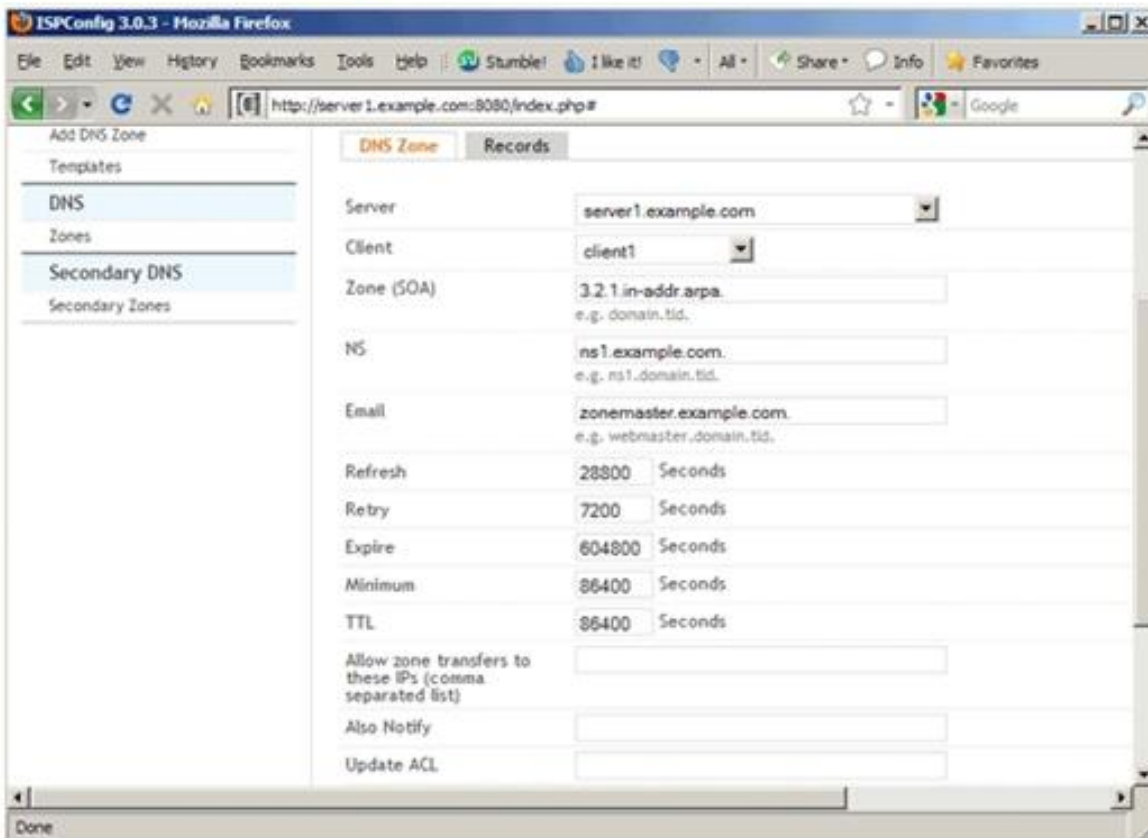


## PTR Records

A PTR record is a domain name pointer, i.e., it is used to point from an IP address to a domain or hostname. This is used for [reverse DNS lookups](#). These records, used only with IN-ADDR.ARPA zones, should contain the canonical hostname of the machine referred to in the Canonical Hostname field. Usually the administrator of an IP address/subnet (i.e., your ISP or hoster) creates these for you (or gives you a web interface where you can configure this yourself), so in most cases you can ignore this feature in ISPConfig (unless you're the administrator of your own IP addresses).

Example: webservers.example.com.

Now let's assume you're the administrator of the IP subnet 1.2.3/255.255.255.0 and want to create a PTR record for the IP address 1.2.3.4 that should point to www.example.com. First you create the DNS zone 3.2.1.in-addr.arpa (3.2.1 is our 1.2.3 subnet in reverse order) in ISPConfig...



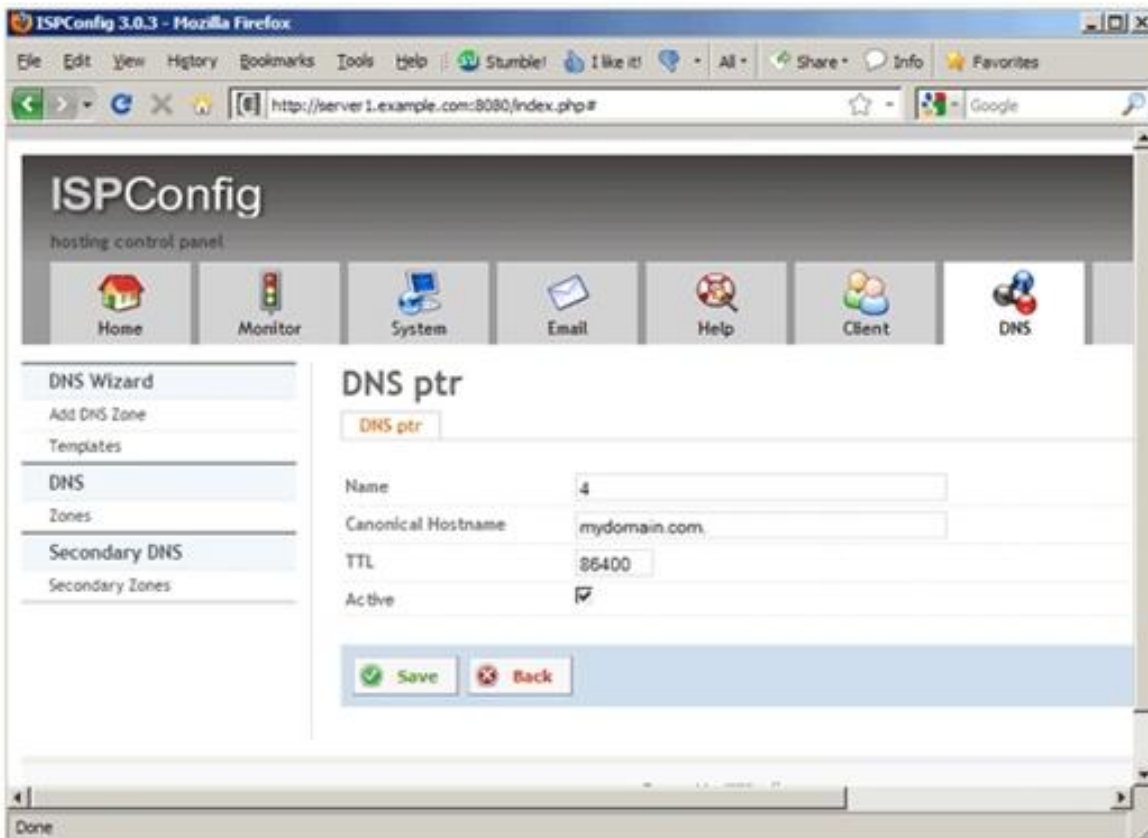
... and in this DNS zone you create a PTR record for the Name 4 (which is our IP address 1.2.3.4 ) which points to www.example.com .

The form contains the following fields:

- Name: Fill in the last part of your IP address. In our example of the 1.2.3.4 IP address, this would be 4 (without any dots).
- Canonical Hostname : Fill in the domain or hostname that this PTR record should point to. You must use fully qualified domain names here:

Examples:

- example.com . (FQDN)
- www.example.com . (FQDN)
- TTL: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
- Active : This defines whether this NS record is active or not.



## RP Records

An RP record describes a responsible person for a hostname. The Responsible Person field contains the DNS-encoded email address of the person responsible for the Hostname requested, then a space, then a hostname that should return a TXT record containing additional information about the responsible person. If there is no such TXT record, the second value should contain a dot (.).

Example: `webmaster.example.com .contactinfo.example.com .`

The form contains the following fields:

- **Hostname** : The name that this record describes. Wildcard values such as \* or \*.sub are supported, and this field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot. If you want email addresses of the form `user@example.com`, you must fill in `example.com.` in the Hostname field (or leave it empty); if you want email addresses of the form `user@sub.example.com`, you must fill in `sub` or `sub.example.com.` in the Hostname field.

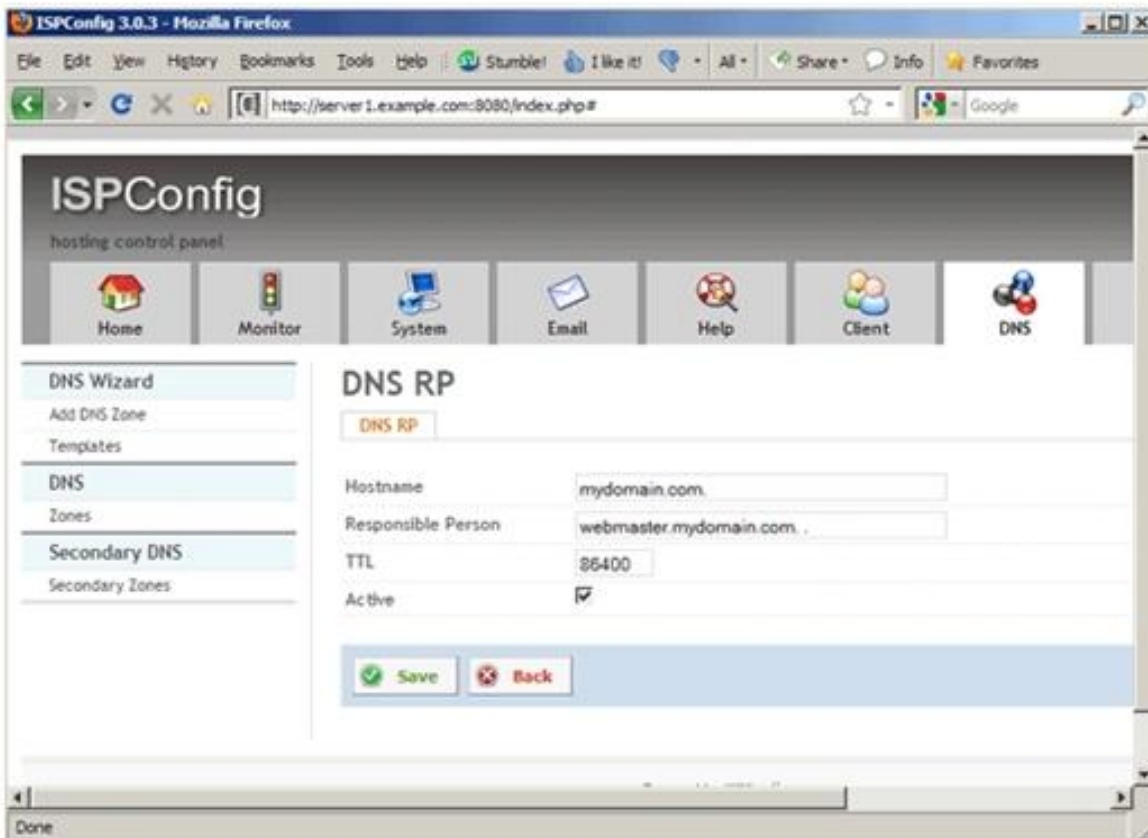
Examples:



- foo
  - foo.example.com.
  - www
  - example.com.
  - You can also leave the field empty which has the same meaning as if you'd fill in example.com .
- Responsible Person : The Responsible Person field contains the DNS-encoded email address of the person responsible for the Hostname requested, then a space, then a hostname that should return a TXT record containing additional information about the responsible person. If there is no such TXT record, the second value should contain a dot ( . ).

### Examples:

- webmaster.example.com . contactinfo.example.com . (This means the responsible person is webmaster@example.com , and there is a TXT record for the hostname contactinfo.example.com which contains additional information about webmaster@example.com . If no TXT record for contactinfo.example.com exists, create one.)
  - webmaster.example.com . . (If no such TXT record exists or you don't want to create one, just fill in a dot for the hostname.)
- TTL: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
- Active : This defines whether this RP record is active or not.



## SRV Records

Server location. SRV records specify the location of the server(s) for a specific protocol and domain. The Server Record field must contain three space-separated values. The first value is a number specifying the weight for this entry. The second field is a number specifying the port on the target host of this service. The last field is a name specifying the target host. The Priority field should contain the priority of this target host. Targets with a lower priority are preferred.

Some protocols such as SIP and XMPP require SRV records. SRV records have the form

`_service._proto.name TTL class SRV priority weight port target`

- `service` : The symbolic name of the desired service.
- `proto` : The transport protocol of the desired service; this is usually either TCP or UDP.
- `name`: The domain name for which this record is valid.
- `TTL`: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.

- `class` : Standard DNS class field (this is always `IN` ).
- `priority` : The priority of the target host, lower value means more preferred (similar to `MX` records).
- `weight` : A relative weight for records with the same priority.
- `port` : The TCP or UDP port on which the service is to be found.
- `target` : The canonical hostname of the machine providing the service.

E.g.

```
_sip._tcp.example.com. 86400 IN SRV 0 5 5060 sipserver.example.com.
```

SRV records allow you to achieve a basic form of high-availability and load-balancing (basic because information is static, i.e., current server loads are not taken into account). The priority field is similar to the one of `MX` record - clients use the server with the lowest priority value first and use other servers only if this server fails. This means you can have multiple SRV records and define a fallback server that is used only if the primary server fails by giving the fallback server a higher priority value than the primary server.

If there are multiple SRV records with the same priority, clients use the weight field to find out which host to use. The weight value is relevant only among records with the same priority.

Here's an example of basic high-availability and load-balancing with SRV records:

```
_sip._tcp.example.com. 86400 IN SRV 10 60 5060 server1.example.com.  
_sip._tcp.example.com. 86400 IN SRV 10 40 5060 server2.example.com.  
_sip._tcp.example.com. 86400 IN SRV 20 0 5060 server3.example.com.
```

In the above example, both `server1.example.com` and `server2.example.com` have a priority value of 10, so all requests will be shared by them, where `server1.example.com` gets 60% of the requests and `server2.example.com` gets the remaining 40% of the requests (because `server1.example.com` has a weight value of 60 and `server2.example.com` has a weight value of 40). If `server1.example.com` fails, all requests will go to `server2.example.com`. If both `server1.example.com` and `server2.example.com` fail, all requests will go to `server3.example.com` which has a priority value of 20.

For more information, read [RFC 2782](#) and [SRV Records on Wikipedia](#)

The form has the following fields:

- `Hostname` : The name that this record describes. This field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

### Examples:

- `_sip._tcp.example.com.`
- `_sip._tcp`

• **Server Record** : The **Server Record** field must contain three space-separated values. The first value is a number specifying the weight for this entry. The second field is a number specifying the port on the target host of this service. The last field is a name specifying the target host.

The target host can be an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

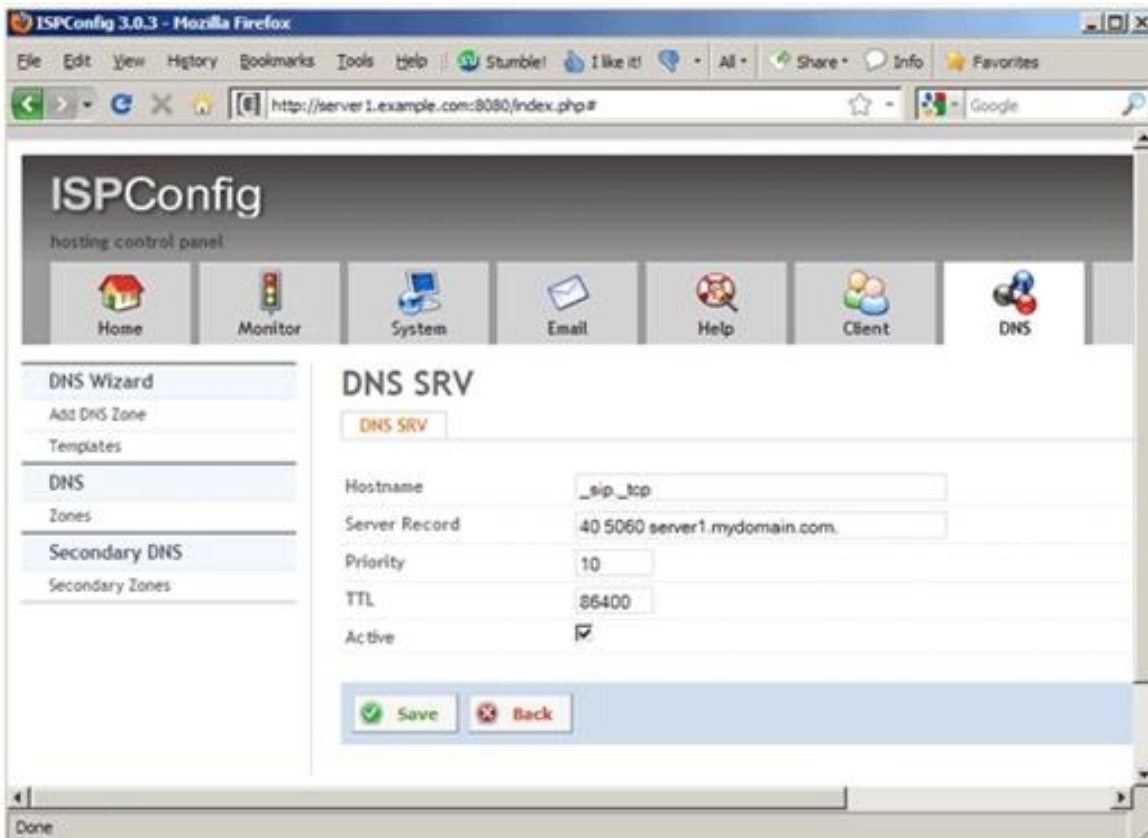
### Examples:

- `0 9 server.example.com .` (FQDN)
- `0 9 server` (hostname only)

• **Priority** : The **Priority** field should contain a preference for this SRV record, usually between 0 and 100 . Records with lower values are preferred.

• **TTL**: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.

• **Active** : This defines whether this SRV record is active or not.



## TXT Records

TXT records are used to give additional information about a hostname. The Text field contains a text string that is returned only when a TXT query is issued for the host specified by Hostname . TXT records can be used for [SPF records](#) .

The form contains the following fields:

- Hostname : The name that this record describes. This field can contain an FQDN or just a hostname. If you specify an FQDN, the name must end with a dot; if you specify just a hostname, it must not end with a dot.

Examples:

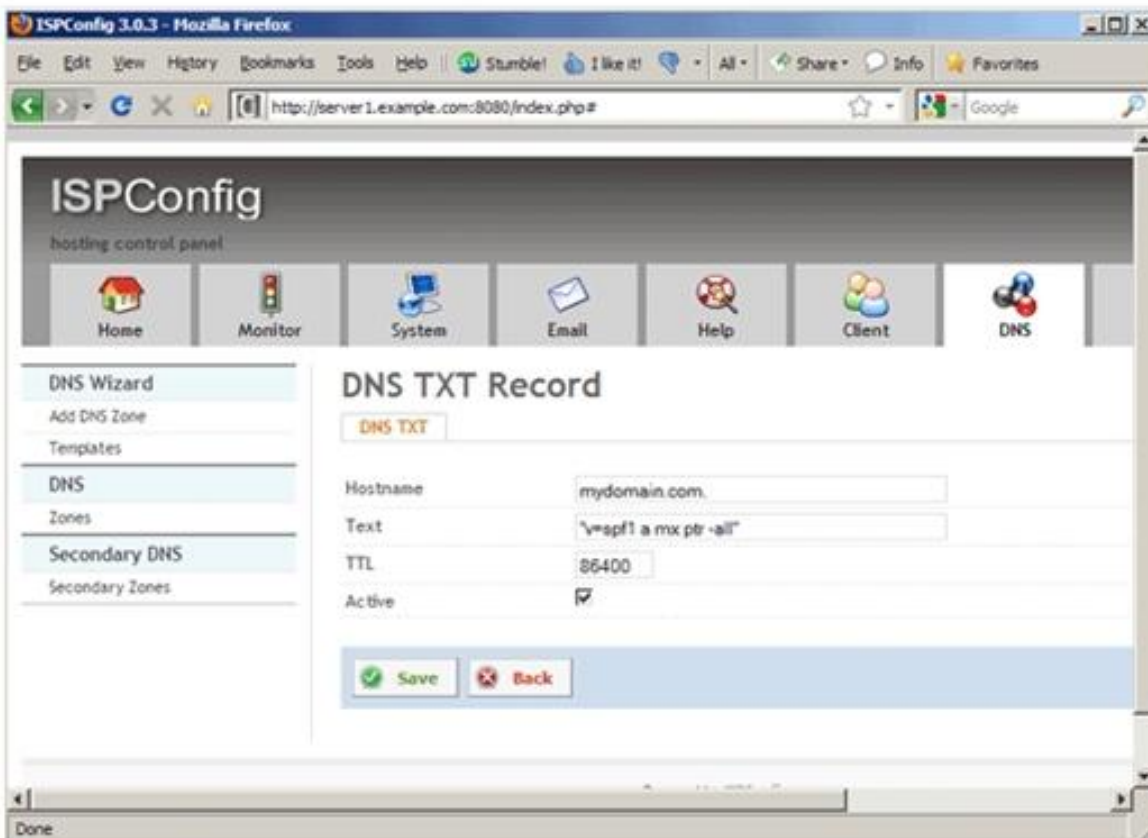
- server1.example.com.
- server1

- Text : The Text field contains a text string that is returned only when a TXT query is issued for the host specified by Hostname . TXT records can be used for [SPF records](#) . it must not end

with a dot.

Examples:

- "This is a string."
- "v=spf1 a mx ptr -all" (SPF record)
- TTL: The time interval (in seconds) that this record may be cached before the source of the information should again be consulted. Zero values are interpreted to mean that the record can only be used for the transaction in progress, and should not be cached.
- Active : This defines whether this TXT record is active or not.



## 4.8.3 Secondary DNS

### 4.8.3.1 Secondary Zones

(This feature is supported only if you use the BIND name server. If you use MyDNS, database replication will be used to transfer data to the secondary DNS server.)

Here you can create secondary (slave) zones, i.e., zones for which another server is the primary (master) nameserver. A slave zone will then automatically be transferred from the master to the slave, so that both servers hold the same information about the zone. If the master fails, the slave can still answer DNS requests.

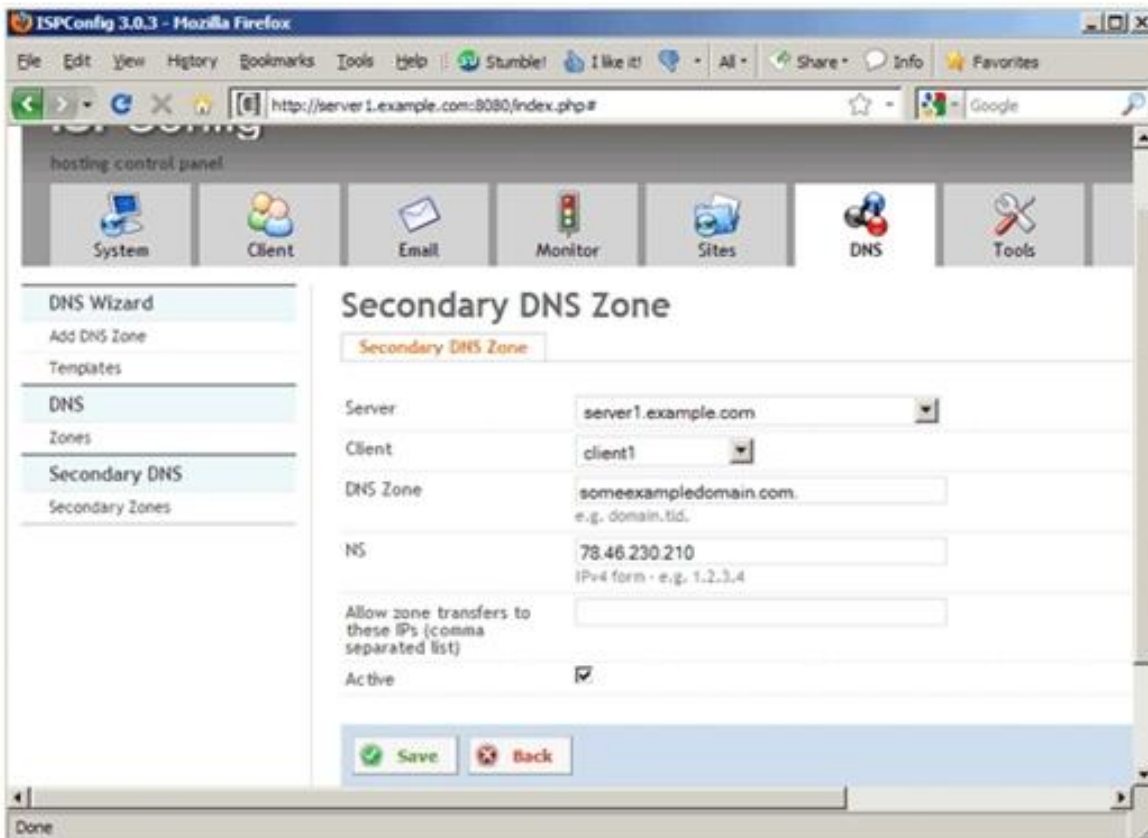
To create a new slave zone, click on the Add new secondary DNS Zone button. This will lead you to the Secondary DNS Zone form with the tab Secondary DNS Zone

## Secondary DNS Zone

### Secondary DNS Zone

The form has the following fields:

- Server : If more than one server is available, you can select the server on which the secondary DNS zone will be located.
- Client : Here you select the client that owns the new secondary DNS zone.
- DNS Zone : Fill in the domain for which you want to create the secondary zone, e.g. example.com . - please note that you need a dot at the end.
- NS: Specify the IPv4 address of the primary nameserver for the domain, e.g. 1.2.3.4
- Allow zone transfers to these IPs (comma separated list) : This field can contain one or more IP addresses separated by commas. These IP addresses will be allowed to connect to the server to transfer the zone. If no IP is specified, any server is allowed to connect. Usually, you can leave this field empty because all slave DNS servers for this zone should contact the master DNS server for the zone, not another slave server.
- Active : This defines whether this secondary DNS zone is active or not.



## 4.9 System

This is where you define the basic settings of the ISPConfig control panel (creating users, configuring services, IP addresses, firewall records, updating the system, etc.).

### 4.9.1 CP Users

Here you can create and modify users of the ISPConfig control panel. Please note that you should use these functions only to create or modify admin users. To create/edit normal ISPConfig users, use the client- and reseller settings in the Client module instead because modifying users or groups here may cause data loss. If you change modules or groups of existing users, these users might not be able to access their web site settings, email settings, etc. in ISPConfig anymore.

#### 4.9.1.1 Add user

Here you can create new ISPConfig users. The Users form has the tabs Users and Groups .



## Users

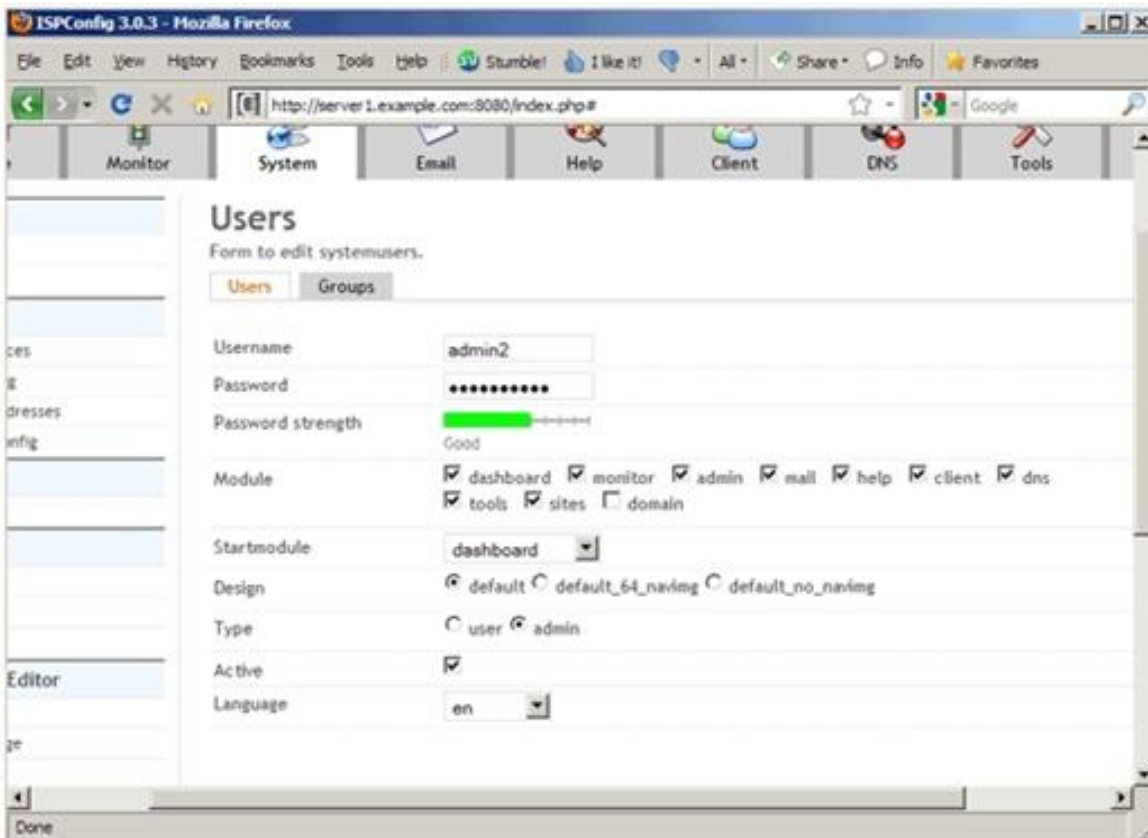
### Users

The form has the following fields:

- Username : Fill in the username of the new user.
- Password : Type in a password for the ISPConfig user. The Password strength field will show how weak or strong your password is. A strong password should include numbers, symbols, upper and lowercase letters; password length should be 8 characters or more; avoid any password based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names, or biographical information.
- Module : Select the modules that will be available for the user:
  - sites : This enables the Sites module.
  - mail : This activates the Email module.
  - monitor : This refers to the Monitor module.
  - admin : This is the System module (i.e., the module that we are currently in).
  - dashboard : This refers to Home.
  - dns : This is the DNS module.
  - help : This activates the Help module.
  - domain : This enables the Domain module. This makes sense only if you also check the Use the domain-module to add new domains checkbox on the Domains tab under System > System > Interface Config . If you use this module, your customers can only select one of the domains the admin creates for them. They can not freely edit the domain field.
  - client : This enables the Client module.
  - tools : This is the Tools module.

You can select multiple modules for each user.

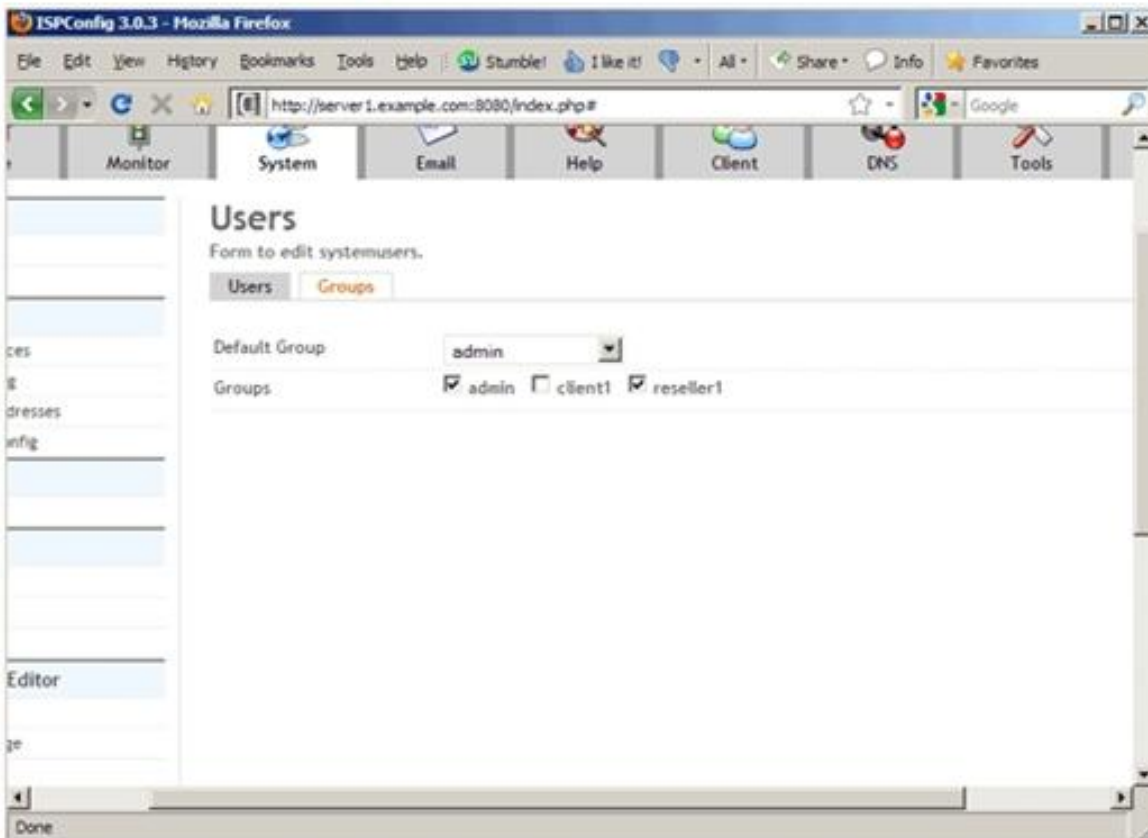
- Startmodule : Select the module that will automatically be loaded when the user logs into ISPConfig.
- Design : Select the theme of the ISPConfig interface.
- Type : Please select if this is a normal user account or an admin account.
- Active : This defines whether this ISPConfig user account is active or not.
- Language : Select the language in which ISPConfig will be loaded for the user.



## Groups

The form has the following fields:

- **Default Group** : This defines the group to which items created by the user (web sites, email accounts, etc.) will belong (unless a different group is selected when the item is created). Selecting a default group does not necessarily mean that the user is also a member of the group - you must check that group in the following form item, Groups , to make the user also a member of the default group.
- **Groups** : Check all groups that the user account should be a member of. Make sure that you also check the group that you selected under Default Group to make the user a member of that group.



#### 4.9.1.2 Edit user

Here you can edit existing users. The form has the same tabs and fields as under Add user

### 4.9.2 System

#### 4.9.2.1 Server Services

All servers that are listed here are added by the ISPConfig installer, i.e., you cannot add new servers here yourself. ISPConfig allows you to control multiple servers from just one control panel, and all servers that are listed here are controlled by ISPConfig. If you want to add another server to ISPConfig, you have to run the ISPConfig installer in expert mode on the remote server and tell the installer that the server will be a slave.

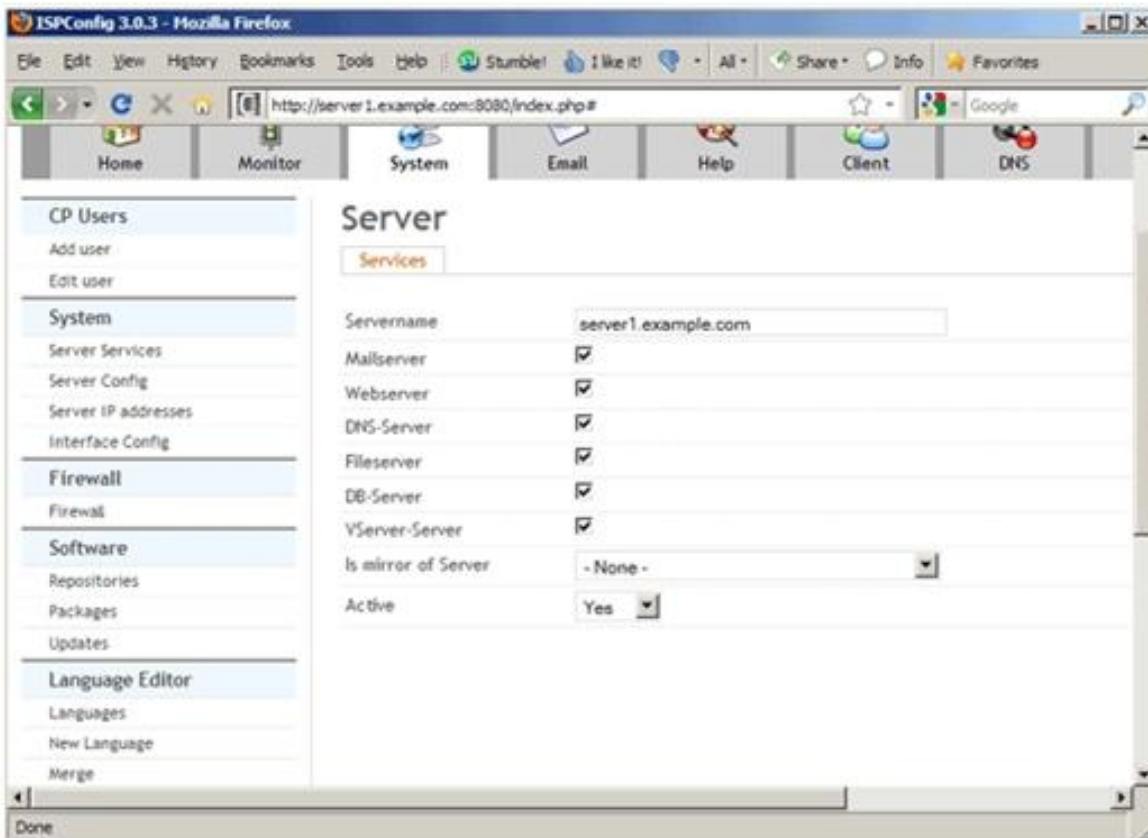
Although you cannot add servers here yourself, you can modify them from here by selecting a server. This will bring you to the Server form with the tab Services

## Server

### Services

The form has the following fields:

- **Servename** : Specify the hostname of the server. Example: server1.example.com
- **Mailserver** : This specifies if this server acts as a mail server (i.e., you can use the Email module to create email accounts etc. on this server).
- **Webserver** : This specifies if this server acts as a web server (i.e., you can use the Sites module to create web sites etc. on this server).
- **DNS-Server** : This specifies if this server acts as a DNS server (i.e., you can use the DNS module to create DNS zones etc. on this server).
- **Fileserver** : If this server acts as a web server, you should also enable Fileserver for this server so that FTP access is possible.
- **DB-Server** : This specifies if it will be able to create databases (in the Sites module) on this server.
- **VServer-Server** : If you check this, it will be possible to create OpenVZ virtual machines on this server (this will be possible from version 3.0.4 of ISPConfig).
- **Is mirror of Server** : If you have specified that this server is a slave of another server during the ISPConfig installation, this server can have two roles: it can act as a full-fledged server, i.e., you can create web sites, email accounts, etc. on this server just like on the main server, or it can act as a mirror of another server - in this case you cannot create any items on that server (this server cannot be selected when you create a new item), but instead the configuration (web site configuration, email configuration, etc.) will be copied to the mirror (just the configuration, not any web site contents, etc. - if you want this, you can achieve this by using [rsync](#) or using a cluster filesystem like [GlusterFS](#) or some kind of network-attached storage, and you'd have to use one of these techniques on the directories `/var/www` for the web sites' contents and `/var/vmail` for the emails - for MySQL databases, you'd have to use [MySQL master-master replication](#)). If you select a master server in the Is mirror of Server field, the server for which you select the master will act as a mirror, not as a full-fledged server. If you have a failover-IP address that you can switch between the master and the mirror (e.g. automatically with [heartbeat/keepalived](#) /etc. or manually, e.g. from your hoster's control panel), you can achieve high-availability because if the master fails, the mirror can take over.
- **Active** : This defines whether this server is active or not.



#### 4.9.2.2 Server Config

All servers that are listed here are added by the ISPConfig installer, i.e., you cannot add new servers here yourself. ISPConfig allows you to control multiple servers from just one control panel, and all servers that are listed here are controlled by ISPConfig. If you want to add another server to ISPConfig, you have to run the ISPConfig installer in expert mode on the remote server and tell the installer that the server will be a slave.

Although you cannot add servers here yourself, you can modify them from here by selecting a server. This will bring you to the Server Config form with the tabs Server, Mail, Getmail, Web, DNS, FastCGI, Jailkit, vlogger, and Cron.

Please note that you shouldn't modify these settings unless you know exactly what you're doing - changes in paths etc. might stop the system from working!

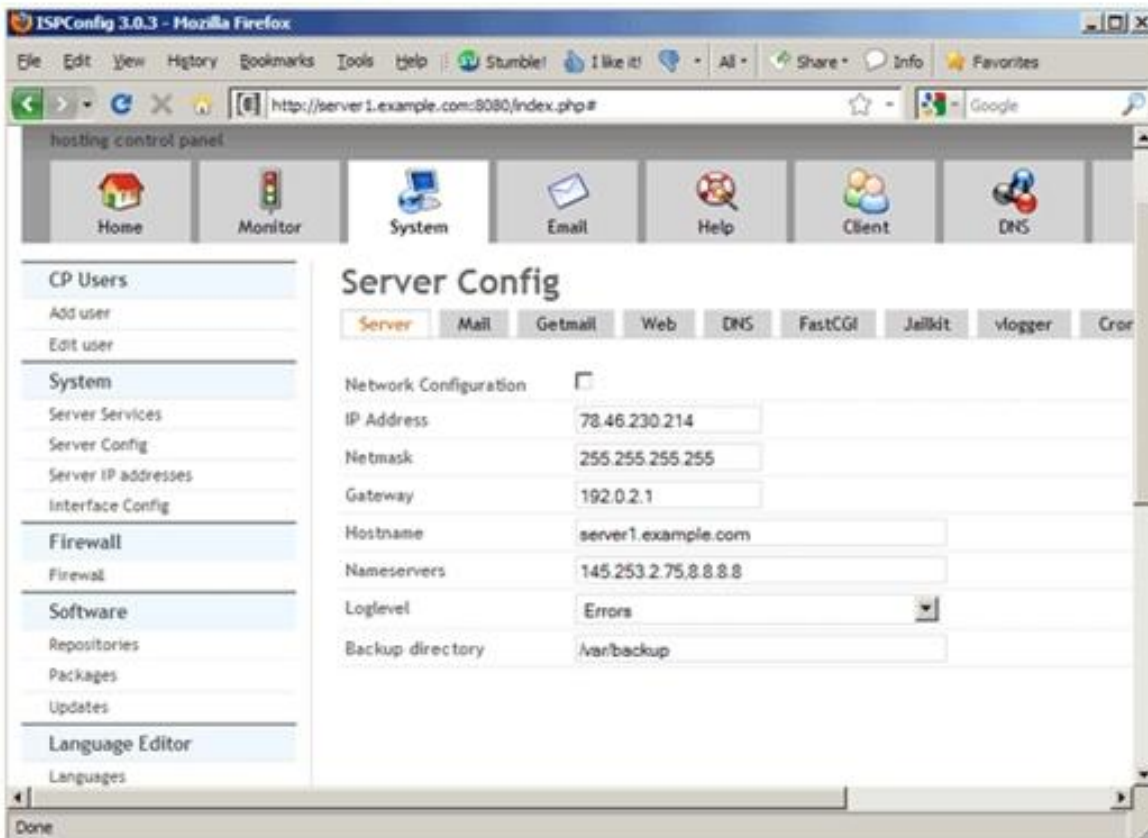
## Server Config

### Server

On this tab you can configure some basic network settings for the server plus the loglevel for the ISPConfig log (under Monitor > System State (All Servers) > Show System-Log ) plus the backup directory for web site backups.

The form has the following fields:

- Network Configuration : If you check this, ISPConfig will automatically configure your system with the network settings from the IP Address , Netmask , Gateway , Hostname , and Nameservers fields. It will also automatically configure all IP addresses that are defined under System > System > Server IP addresses . Please note that this automatic network configuration works only on Debian/Ubuntu and only if you have one network card which must be eth0. It is recommended to not check this checkbox and configure your network settings manually.
- IP Address : Specify the IPv4 address of this server. Example: 1.2.3.4
- Netmask : Type in the server's netmask. Example: 255.255.255.0
- Gateway : Fill in the server's gateway.
- Hostname : Type in the server's fully-qualified hostname. Example: server1.example.com
- Nameservers : Fill in the IP addresses of nameservers that this server will use to do DNS lookups. You can specify multiple nameservers by separating them with a comma. These should be the nameservers from /etc/resolv.conf . Example: 145.253.2.75,8.8.8.8
- Loglevel : Select the loglevel for the ISPConfig log (under Monitor > System State (All Servers) > Show System-Log ).
  - Debug: This loglevel will log all output from ISPConfig, including warnings and errors. As the name says, this is usefull for debugging.
  - Warnings : This loglevel will log ISPConfig warnings and errors.
  - Errors : This loglevel will just log ISPConfig errors. Recommended for production systems.
- Backup directory : This is the directory where web site backups will be stored. The default directory is /var/backup



## Mail

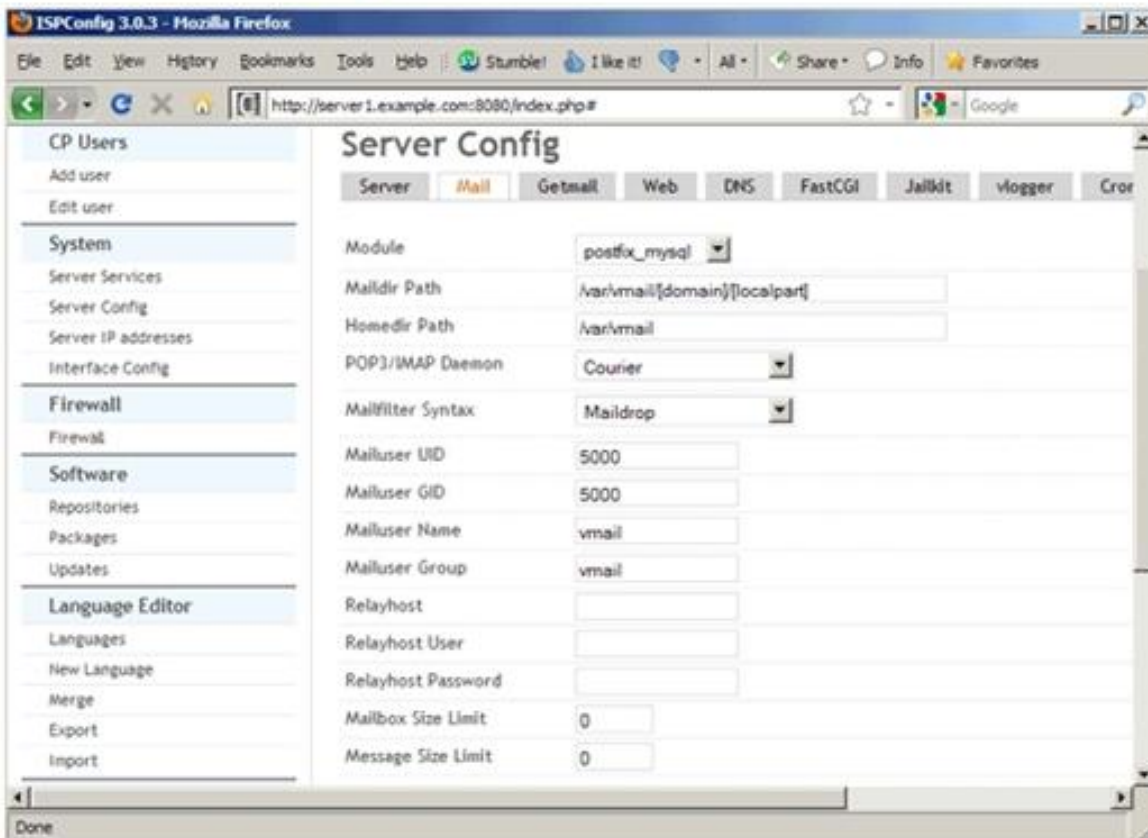
On this tab you can configure the general mail settings for the server. The form has the following fields:

- **Module** : Select the mail module that the server should use. Currently only postfix\_mysql is supported.
- **Maildir Path** : This defines where users' mailboxes will be located. The default path is `/var/vmail/[domain]/[localpart]`. `[domain]` is a placeholder for the mail domain and `[localpart]` is a placeholder for the local part of an email address. Example: if your email address is `user@example.com`, the Maildir path would be `/var/vmail/example.com/user`. Please note that Maildir Path should be a subdirectory of Homedir Path - otherwise the mail system will probably stop to work.
- **Homedir Path** : This is the home directory of Mailuser Name. The default directory is `/var/vmail`. If you use maildrop, this is the directory where the mailfilter file will be located.
- **POP3/IMAP Daemon** : Select your POP3/IMAP daemon. Supported POP3/IMAP daemons are Courier and Dovecot.
- **Mailfilter Syntax** : Select the mailfilter to use. If you use Courier, you must select Maildrop ;

if you use Dovecot, you must select Sieve . Depending on what you select, you must use Maildrop or Sieve syntax if you define custom filter rules for an email mailbox (Email > Email Mailbox > Custom Rules ). If you create mailfilters under Email > Email Mailbox > Mail Filter , the system will automatically translate them into Maildrop or Sieve syntax depending on your selection here.

- Mailuser UID : This is the user ID of the system user defined under Mailuser Name
- Mailuser GID : This is the group ID of the system group defined under Mailuser Group
- Mailuser Name : This is the system user name of the user under which the virtual mail setup runs. Default value: vmail
- Mailuser Group : This is the system group name of the group under which the virtual mail setup runs. Default value: vmail
- Relayhost : If you want to [relay](#) outgoing mails through another mailserver (for example, because your server is on a dynamic IP and therefore blacklisted), you can use the Relayhost , Relayhost User , and Relayhost Password fields for this. Fill in the hostname or IP address of the server through which you want to relay in the Relayhost field. If you use an IP address, put it in square brackets ([ ]) to prevent DNS lookups. Examples: mail.yourisp.com , [1.2.3.4] . Leave the field empty if you don't want to relay.
- Relayhost User : Fill in the username that can be used to log in on the relayhost .
- Relayhost Password : Fill in the password of the relayhost user on the relayhost.
- Mailbox Size Limit : This defines the max. size (in bytes) that a single mailbox can have on this server. 0 means unlimited.
- Message Size Limit : This defines the max. size (in bytes) that a single email can have on this server. 0 means unlimited.



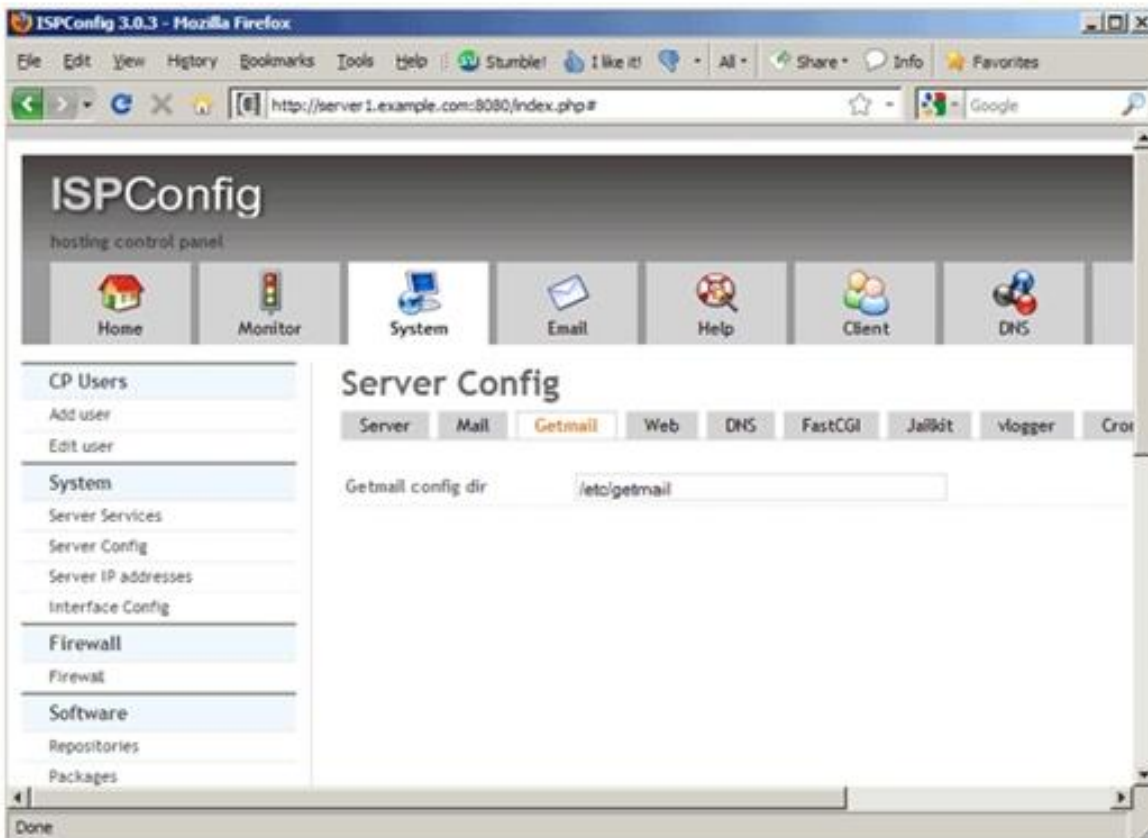


## Getmail

Here you can configure getmail. Getmail is the service that fetches emails from remote servers; it is used if you define accounts under Email > Fetchmail > Fetchmail

The form has the following field:

- Getmail config dir : This is the directory where getmail expects its configuration.



## Web

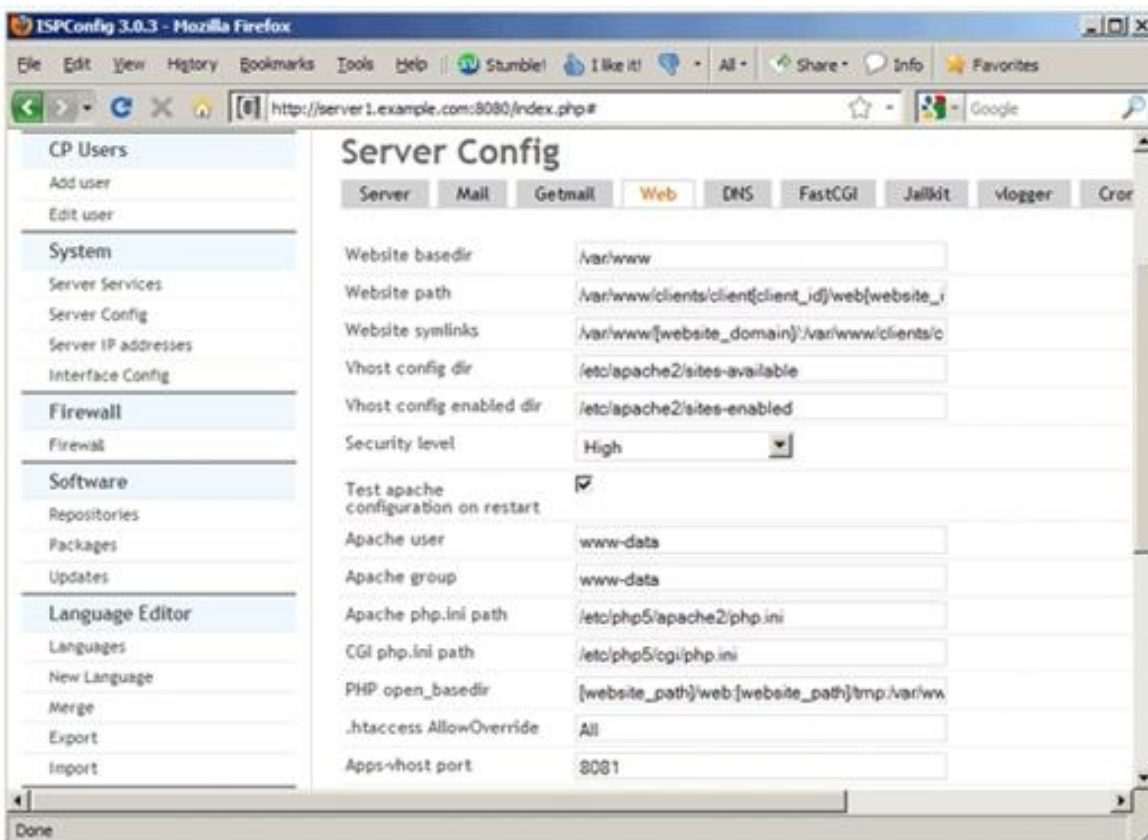
On this tab you can configure various settings for Apache, PHP, AWStats, etc. The form has the following fields:

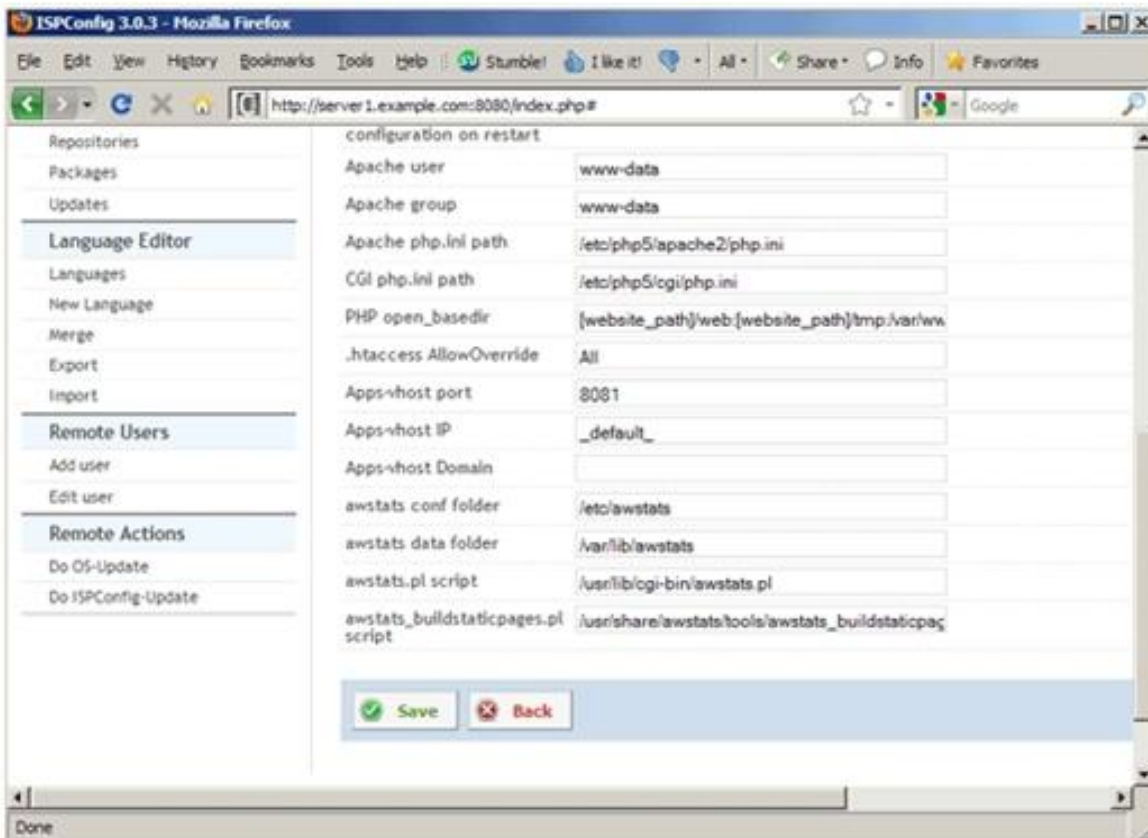
- **Website basedir** : This is the directory where all web sites will be created (in subdirectories). Usually this is the value of `AP_DOC_ROOT` from the output of `suexec -V` or `suexec2 -V` so that `suEXEC` can be used in the web sites (`/var/www` on Debian/Ubuntu/Fedora/CentOS, `/srv/www` on OpenSUSE). (The `suEXEC` feature provides Apache users the ability to run CGI and SSI programs under user IDs different from the user ID of the calling web-server.)
- **Website path** : This is the actual path where new web sites will be created (this is not the actual document root of the web site - this will be the subdirectory `web` in `Website path` ). This should be a subdirectory of `Website basedir` . You can use the placeholders `[client_id]` and `[website_id]` which will be replaced by the IDs of the client and web site respectively.
- **Website symlinks** : ISPConfig can create symlinks to `Website path` so that it is easier to navigate to `Website Path` on the command line. You can use the placeholder `[website_domain]` which will be replaced by the domain of the web site (e.g. `example.com` ). You can define multiple symlinks by separating them with a colon (`:`) (don't use spaces).

- **Vhost config dir** : This is the directory where ISPConfig will place the vhost configuration files for each web site. This does not automatically enable the vhost because Apache doesn't read that directory. To enable a vhost, it must be symlinked to another directory which is read by Apache (see **Vhost config enabled dir** ).
- **Vhost config enabled dir** : This is a directory that is read by Apache and to which vhost configuration files must be symlinked to enable the vhost.
- **Security level** : This defines how permissions and ownerships are set for the Website path directory.
  - **Medium**: The directory is owned by root and readable for all users.
  - **High** : The directory is owned by the web site user and cannot be read by other users. It is recommended to choose High .
- **Apache user** : This is the user under which the Apache web server runs.
- **Apache group** : This is the group under which the Apache web server runs.
- **Apache php.ini path** : This is the full php.ini path for the php.ini file used by Apache's mod\_php.
- **CGI php.ini path** : This is the full php.ini path for the php.ini used by FastCGI, CGI, and suPHP.
- **PHP open\_basedir** : This setting limits the files that can be opened by PHP to the specified directory-tree, including the file itself. This directive is NOT affected by whether Safe Mode is turned On or Off. You can use the placeholder [website\_path] which will be replaced by the path that is set in the Website path field. You can define multiple directories by separating them with a colon (:) (don't use spaces).
- **.htaccess AllowOverride** : This setting specifies what types of directives are allowed in .htaccess files. Possible values: All|None|AuthConfig|FileInfo|Indexes|Limit| Options[= Option ,...] See <http://httpd.apache.org/docs/2.2/mod/core.html#allowoverride> for more details.
- **Apps-vhost port** : ISPConfig allows to install software packages ("apps" - applications) such as phpMyAdmin or Roundcube via the ISPConfig Package Installer (System > Software > Packages ). These apps will be installed in the /var/www/apps directory and can be accessed over their own vhost. Specify the port that you want to use for this vhost (default is 8081 - the vhost could then be accessed over http://example.com:8081 ). Please do not use a port that is already in use (such as 80 (http) or 443 (https)).
- **Apps-vhost IP** : Specify an IPv4 address that is configured on your server on which the vhost will listen. It is also possible to use \_default\_ (meaning a request to an unspecified address on the Apps-vhost port is served from the apps vhost) or a wildcard (\* - meaning requests on all addresses on the port specified by Apps-vhost port will be served by the apps vhost).
- **Apps-vhost Domain** : Specify the domain that you want to use to access the apps vhost.

Examples: example.com (-> http://example.com:8081 ), apps.example.com (-> http://apps.example.com:8081 ), www.example.com (-> http://www.example.com:8081 ).  
 Leave this field empty to use any address (domain, hostname, IP address) that points to the server.

- awstats conf folder : This specifies the directory where the web site statistics package [AWStats](#) expects its configuration files. This field is meaningless if you use [Webalizer](#) instead of AWStats.
- awstats data folder : This specifies the directory where AWStats creates its data files (from which the reports will be created).
- awstats.pl script : This specifies the location of the awstats.pl script on the server.
- awstats\_buildstaticpages.pl script : This specifies the location of the awstats\_buildstaticpages.pl script on the server. This script creates static HTML pages with statistics - these will be generated once a day (at 0.30h) and are available in the /stats folder of your web site (e.g. http://www.example.com/stats ).



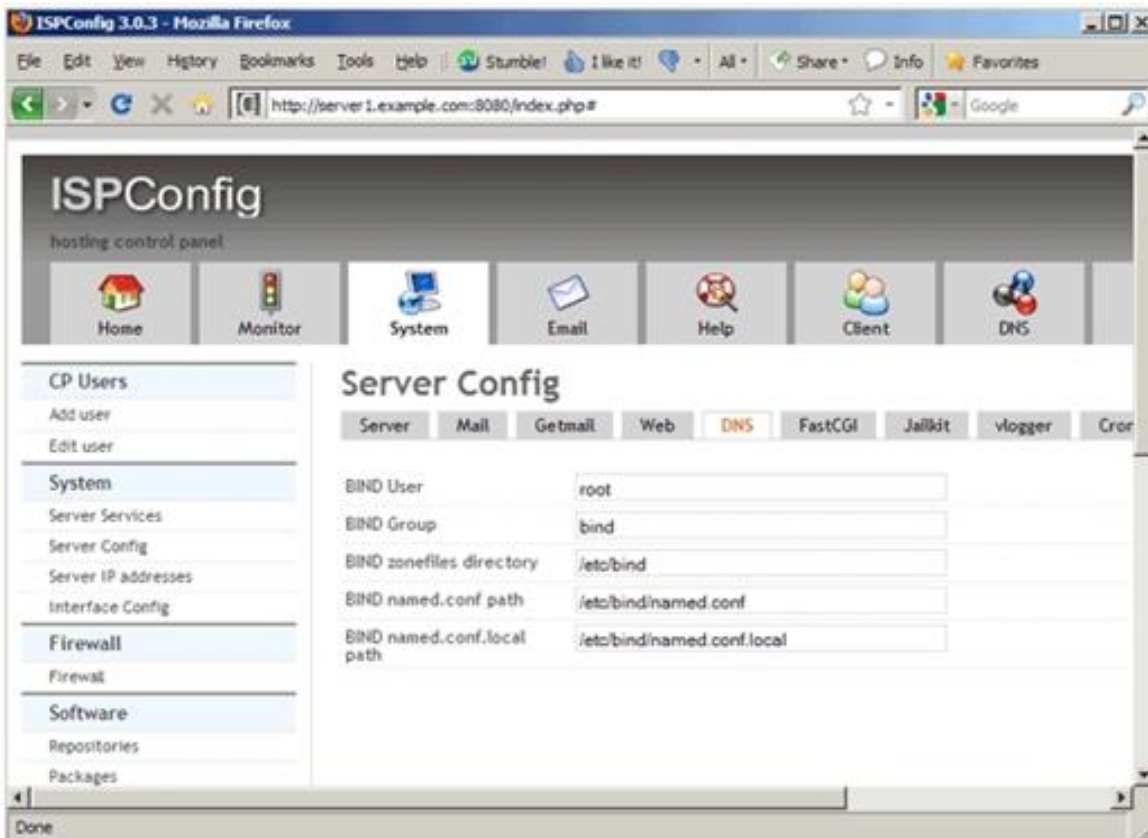


## DNS

If you use the BIND nameserver (instead of MyDNS), you can configure basic BIND settings on this tab.

The form has the following fields:

- BIND User : This is the system user that BIND runs under.
- BIND Group : This is the system group that BIND runs under.
- BIND zonefiles directory : This is the directory where BIND will place its zone files (Debian: /etc/bind ).
- BIND named.conf path : This is the location where BIND expects its configuration file named.conf (Debian: /etc/bind/named.conf ).
- BIND named.conf.local path : This is the location of the named.conf.local file that is included in named.conf and which includes the zone files created by ISPConfig.



## FastCGI

On this tab you can configure basic FastCGI settings that are relevant if you use PHP via FastCGI.

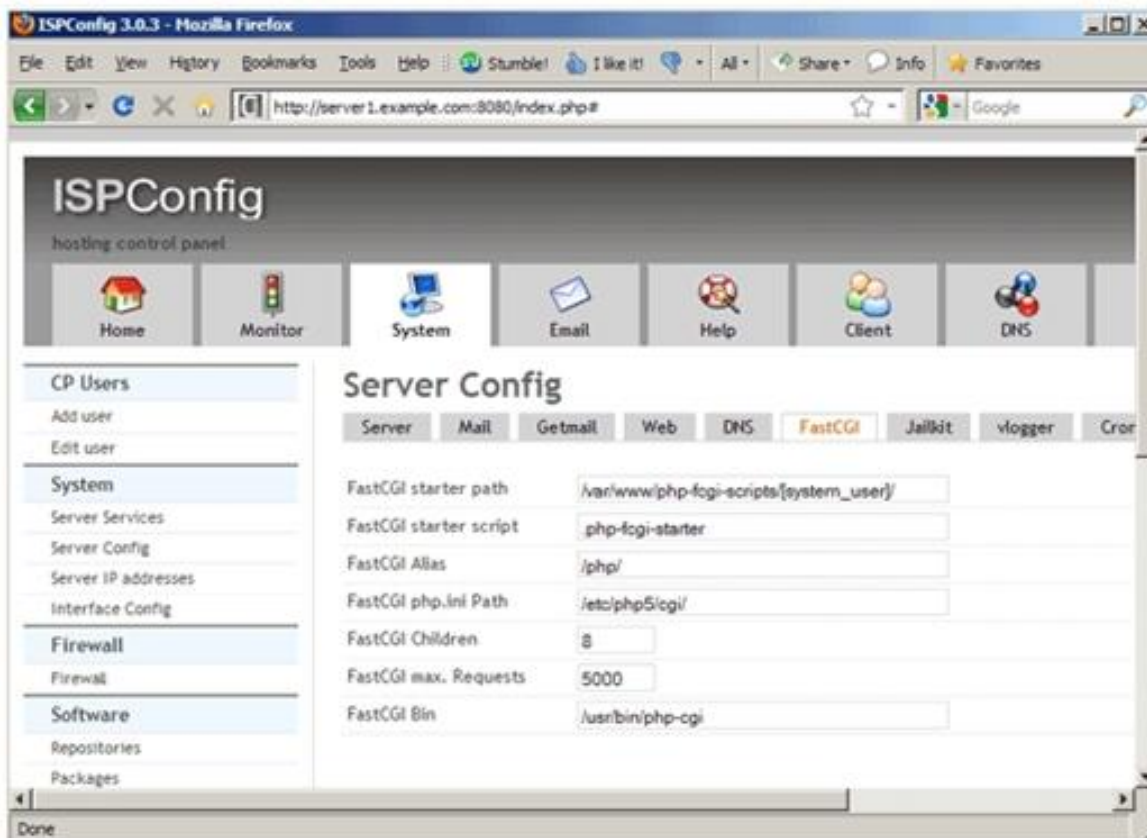
The form has the following fields:

- FastCGI starter path : We will run PHP using suExec; suExec's document root is `/var/www` (Debian/Ubuntu/Fedora/CentOS) or `/srv/www` (OpenSUSE). Therefore we cannot call the PHP binary directly because it is located outside suExec's document root. As suExec does not allow symlinks, the only way to solve the problem is to create a wrapper script for each web site in a subdirectory of `/var/www` or `/srv/www`; the wrapper script will then call the PHP binary. In this field you can specify the directory (should be a subdirectory of `/var/www` or `/srv/www`) where the wrapper script will be located. You can use the placeholder `[system_user]` which will be replaced by the system user that owns the web site, e.g. `web1`.
- FastCGI starter script : This is the name of the FastCGI wrapper script. Example: `.php-fcgi-starter`
- FastCGI Alias : (not in use right now; see <http://www.fastcgi.com/docs/faq.html#FastCGIExternalServer> for more details.) Since all FastCGI directives are global (they are not configured in a server context), all FastCGI paths

map to the filesystem. In the case of external servers, this path does not have anything to do with the file system; it is a virtual file system path. Since the connection between mod\_fastcgi and the FastCGI app is by a socket (unix or tcp), mod\_fastcgi does not care where the program is (it could be on a completely different machine). However, mod\_fastcgi needs to know when a hit is calling for an external app, so it uses this path as if it were a local filesystem path. Apache translates a request URI to a filesystem path.

Example: FastCGIExternalServer /var/www/htdocs/extprog -host 127.0.0.1:9000

- FastCGI php.ini Path : This is the full php.ini path for the php.ini used by FastCGI.
- FastCGI Children : This defines the number of PHP children that will be launched. (This variable is only useful for lighttpd or nginx as Apache mod\_fcgi will control the number of children itself and never use the additional processes.)
- FastCGI max. Requests : This is the maximum number of requests before an fcgid process is stopped and a new one is launched.
- FastCGI Bin : This is the path to the FastCGI PHP binary.



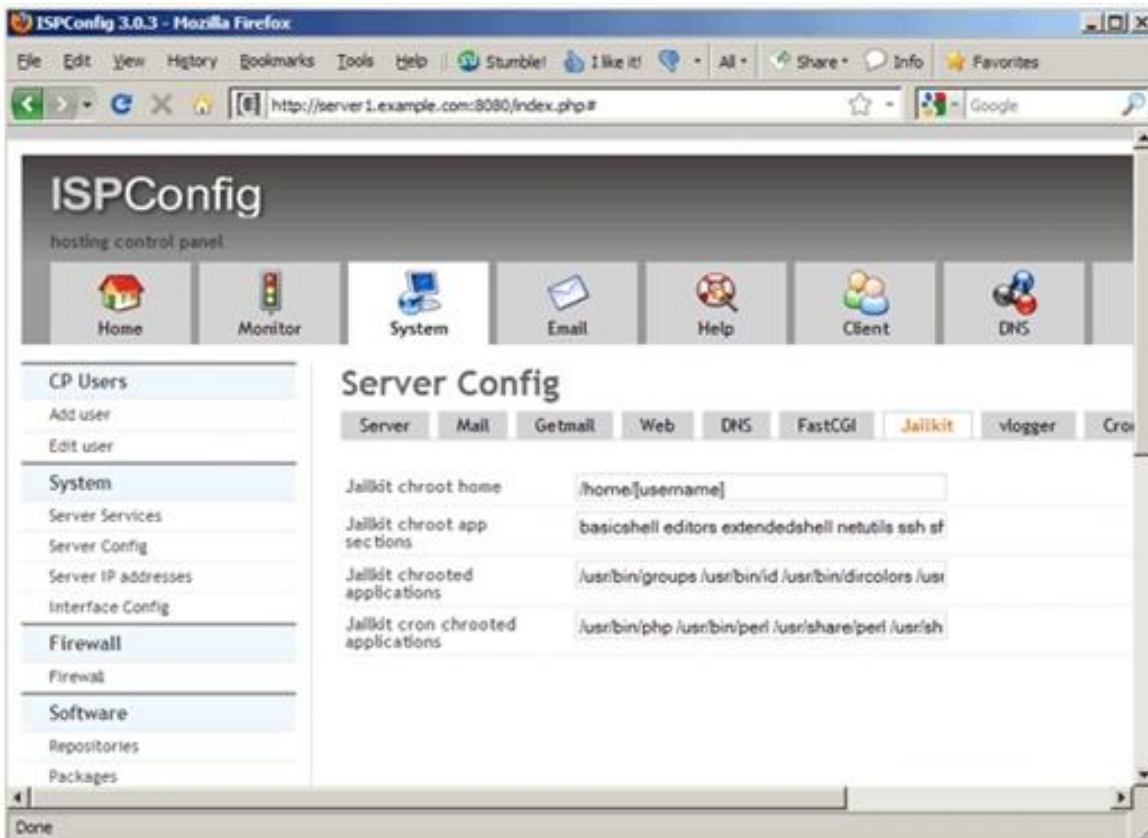
## Jailkit

Here you can configure the basic [Jailkit](#) behaviour. Jailkit is a set of utilities to limit user accounts to specific files using `chroot()` and or specific commands. You can make a shell user use Jailkit by selecting it in the Chroot Shell drop-down menu of the shell user under Sites > Shell > Shell-User

The form has the following fields:

- Jailkit chroot home : This is the directory where jailkit users will be chrooted. The placeholder `[username]` will be replaced with the actual system user name. Example: `/home/[username]`
- Jailkit chroot app sections : These are predefined sets of applications/programs that chrooted users can use. These sets are defined in `/etc/jailkit/jk_init.ini`. Separate multiple entries with a space. Example: `basicshell editors extendedshell netutils ssh sftp scp groups jk_lsh`
- Jailkit chrooted applications : In this field you can explicitly list single applications/programs that chrooted users will be able to use (it is possible that these applications/programs are already part of the predefined sets of applications that you've enabled in the Jailkit chroot app sections field). Separate multiple entries with a space. Example: `/usr/bin/groups /usr/bin/id /usr/bin/dircolors /usr/bin/lesspipe /usr/bin/basename /usr/bin/dirname /usr/bin/nano /usr/bin/pico`
- Jailkit cron chrooted applications : Under Sites > Cron > Cron Jobs you can define cron jobs. If Chrooted Cron is selected in the limits of the client that owns the cron job, the cron jobs are chrooted (using Jailkit). In this field you can explicitly list single applications/programs that chrooted cron jobs will be able to use. Separate multiple entries with a space. Example: `/usr/bin/php /usr/bin/perl /usr/share/perl /usr/share/php`



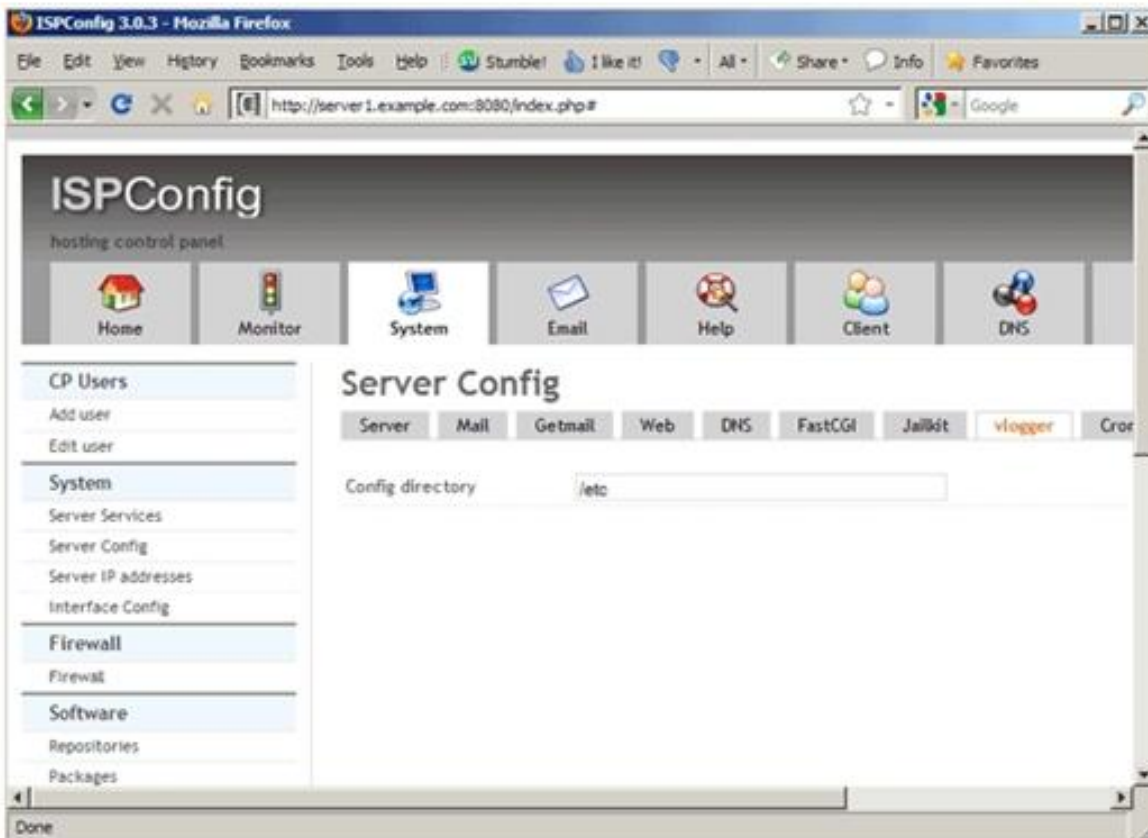


## vlogger

[vlogger](#) is a little tool that takes the burden of creating Apache virtual host logfiles off of Apache so that Apache doesn't have to deal with open logfiles.

The form has the following field:

- Config directory : This defines the directory where vlogger expects its configuration file.

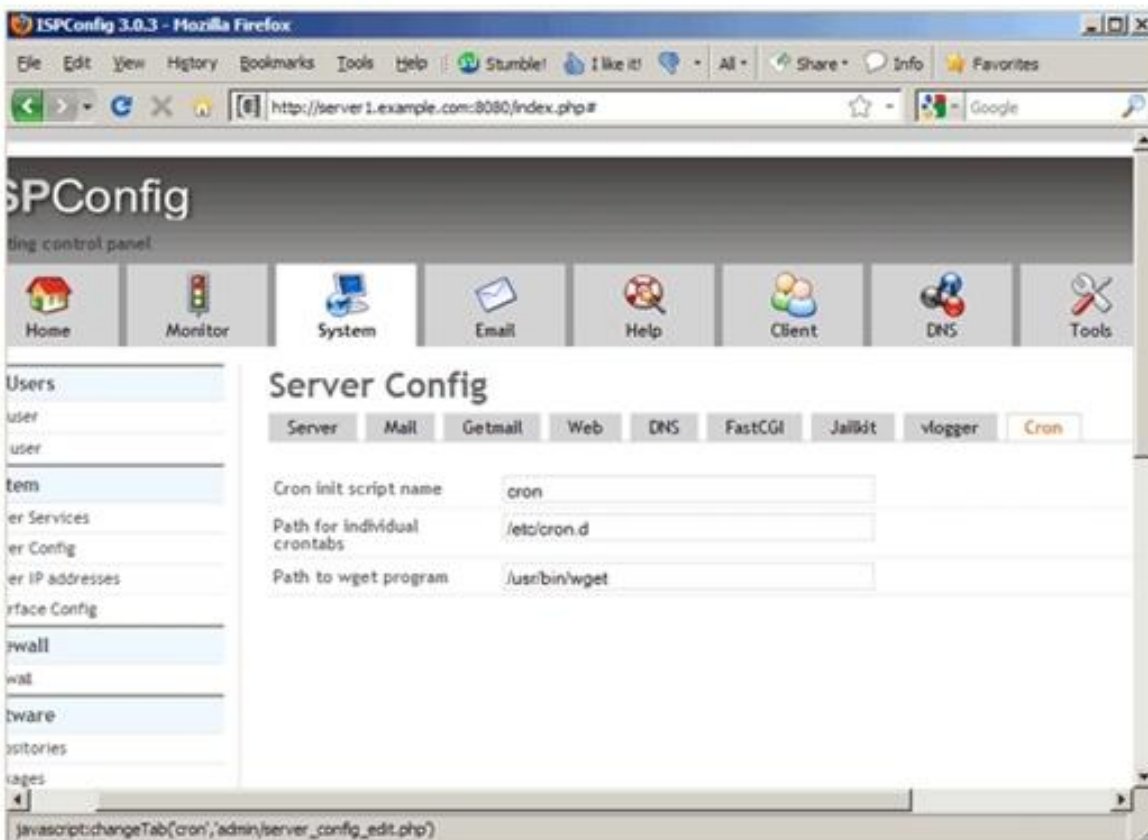


## Cron

On this tab you can configure a few settings for cron. The

form has the following fields:

- Cron init script name : This is the name of the cron init script that is located in the `/etc/init.d/` directory.
- Path for individual crontabs : This is the directory where cron jobs will be created by ISPConfig. This must be a directory where cron expects to find cron jobs, e.g. `/etc/cron.d`
- Path to wget program : This is the path to the wget program, e.g. `/usr/bin/wget`. If you specify a URL in the Command to run field under Sites > Cron > Cron Jobs, it will automatically be executed via wget, that's why cron needs to know the exact path.



#### 4.9.2.3 Server IP addresses

Here you can add additional IP addresses to your server. If you've enabled automatic network configuration for your server (field Network Configuration on the Server tab under Server Config ), these additional IP addresses will be configured automatically (please note that this works only on Debian/Ubuntu servers and if you have one network card which is named eth0 ). However, it is recommended to configure additional IP addresses manually (see chapter 5.18) and then add them here so that ISPConfig knows that they exist.

To create a new IP address, click on the Add new IP Address button. This will lead you to the IP Addresses form with the tab IP Address

### IP Addresses

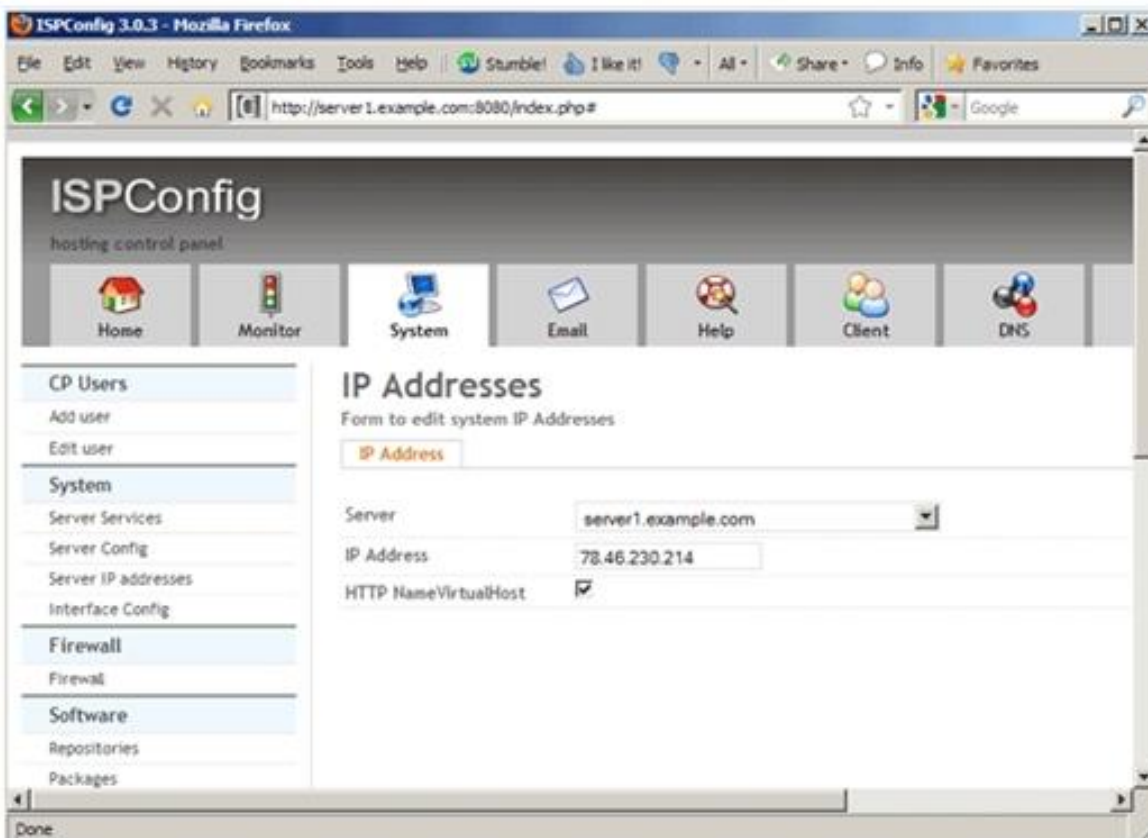
#### IP Address

The form has the following fields:

- Server : If more than one server is available, you can select the server on which the IP

address is/will be located.

- IP Address : Type in the IPv4 address. Example: 1.2.3.4
- HTTP NameVirtualHost : If you check this field, you can select this IP address for a new web sites in the Sites module; otherwise it cannot be used for Apache vhosts.



#### 4.9.2.4 Interface Config

Under Interface Config you can configure the behaviour of the ISPConfig control panel itself.

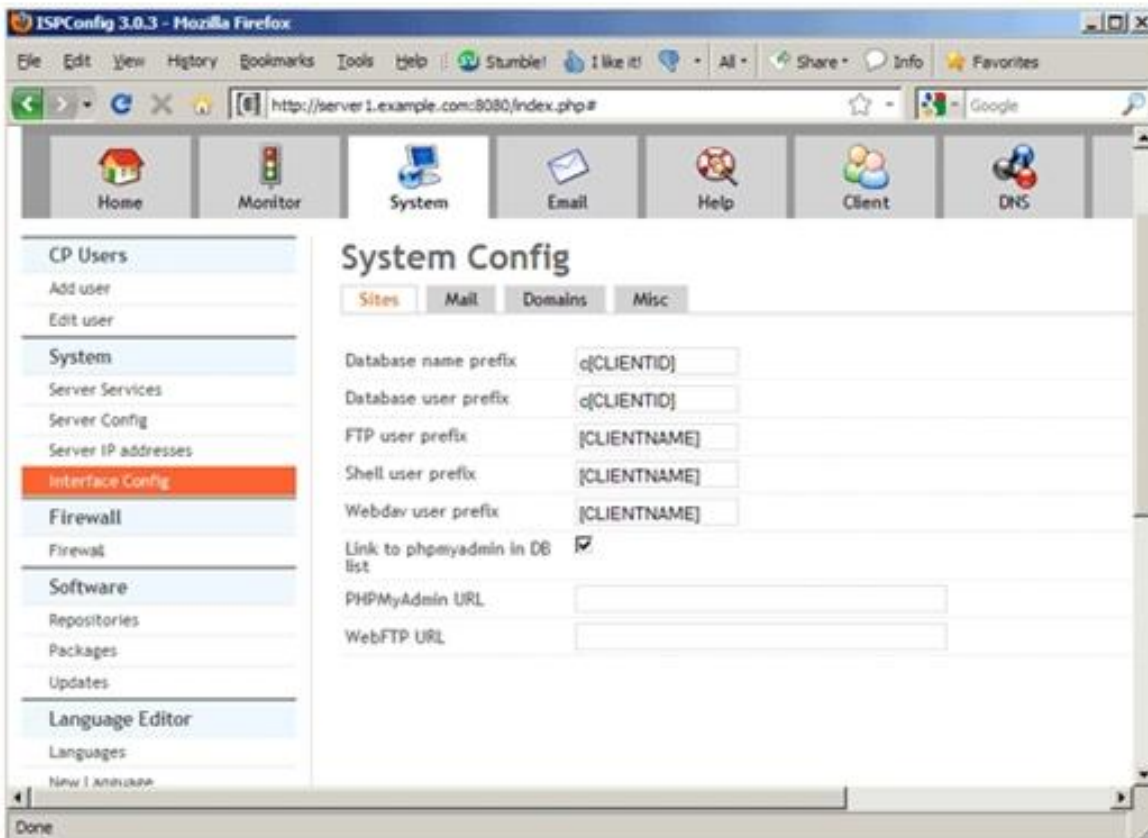
You can find the following tabs here: Sites , Mail , Domains , Misc .

### Sites

This tab allows you to configure a few settings for the Sites module.

The form has the following fields:

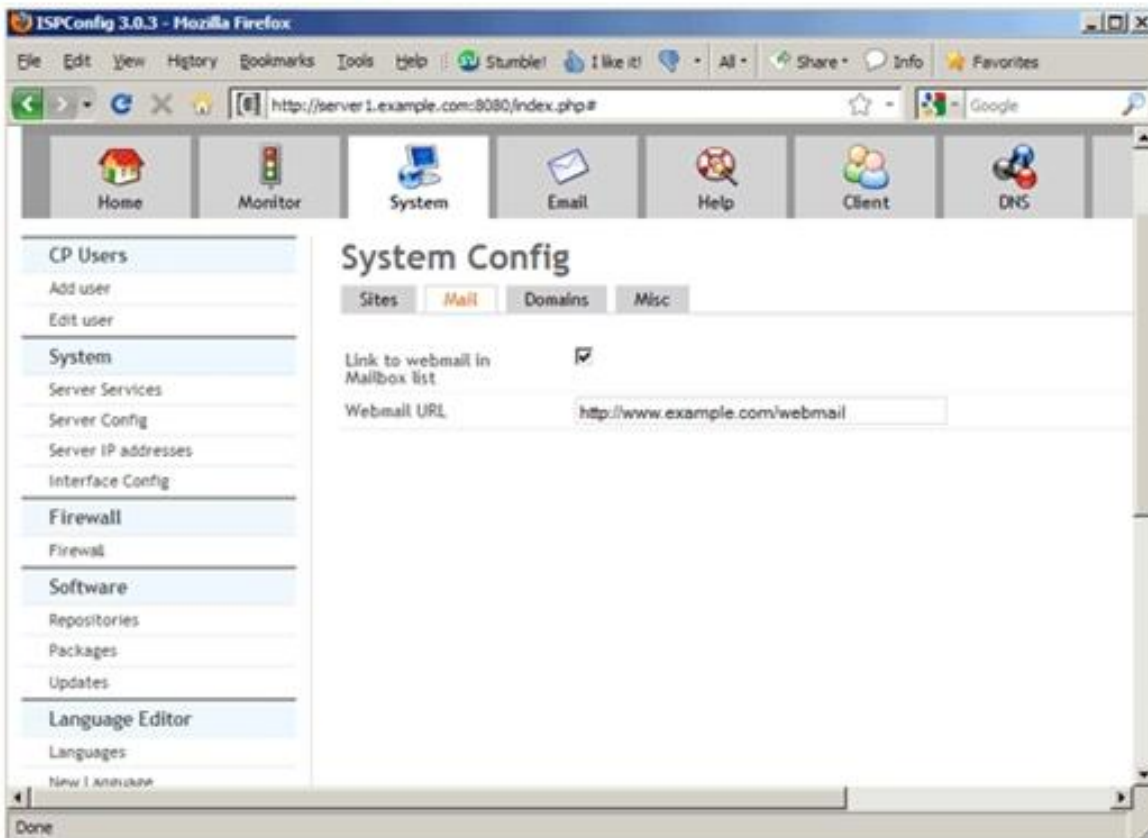
- Database name prefix : This defines the prefix that will be used for databases that you create under Sites > Database > Database . You can use the placeholders [CLIENTID] (which will be replaced with the ID of the client, e.g. 1 or 58 ) and [CLIENTNAME] (which will be replaced with the client's username). Please note that database names must not be longer than 16 characters - MySQL doesn't support longer database names! Therefore it is strongly recommended to use [CLIENTID] here instead of [CLIENTNAME] . Examples: c[CLIENTID] , [CLIENTID] (MySQL database names can begin with a number).
- Database user prefix : This defines the prefix that will be used for database users of databases that you create under Sites > Database > Database . You can use the placeholders [CLIENTID] (which will be replaced with the ID of the client, e.g. 1 or 58 ) and [CLIENTNAME] (which will be replaced with the client's username). You must not use underscores (!) Example: c[CLIENTID]
- FTP user prefix : This defines the prefix that will be used for FTP users that you create under Sites > FTP > FTP-User . You can use the placeholders [CLIENTID] (which will be replaced with the ID of the client, e.g. 1 or 58 ) and [CLIENTNAME] (which will be replaced with the client's username). Example: [CLIENTNAME]
- Shell user prefix : This defines the prefix that will be used for shell users that you create under Sites > Shell > Shell-User . You can use the placeholders [CLIENTID] (which will be replaced with the ID of the client, e.g. 1 or 58 ) and [CLIENTNAME] (which will be replaced with the client's username). Example: [CLIENTNAME]
- Webdav user prefix : This defines the prefix that will be used for WebDAV users that you create under Sites > Webdav > Webdav User . You can use the placeholders [CLIENTID] (which will be replaced with the ID of the client, e.g. 1 or 58 ) and [CLIENTNAME] (which will be replaced with the client's username). Example: [CLIENTNAME]
- Link to phpmyadmin in DB list : If you check this checkbox, an icon with a link to phpMyAdmin will be added to each database in the database list under Sites > Database > Database .
- PHPMyAdmin URL: If you have checked the Link to phpmyadmin in DB list checkbox, specify your phpMyAdmin URL here - otherwise an icon with a link to the default phpMyAdmin location will be displayed. This also means phpMyAdmin must already be installed somewhere on your server. Example: <http://www.example.com/phpmyadmin>
- WebFTP URL: If you specify your WebFTP URL here, a WebFTP icon with a link to your WebFTP application will be displayed in the FTP user list. This also means that a WebFTP application such as [net2ftp](#) must already be installed somewhere on your server. Example: <http://www.example.com/webftp>



## Mail

This tab allows you to configure a few settings for the Email module. The form has the following fields:

- Link to webmail in Mailbox list : If you check this checkbox, an icon with a link to your webmail application will be added to each mailbox in the mailbox list under Email > Email Accounts > Email Mailbox
- Webmail URL : If you have checked the Link to webmail in Mailbox list checkbox, specify your webmail URL here - otherwise an icon with a link to the default webmail location will be displayed. This also means a webmail application must already be installed somewhere on your server. Example: <http://www.example.com/webmail>

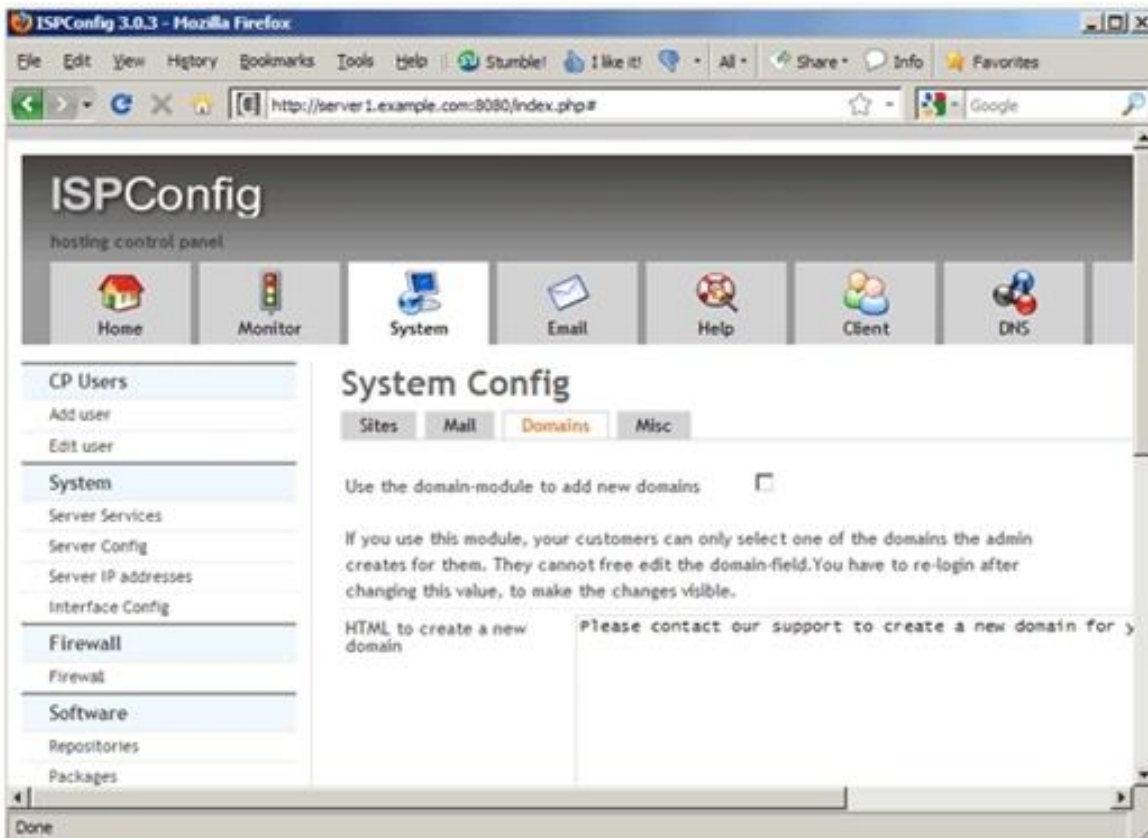


## Domains

This tab is relevant only if you've enabled the domain module under System > CP Users . If you use this module, your customers can only select one of the domains the admin creates for them. They can not freely edit the domain field.

The form has the following fields:

- Use the domain module to add new domains : If you check this field (and the domain module is enabled), your customers can only select one of the domains that you create for them. They can not freely edit the domain field. You have to re-login after changing this value to make the changes visible.
- HTML to create a new domain : This text area can contain some HTML that will be shown to a customer if the domain module is enabled for the customer and he tries to create a new domain.



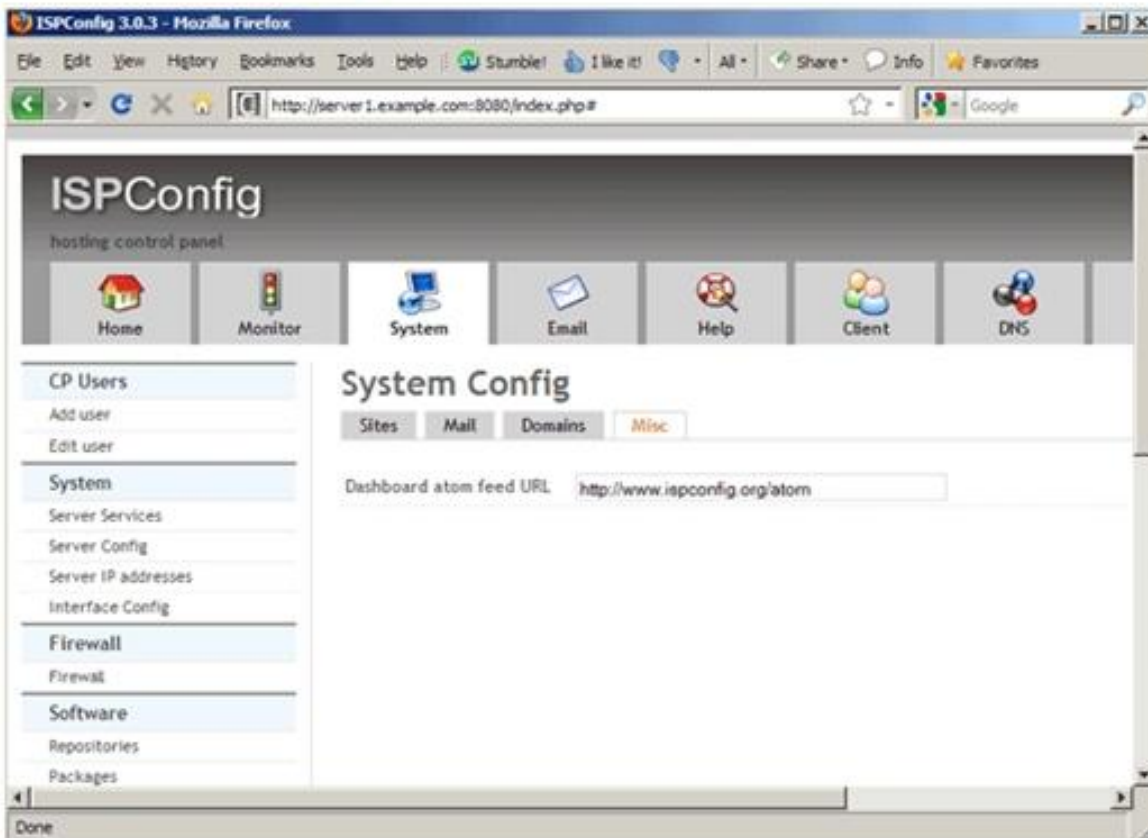
## Misc

You can configure some miscellaneous settings here.

The form has the following field:

- Dashboard atom feed URL : If you want to display a certain news feed on the dashboard (Home), you can specify the URL of the Atom feed here (RSS feeds are not supported). By default, the latest ISPConfig news are displayed (<http://www.ispconfig.org/atom>).





## 4.9.3 Firewall

### 4.9.3.1 Firewall

This is where we can enable the firewall for a server. For each server controlled by ISPConfig, there can be just one firewall record. If there's no firewall record for a server, the firewall is not active on that server.

To create a new firewall record, click on the Add Firewall record button. This will lead you to the Firewall form with the tab Firewall

## Firewall

## Firewall

The form has the following fields:

- Server : Select the server on which you want to enable the firewall.

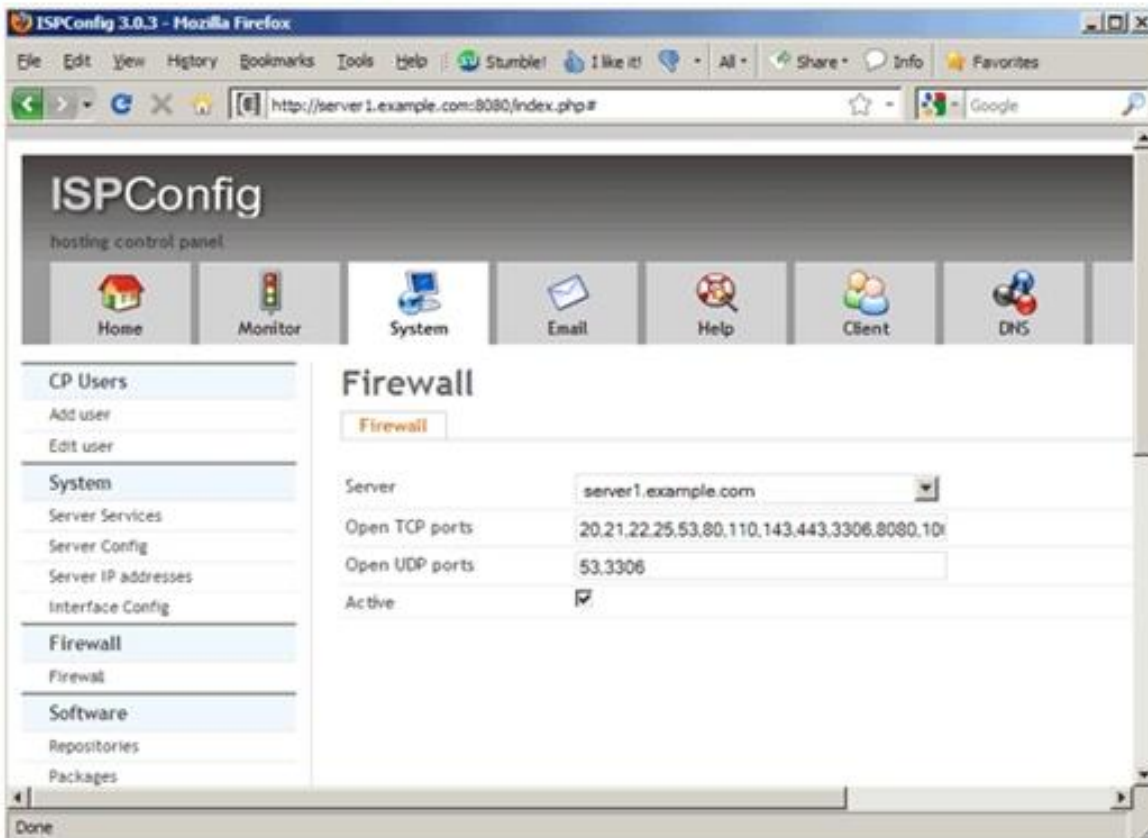
• **Open TCP ports** : Specify the TCP ports that should be open in the firewall. Separate multiple ports by comma (no space), e.g. 20,21,22,25,53,80,110,143,443,3306,8080,8081,10000  
Specify port ranges with a colon, e.g. 60:70 or 21,22,25,30:40,53,80 . TCP ports that you don't list here will automatically be closed by the firewall. Common TCP ports are:

- 20 : FTP
- 21 : FTP
- 22 : SSH
- 25 : SMTP
- 53 : DNS
- 80 : HTTP
- 110 : POP3
- 143 : IMAP
- 443 : HTTPS
- 3306 : MySQL
- 8080 : ISPConfig, HTTP-Proxies
- 8081 : ISPConfig apps vhost
- 10000 : Webmin

• **Open UDP ports** : Specify the UDP ports that should be open in the firewall. Separate multiple ports by comma (no space), e.g. 53,3306 . Specify port ranges with a colon, e.g. 60:70 or 21,22,25,30:40,53,80 . UDP ports that you don't list here will automatically be closed by the firewall. Common UDP ports are:

- 53 : DNS
- 3306 : MySQL

• **Active** : This defines whether the firewall is active or not.



## 4.9.4 Software

Under Software you can define ISPConfig application repositories, install ISPConfig application packages (such as phpMyAdmin) and install updates of such packages, if available.

### 4.9.4.1 Repositories

Here you can add ISPConfig application repositories to your system.

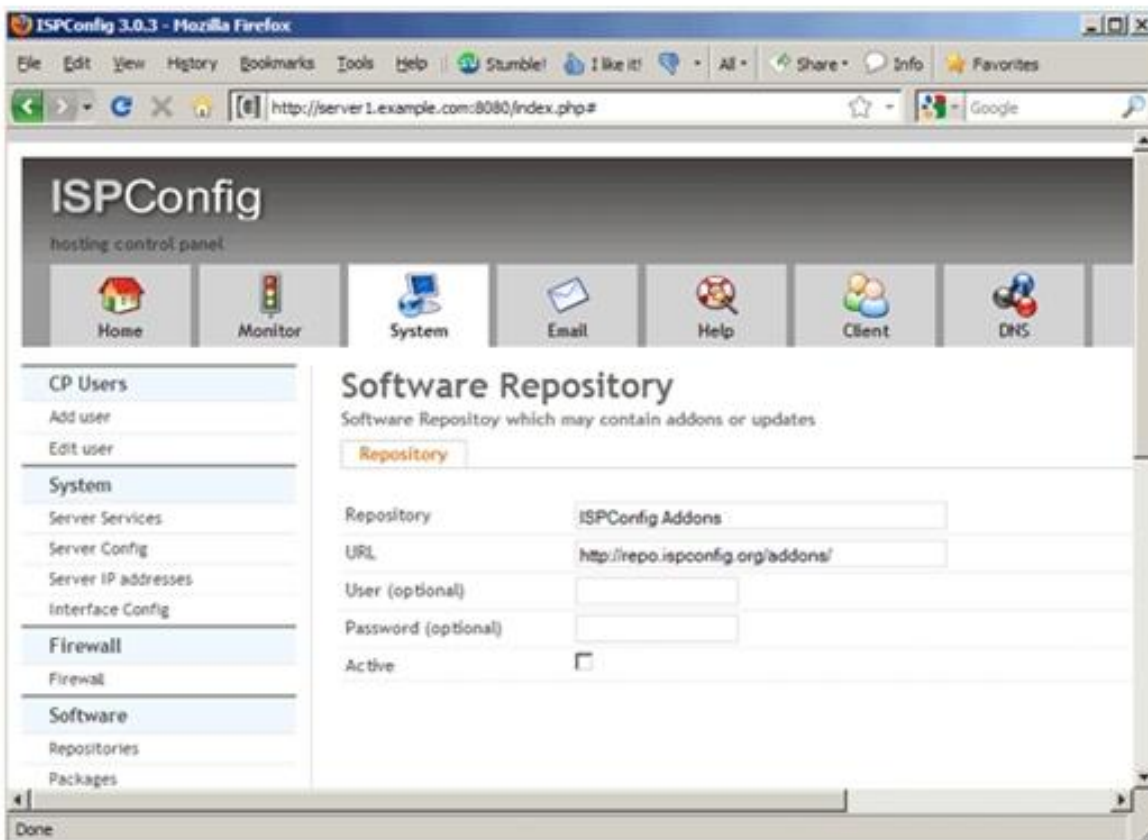
To create a new repository, click on the [Add new record](#) button. This will lead you to the [Software Repository](#) form with the tab [Repository](#)

## Software Repository

### Repository

The form has the following fields:

- **Repository** : Type in a name for the repository, e.g. ISPConfig Addons
- **URL**: Specify the URL of the repository. Example: <http://repo.ispconfig.org/addons/>
- **User (optional)** : If the whole repository or single packages of the repository (e.g. packages that need testing and should be available only to developers) are password-protected, type in the repository username here. Leave the field empty if the repository isn't password-protected.
- **Password (optional)** : If the whole repository or single packages of the repository (e.g. packages that need testing and should be available only to developers) are password-protected, type in the repository password here. Leave the field empty if the repository isn't password-protected.
- **Active** : This defines whether the repository is active or not.



#### 4.9.4.2 Packages

Here you can find a list of available packages from the active repositories. For each server that

is controlled by ISPConfig, you can see if the package is already installed (it then reads Installed version ... ) or if it can be installed (it reads Install now ). To install a package, simply click on the Install now link. Installation can take two or three minutes; reload the page to see if it has been installed successfully (it should then read Installed version ... ).

### 4.9.4.3 Updates

Under Updates you can find a list of all installed packages for which updates are available (select the server under Select server first). You can install the updates from here by clicking on the Install update link.

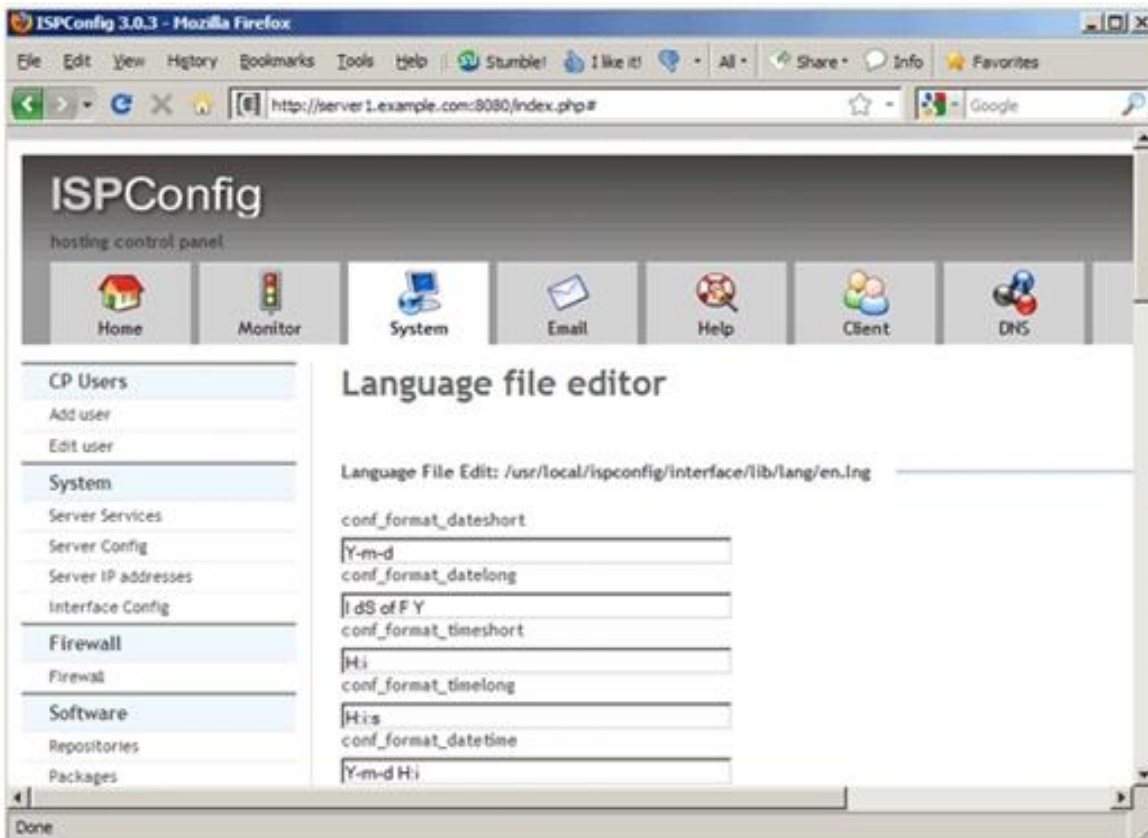
## 4.9.5 Language Editor

The Language Editor allows you to add new ISPConfig translations or modify existing ones. For example, if the ISPConfig interface isn't available in your language, you can create a translation here.

### 4.9.5.1 Languages

Here you can find the Language file editor which allows you to modify all existing translations. Select the translation that you want to modify in the Select language drop-down menu; this will bring up a list of all available language files (extension .lng ) for that language, together with a note to which ISPConfig module the language file belongs and the last modification date. Click on the file that you want to modify - this will bring you to a form with all strings that can be translated. Make your modifications and click on the Save button afterwards.

Hint: You can change the text of the welcome email that is sent to new email accounts under mail > en\_mail\_user.lng (the fields are welcome\_mail\_subject and welcome\_mail\_message ).



#### 4.9.5.2 New Language

If you want to add a new translation (for example, because ISPConfig isn't available in your language), you can do this here. The Add new language form has the following fields:

- Select language basis : Select one of the existing translations here, e.g. en . Your new language files will use this existing translation first so that you have a basis to start with, and you can then use the Language file editor under Languages to translate the strings to the new language.
- New language : Type in the two characters ISO 639-1 language code (see [http://en.wikipedia.org/wiki/List\\_of\\_ISO\\_639-1\\_codes](http://en.wikipedia.org/wiki/List_of_ISO_639-1_codes)) of your new translation.

After you have created the new language, you can use the Language file editor under Languages to translate the strings to the new language.

#### 4.9.5.3 Merge

The Merge function adds missing strings and even missing language files from the English master language files to the selected language. This is useful for the following two scenarios:

- You've created your own language in an old ISPConfig version, and now you update ISPConfig, and the new ISPConfig version has a lot of new functions that are missing in your language files. You can use the Merge function to merge the new/missing translations into your language files, and then you can use the Language file editor under Languages to translate the strings to the new language.
- The second scenario is for the ISPConfig developers only. A lot of translations were contributed by ISPConfig users, but of course the developers don't speak all these languages. If the developers add new functions, they add the English translations and merge these English translations into all the other supported languages (so that a native speaker and ISPConfig contributor can translate them using the Language file editor).

To merge new English strings into a translation, just select the language in the Select language drop-down menu and click on the Merge files now button.

### 4.9.5.4 Export

Here you can export existing translations. Just select the language that you want to export and click on the Export the selected language file set button. This will display a link to the exported file (e.g. Exported language file to: /temp/en.lng); click on that link, and the exported file will be displayed in a new browser window (from where you can save it on your computer).

You must not use the Export function to manually edit exported translations in a text editor - always use ISPConfig's Language file editor for that! The Export function is useful if

- you've created a translation on one ISPConfig installation and want to use the same translation on another ISPConfig installation (where you can use the Import function to import that translation).
- you've created a translation and want to send it to the ISPConfig developers (dev@ispconfig.org).

### 4.9.5.5 Import

You can use the Import function to import translations that you've previously exported on another ISPConfig server. Please note that you must not import language files that have been manually modified in a text editor - always use ISPConfig's Language file editor to modify

translations!

The Import language file form has the following fields:

- Select language file : Select the language file to import from your local computer. ISPCONFIG will automatically detect the language from the contents of the selected file.
- Overwrite file, if exists : Check this if you want to overwrite any existing files of this translation on the ISPCONFIG server.
- Skip ISPCONFIG version check : Usually ISPCONFIG performs a version check to find out if the translation that is to be imported matches the version number of the ISPCONFIG installation, and displays an error message if the versions don't match (i.e., ISPCONFIG refuses to import the translation). By checking this checkbox you can skip this version check.

## 4.9.6 Remote Users

This feature is for ISPCONFIG developers only. ISPCONFIG has an API that allows to access all ISPCONFIG functions from other applications or remote places (the API documentation is not part of this manual). For example, an ISP could build a web interface and allow his customers to create web sites from this web interface.

Access to this API is password protected. To allow access to the API, you must create a user and password here first and use these login credentials in the application that uses the API.

### 4.9.6.1 Add user

You can create an API user here. The Remote user form has the tab Remote User .

Remote user

Remote User

The form has the following fields:

- Username : Fill in the username of the new API user.
- Password : Type in a password for the API user. The Password Strength field will show how weak or strong your password is.
- Functions : Please check all functions that the API user will be allowed to use.



### 4.9.6.2 Edit user

Here you can edit existing API users. The form has the same tabs and fields as under Add user .

## 4.9.7 Remote Actions

Here you can initiate operating system updates and ISPConfig updates on all servers controlled by ISPConfig.

### 4.9.7.1 Do OS-Update

The Do OS-Update function allows you to start an operating system update on the selected server, i.e., the latest updates will be installed. Please note that this function supports only Debian and Ubuntu. It will perform

```
aptitude -y upgrade
```

on the selected server. This works also on remote servers that are controlled by this ISPConfig installation. To update all servers controlled by ISPConfig, select All servers

As this is an unattended update and you don't see what packages are updated, you should use this function at your own risk. [At this point, it is strongly recommended to run your updates manually on the command line!](#)

### 4.9.7.2 Do ISPConfig-Update

The Do ISPConfig-Update function allows you to update ISPConfig on the selected server. This works also on remote servers that are controlled by this ISPConfig installation. To update all servers controlled by ISPConfig, select All servers

This function is experimental! [At this point, it is strongly recommended to run your updates manually on the command line!](#)

## 4.10 Monitor

The Monitor module allows you to take a look at the logs, CPU, memory, disk usage, etc. of all servers controlled by ISPConfig. Under System State (All Servers) you can find information about all servers controlled by ISPConfig, whereas the details in the other menu items refer to just one (the selected) server.

## 4.10.1 System State (All Servers)

Here you can find details about all servers that are controlled by this ISPconfig installation.

### 4.10.1.1 Show Overview

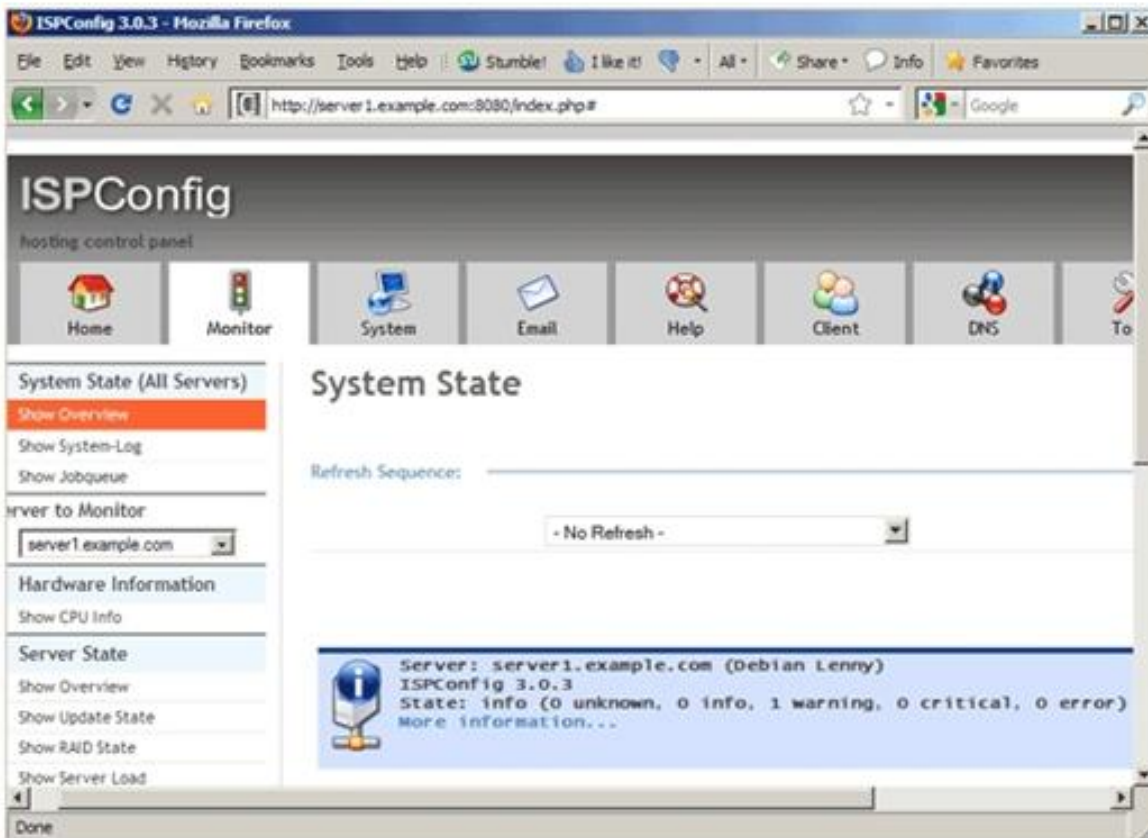
Here you can find an overview of all your servers that are controlled by ISPConfig. Details that are displayed here are the general state of the server (if there have been warnings, errors, etc.), the state of the hard drive space, mail queue, server load, if all services are online, and if updates are available (some of these details will only be displayed if you click on the More information... link).

Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.

By clicking on the [More...] link that is displayed next to each status, you can find out more details about that item - the same details can be accessed under Server State in the menu (but then make sure you select the correct server under Server to Monitor ).

Each server's overview is displayed with one of the background colours green, orange, or red:

- Green: everything is ok - no warnings or errors, no updates are available, all services are online, etc.
- Blue: there are warnings in your logs, or updates are available, but there's nothing system-critical on the server.
- Red: this marks some kind of failure, e.g. errors in the logs, needed services aren't running, a script failed to execute, etc. This is system-critical, and immediate action should be taken by your side (e.g. log onto your server's shell and check the logs in the `/var/log/` directory).



#### 4.10.1.2 Show System-Log

Here you can take a look at the ISPConfig log - this log shows what ISPConfig does in the background, and if there have been warnings or errors. This log is for all servers controlled by ISPConfig (you can use the filter to display log entries from a specific server); what is getting logged depends on the log level that you set for each server on the **Server** tab under **System > System > Server Config** (Debug, Warnings, or Errors).

#### 4.10.1.3 Show Jobqueue

Here you can find a list of background tasks that ISPConfig has to carry out on the nodes that are controlled by ISPConfig. If the list is empty, ISPConfig has completed all tasks.

### 4.10.2 Server to Monitor

This refers to all following menu items, i.e., the following menu items will display information about the server that you select here.

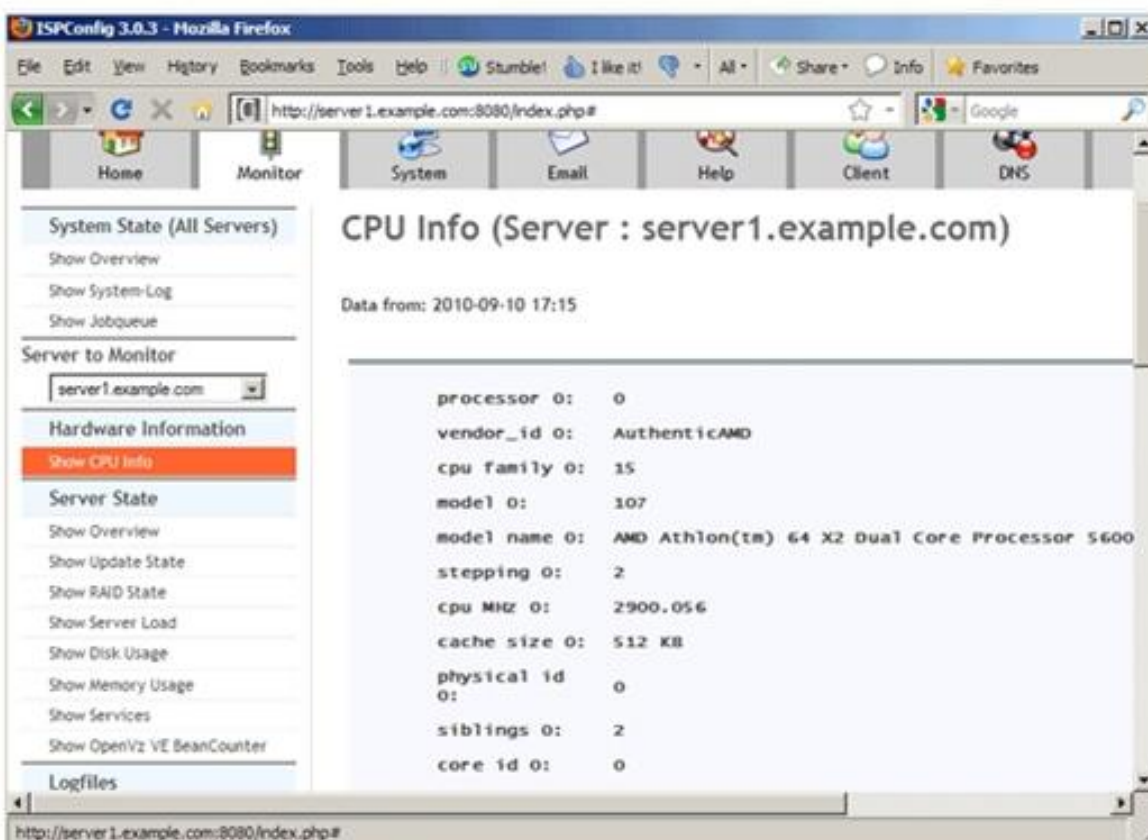
## 4.10.3 Hardware Information

### 4.10.3.1 Show CPU Info

You can find details about the CPU of the selected server here. This is the same as if you run

```
cat /proc/cpuinfo
```

on the server.

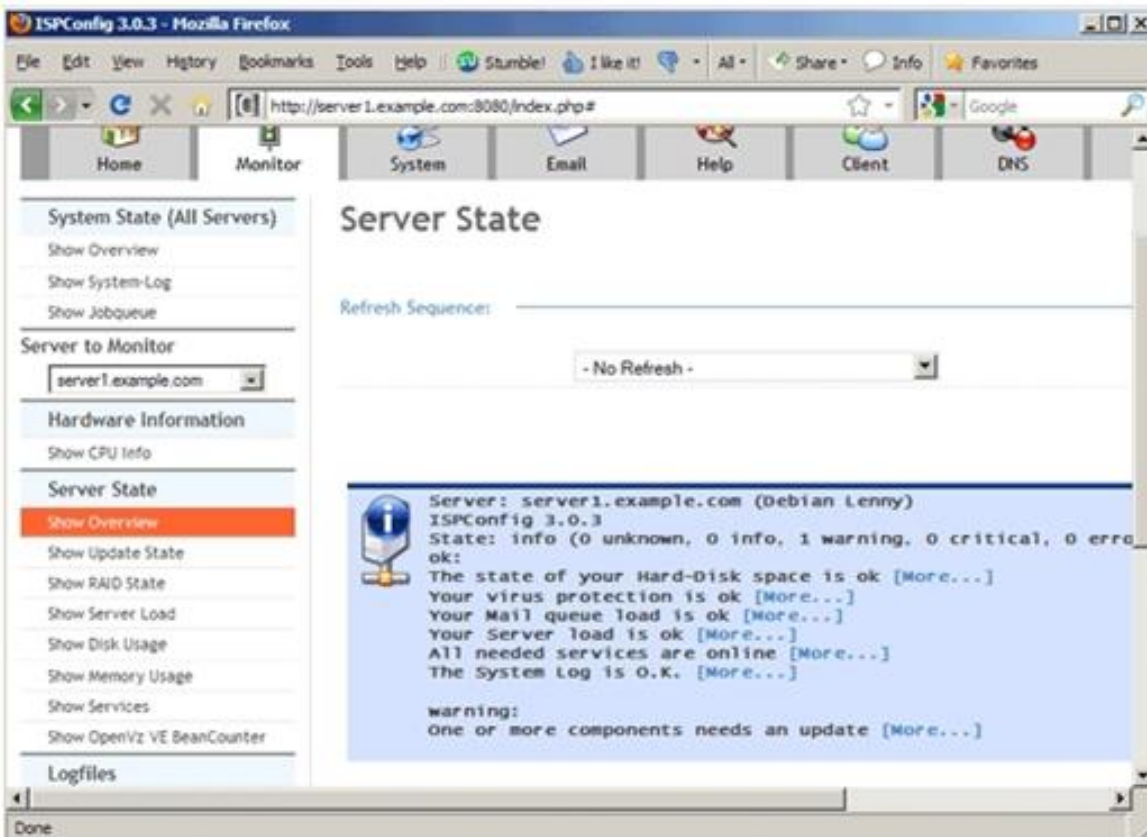


## 4.10.4 Server State

### 4.10.4.1 Show Overview

Here you can find the same details as under Monitor > System State (All Servers) > Show Overview , except that the details here refer to just one server (the one you selected under Monitor > Server to Monitor ).

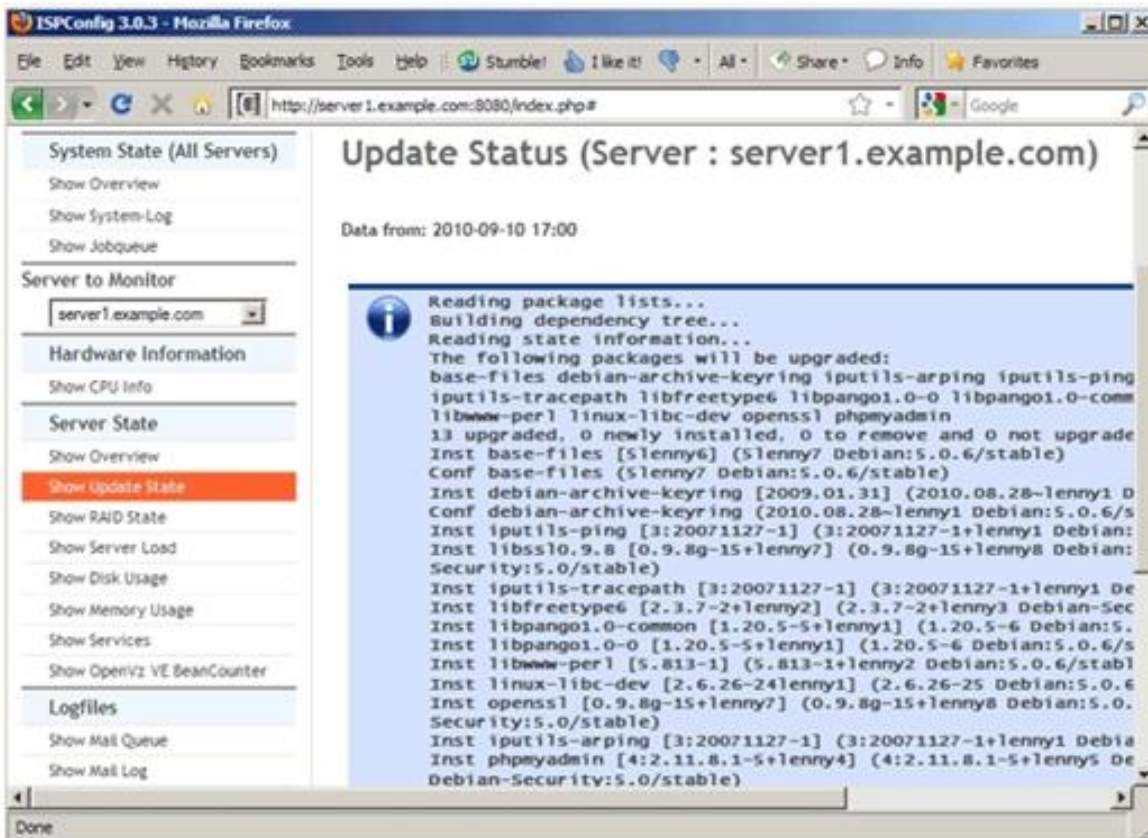
Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.



#### 4.10.4.2 Show Update State

This page displays if update packages are available for the operating system and the installed packages. If there are, you should bring your server up to date.

If you see the warning **WARNING: Your ClamAV installation is OUTDATED!** - this sounds more dramatic than it actually is, and it is usually not necessary to take any action. This just means that a newer ClamAV version is available than the one that is installed - your current version is still ok. It does not mean that the virus signature database is not up to date - it actually is, and protection is still guaranteed. You can check if your distribution offers an updated ClamAV package - if it does, you can install it, but if it doesn't, you should avoid installing ClamAV from the sources - wait until your distribution provides an updated package.



It is recommended to do this manually with your distribution's package manager, e.g. apt/aptitude on Debian/Ubuntu, yum on Fedora/CentOS, and yast/zypper on OpenSUSE.

### Debian/Ubuntu:

```
aptitude update
```

```
aptitude safe-upgrade
```

### Fedora/CentOS:

```
yum update
```

### OpenSUSE:

```
zypper refresh
```

```
zypper update
```

If you are on Debian/Ubuntu, you could also go to System > Remote Actions > Do OS-Update , but this method is not recommended!

### 4.10.4.3 Show RAID State

If the selected server uses RAID, you can find details about the RAID arrays here. Basically, these are the same details that the command

```
cat /proc/mdstat
```

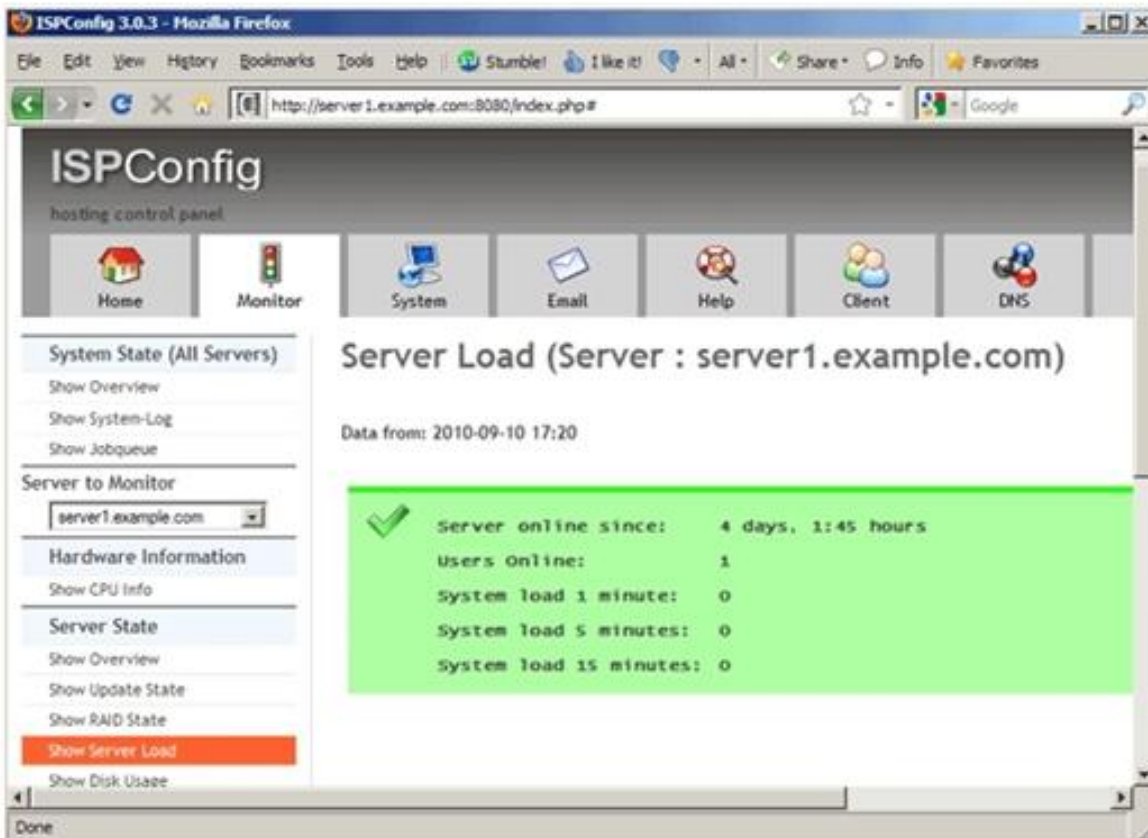
would show.

### 4.10.4.4 Show Server Load

Here you can find details about the server load. Basically, these are the same details that the command

```
uptime
```

would show.



#### 4.10.4.5 Show Disk Usage

Here you can find details about the server's disk usage. Basically, these are the same details that the command

```
df -h
```

would show.



The screenshot shows the ISPConfig 3.0.3 interface in Mozilla Firefox. The main content area displays 'Disk Usage (Server : server1.example.com)' with data from 2010-09-10 17:20. A green checkmark icon is visible on the left of the table. The table lists the following disk usage information:

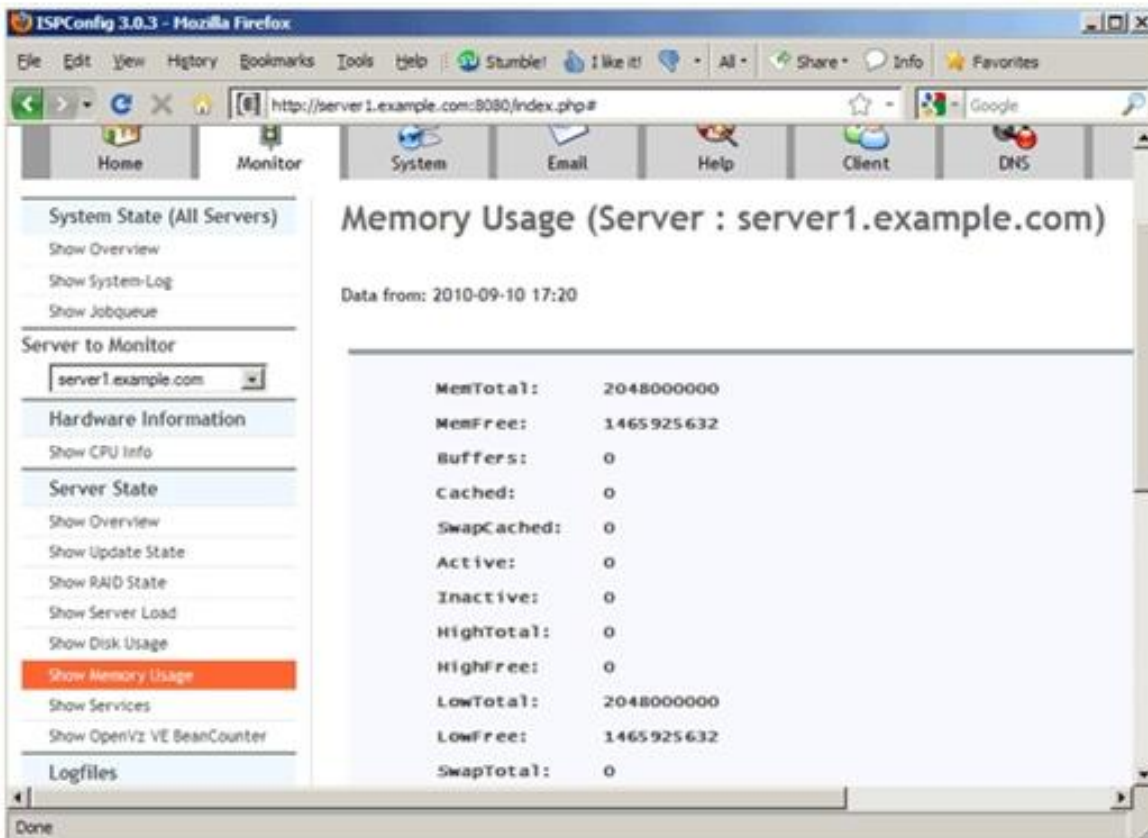
Filesystem	Type	Size	Used	Available	Use%	Mounted on
simfs	simfs	9.6G	1.1G	8.5G	11%	/
tmpfs	tmpfs	998M	0	998M	0%	/lib/init/rw
tmpfs	tmpfs	998M	0	998M	0%	/dev/shm

#### 4.10.4.6 Show Memory Usage

Here you can find details about the server's memory usage. Basically, these are the same details that the command

```
cat /proc/meminfo
```

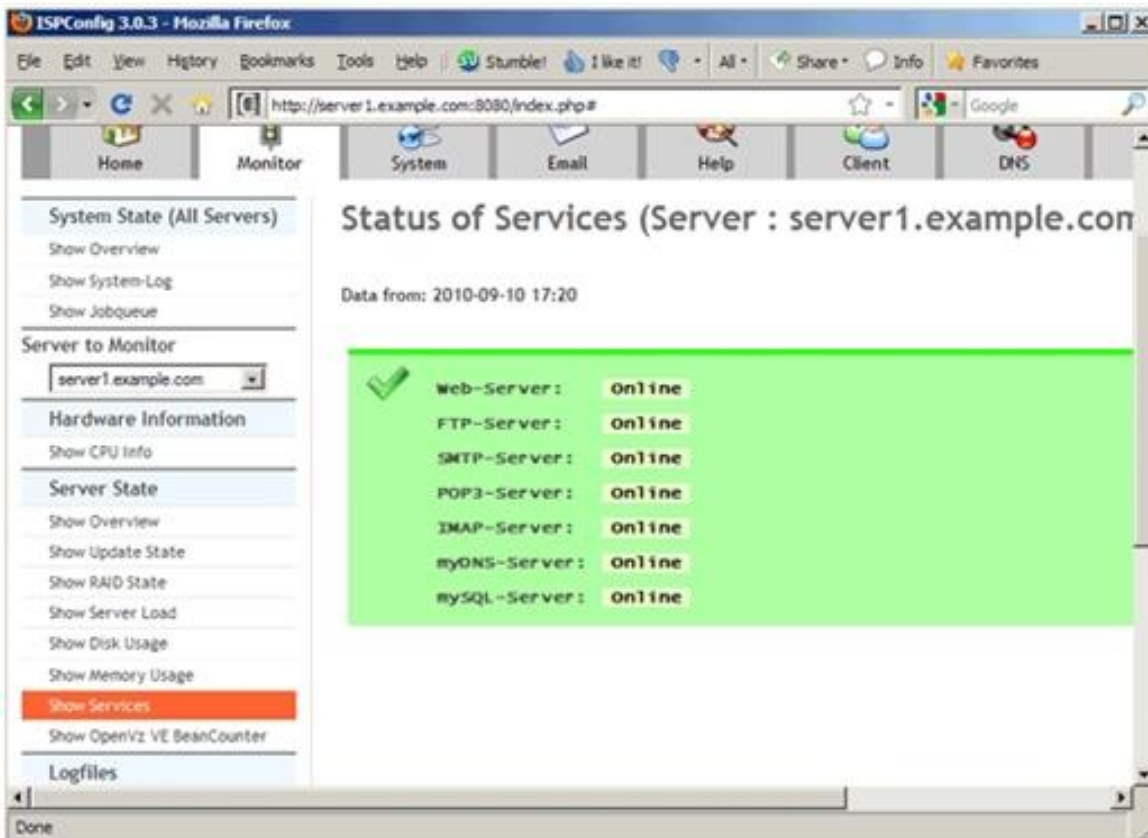
would show.



#### 4.10.4.7 Show Services

Under this menu item you can find information if the following services are running or not:

- Web-Server
- FTP-Server
- SMTP-Server
- POP3-Server
- IMAP-Server
- myDNS-Server (this refers to your DNS server in general, no matter if you use MyDNS, BIND, or PowerDNS)
- mySQL-Server



#### 4.10.4.8 Show OpenVz VE BeanCounter

If the selected server is an OpenVZ container (virtual machine), you can find details about the OpenVZ beancounter here (it displays details about the allocated resources and limits of the virtual machine). Basically, these are the same details that the command

```
cat /proc/user_beancounters
```

would show.

Version: 2.5	uid	resource	held	maxheld	barview	limit	failed
210	memsize	7875760	8588101	11055923	11377049		0
	lockedpages	0	0	256	256		0
	privmpages	142595	159001	800000	750000		0
	shmpages	862	1518	21504	21504		0
	dummy	0	0	0	0		0
	rmpages	92	101	240	240		0
	physpages	88764	109069	0	2147483647		0
	vmpages	0	0	33792	2147483647		0
	oomkspages	88764	109069	26112	2147483647		0
	rustosock	20	46	360	360		0

## 4.10.5 Logfiles

### 4.10.5.1 Show Mail Queue

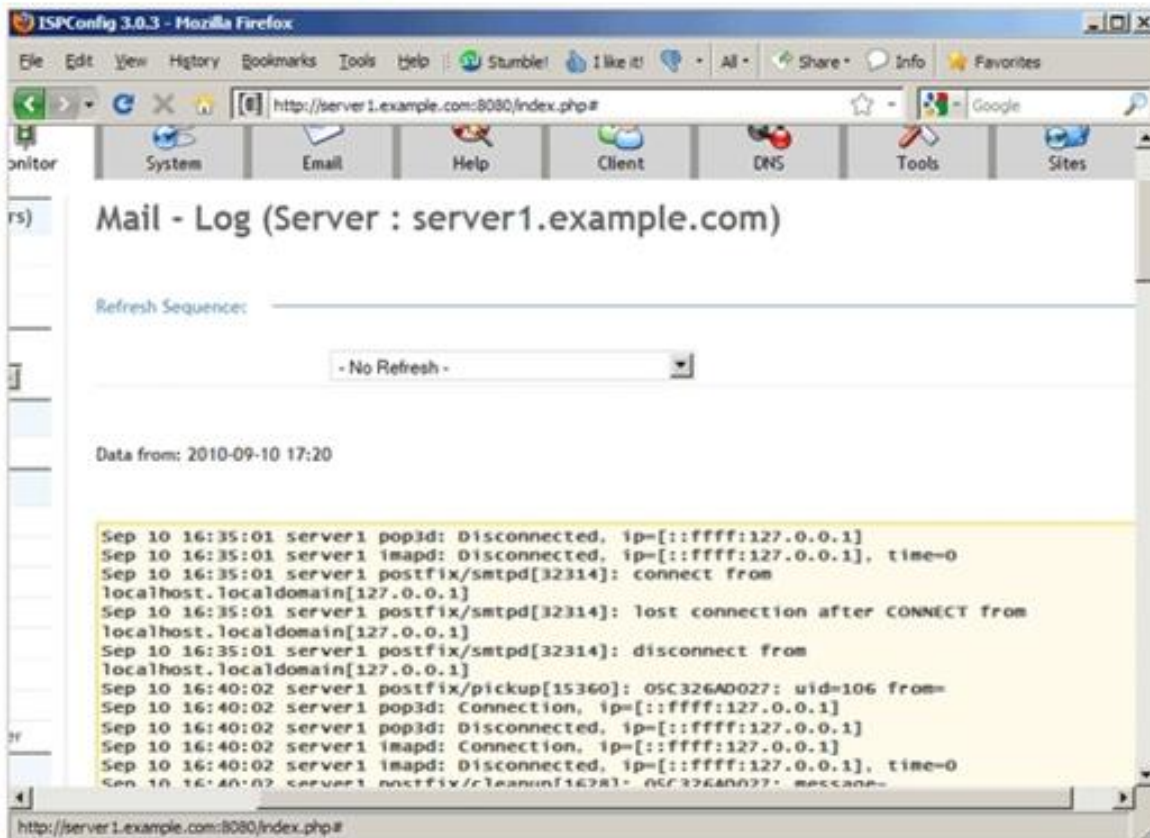
Here you can find details about the server's mail queue. Basically, these are the same details that the command

```
postqueue -p
```

would show.

### 4.10.5.2 Show Mail Log

You can find the last 100 lines of the selected server's mail log (`/var/log/mail.log` on Debian/Ubuntu) here. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.



#### 4.10.5.3 Show Mail Warn-Log

You can find the last 100 lines of the selected server's mail.warn log (`/var/log/mail.warn` on Debian/Ubuntu) here. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.

#### 4.10.5.4 Show Mail Error-Log

You can find the last 100 lines of the selected server's mail.error log (`/var/log/mail.err` on Debian/Ubuntu) here. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.

#### 4.10.5.5 Show System-Log

You can find the last 100 lines of the selected server's system log (`/var/log/messages` on

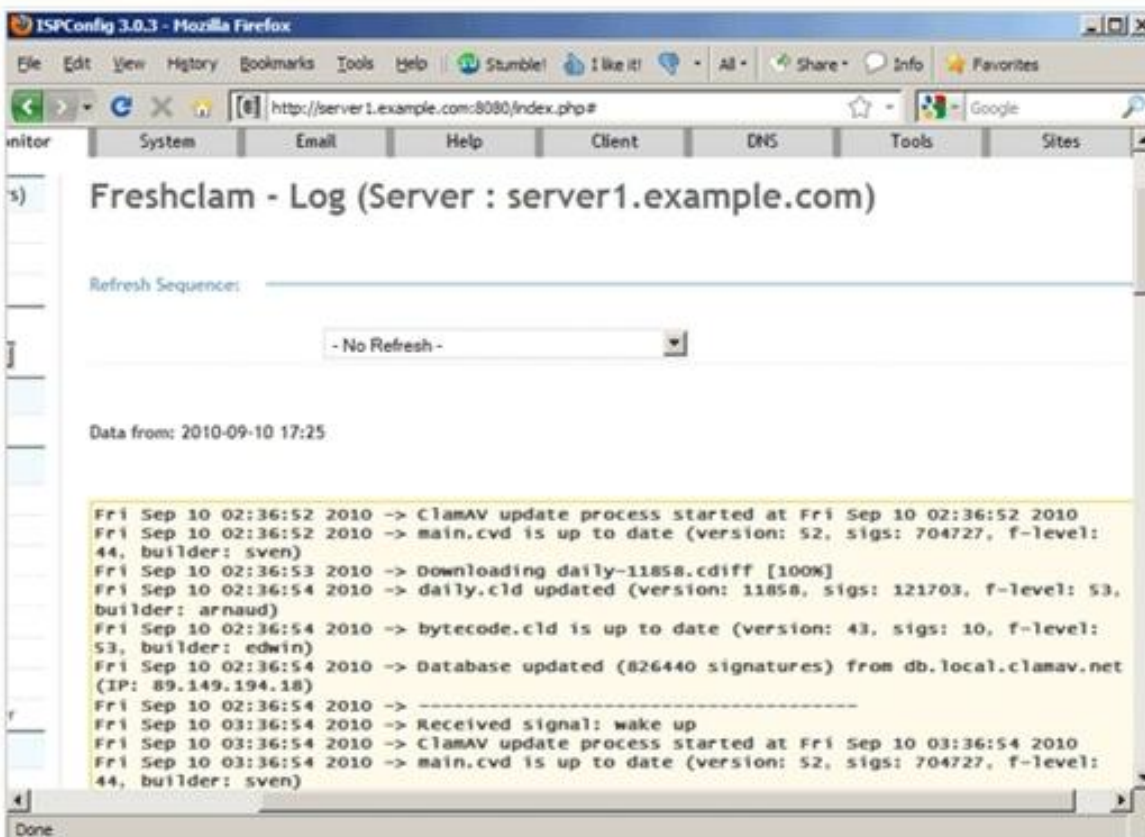
Debian/Ubuntu) here. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.

#### 4.10.5.6 Show ISPC Cron-Log

You can find the last 100 lines of the selected server's ISPConfig cron log (`/var/log/ispconfig/cron.log`) here - the ISPConfig background tasks are run by cron, and therefore this log contains information about what happened behind the scenes. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.

#### 4.10.5.7 Show Freshclam-Log

You can find the last 100 lines of the selected server's freshclam log (`/var/log/clamav/freshclam.log` on Debian/Ubuntu) here - this log contains information regarding the virus signature updates of the server's virus scanner, ClamAV. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.



#### 4.10.5.8 Show Clamav-Log

You can find the last 100 lines of the selected server's clamav log ( `/var/log/clamav/clamav.log` on Debian/Ubuntu) here - this log contains information regarding the server's virus scanner, ClamAV. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.

#### 4.10.5.9 Show RKHunter-Log

You can find the last 100 lines of the selected server's rkhunter log (`/var/log/rkhunter.log` on Debian/Ubuntu) here - rkhunter is run by cron (usually once per night) and scans the server for malware/rootkits/trojans. The result of such a scan is logged in the rkhunter log file. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.

The screenshot shows the ISPConfig 3.0.3 web interface in Mozilla Firefox. The browser address bar shows `http://server1.example.com:8080/index.php#`. The main content area displays the "RKHunter Log (Server : server1.example.com)" with data from 2010-09-09 23:03. The log content is as follows:

```
[ Rootkit Hunter version 1.3.2 ]

Checking rkhunter data files...
Checking file mirrors.dat [ No update ]
Checking file programs_bad.dat [ No update ]
Checking file backdoorports.dat [ No update ]
Checking file suspscan.dat [ No update ]
Checking file i18n/cn [ No update ]
Checking file i18n/en [ No update ]
Checking file i18n/zh [ No update ]
Checking file i18n/zh.utf8 [ No update ]

Checking system commands...

Performing 'strings' command checks
Checking 'strings' command [ OK ]

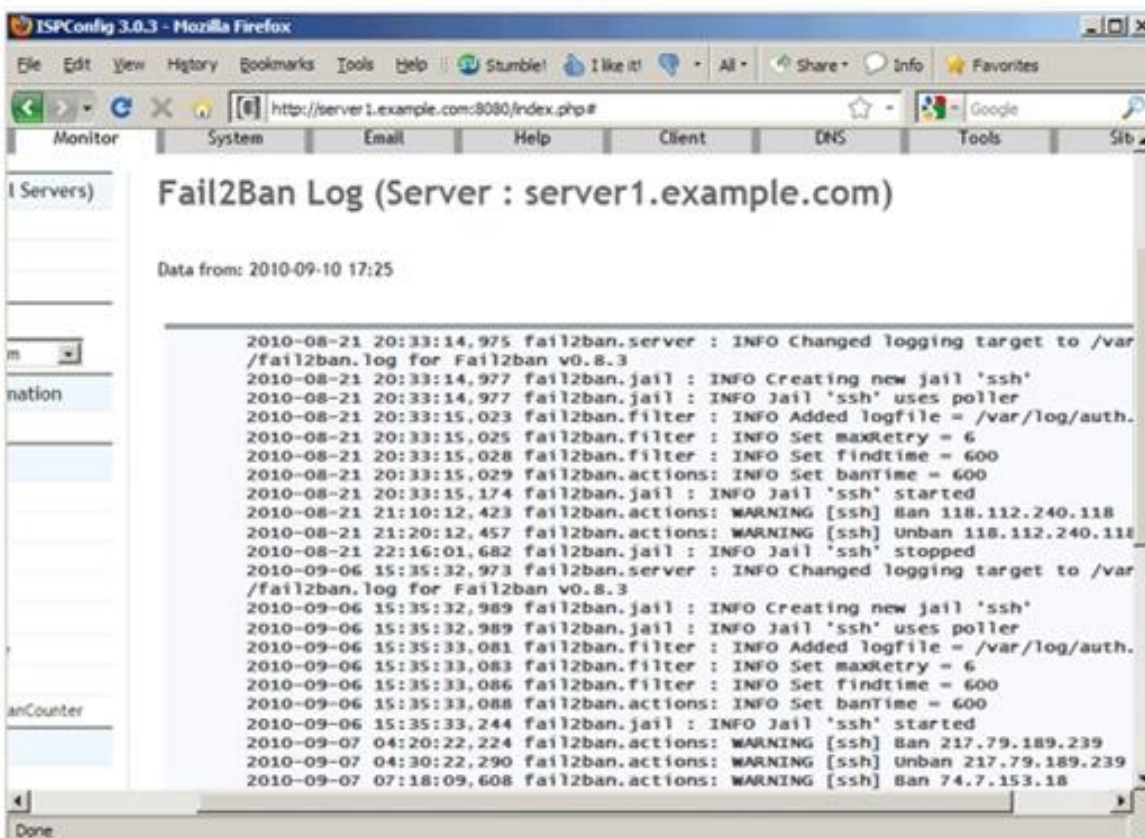
Performing 'shared libraries' checks
Checking for preloading variables [ None found ]
Checking for preload file [ Not found ]
Checking LD_LIBRARY_PATH variable [ Not found ]

Performing file properties checks
Checking for prerequisites [ OK ]
```

### 4.10.5.10 Show fail2ban-Log

Fail2ban is a tool that observes login attempts to various services, e.g. SSH, FTP, SMTP, Apache, etc., and if it finds failed login attempts again and again from the same IP address or host, fail2ban stops further login attempts from that IP address/host by blocking it with an iptables firewall rule.

You can find the last 100 lines of the selected server's fail2ban log (`/var/log/fail2ban.log` on Debian/Ubuntu) here - it contains details about what services are monitored and what IP addresses got blocked due to a tried break-in attempt. Under Refresh Sequence you can select if the information should be refreshed automatically while you are on this page (by default it is not refreshed), and in which interval.



If you want to unblock an IP address/host, take a look at chapter 5.16.

## 4.11 Help

By default, this module isn't enabled for normal users. You can enable it on the Users tab under System > CP Users > Edit user



## 4.11.1 Support

This is a ticket system where users can send messages to their reseller or the server administrator if they need help.

### 4.11.1.1 Send message

You can create a new ticket here. You will see the Support Message form with the tab Message

## Support Message

### Message

The form has the following fields:

- Recipient ID : Normal users cannot select a recipient here because ISPConfig determines the recipient itself - it is the ISPConfig administrator. Only if you are logged in as the ISPConfig administrator can you select the recipient (because the administrator is allowed to send messages to all ISPConfig users).
- Subject : Fill in the subject of your request.
- Message : Fill in your message.

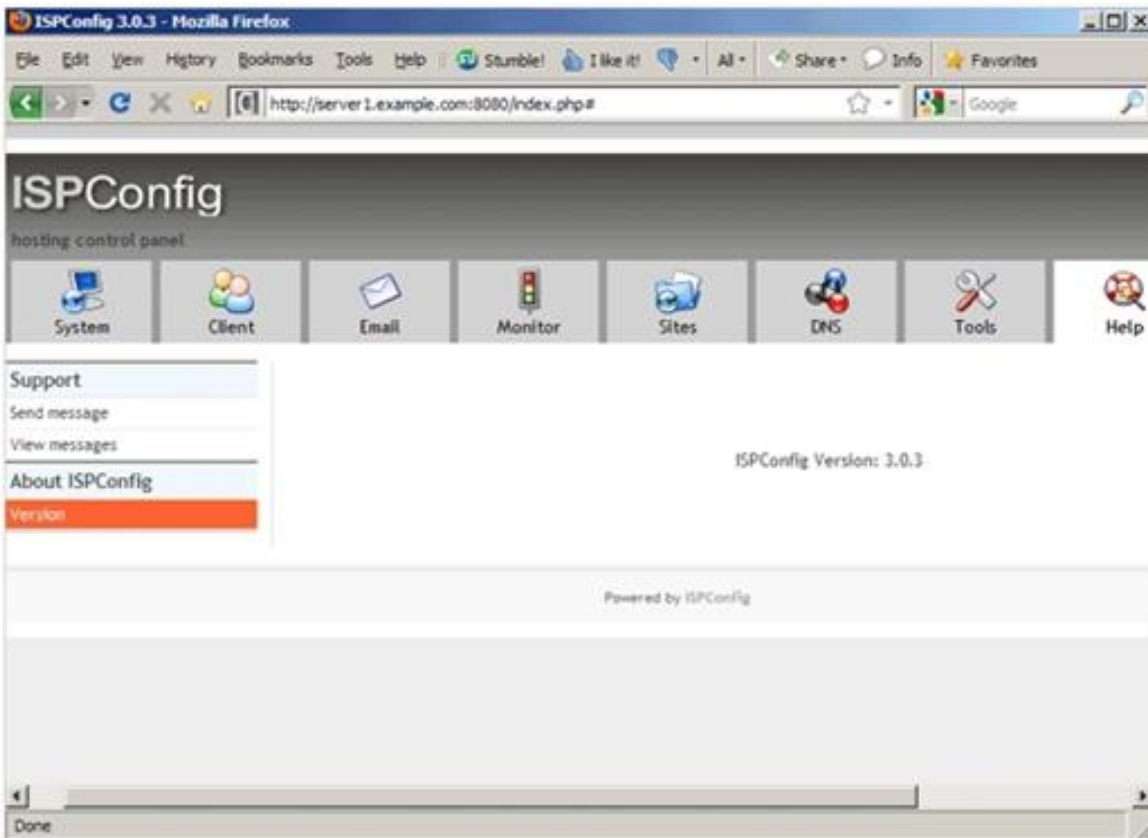
### 4.11.1.2 View messages

Here you can see a list of all tickets opened by you (answered or unanswered).

## 4.11.2 About ISPConfig

### 4.11.2.1 Version

Shows the currently installed ISPConfig 3 version:



## 4.12 Domains

If you use this module, your customers can only select one of the domains the admin creates for them. They can not freely edit the domain field.

This module is active only if you also check the Use the domain-module to add new domains checkbox on the Domains tab under System > System > Interface Config

### 4.12.1 Domains

#### 4.12.1.1 Domains

Here you can add domains to your server that clients can later on select when they create a new web site.

To add a new domain, click on the Add new Domain button. This will lead you to the Domain form with the tab Domain .

## Domain

## Domain

The form has the following fields:

- Domain : Type in a domain name that you want to allocate to a client, e.g. example.com (without any subdomain like www).
- Client : Select the client to which you want to allocate the domain from the drop-down menu. This client will then be able to select the domain from a drop-down menu when he creates a web site.

## 5 Howtos

### 5.1 How Do I Create A Reseller?

Log in as admin and go to Client > Resellers > Add Reseller  
the address of the reseller on the Address tab...

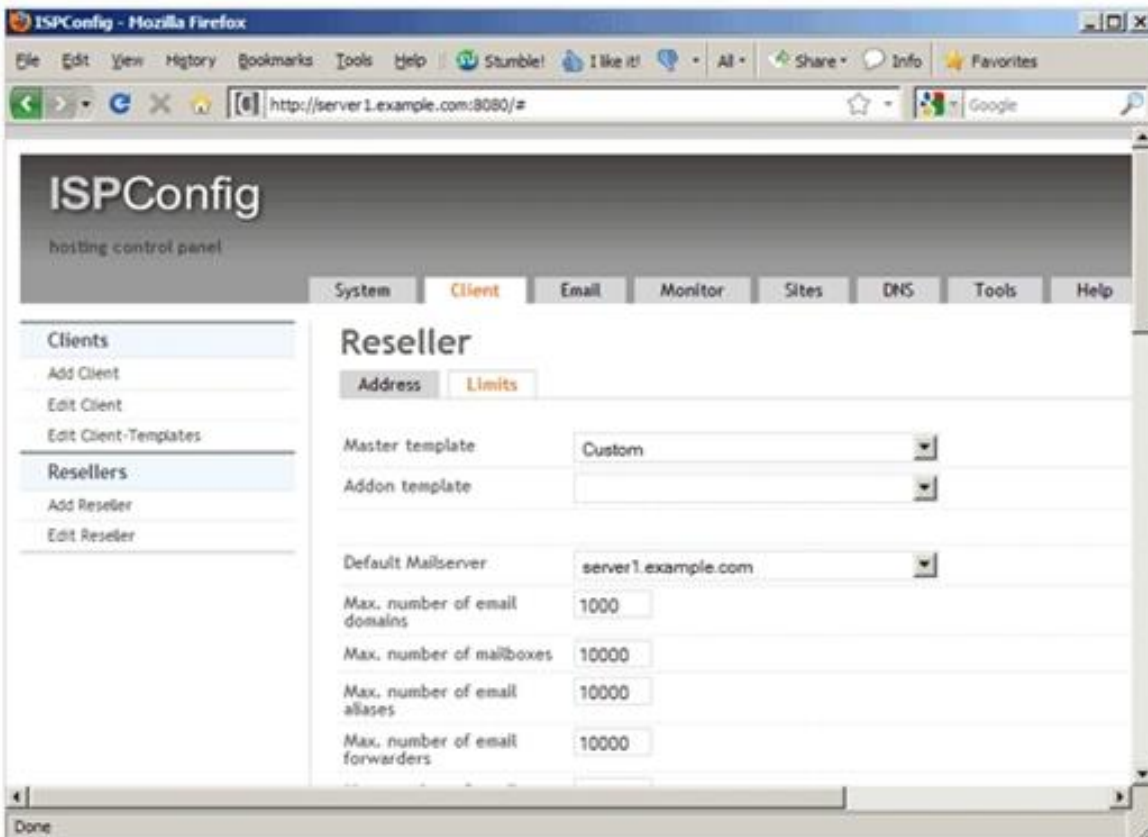
(see chapter 4.5.2.1). Fill in

The screenshot shows the ISPConfig 3 web interface in a Mozilla Firefox browser. The browser's address bar displays the URL `http://server1.example.com:8080/#`. The main content area is titled "ISPConfig hosting control panel" and features a navigation menu with tabs for System, Client, Email, Monitor, Sites, DNS, Tools, and Help. The "Client" tab is selected, and the "Reseller" form is visible. The form has two tabs: "Address" (selected) and "Limits". The form fields are as follows:

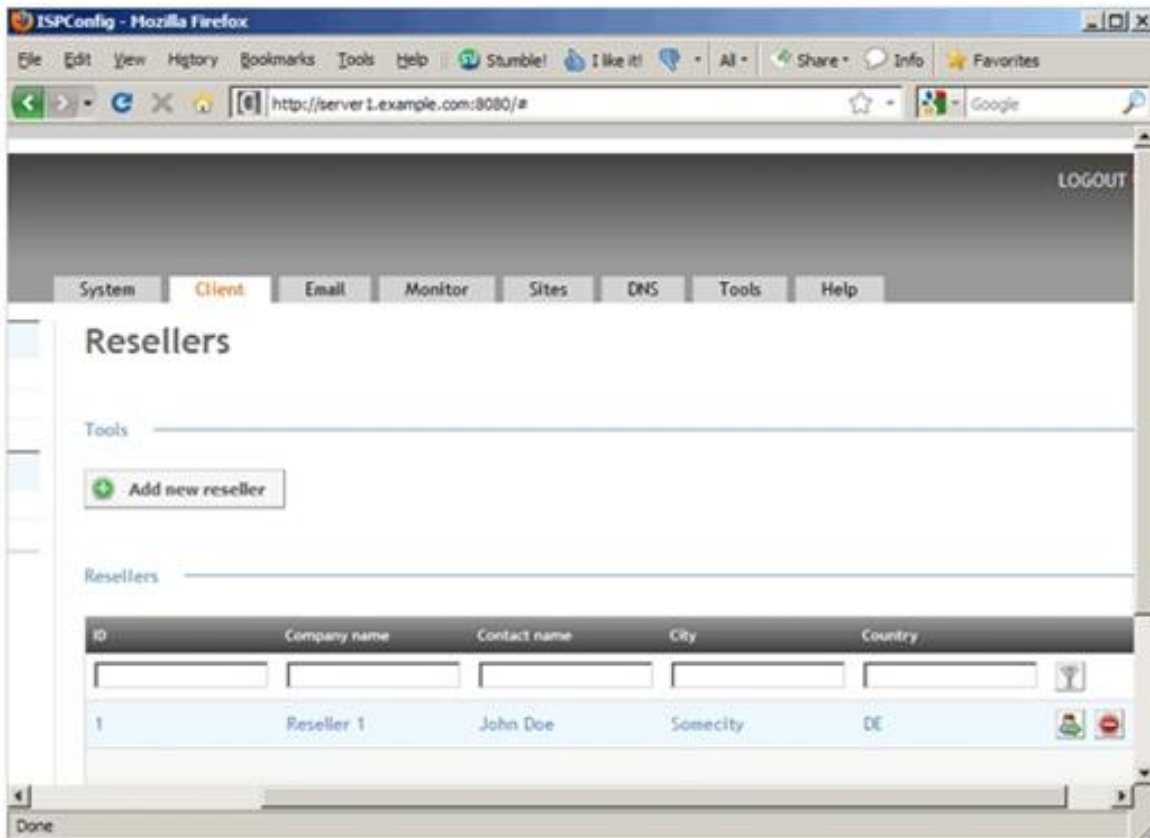
Field	Value
Company name	Reseller 1
Contact name	John Doe
Username	reseller1
Password	.....
Password strength	Good
Language	en
Theme	default
Street	Main Street 1
ZIP	12345

A left sidebar contains navigation links for Clients and Resellers. The "Resellers" section includes links for "Add Reseller" and "Edit Reseller".

... and then go to the Limits tab to specify limits for the reseller. An important field is the Max. number of Clients field as it specifies how many clients the reseller can create.



After you have created the reseller, you can find it in the list under Client > Resellers > Edit Reseller :



If you want to modify the reseller, you can pick it from that list and change the reseller's settings. From the list view, it is also possible to directly log in as the reseller (just click on the



button) and to delete the reseller (click on the



button) (see chapter 4.5.2.2).

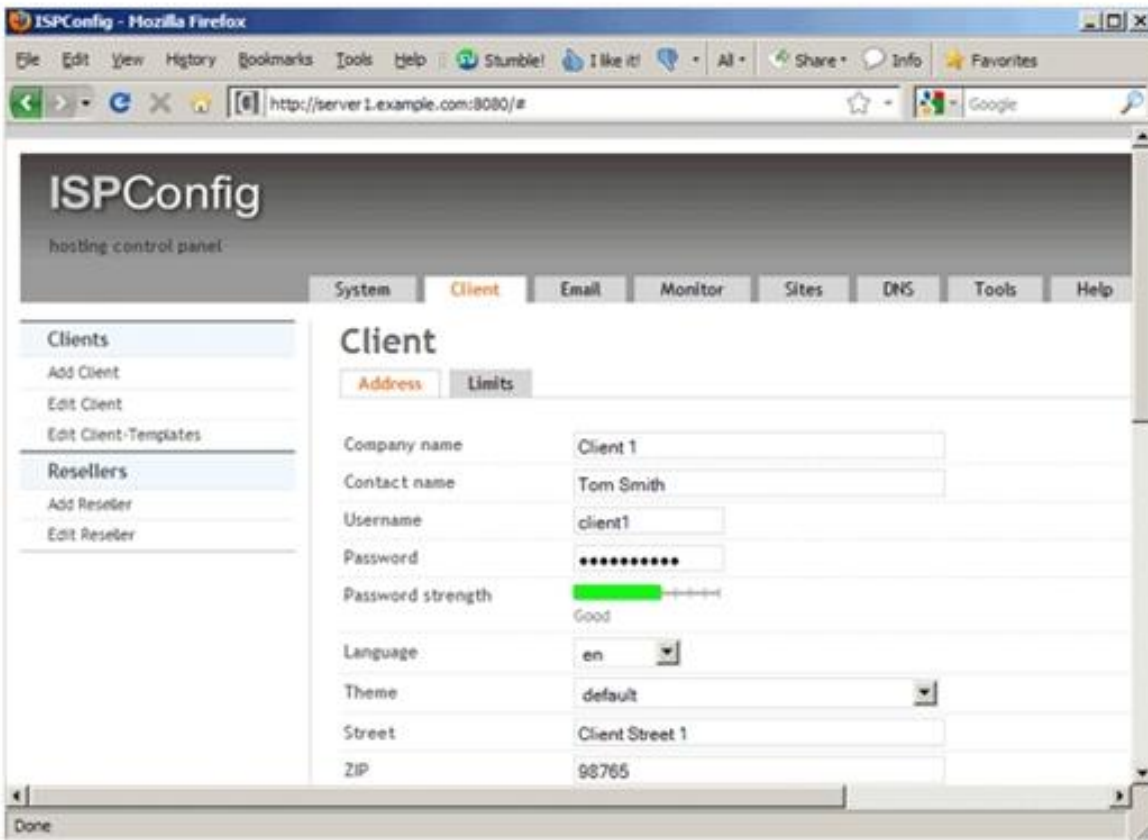
## 5.2 How Do I Create A Client?

Now we have to differentiate between two scenarios: 1) the client belongs to the admin 2) the client belongs to a reseller.

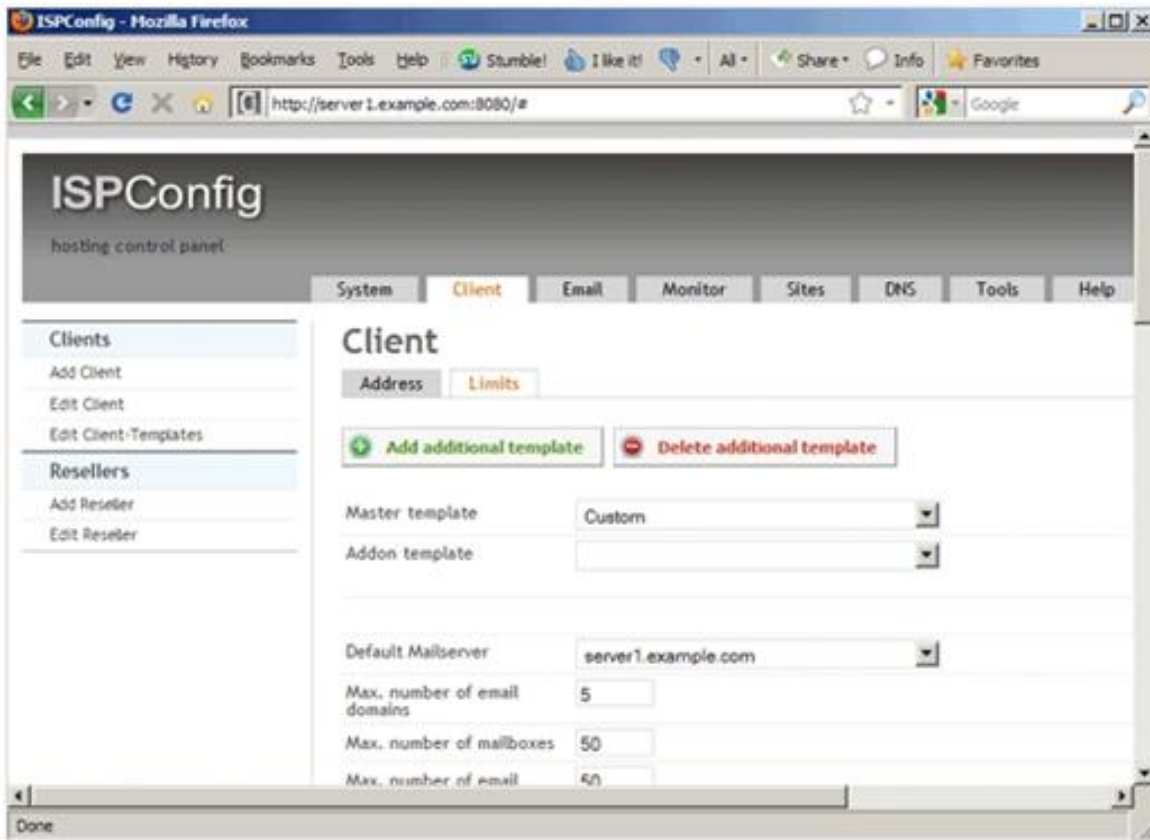
In the first case you must log in as admin and create the client from the admin account, in the second case you must log in as the reseller and create the client from the reseller account.

Then go to Client > Clients > Add Client  
client on the Address tab...

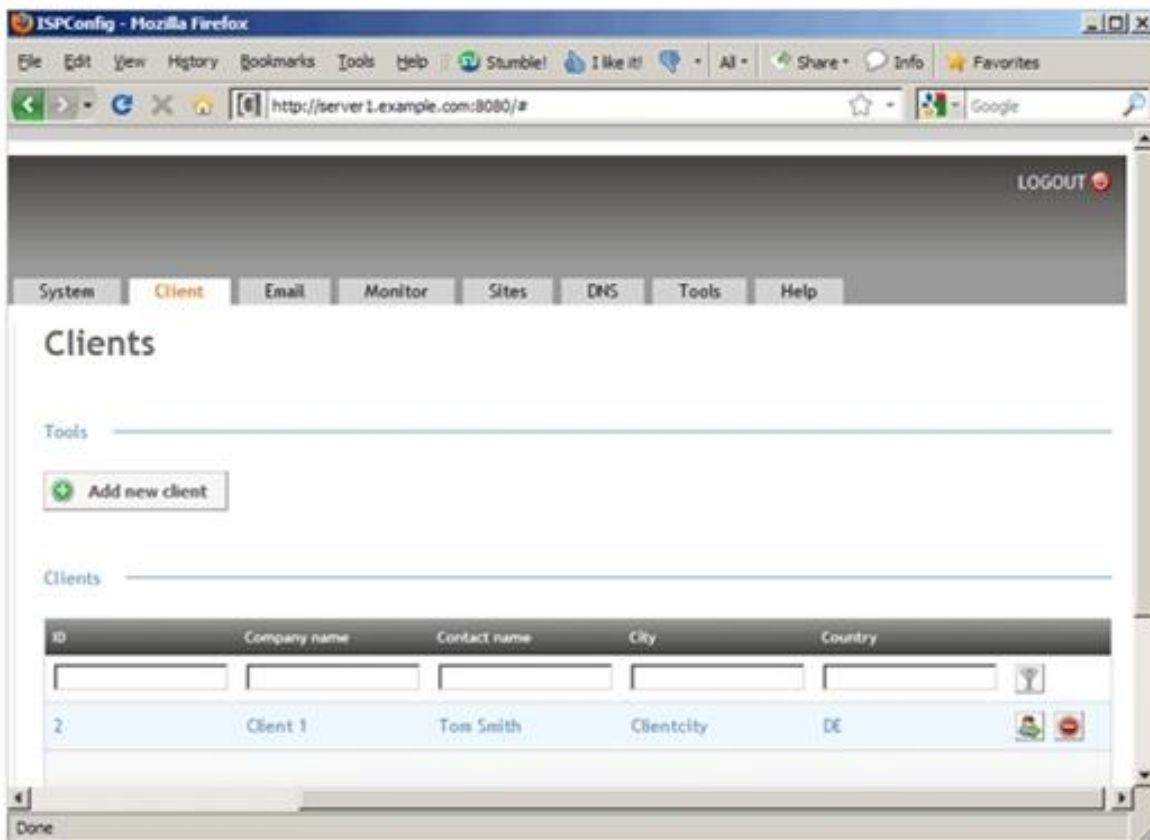
(see chapter 4.5.1.1). Fill in the address of the



... and then go to the Limits tab to specify limits for the client:



After you have created the client, you can find it in the list under Client > Clients > Edit Client :



If you want to modify the client, you can pick it from that list and change the client's settings. From the list view, it is also possible to directly log in as the client (just click on the



button) and to delete the client (click on the



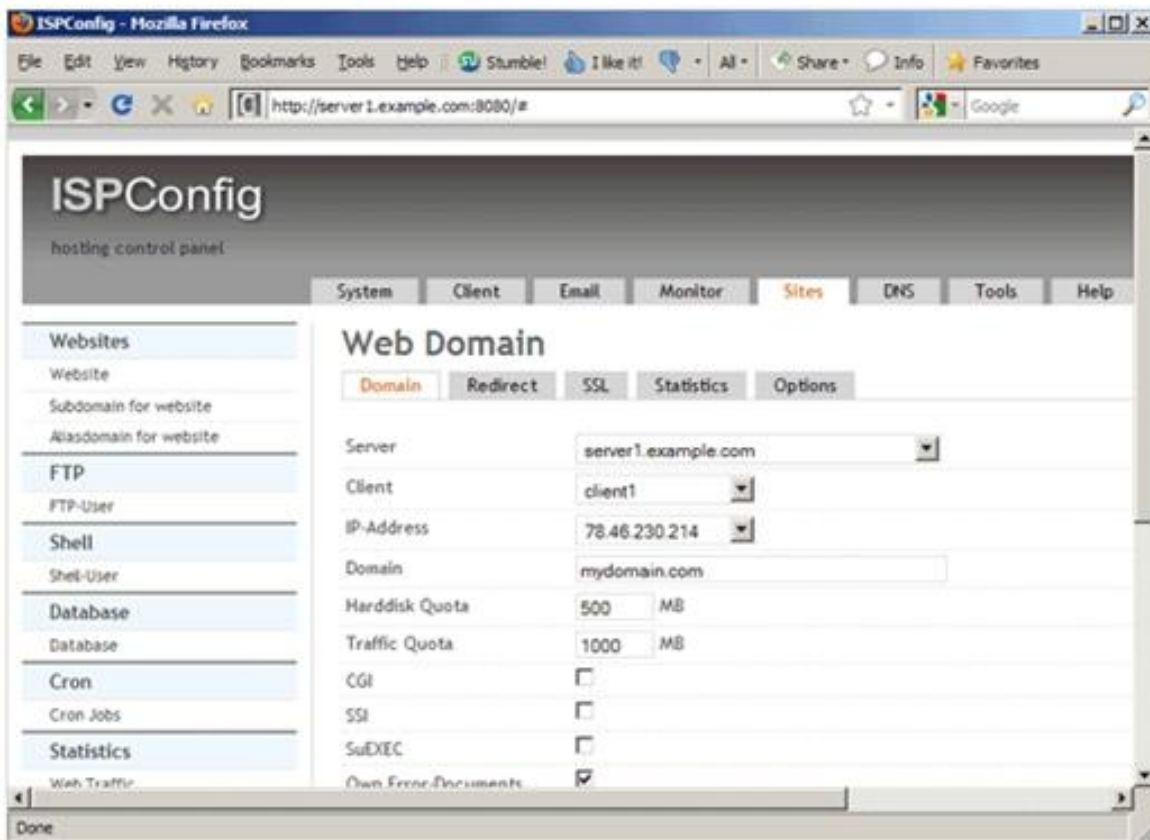
button) (see chapter 4.5.1.2).

## 5.3 How Do I Create A Web Site?

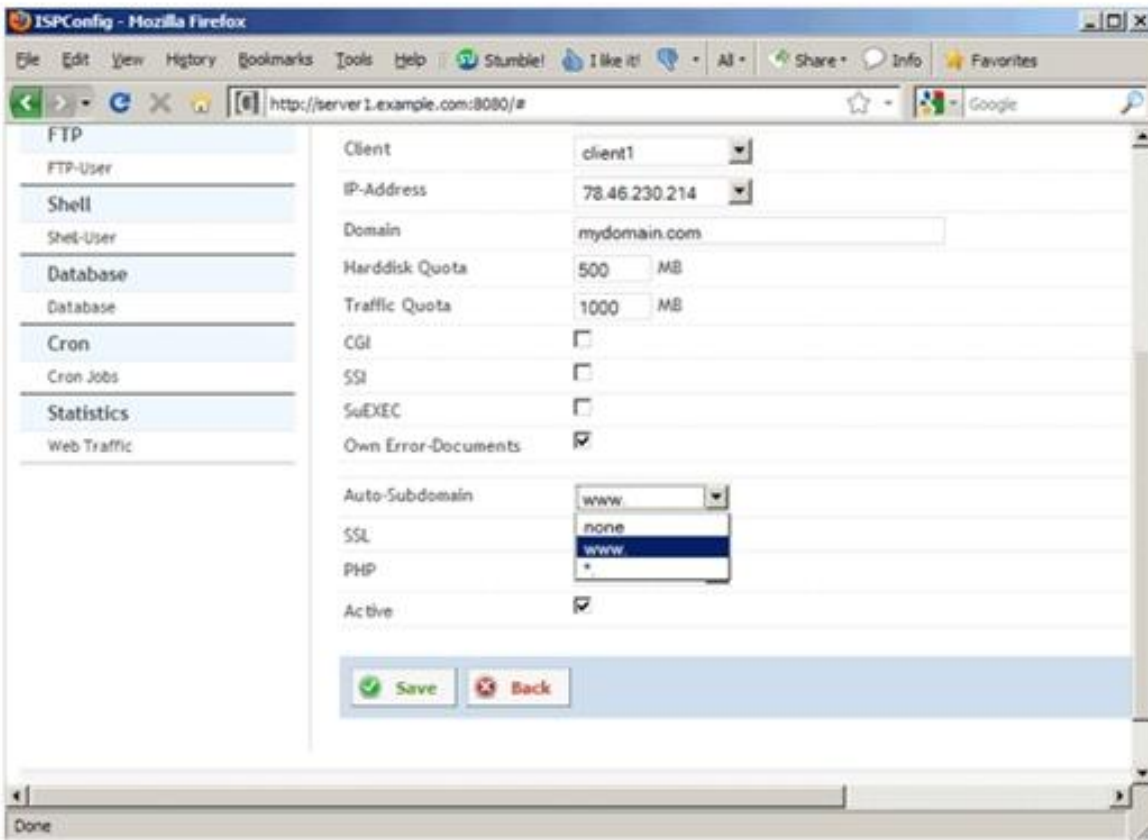
It is important that you create a client first before you create a web site, so that you can assign the web site to that client (a client can own multiple web sites).

Then log in as admin or as the reseller to which that client belongs and go to Sites > Websites > Website (see chapter 4.6.1.1). To create a web site, you just need to fill out the Domain tab (the other tabs contain special configurations that you usually don't need). Make sure that you select the correct client in the Client drop-down menu (if you are logged in as admin, you can select all clients that exist on the system; if you are logged in as a reseller, you can select only the clients that belong to the reseller):

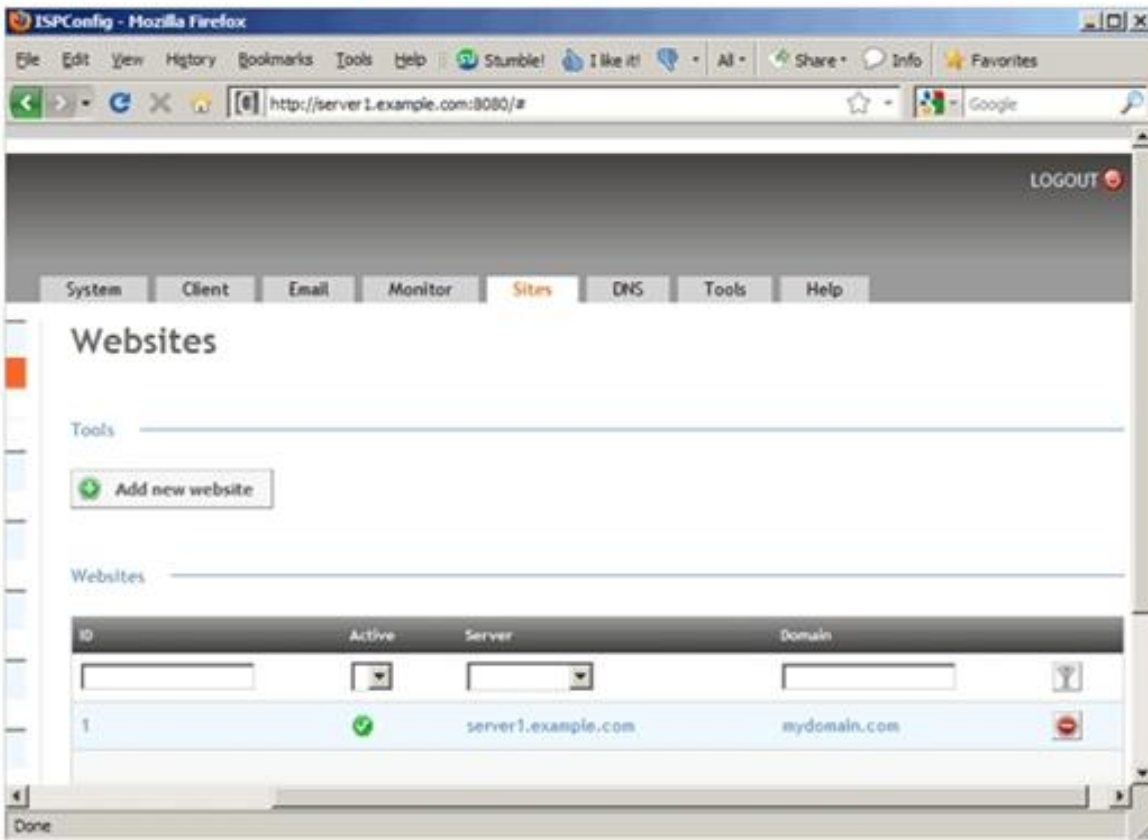





Use the Auto-Subdomain field to define whether you want no automatic subdomain for the web site (in this case you can access the site only by using the domain, e.g. <http://example.com> ), an automatic www subdomain (recommended) (you can then access the site using <http://example.com> and <http://www.example.com> ), or a wildcard subdomain (\*. ) which means you can access the site with any subdomain that does not point to another web site:

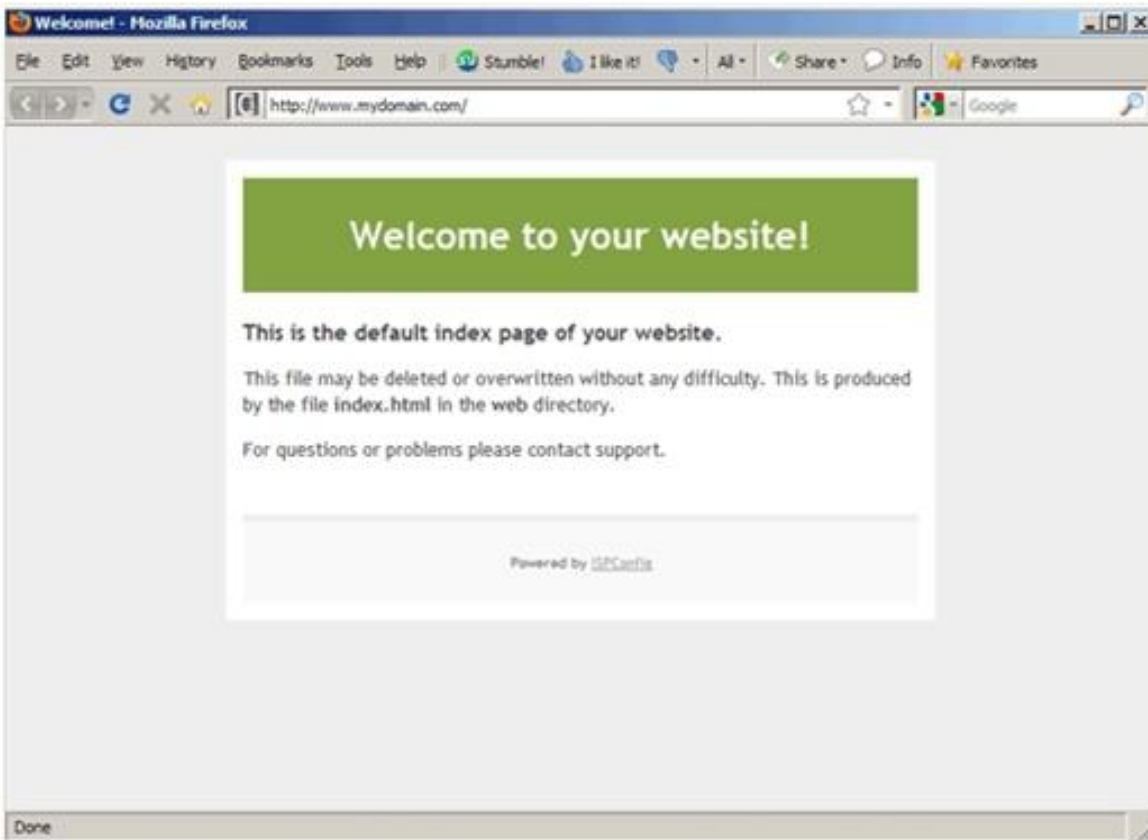


After you have created the web site, you can find it in the list under Sites > Websites > Website :



From the list view, it is possible to delete the web site (click on the  button).

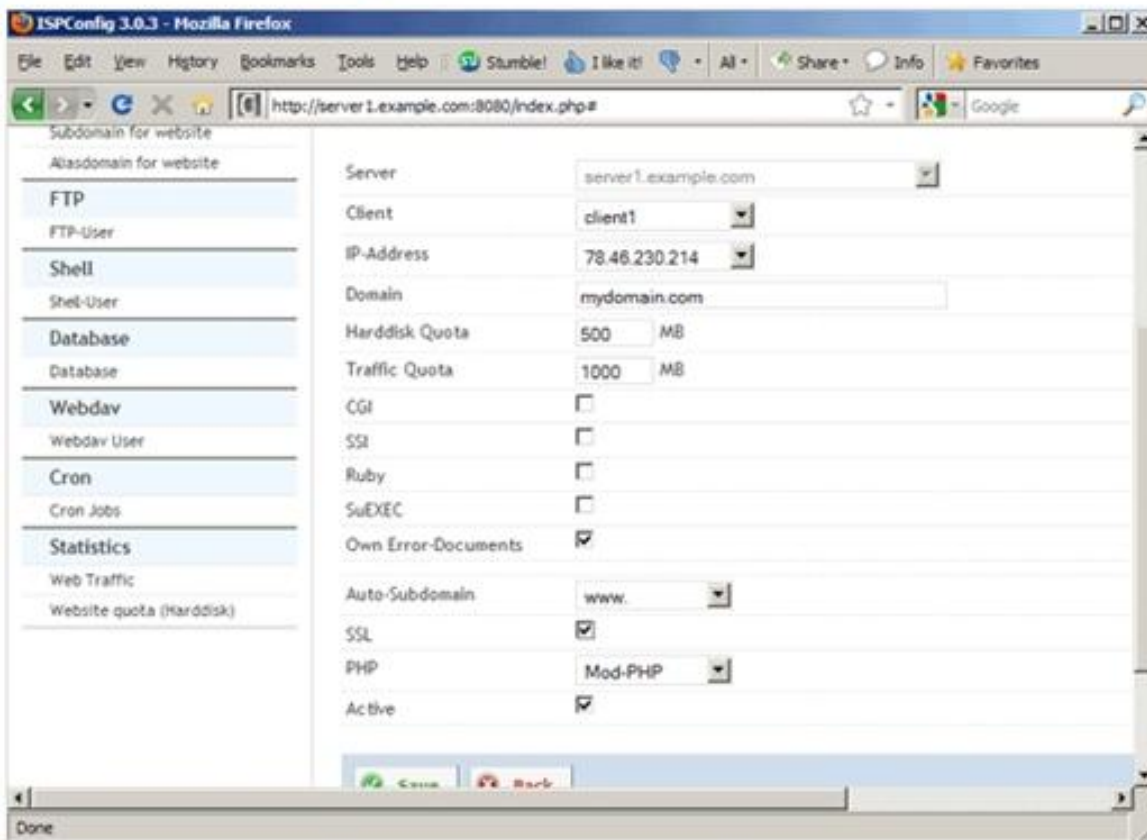
If the DNS records for the new web site exist and point to the correct server, you can now go to the new web site in a browser, and you should see the default ISPConfig 3 welcome page:



Important: if a client creates a web site himself, he has the permissions to modify the web site settings in ISPConfig. If the admin or a reseller creates a web site for a client, then the web site settings cannot be modified by the client in ISPConfig, only by the admin or by the reseller that created the web site.

## 5.4 How Do I Create An SSL Web Site?

To make a web site SSL-capable, please make sure that the SSL checkbox is checked on the web site's Domain tab (please note that you can have only one SSL web site per IP address). Important: you must select a specific IP address from the IP-Address drop-down menu; you must not select the wildcard (\* )!

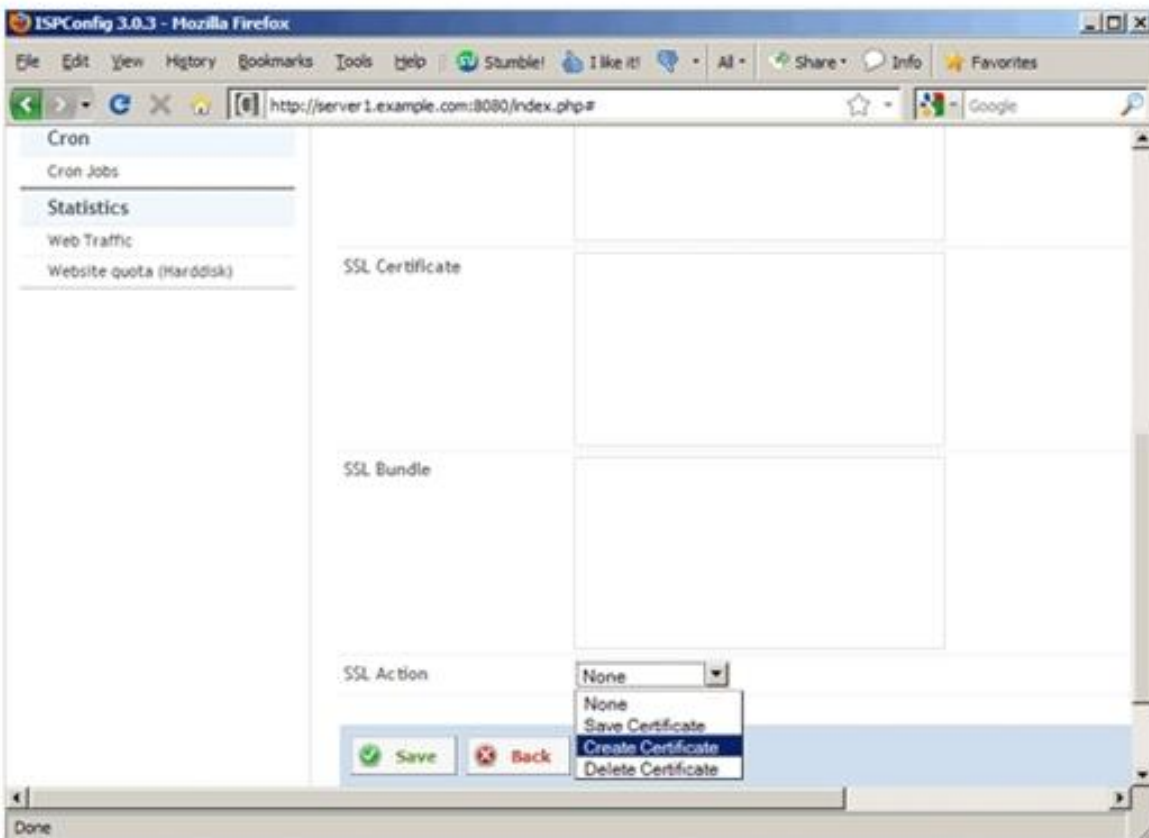
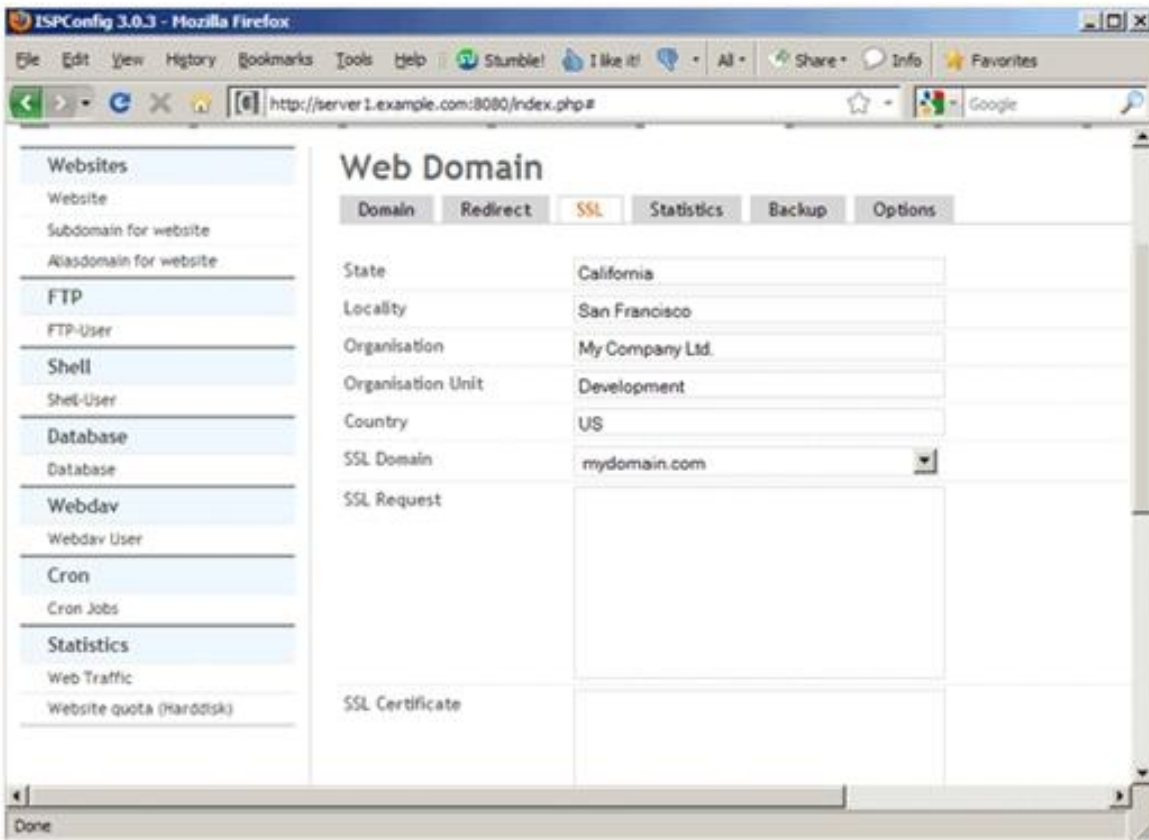


Then go to the SSL tab (see chapter 4.6.1.1).

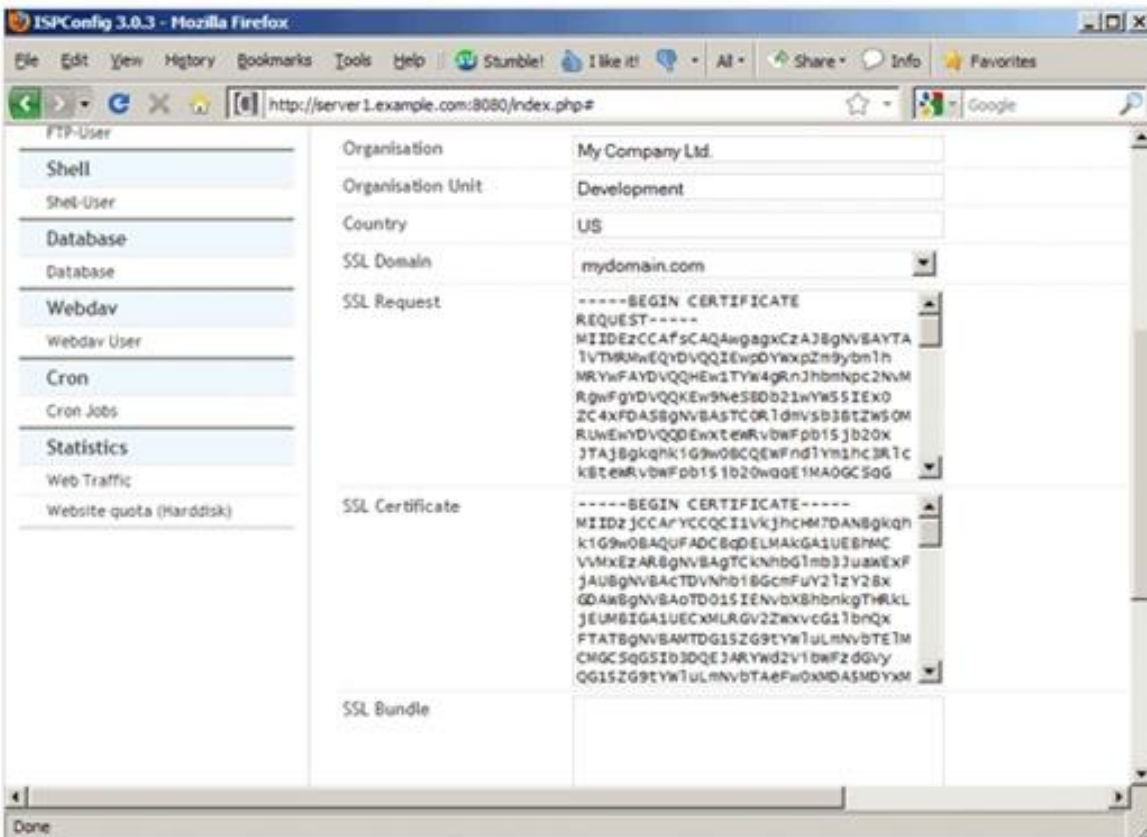
On the SSL tab you can create a self-signed SSL certificate together with a certificate signing request (CSR) that you can use to apply for an SSL certificate that is signed by a trusted certificate authority (CA) such as Verisign, Comodo, Thawte, etc. It's not necessary to buy such a trusted SSL certificate, but you should note that if you use a self-signed SSL certificate, browsers will display a warning to your visitors.

Please note that you can have just one SSL web site per IP address.

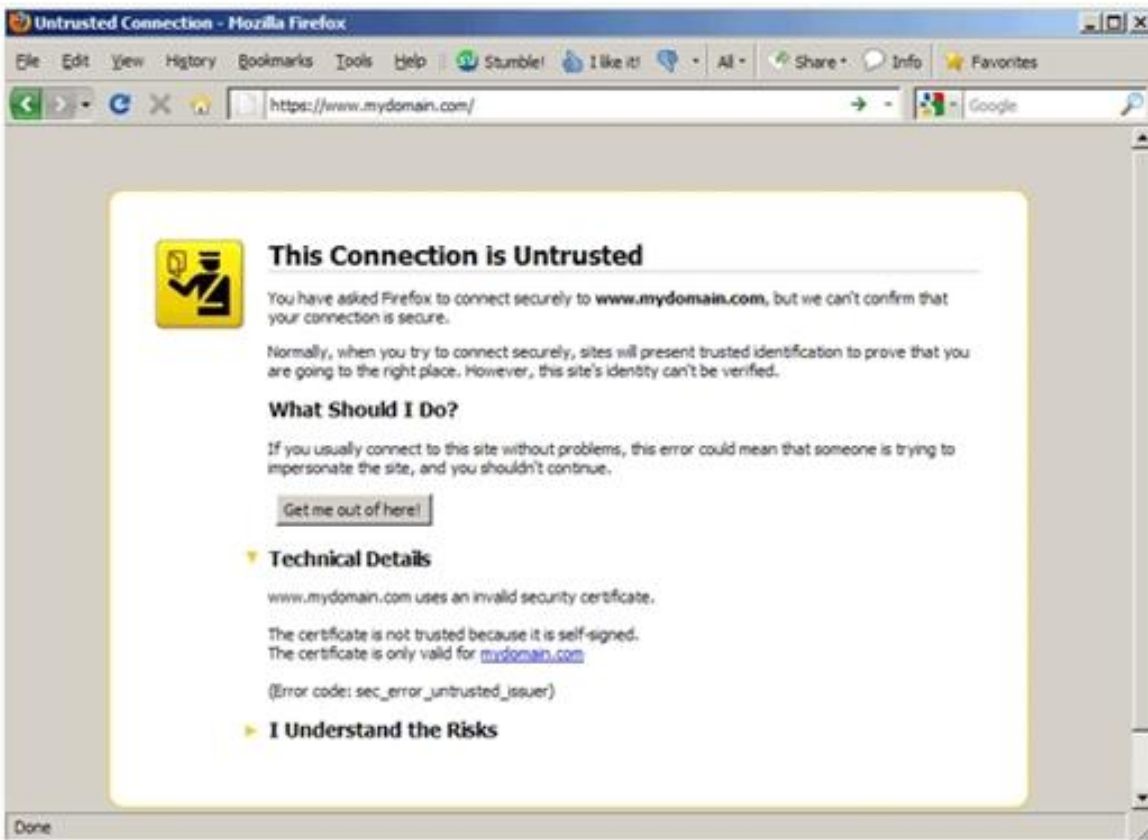
To create a self-signed certificate, please fill out the fields State , Locality , Organisation , Organisation Unit , Country , and SSL Domain , and then select Create Certificate from the SSL Action drop-down menu, and click on Save . Leave the fields SSL Request , SSL Certificate , and SSL Bundle empty - the fields SSL Request and SSL Certificate will be filled out by the system.



After the self-signed certificate was created, you will find data in the SSL Request and SSL Certificate fields (it can take one or two minutes until the data appears in the fields):

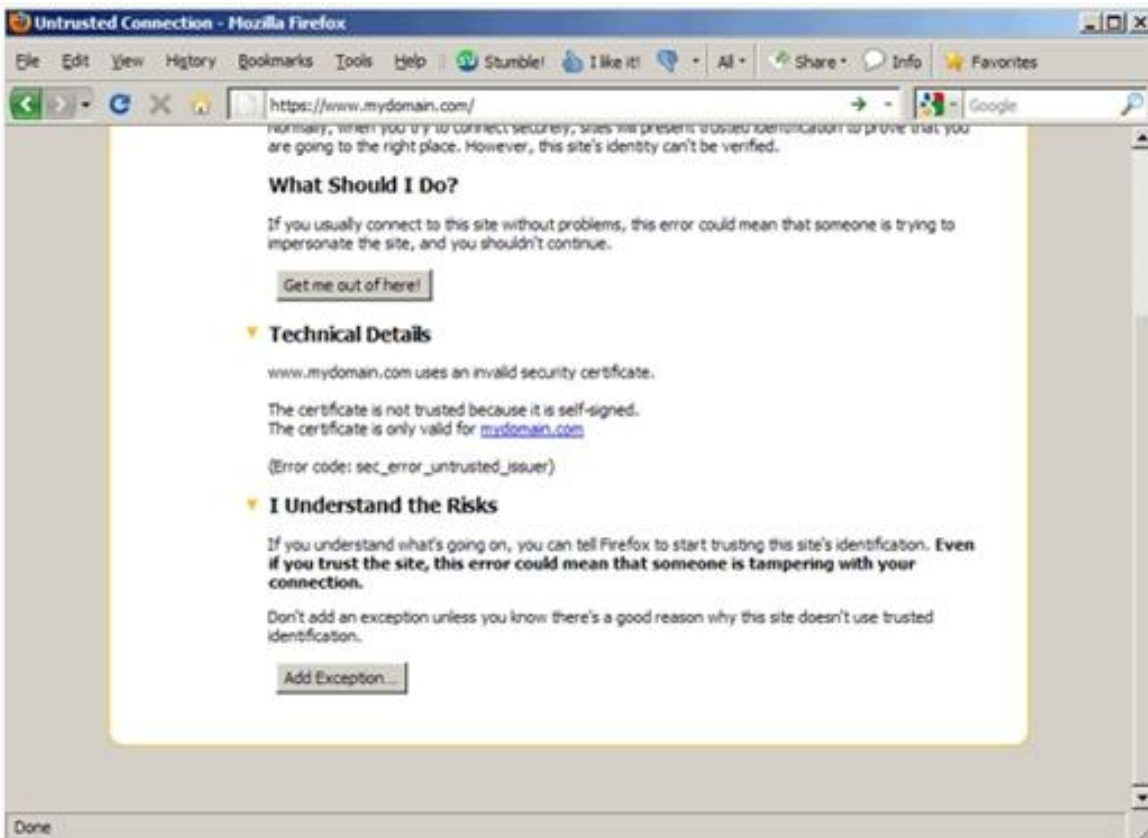


It is already possible to access the web site using https:// now with the self-signed certificate, but your visitors will see a warning. For example, Firefox will complain about the self-signed certificate, therefore you must tell Firefox to accept the certificate - to do this, click on the I Understand the Risks link:

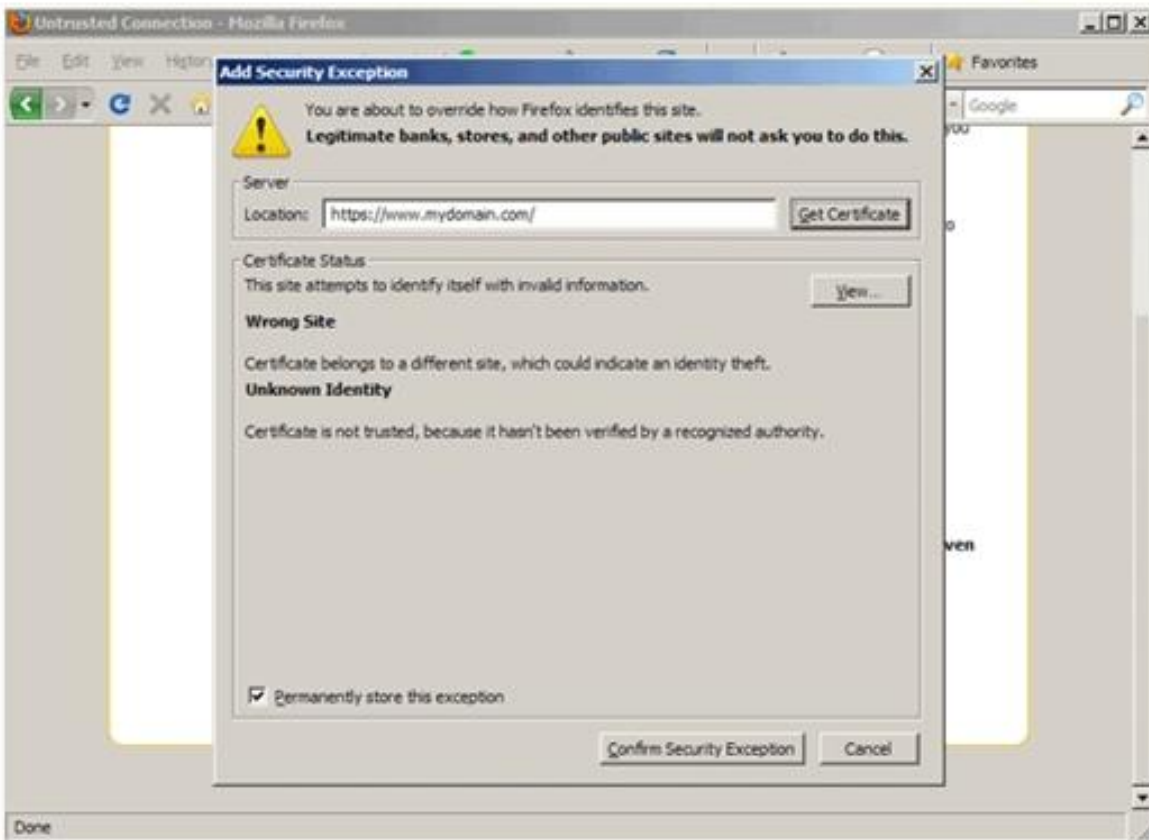


Click on Add Exception... :

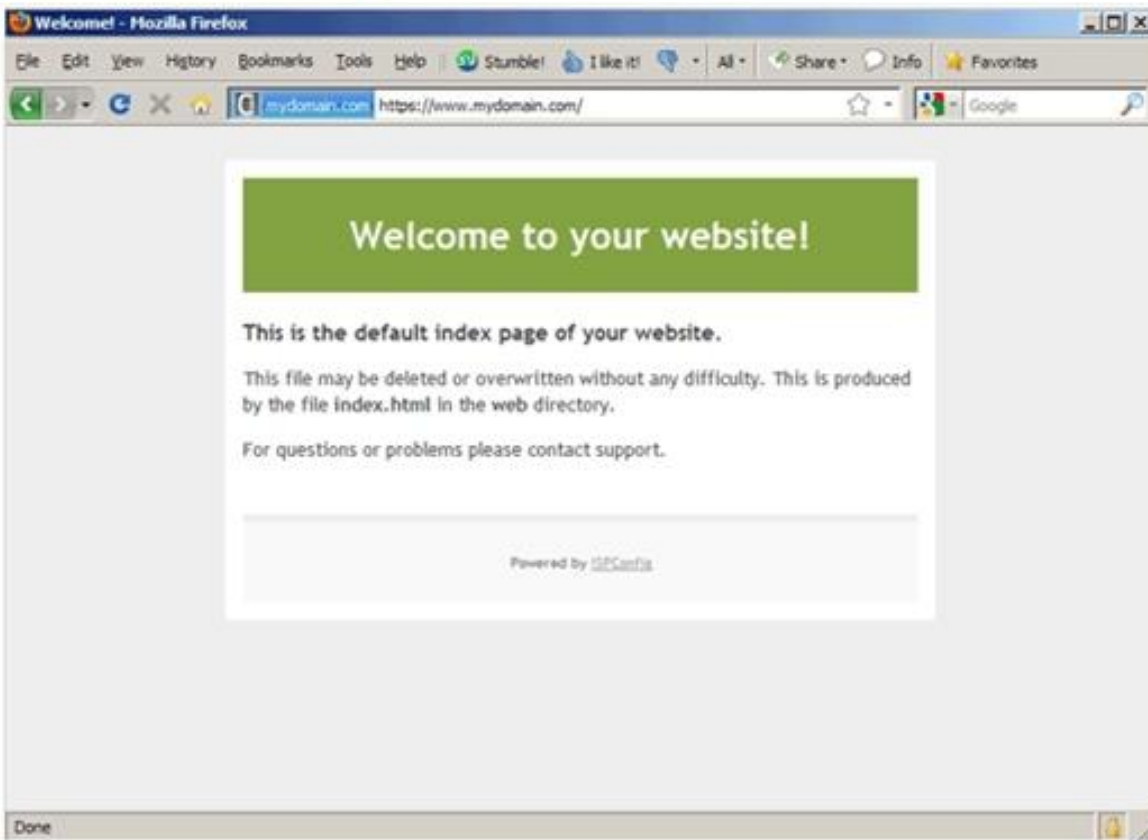




The Add Security Exception window opens. In that window, click on the Get Certificate button first and then on the Confirm Security Exception button:



Afterwards you should be able to see the https:// web site:



If you want to buy an SSL certificate from a trusted CA, you have to copy the data from the SSL Request field - this is the certificate signing request (CSR). With this CSR, you can apply for a trusted SSL certificate at your CA - the CA will create an SSL certificate from this CSR, and you can paste the trusted SSL certificate into the SSL Certificate field. Sometimes your CA will also give you an SSL bundle - paste this into the SSL Bundle field. Select Save Certificate from the SSL Action drop-down menu and click on the Save button:



You have just replaced your self-signed certificate with a trusted SSL certificate.

To delete a certificate, select Delete Certificate from the SSL Action drop-down menu and click on the Save button.

SSL Action 

## 5.5 How Do I Redirect My Web Site To Another Web Site Or To A Specific Directory On The Server?

Go to the Redirect tab of your web site in ISPConfig (see chapter 4.6.1.1). In the Redirect Type field, please select the flag that you want to use for the redirect:

Flags:

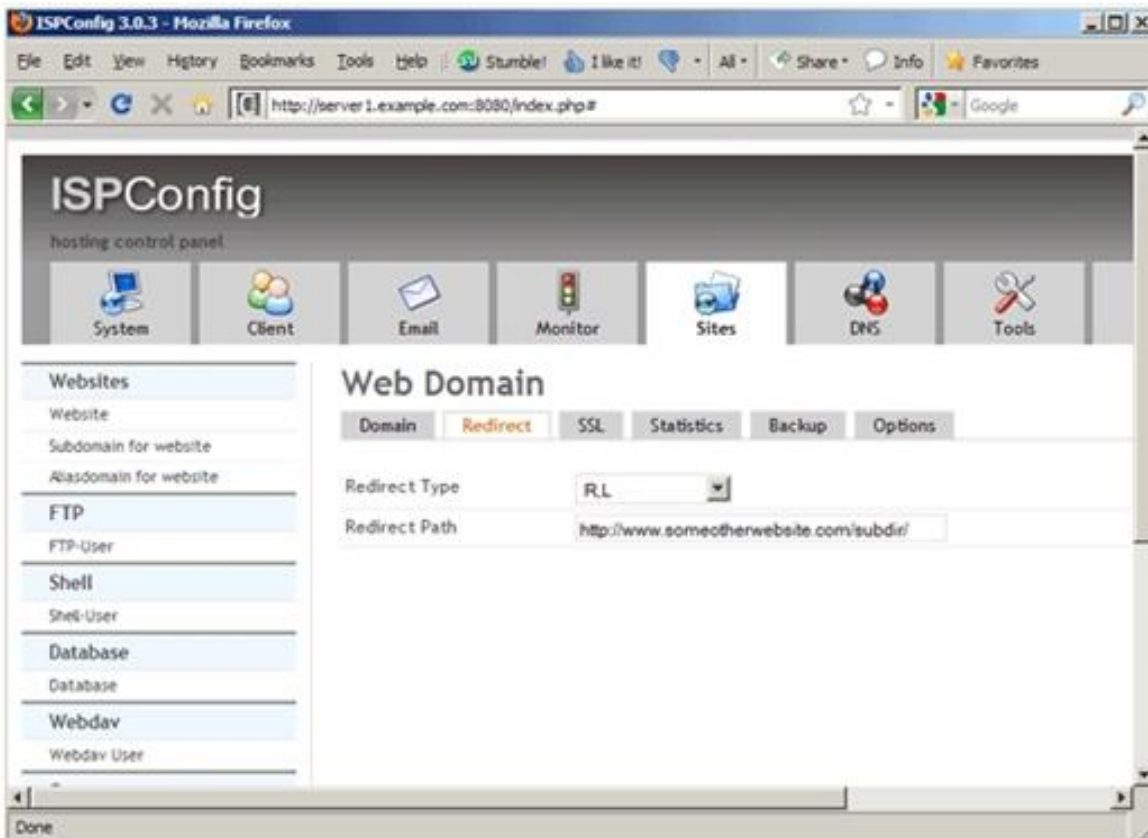
- R: Use of the [R] flag causes a HTTP redirect to be issued to the browser. If a fully-qualified URL is specified (that is, including `http://servername/`) then a redirect will be issued to that location. Otherwise, the current servername will be used to generate the URL sent with the redirect.
- L: The [L] flag causes `mod_rewrite` to stop processing the rule set. In most contexts, this means that if the rule matches, no further rules will be processed.
- R,L: You will almost always want to use [R] in conjunction with [L] (that is, use [R,L]) because on its own, the [R] flag prepends `http://thishost[:thisport]` to the URI, but then passes this on to the next rule in the ruleset, which can often result in 'Invalid URI in request' warnings.

More details about flags can be found here:

[http://httpd.apache.org/docs/2.2/rewrite/rewrite\\_flags.html](http://httpd.apache.org/docs/2.2/rewrite/rewrite_flags.html)

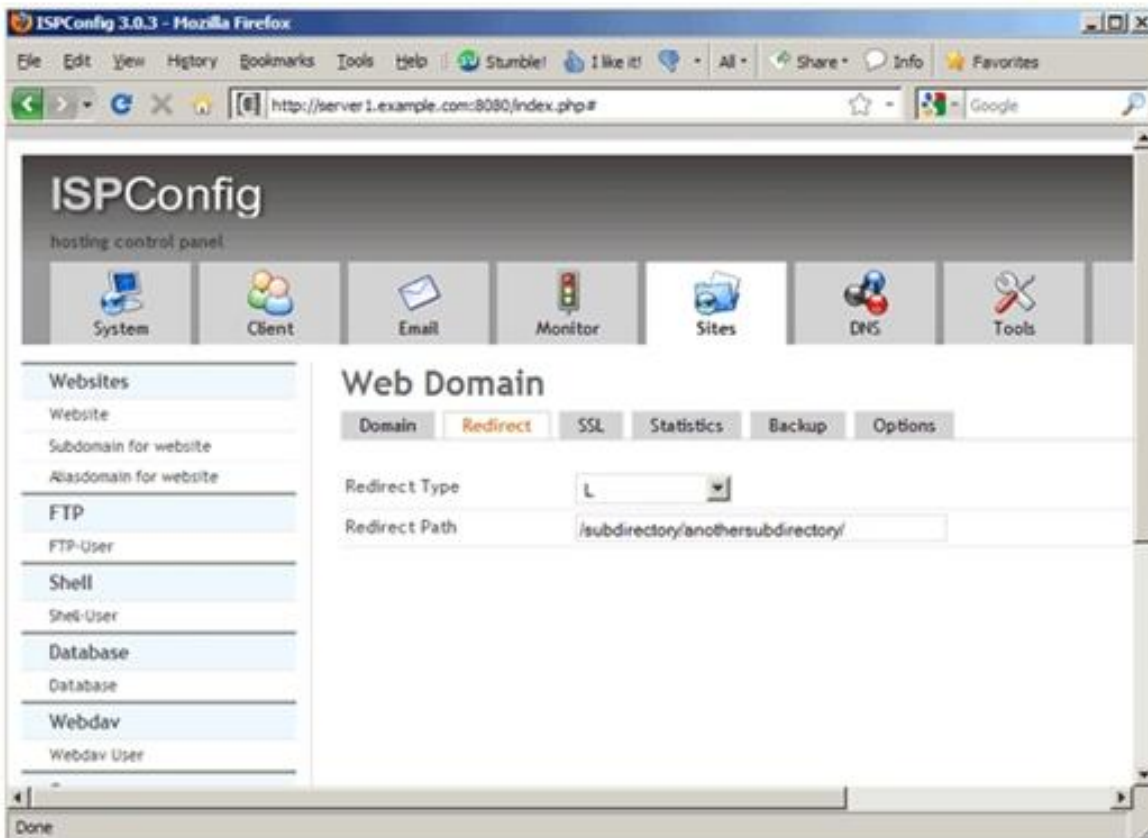
If you want to do a URL redirect, you should use the R,L flags, while for a directory redirect it is recommended to just use the L flag.

If you want to do a URL redirect, please specify the redirect target URL in the Redirect Path field (e.g. `http://www.someotherwebsite.com/subdir/` or `http://www.someotherwebsite.com/` ). Please note that the URL should have a trailing slash:



If you want to do a redirect to a subdirectory of your web site, please specify the subdirectory or the path to the subdirectory (relative to the document root of your web site) in the Redirect Path field. Please note that the path must begin and end with a slash (e.g.

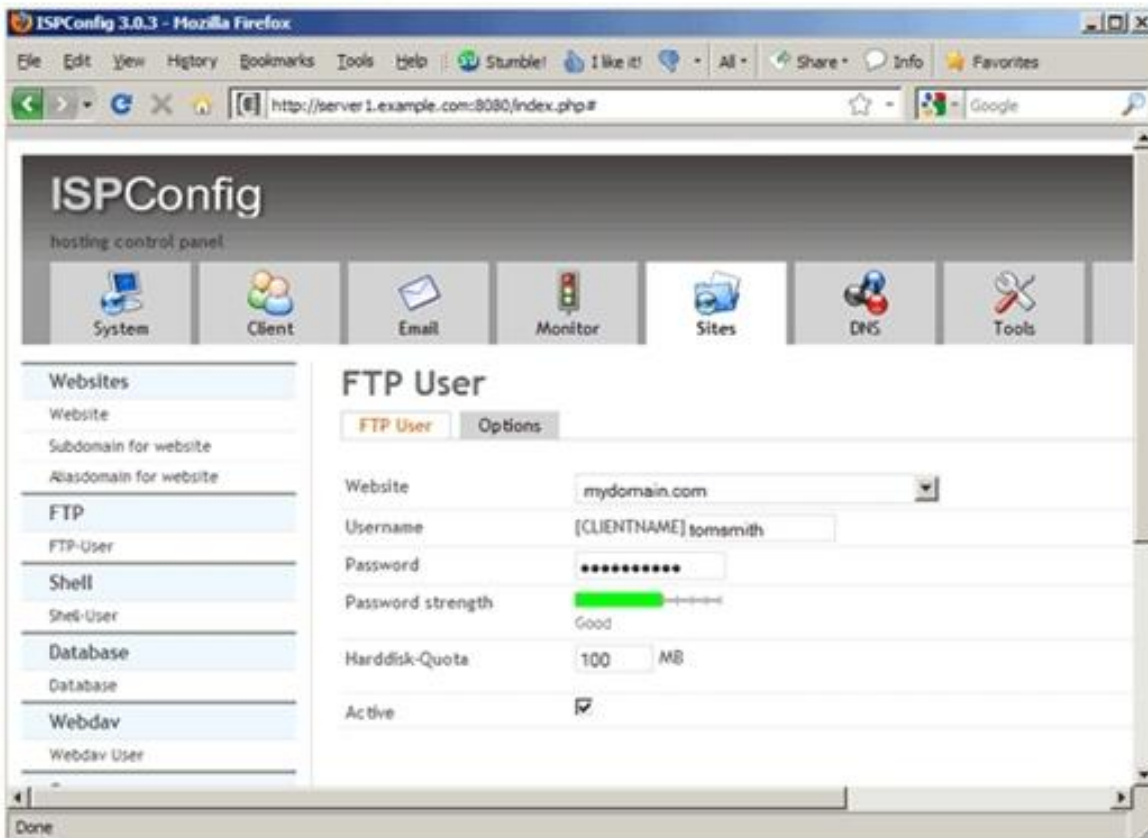
/subdirectory/anothersubdirectory/ ):



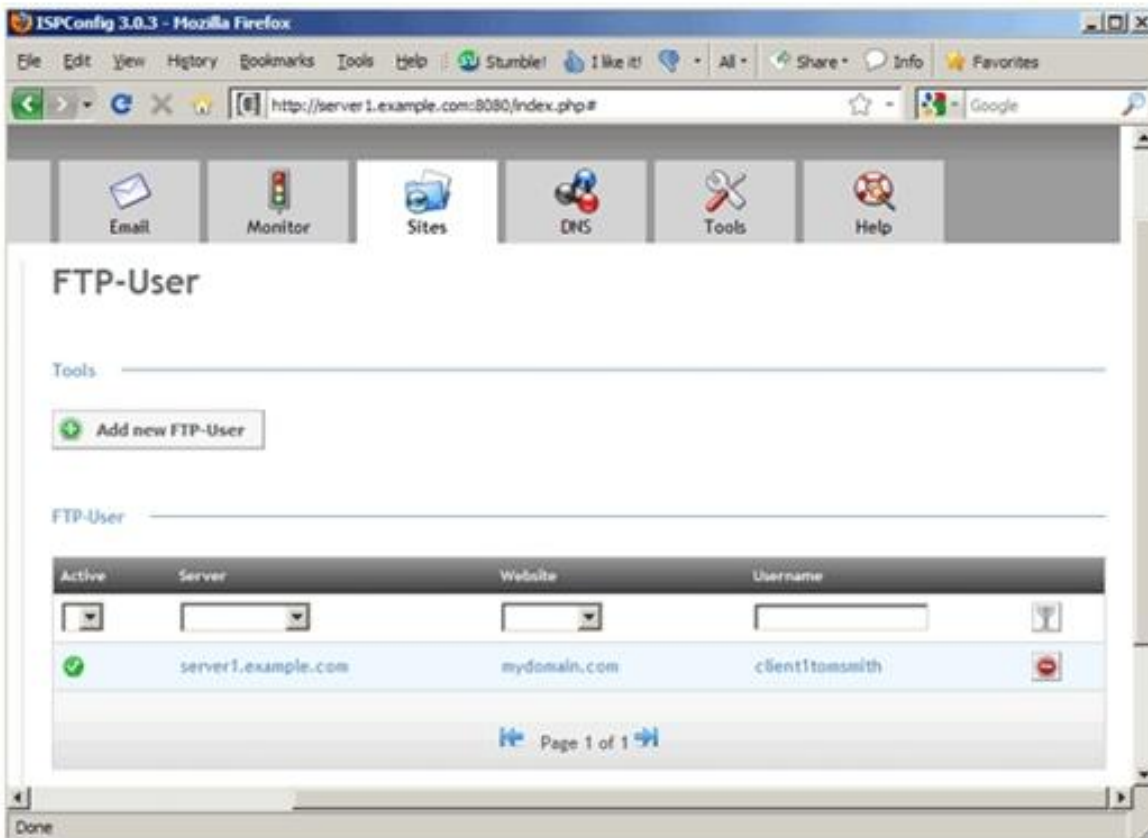
## 5.6 How Do I Create An FTP Account So That I Can Upload Files To My Web Site?


Go to Sites > FTP > FTP-User and click on the Add new FTP-User button (see chapter 4.6.2.1).

Select the web site for which you want to create the FTP user, then define a username for the FTP account ([CLIENTNAME] is a placeholder and will be replaced by ISPConfig; you can see the final username in the FTP user list) and a password and specify a hard disk quota in MB (-1 means unlimited):



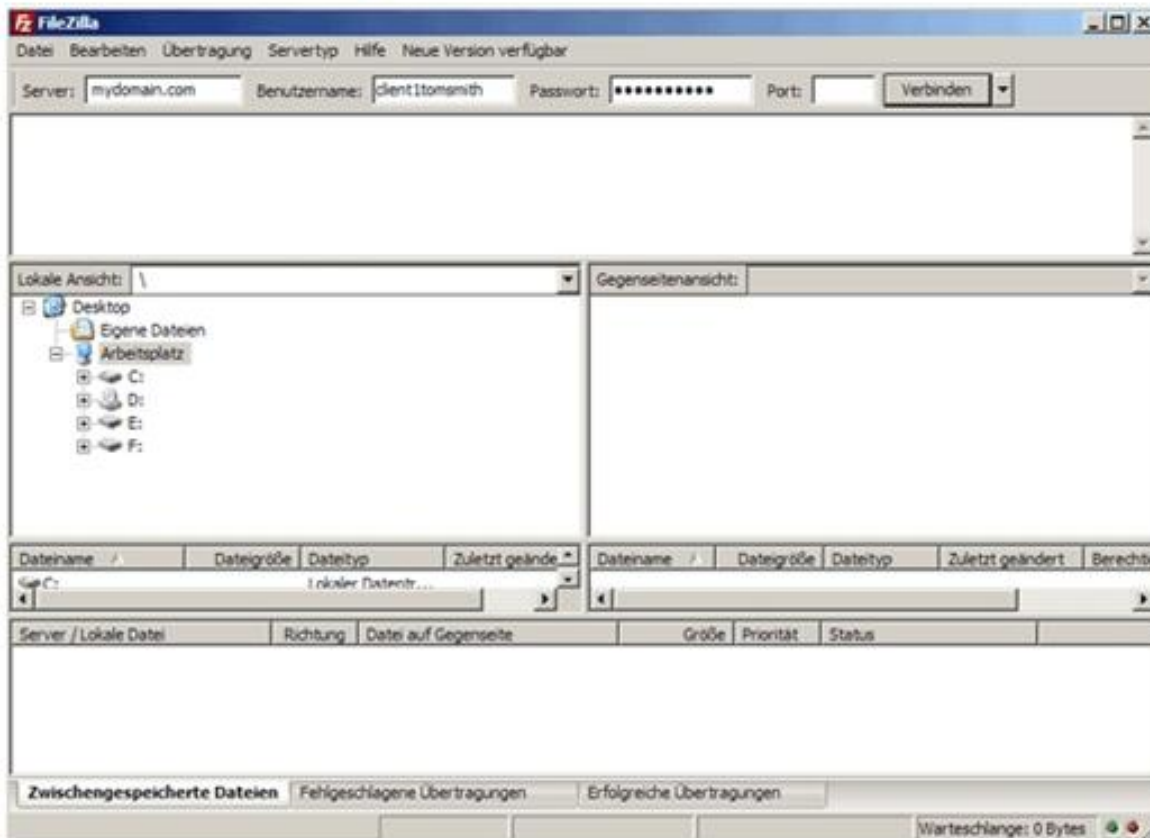
Afterwards you can find the new FTP user in the list under Sites > FTP > FTP-User (where you can also see the final username of the FTP user, client1tomsmith in this case which means that [CLIENTNAME] was replaced with client1 ):



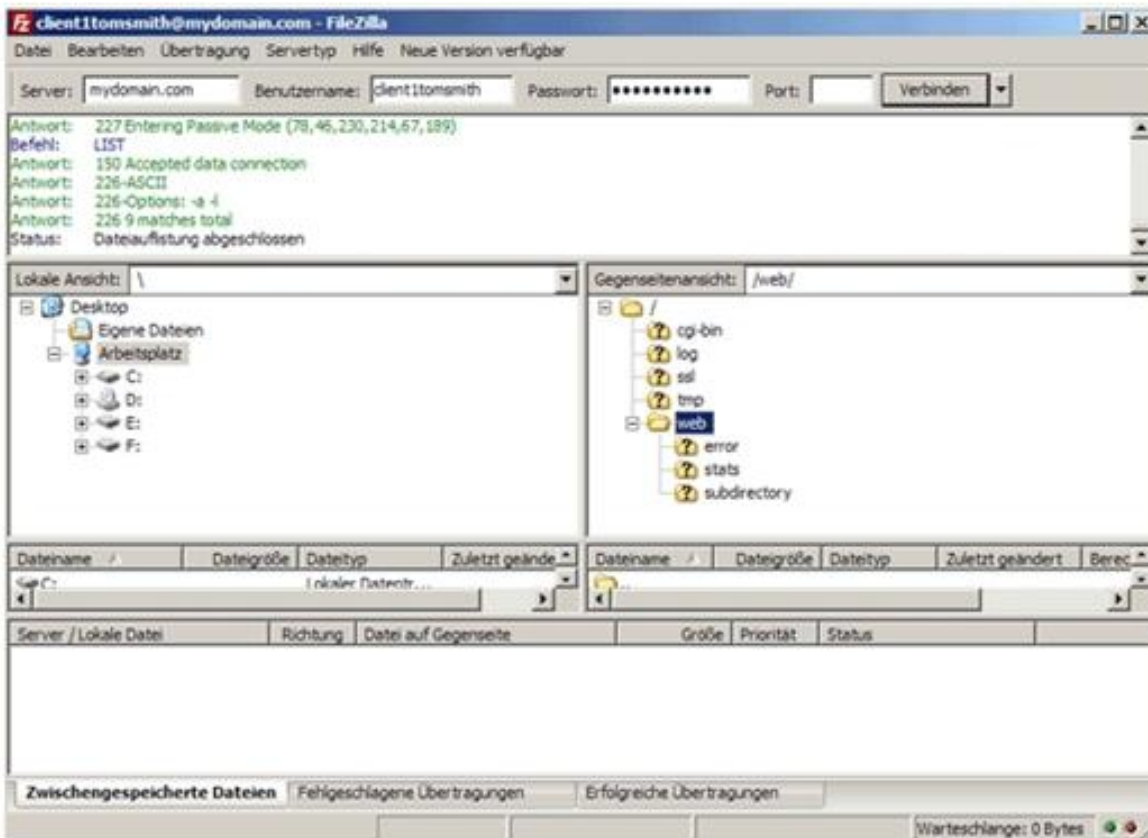
From the list view, it is possible to delete the FTP user (click on the  button).

You can now use the new FTP account to log into your web site (using an FTP client such as [FileZilla](#)) - use your web site domain (without http:// or https://) in the Server or Hostname field of your FTP client and then your FTP username and password to log in:

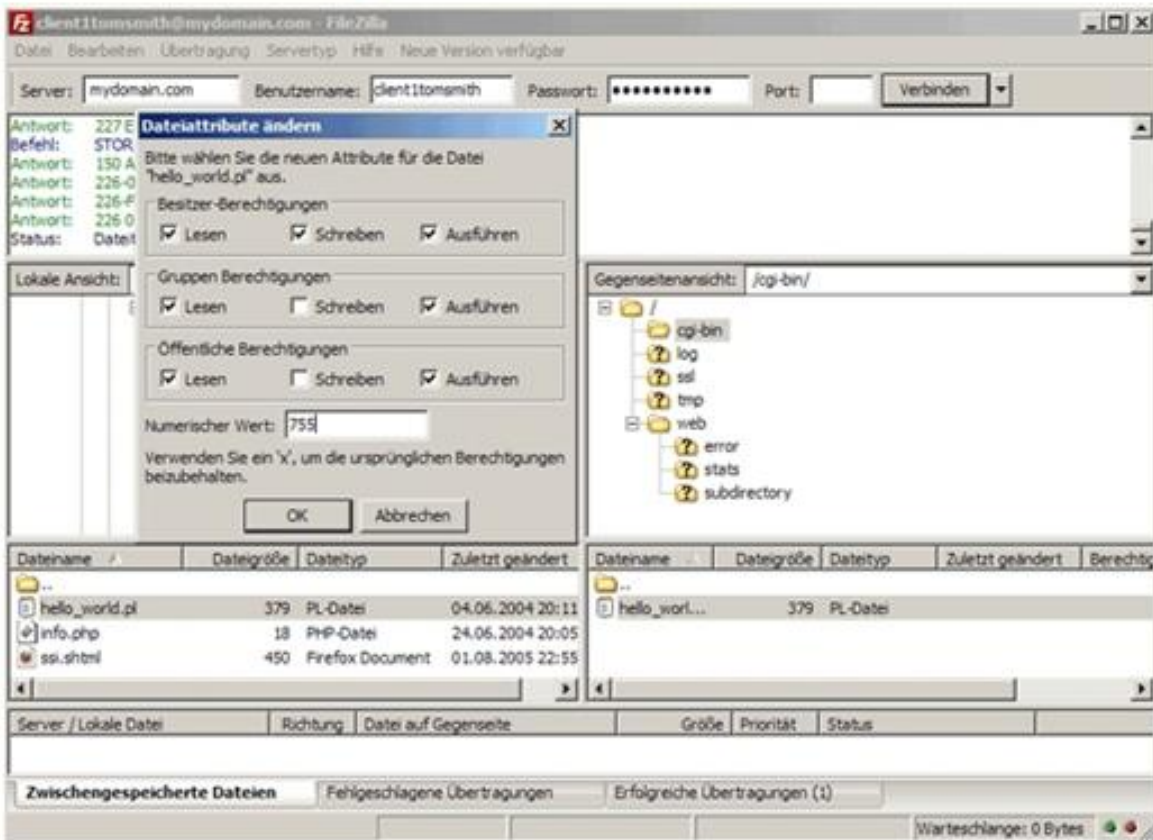




After you've logged in, you can now see the directory structure of your web site. You must upload web site contents into the `web/` directory (or subdirectories of it) as this is the document root of your web site; Perl or CGI scripts must go into the `cgi-bin/` directory:

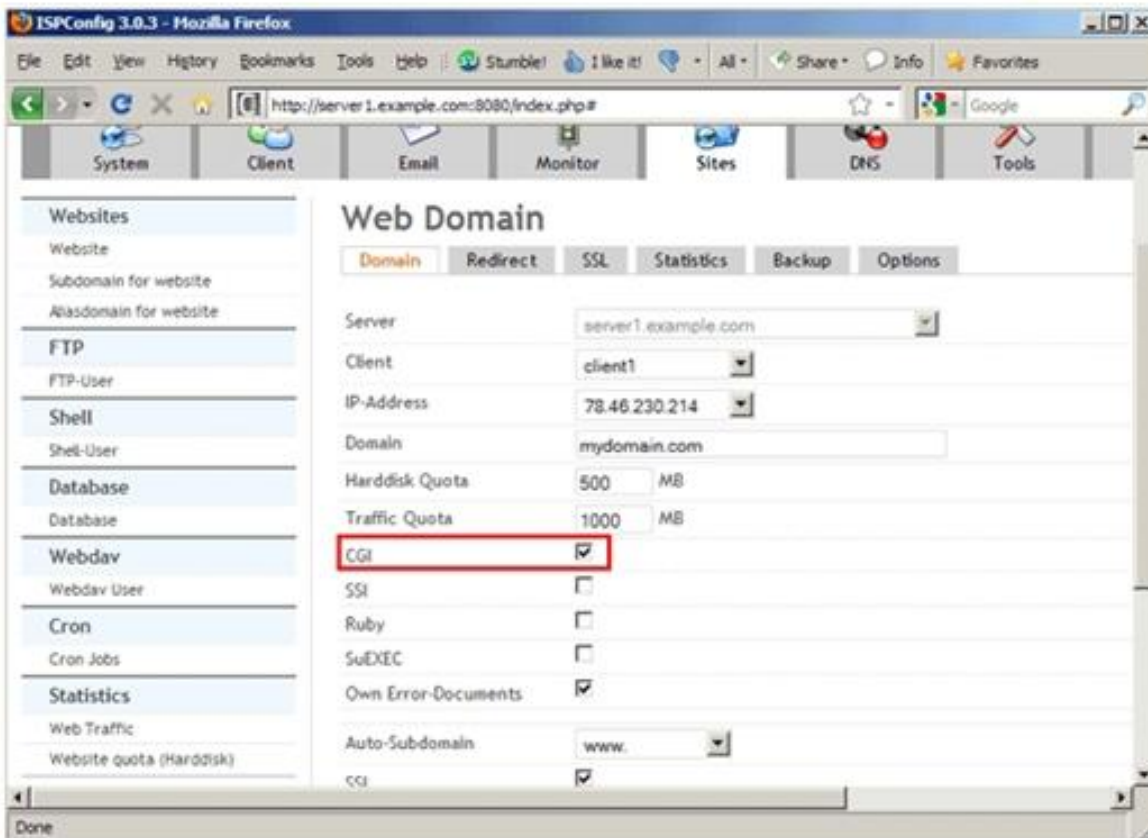


Please note that Perl or CGI scripts that you upload into the `cgi-bin/` directory must be executable; you can make them executable by changing the file attributes through your FTP client:



## 5.7 How Can I Use Perl/CGI Scripts With My Web Site?

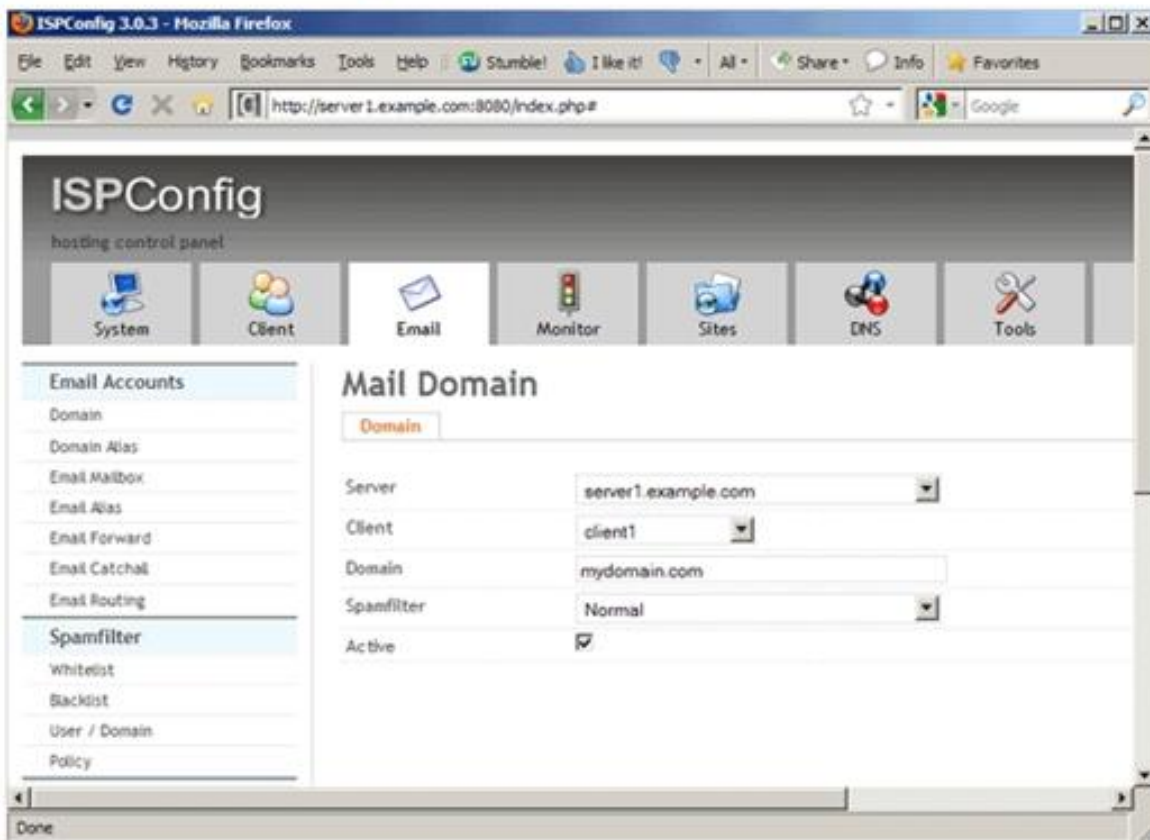
First you must check the CGI checkbox for your web site on the Domain tab in ISPConfig:



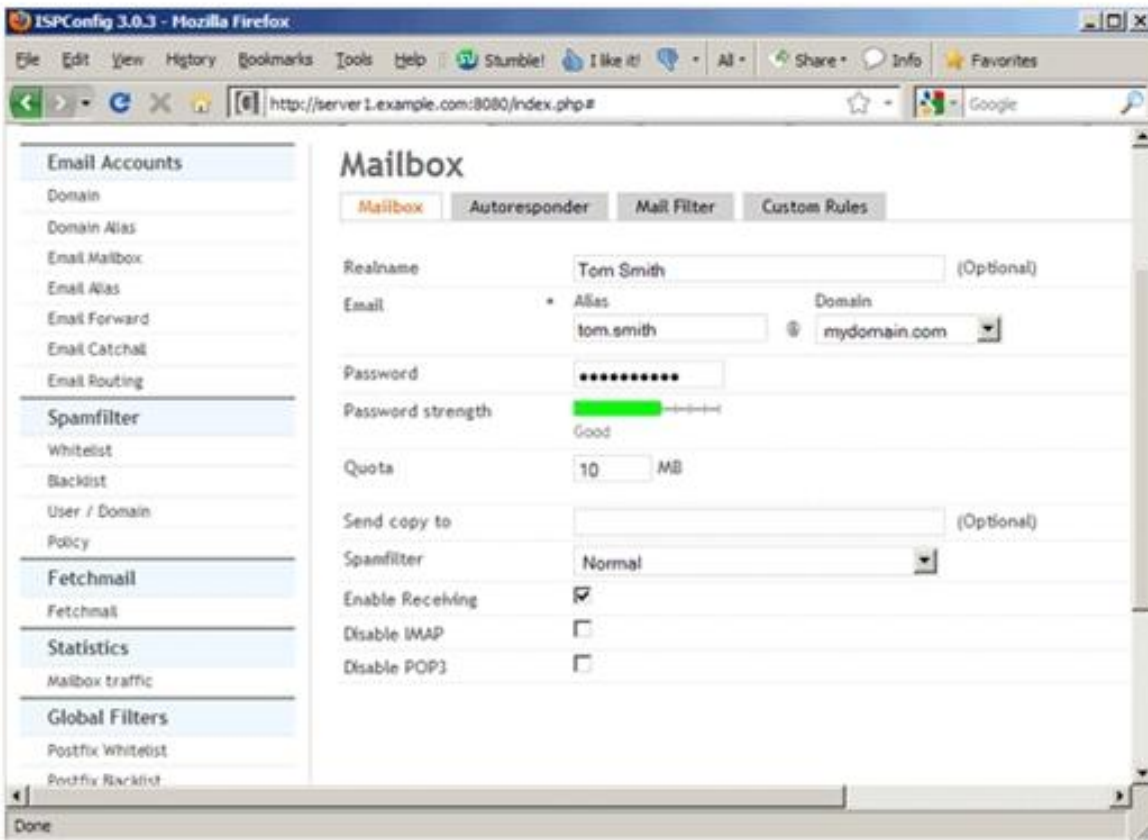
Afterwards, you can upload your Perl and CGI scripts to the `cgi-bin/` directory of your web site (they will only work in that directory). Please note that you must make your Perl and CGI scripts executable (e.g. through your FTP client, see chapter 5.6) because otherwise they will not work. Also, if you have enabled suExec for your web site, the scripts must be owned by the correct user and group (which is already the case if you uploaded them through FTP).

## 5.8 How Do I Create An Email Account?

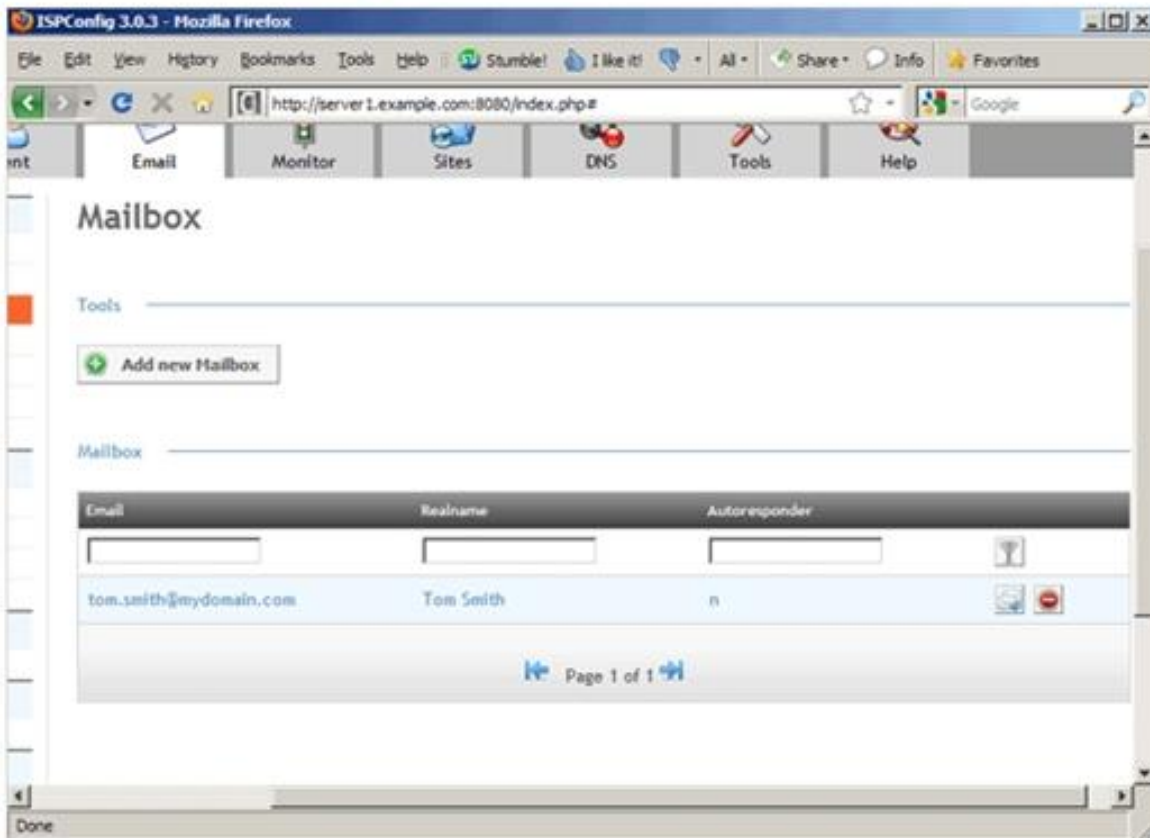
The first thing we have to do is to add the domain of the email account to the system. To do this, go to `Email > Email Accounts > Domain` and click on the `Add new Domain` button. Fill in the domain name, select the correct client and enable the spamfilter for the domain, if desired:



Now we can create an email account for that domain. Go to Email > Email Accounts > Email Mailbox and click on the Add new Mailbox button. Select the domain and fill in an alias (i.e., the local part or the part before the @ sign). The Realname and Send copy to fields are optional. Fill in a password for the account, set a quota in MB (-1 means unlimited) and select a spamfilter level to use: Non-Paying, Uncensored, Wants all spam, Wants viruses, Normal, Trigger happy, Permissive. The settings for each of these levels are defined under Email > Spamfilter > Policy. Please note that this setting overrides the spamfilter setting of the mail domain (no matter what spamfilter level you chose for the mail domain; this is true even if you disabled the spamfilter for the mail domain), with one exception: If you choose to not enable the spamfilter for this email account, but the spamfilter is enabled for the mail domain, then the spamfilter setting of the mail domain is used for this email account. Use Uncensored to disable the spam-/virusfilter (see chapter 4.7.1.3):



After you have created the email account, you can find it in the list under Email > Email Accounts > Email Mailbox :



From the list view, it is possible to access the email account using a webmail application (click on the



button; please note that you must have installed a webmail application yourself and defined the webmail URL in the system configuration, as described in chapter 4.9.2.4) or to delete the email account (click on the



button).

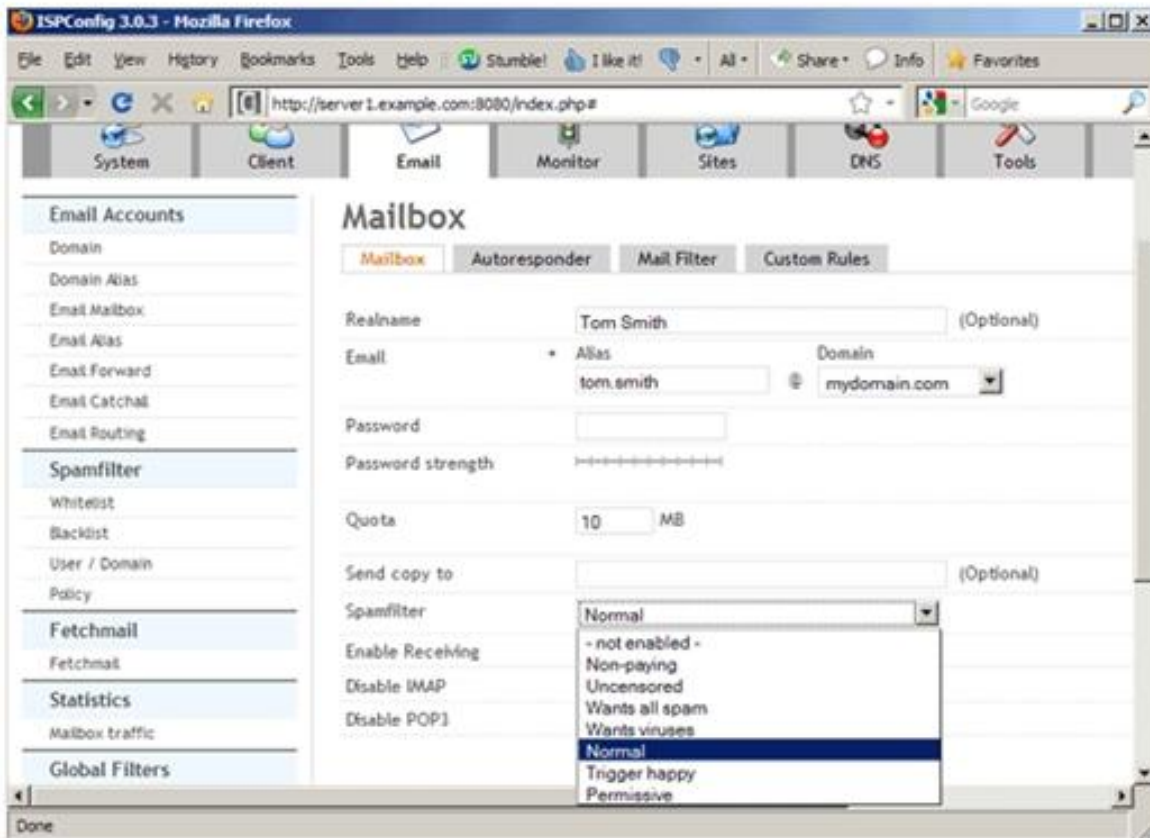
Every new email account will automatically receive a welcome email from the ISPConfig 3 system:



## 5.9 How Do I Activate The Spamfilter/Virus Scanner For An Email Account?

When you create or edit an email account, you can select a spamfilter level to use: Non-Paying , Uncensored , Wants all spam , Wants viruses , Normal , Trigger happy , Permissive . The settings for each of these levels are defined under Email > Spamfilter > Policy . Please note that this setting overrides the spamfilter setting of the mail domain (no matter what spamfilter level you chose for the mail domain; this is true even if you disabled the spamfilter for the mail domain), with one exception: If you choose to not enable the spamfilter for this email account, but the spamfilter is enabled for the mail domain, then the spamfilter setting of the mail domain is used for this email account. Use Uncensored to disable the spamfilter (see chapter 4.7.1.3).





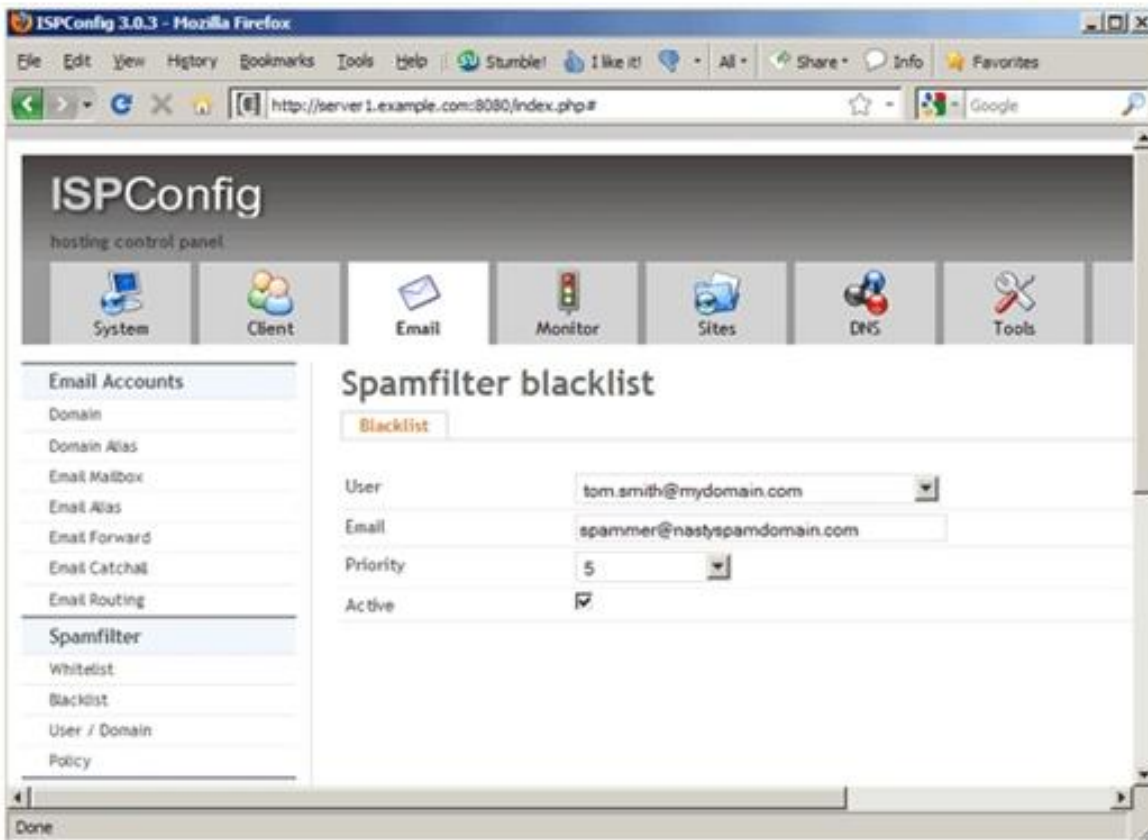
## 5.10 How Do I Blacklist/Whitelist Email Addresses In The Spamfilter?

To blacklist an email address in the spamfilter (which means that emails originating from that email address will always be considered spam), go to **Email > Spamfilter > Blacklist** and click on the **Add Blacklist record** button (see chapter 4.7.2.2).

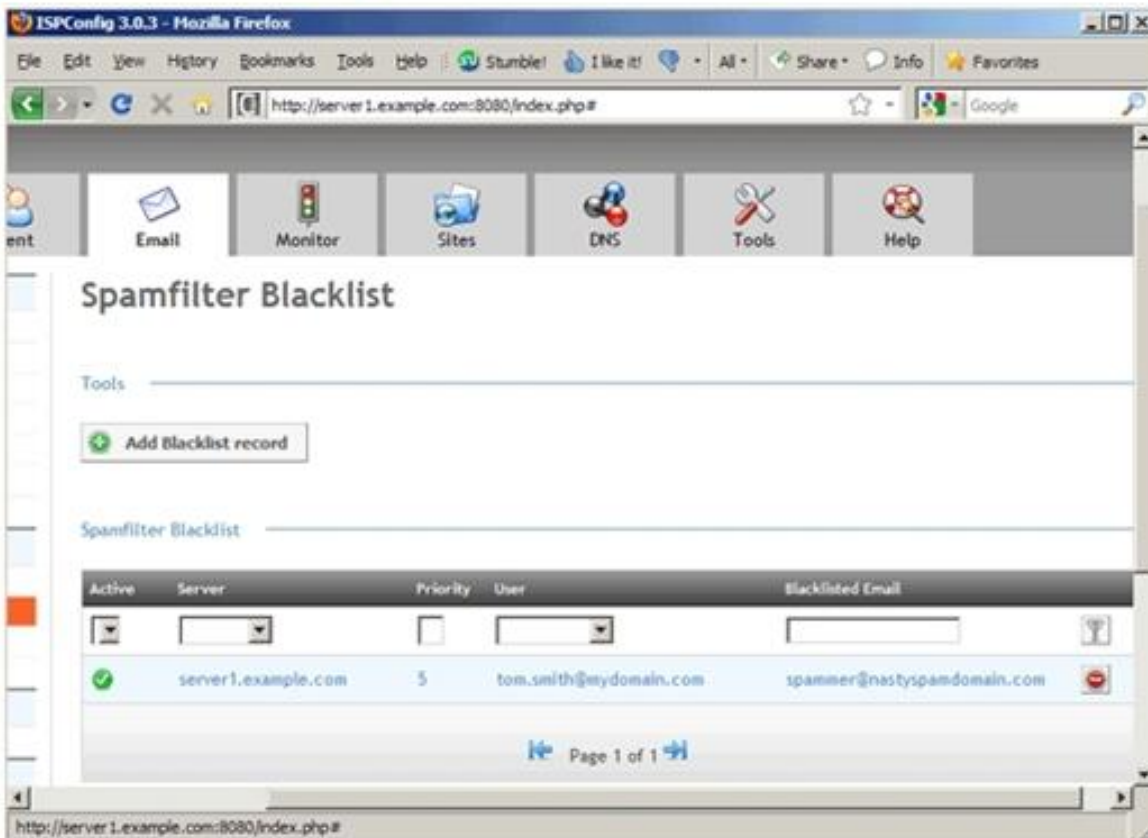
Select the user or the whole domain that will benefit from this blacklist record in the **User** drop-down menu, and then fill in the email address that you want to blacklist in the **Email** field.


If multiple whitelist/blacklist records apply, the **Priority** field specifies which rule to use first (10 = highest priority, 1 = lowest priority). For example, if you blacklist `@nastyspamdomain.com` with a priority of 5, you could whitelist `gooduser@nastyspamdomain.com` with a priority of 6 so that `gooduser@nastyspamdomain.com`'s mails get through while `@nastyspamdomain.com` is blacklisted. In most cases you can disregard the **Priority** field.

Make sure that the **Active** checkbox is checked and click on **Save**.



Afterwards you can find the new blacklist record in the list under Email > Spamfilter > Blacklist :



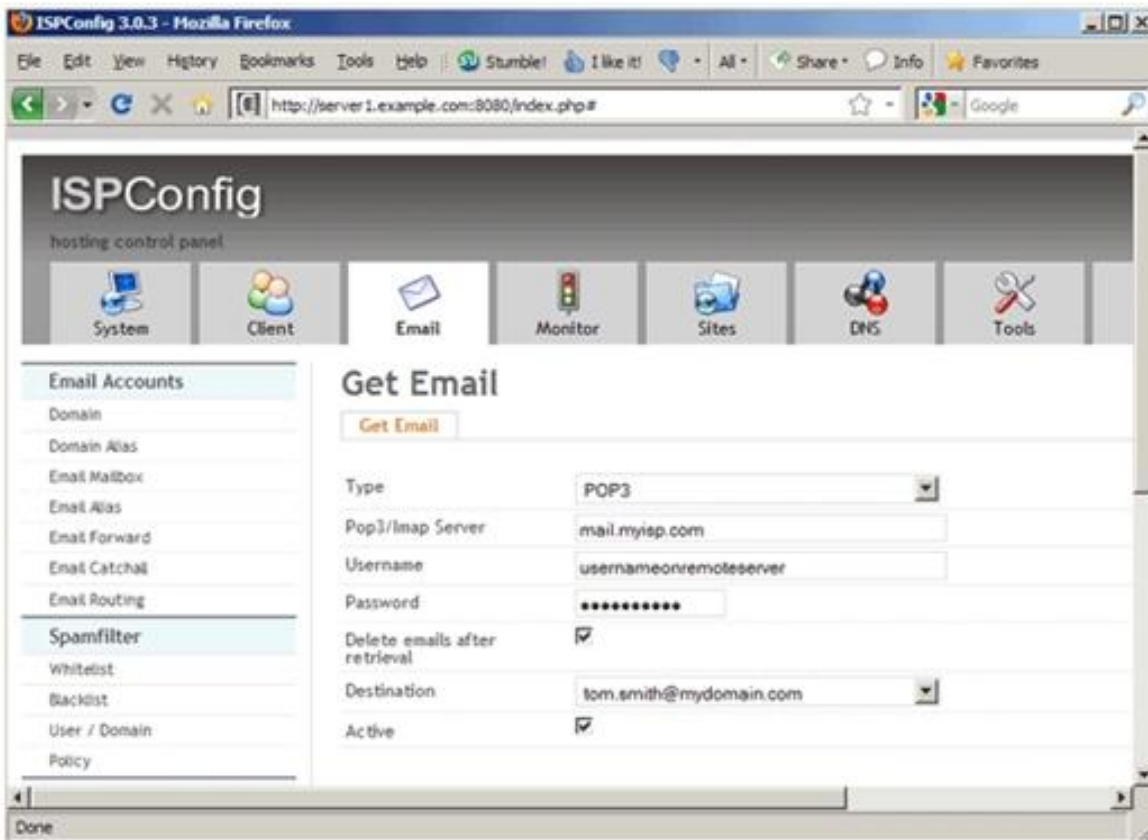
From the list view, it is possible to delete the blacklist record (click on the  button).

Creating whitelist records works the same as for blacklist records - just go to Email > Spamfilter > Whitelist (see chapter 4.7.2.1).

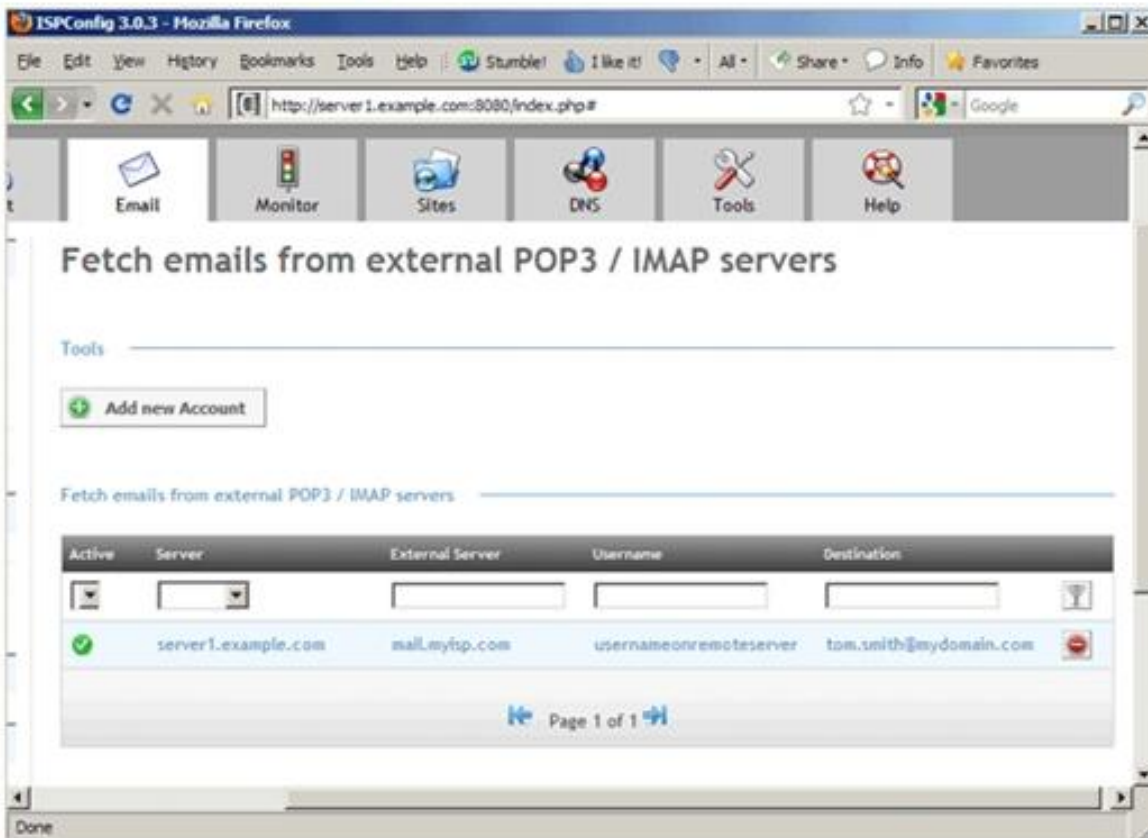
## 5.11 How Do I Fetch Emails From A Remote Server With ISPConfig And Put The Emails In A Local Email Account?


You can use ISPConfig to retrieve emails from a remote POP3 or IMAP account and put them into a local mailbox (see chapter 4.7.3.1). To create such a Fetchmail account, go to Email > Fetchmail > Fetchmail and click on the Add new Account button.

Select the protocol that should be used to retrieve emails from the remote server (POP3, IMAP, POP3SSL, IMAPSSL), then specify the hostname of the remote mail server, the username of the mailbox on the remote server together with the password, and select the local mailbox (in the Destination field) where mails retrieved from the remote server should be put. If you want emails to be automatically deleted on the remote host after they have been retrieved, check the Delete emails after retrieval checkbox:



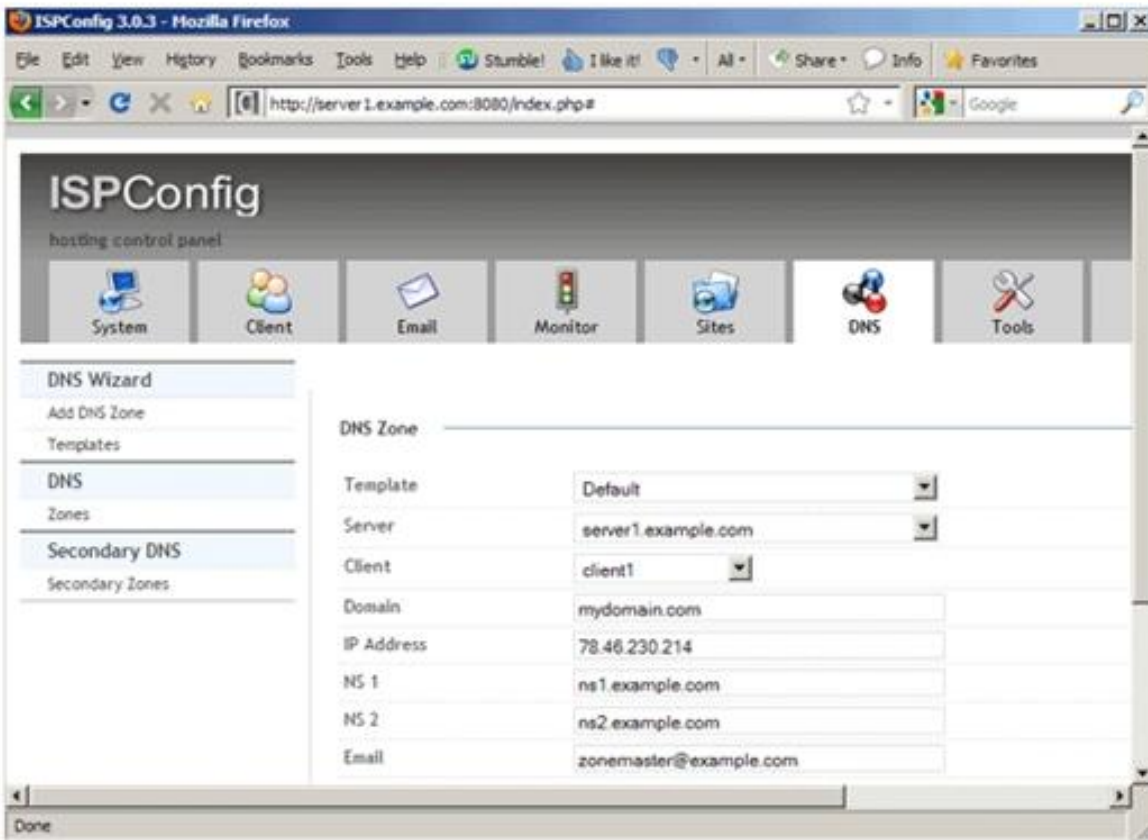
Afterwards you can find the new Fetchmail account in the list under Email > Fetchmail > Fetchmail :



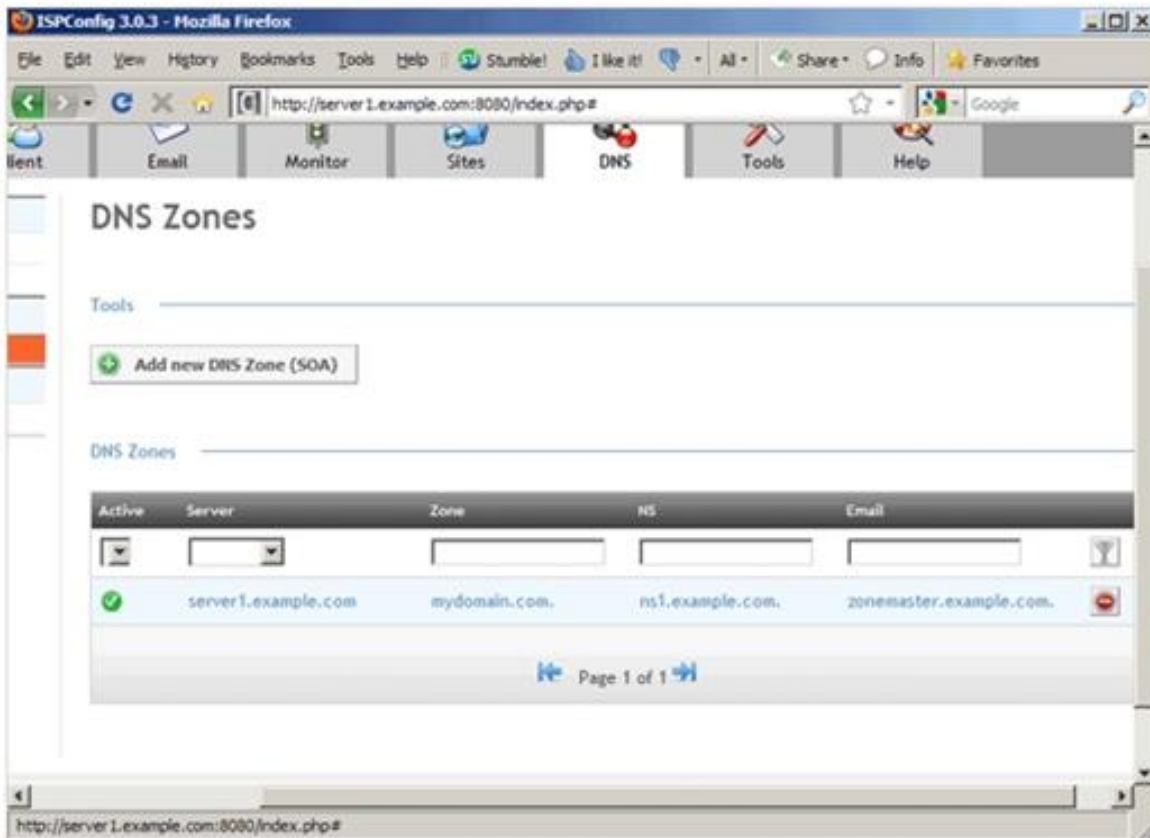
From the list view, it is possible to delete the Fetchmail account (click on the  button).


## 5.12 How Do I Create A DNS Zone?

To create a DNS zone, it is recommended to use the DNS Wizard (DNS > DNS Wizard > Add DNS Zone ) which will automatically create a set of common DNS records for your domain (like www, mail , ns records, etc.) (see chapter 4.8.1.1).

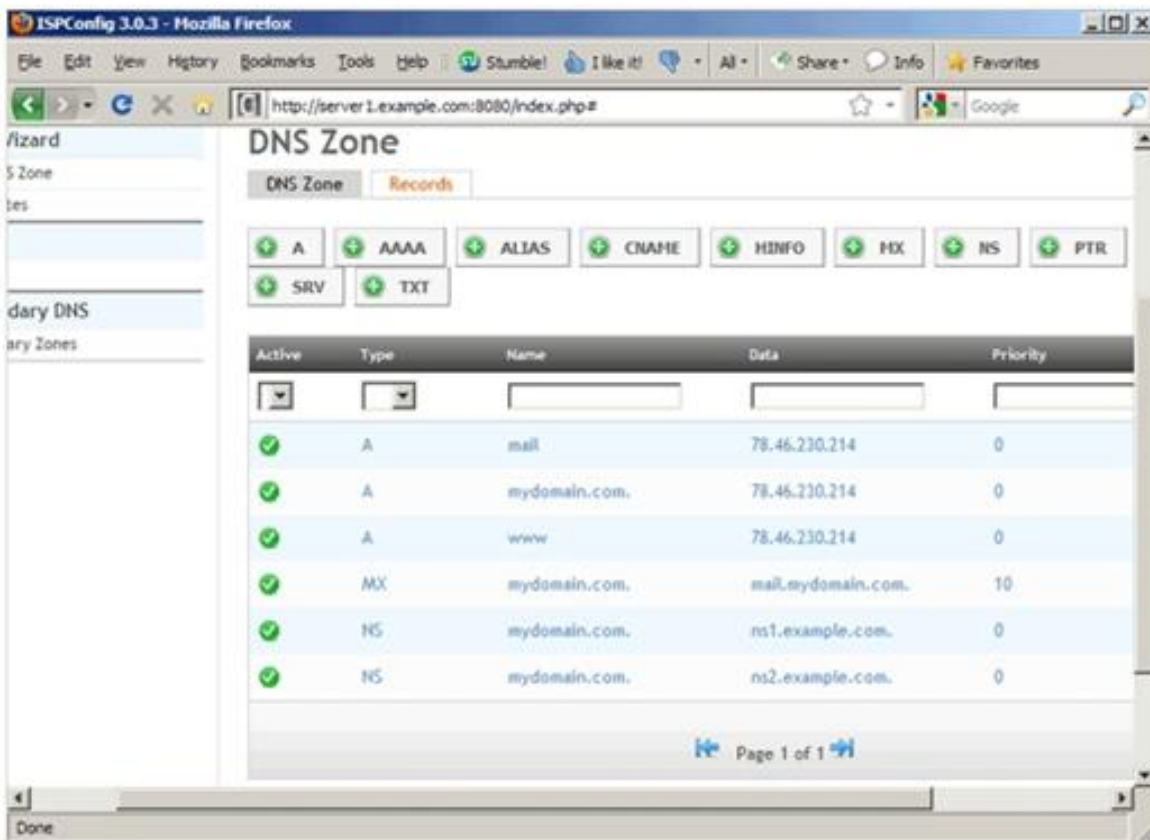


Afterwards you can find the new zone in the list under DNS > DNS > Zones :



From the list view, it is possible to delete the DNS zone (click on the  button).

If you edit the zone and go to the Records tab, you will see the records that have automatically been created by the DNS Wizard (the Default template will create A records for mydomain.com , www.mydomain.com , and mail.mydomain.com , two NS (nameserver) records, plus an MX (mail exchanger) record for mydomain.com that points to mail.mydomain.com ):



On the Records tab, you can edit or delete existing records and add further ones.

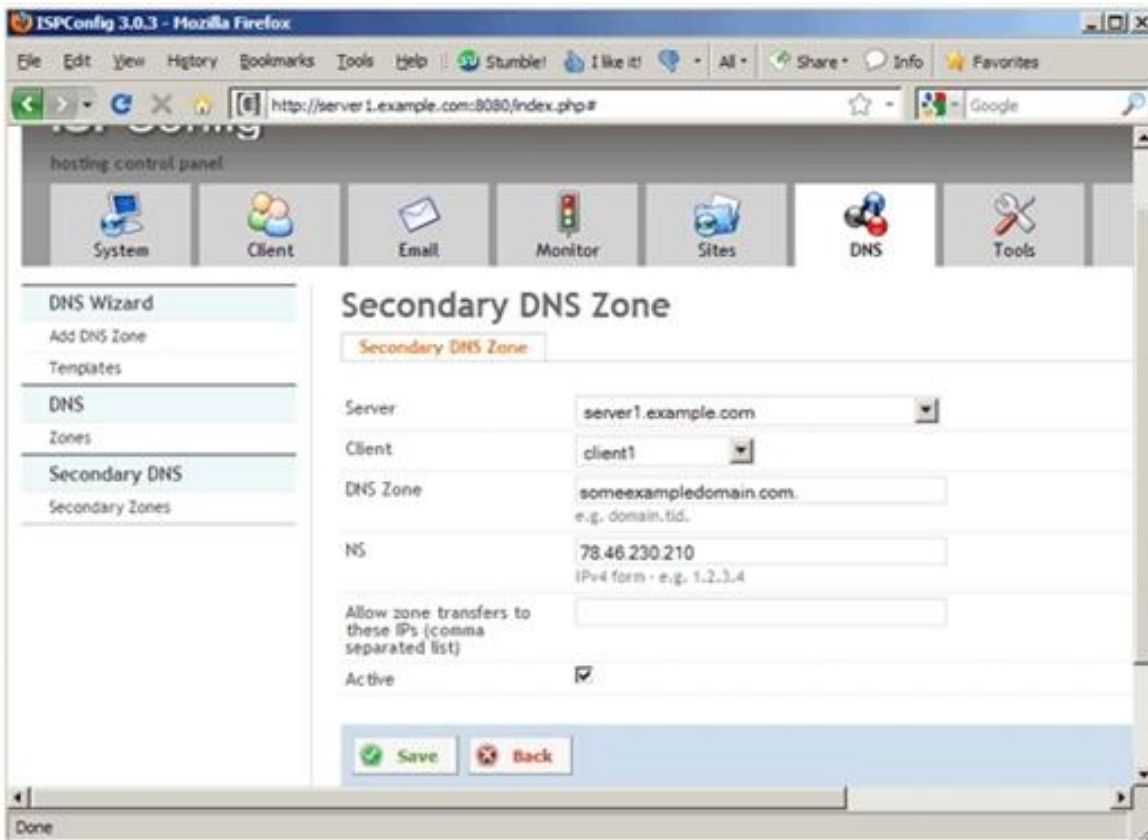
## 5.13 How Do I Create A Secondary DNS Zone?

(This feature is supported only if you use the BIND name server. If you use MyDNS, database replication will be used to transfer data to the secondary DNS server.)

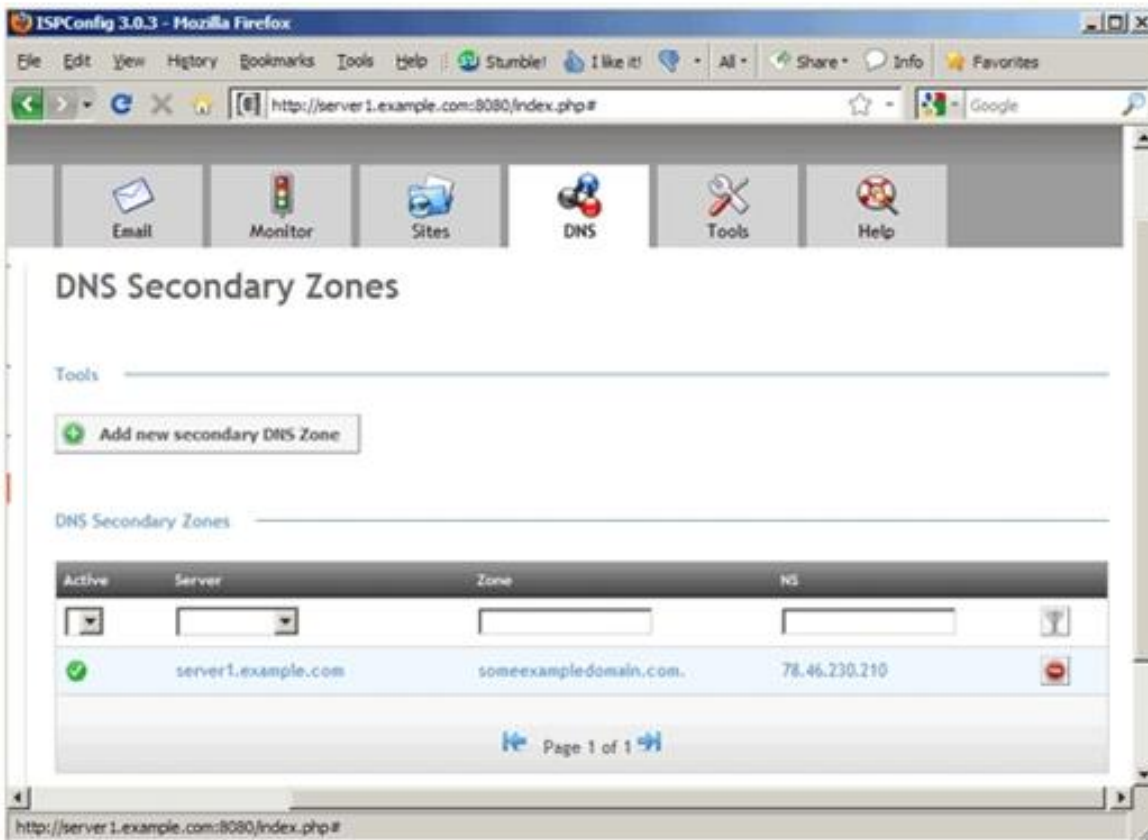
If you've already created the master DNS zone for a domain on another server and would like to use ISPConfig to create the secondary zone for the domain on one of the servers controlled by ISPConfig, go to DNS > Secondary DNS > Secondary Zones and click on the Add new secondary DNS Zone button (see chapter 4.8.3.1).


Select the server and the client for the secondary zone, then fill in the domain for which you want to create the secondary zone in the DNS Zone field, e.g. someexampledomain.com. - please note that you need a dot at the end. Then specify the IPv4 address of the primary nameserver for the domain in the NS field, e.g. 1.2.3.4. Make sure that the Active checkbox is checked and click on Save :





Afterwards you can find the new zone in the list under DNS > Secondary DNS > Secondary Zones :



From the list view, it is possible to delete the secondary DNS zone (click on the  button).

## 5.14 How Do I Create A Mirror?

Please take a look at chapter 3.3

## 5.15 How Do I Split Up Services Between Multiple Servers?

Please take a look at chapter 3.2.

## 5.16 How Do I Unblock An IP Address That Got Blocked By fail2ban?

If you want to unblock an IP address that got blocked by fail2ban, first run

```
iptables -L
```

Output could be as follows:

```
root@server1:~# iptables -L
Chain INPUT (policy ACCEPT)
target prot opt source destination
fail2ban-ssh tcp -- anywhere anywhere tcp dpt:ssh

Chain FORWARD (policy ACCEPT)
target prot opt source destination

Chain OUTPUT (policy ACCEPT)
target prot opt source destination

Chain fail2ban-ssh (1 references)
target prot opt source destination
DROP 0 -- some.remote.host anywhere
RETURN 0 -- anywhere anywhere
root@server1:~#
```

Notice `some.remote.host` is currently being blocked here. You can tell iptables to drop that rule. The syntax is `iptables -D <rulename> <rule line>`. To unblock `some.remote.host`, run

```
iptables -D fail2ban-ssh 1
```

Run `iptables -L` again, and you should see that the rule is gone, and `some.remote.host` should be able to log in via SSH again.

## 5.17 How Do I Create A Subdomain And Redirect It To A Different Folder/Web Site?

Go to Sites > Websites > Subdomain for website (see chapter 4.6.1.2). In the Redirect Type field, please select the flag that you want to use for the redirect:

Flags:

- R: Use of the [R] flag causes a HTTP redirect to be issued to the browser. If a fully-qualified URL is specified (that is, including `http://servername/`) then a redirect will be issued to that location. Otherwise, the current servername will be used to generate the URL sent with the redirect.
- L: The [L] flag causes `mod_rewrite` to stop processing the rule set. In most contexts, this

means that if the rule matches, no further rules will be processed.

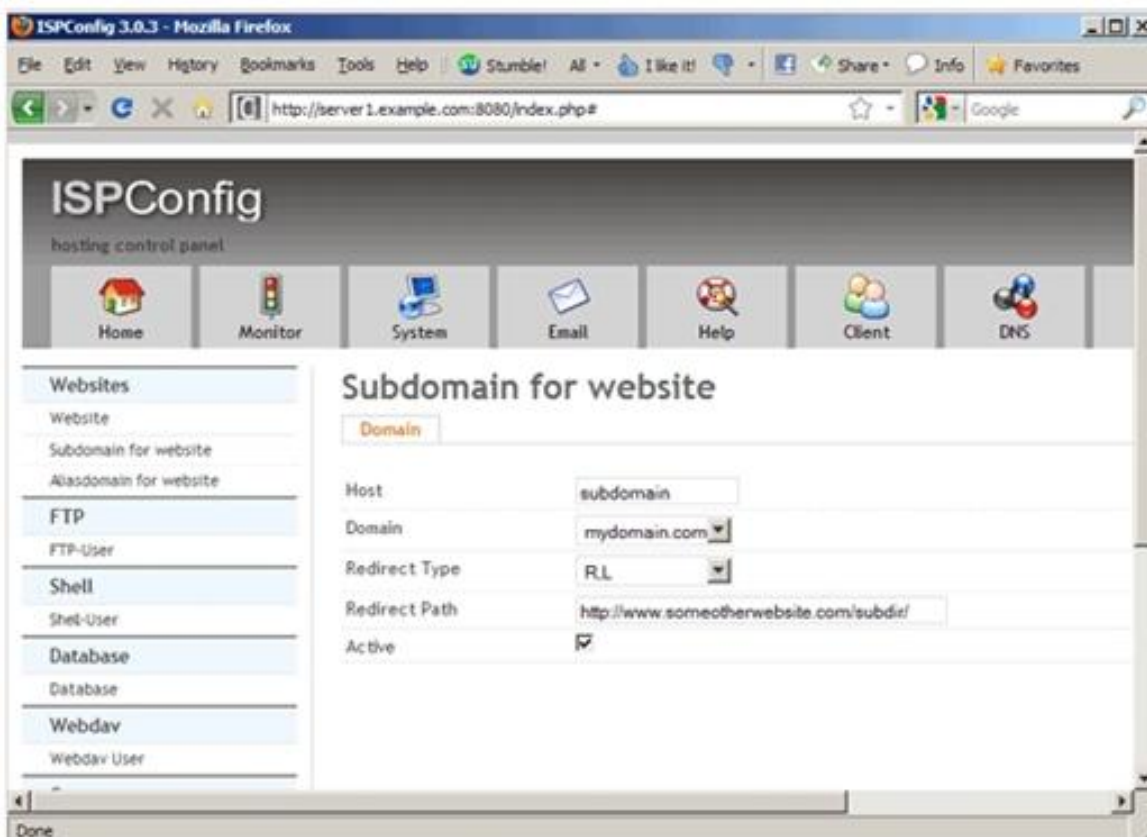
- R,L: You will almost always want to use [R] in conjunction with [L] (that is, use [R,L]) because on its own, the [R] flag prepends `http://thishost[:thisport]` to the URI, but then passes this on to the next rule in the ruleset, which can often result in 'Invalid URI in request' warnings.

More details about flags can be found here:

[http://httpd.apache.org/docs/2.2/rewrite/rewrite\\_flags.html](http://httpd.apache.org/docs/2.2/rewrite/rewrite_flags.html)

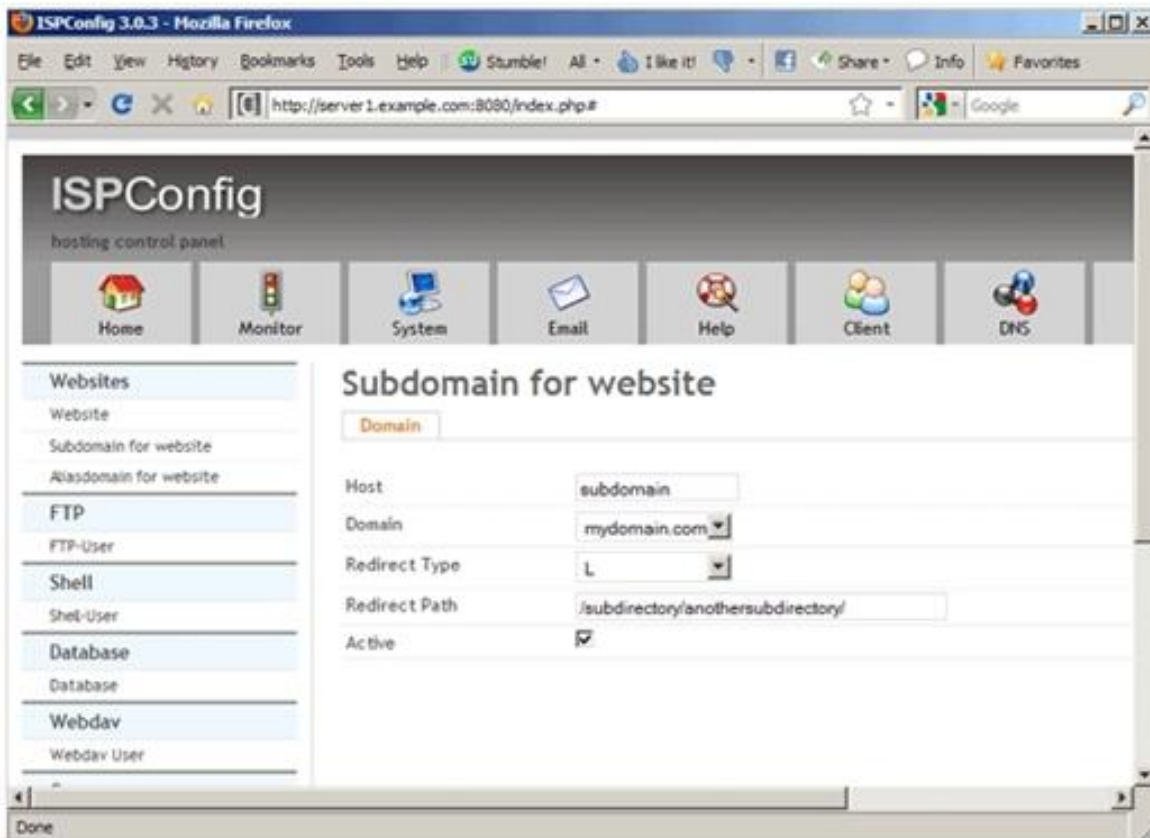
If you want to do a URL redirect, you should use the R,L flags, while for a directory redirect it is recommended to just use the L flag.

If you want to do a URL redirect, please specify the redirect target URL in the Redirect Path field (e.g. `http://www.someotherwebsite.com/subdir/` or `http://www.someotherwebsite.com/` ). Please note that the URL should have a trailing slash:



If you want to do a redirect to a subdirectory of your web site, please specify the subdirectory or the path to the subdirectory (relative to the document root of your web site) in the Redirect Path field. Please note that the path must begin and end with a slash (e.g.

`/subdirectory/anothersubdirectory/` ):



## 5.18 How Do I Manually Configure New IP Addresses On My System?

I'm assuming that your system uses the static IP address 192.168.0.100 on the network interface eth0 , and that you want to add the IP address 192.168.0.101 to that interface.

Debian/Ubuntu:

Open `/etc/network/interfaces` :

```
vi /etc/network/interfaces
```

It will probably look like this:

```
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

# The loopback network interface
auto lo
iface lo inet loopback
```

```
# The primary network interface
auto eth0
iface eth0 inet static
    address 192.168.0.100
    netmask 255.255.255.0
    network 192.168.0.0
    broadcast 192.168.0.255
    gateway 192.168.0.1
```

What we do now is duplicate the `eth0` stanza, but instead of `eth0` we use `eth0:0` (a virtual network device), and in the address line we use the new IP address `192.168.0.101` instead of `192.168.0.100`. All other settings remain the same. In the end the complete file looks as follows:

```
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto eth0
iface eth0 inet static
    address 192.168.0.100
    netmask 255.255.255.0
    network 192.168.0.0
    broadcast 192.168.0.255
    gateway 192.168.0.1

auto eth0:0
iface eth0:0 inet static
    address 192.168.0.101
    netmask 255.255.255.0
    network 192.168.0.0
    broadcast 192.168.0.255
    gateway 192.168.0.1
```

(If you want to use a third, fourth, etc. IP address, use the virtual interfaces `eth0:1`, `eth0:2`, and so on. If you are unsure about the network settings, you can use this network calculator: <http://subnetmask.info/>.)

Restart the network afterwards:

```
/etc/init.d/newtorking restart
```

## The command

```
ifconfig
```

should show the new interface afterwards:

```
server1:~# ifconfig
eth0  Link encap:Ethernet HWaddr 00:0C:29:FD:78:BE
      inet addr:192.168.0.100 Bcast:192.168.0.255 Mask:255.255.255.0
      inet6 addr: fe80::20c:29ff:febd:78be/64 Scope:Link
      UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
      RX packets:130 errors:0 dropped:0 overruns:0 frame:0
      TX packets:137 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:1000
      RX bytes:12592 (12.2 KiB) TX bytes:31876 (31.1 KiB)
      Base address:0x1070 Memory:ec820000-ec840000

eth0:0 Link encap:Ethernet HWaddr 00:0C:29:FD:78:BE
      inet addr:192.168.0.101 Bcast:192.168.0.255 Mask:255.255.255.0
      UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
      Base address:0x1070 Memory:ec820000-ec840000

lo    Link encap:Local Loopback
      inet addr:127.0.0.1 Mask:255.0.0.0
      inet6 addr: ::1/128 Scope:Host
      UP LOOPBACK RUNNING MTU:16436 Metric:1
      RX packets:8 errors:0 dropped:0 overruns:0 frame:0
      TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:0
      RX bytes:560 (560.0 b) TX bytes:560 (560.0 b)

server1:~#
```

## Fedora/CentOS:

The file `/etc/sysconfig/network-scripts/ifcfg-eth0` contains the settings for `eth0`. We can use this as a sample for our new virtual network interface `eth0:0` (which we use for our additional IP address `192.168.0.101`):

```
cp /etc/sysconfig/network-scripts/ifcfg-eth0 /etc/sysconfig/network-scripts/ifcfg-eth0:0
```

Now we want to use the IP address 192.168.0.101 on the virtual interface eth0:0. Therefore we open the file /etc/sysconfig/network-scripts/ifcfg-eth0:0 and modify it as follows (use eth0:0 in the DEVICE line and 192.168.0.101 in the IPADDR line; the other settings should remain the same; we can leave out the HWADDR line as it is the same physical network card):

```
vi /etc/sysconfig/network-scripts/ifcfg-eth0:0
```

```
DEVICE=eth0:0
BOOTPROTO=static
BROADCAST=192.168.0.255
IPADDR=192.168.0.101
NETMASK=255.255.255.0
NETWORK=192.168.0.0
ONBOOT=yes
```

(If you want to use a third, fourth, etc. IP address, do the same steps again, but use the virtual interfaces eth0:1, eth0:2, and so on. If you are unsure about the network settings, you can use this network calculator: <http://subnetmask.info/>.)

Restart the network afterwards:

```
/etc/init.d/network restart
```

Now run

```
ifconfig
```

You should now see your new IP address in the output:

```
[root@server1 ~]# ifconfig
eth0  Link encap:Ethernet HWaddr 00:0C:29:FD:78:BE
      inet  addr:192.168.0.100 Bcast:192.168.0.255  Mask:255.255.255.0
      inet6 addr: fe80::20c:29ff:fe7d:78be/64 Scope:Link
      UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
      RX packets:130 errors:0 dropped:0 overruns:0 frame:0
      TX packets:137 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:1000
      RX bytes:12592 (12.2 KiB) TX bytes:31876 (31.1 KiB)
      Base address:0x1070 Memory:ec820000-ec840000

eth0:0  Link encap:Ethernet HWaddr 00:0C:29:FD:78:BE
      inet  addr:192.168.0.101 Bcast:192.168.0.255  Mask:255.255.255.0
      UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
```



Base address:0x1070 Memory:ec820000-ec840000

```
lo    Link encap:Local Loopback
inet addr:127.0.0.1  Mask:255.0.0.0
inet6 addr: ::1/128 Scope:Host
UP LOOPBACK RUNNING MTU:16436 Metric:1
RX packets:8 errors:0 dropped:0 overruns:0 frame:0
TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:560 (560.0 b) TX bytes:560 (560.0 b)
```

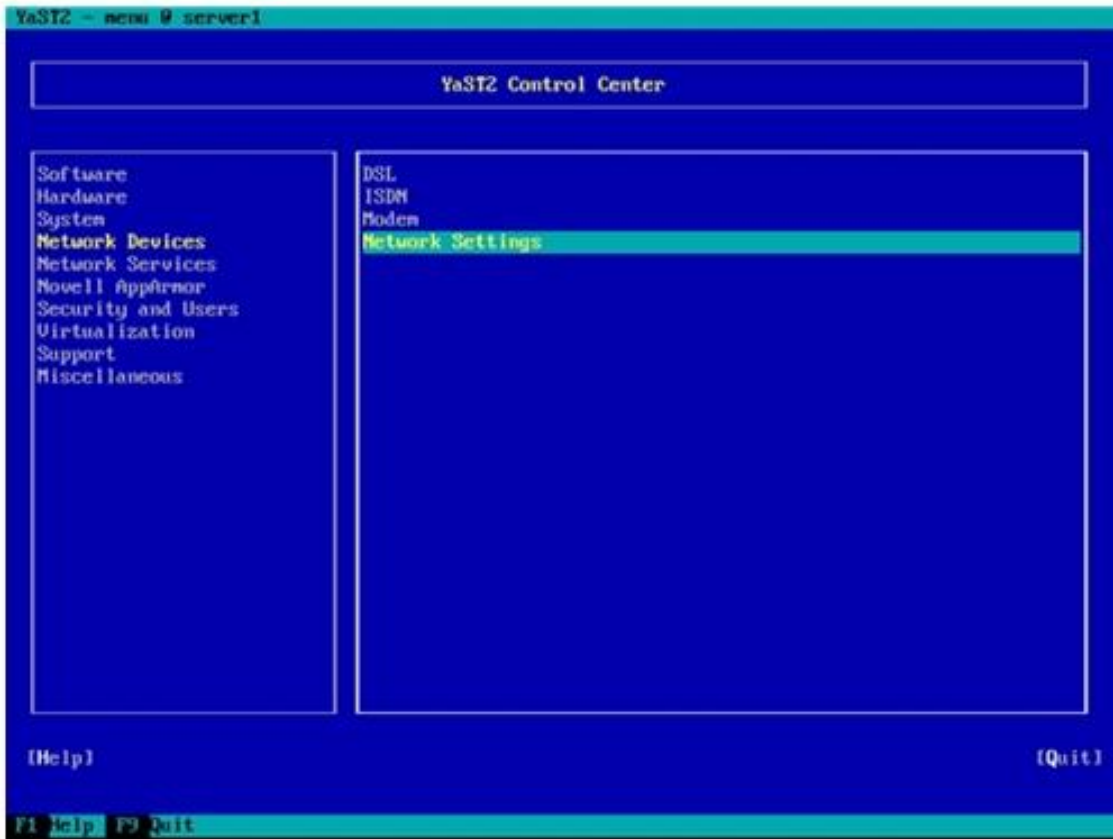
[root@server1 ~]#

OpenSUSE:

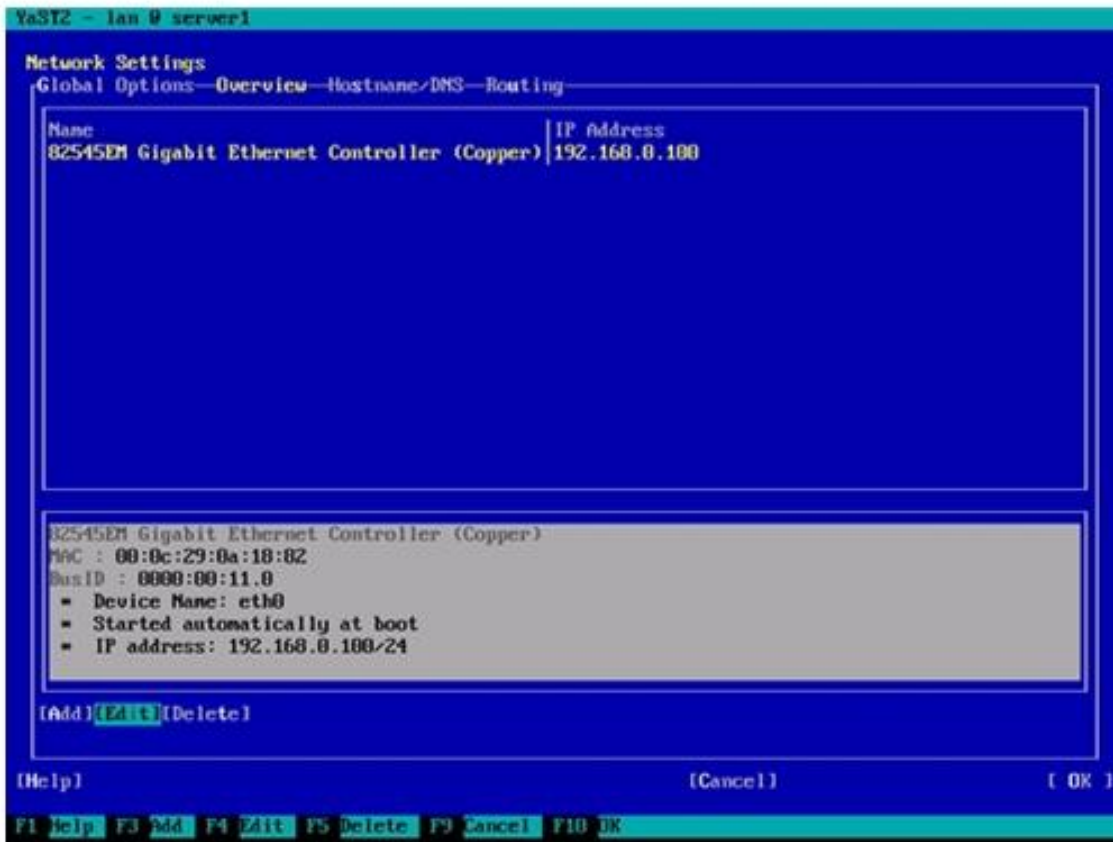
Start YaST:

```
yast2
```

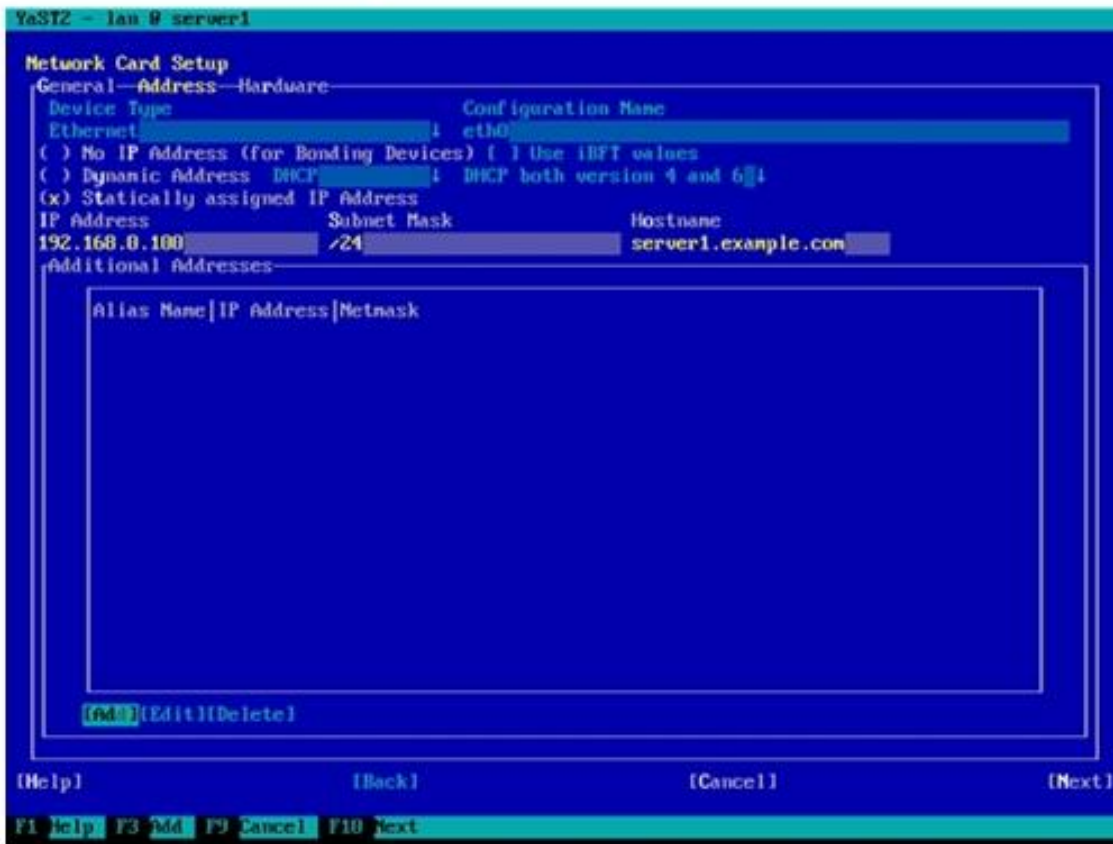
Go to Network Devices > Network Settings :



Mark the current network interface and select [Edit] :



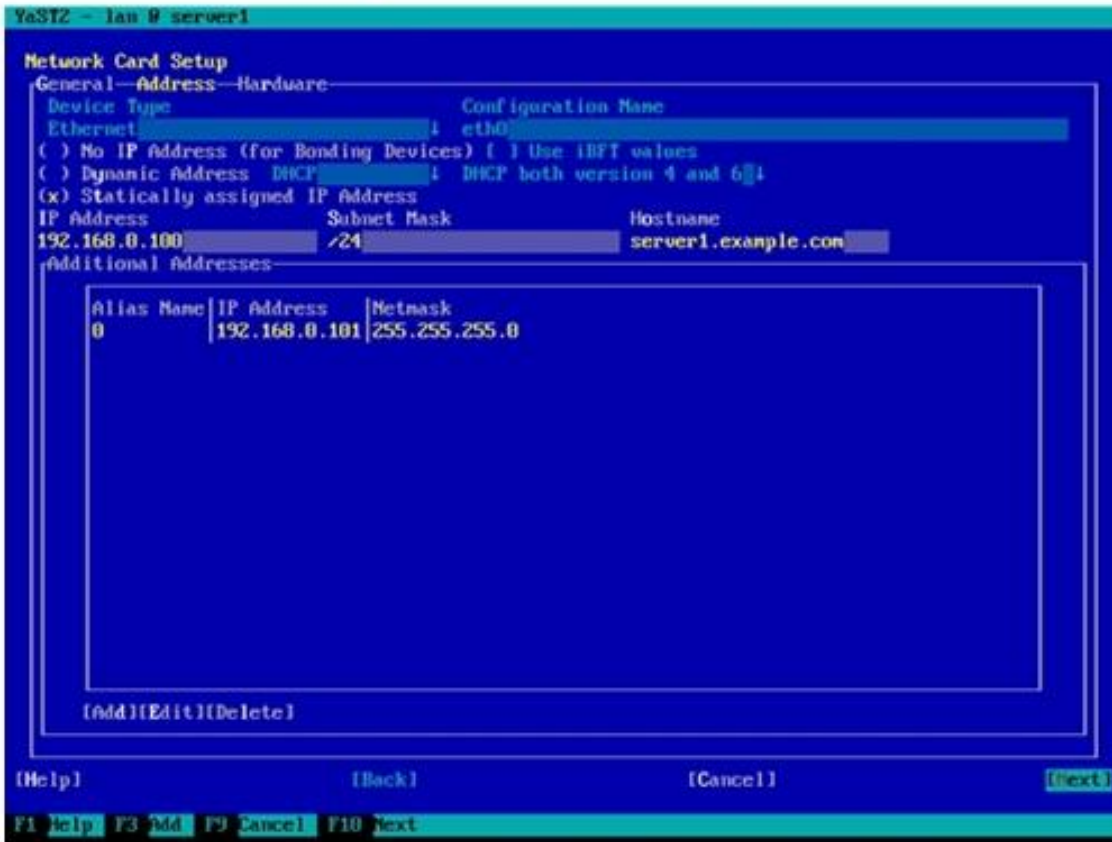
In the Additional Addresses box, select [Add] :



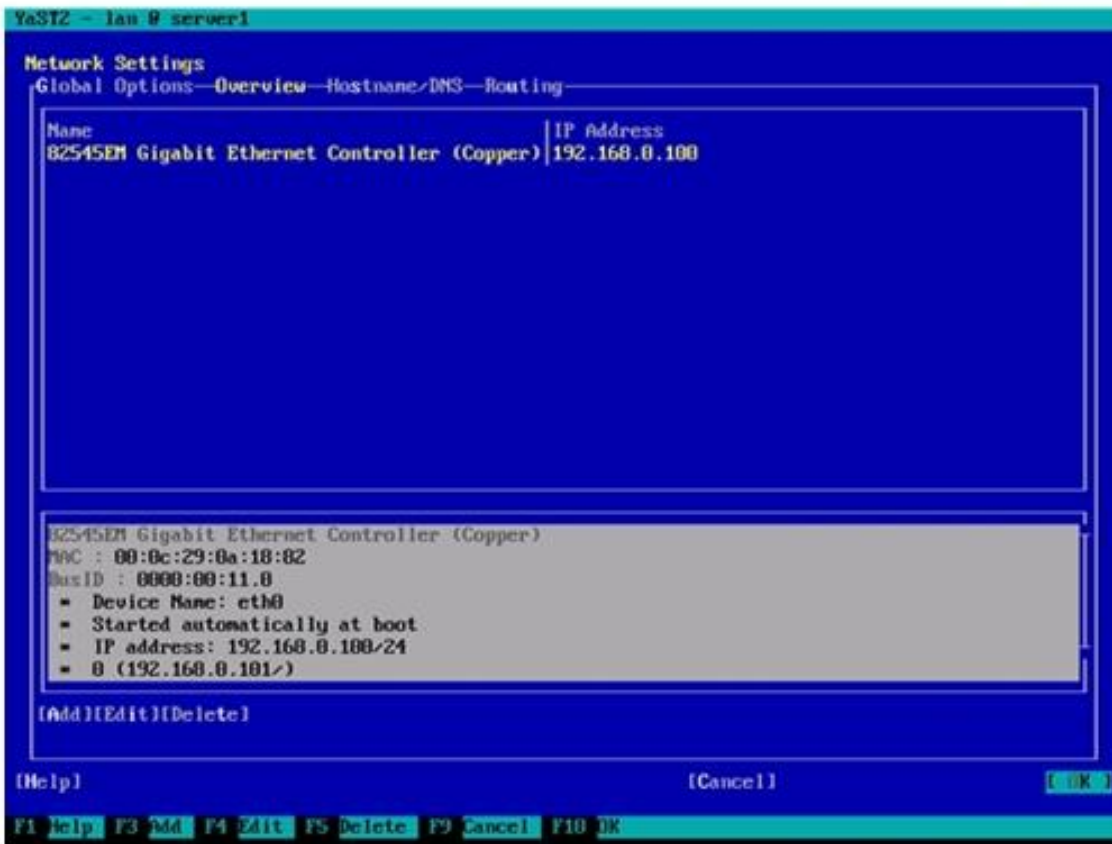
Fill in 0 in the Alias Name field (this translates to the virtual network interface eth0:0 ; if you want to add a third, fourth, etc. IP address later on, you'd use 1, 2, etc. in this field - this would translate to eth0:1 , eth0:2 , and so on), 192.168.0.101 in the IP Address field, and 255.255.255.0 in the Netmask field (in most cases the netmask is the same as for eth0 ; if you are unsure about the network settings, you can use this network calculator: <http://subnetmask.info/>). Then select [OK] :



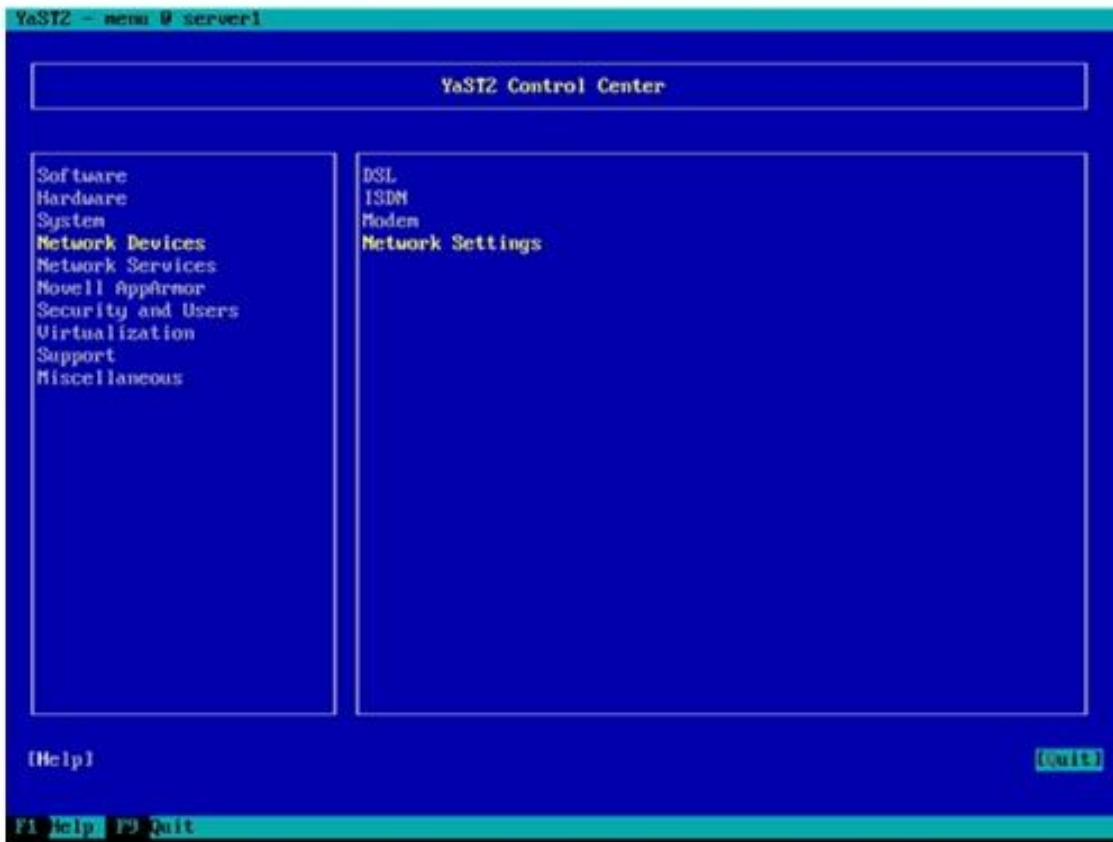
Select [NEXT] on the following screen:



Select [OK] :



Now you can leave YaST by selecting [Quit] :



Now run

```
ifconfig
```

You should now see your new IP address in the output:

```
server1:~ # ifconfig
eth0  Link encap:Ethernet HWaddr 00:0C:29:0A:18:82
      inet addr:192.168.0.100 Bcast:192.168.0.255 Mask:255.255.255.0
      inet6 addr: fe80::20c:29ff:fe0a:1882/64 Scope:Link
      UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
      RX packets:326 errors:0 dropped:0 overruns:0 frame:0
      TX packets:67 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:1000
      RX bytes:33800 (33.0 Kb) TX bytes:7555 (7.3 Kb)

eth0:0 Link encap:Ethernet HWaddr 00:0C:29:0A:18:82
      inet addr:192.168.0.101 Bcast:192.168.0.255 Mask:255.255.255.0
      UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

lo    Link encap:Local Loopback
      inet addr:127.0.0.1 Mask:255.0.0.0
```

```
inet6 addr: ::1/128 Scope:Host
UP LOOPBACK RUNNING MTU:16436 Metric:1
RX packets:2 errors:0 dropped:0 overruns:0 frame:0
TX packets:2 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:100 (100.0 b) TX bytes:100 (100.0 b)
```

```
server1:~ #
```

## 5.19 How To Build A PureFTPd Debian Package For OpenVZ Virtual Machines (Without Capabilities Enabled)

The PureFTPd package that comes with Debian 5.0 (Lenny) does not start in an OpenVZ virtual machine as it is compiled with "capabilities". This tutorial describes the steps to build a PureFTPd Debian package with capabilities disabled:

Make a temporary directory:

```
mkdir /usr/src/pure-ftpd
cd /usr/src/pure-ftpd
```

Download the source package for PureFTPd:

```
apt-get source pure-ftpd
```

```
apt-get build-dep pure-ftpd
```

Edit the `rules` file and add the switch `--without-capabilities`:

```
cd pure-ftpd-1.0.21/debian
nano rules
```

Change the line:

```
optflags=--with-everything --with-largefile --with-pam --with-privsep --with-tls
```

to (one line!):



```
optflags=--with-everything --with-largefile --with-pam --with-privsep --with-tls --without-capabilities
```

Build the Debian (.deb) package...

```
cd ..  
  
dpkg-buildpackage -uc -b
```

... and install it:

```
cd ..  
  
dpkg -i pure-ftpd-common_1.0.21-11.4_all.deb pure-ftpd-mysql_1.0.21-11.4_i386.deb  
  
/etc/init.d/pure-ftpd-mysql restart
```

To prevent that apt overwrites these manually compiled packages with the default packages from the Debian repositories, execute these commands:

```
echo 'pure-ftpd-common hold' | dpkg --set-selections  
  
echo 'pure-ftpd-mysql hold' | dpkg --set-selections
```

## 5.20 How To Display Hidden Files With PureFTPd On Debian And Ubuntu Linux

If hidden files (files that start with a dot like `.htaccess`, `.bash_history`, `.profile` or `.ssh`) are not displayed in your FTP client, then they are most likely disabled in the FTP server. To enable hidden files in PureFTPd on Debian and Ubuntu Linux, execute this command...

```
echo "yes" > /etc/pure-ftpd/conf/DisplayDotFiles
```

... and then restart PureFTPd:

```
/etc/init.d/pure-ftpd-mysql restart
```

## 5.21 PureFTPd Does Not Show More Than 2,000 Files On Debian And Ubuntu

The PureFTPd daemon by default has a recursion limit of 2,000 files, this prevents the server from showing more than 2,000 files when you browse a directory with an FTP client. To expand this limit to e.g. 5,000 files, create or edit the file `/etc/pure-ftpd/conf/LimitRecursion` and add the line `5000 500` :

```
echo "5000 500" > /etc/pure-ftpd/conf/LimitRecursion
```

Then restart PureFTPd:

```
/etc/init.d/pure-ftpd-mysql restart
```

## 5.22 How To Speed Up Logins In PureFTPd On Debian Or Ubuntu Linux By Disabling Name Resolving

If you experience problems with slow logins in PureFTPd, this is often caused by a problem with the resolving of the client's hostname. This happens e.g. when you run an FTP server in your intranet and the hostname of the client computer does not exist in DNS. To disable name resolving in PureFTPd, run the command:

```
echo 'yes' > /etc/pure-ftpd/conf/DontResolve
```

Then restart PureFTPd:

```
/etc/init.d/pure-ftpd-mysql restart
```

Disabling name resolving also fixes the following error message:

```
Jul 24 16:26:28 ispcconfig pure-ftpd: (?@?) [ERROR] Sorry, invalid address given
```

## 5.23 How To Enable Verbose Logging In PureFTPd On Debian And Ubuntu Linux

To turn on verbose logging (e.g. to debug FTP connection or authentication problems) in PureFTPd FTP server on Debian and Ubuntu Linux, execute the following command as root user on the shell:

```
echo 'yes' > /etc/pure-ftpd/conf/VerboseLog
```

Then restart PureFTPd:

```
/etc/init.d/pure-ftpd-mysql restart
```

The debug output will be logged to syslog. To view the log content, execute:

```
tail -n 100 /var/log/syslog
```

To disable verbose logging, execute these commands:

```
rm -f /etc/pure-ftpd/conf/VerboseLog
```

```
/etc/init.d/pure-ftpd-mysql restart
```

## 5.24 How To Enable FTPS For PureFTPd On Debian And Ubuntu Linux

To enable FTPS for PureFTPd on Debian Lenny and Ubuntu, run:

```
echo 1 > /etc/pure-ftpd/conf/TLS
```

```
mkdir -p /etc/ssl/private/
```

```
openssl req -x509 -nodes -days 7300 -newkey rsa:2048 -keyout /etc/ssl/private/pure-ftpd.pem -out  
/etc/ssl/private/pure-ftpd.pem
```

```
chmod 600 /etc/ssl/private/pure-ftpd.pem
```

Then restart PureFTPd:

```
/etc/init.d/pure-ftpd-mysql restart
```

## 6 Security Considerations

### 6.1 How Do I Disable Certain PHP Functions?

Debian/Ubuntu:

Debian and Ubuntu systems come with multiple `php.ini` files (`/etc/php5/apache2/php.ini` for `mod_php`, `/etc/php5/cgi/php.ini` for Fast-CGI and CGI, and `/etc/php5/cli/php.ini` for command-line PHP). You can use the `disable_functions =` directive to disable potentially dangerous PHP functions such as `exec`, `passthru`, `popen`, `ini_set`, `system`, but only in `/etc/php5/apache2/php.ini` and `/etc/php5/cgi/php.ini`, e.g. as follows:

```
[...]
; This directive allows you to disable certain functions for security reasons. ; It
receives a comma-delimited list of function names. This directive is ; *NOT*
affected by whether Safe Mode is turned On or Off.
disable_functions = exec,passthru,popen,ini_set,system,show_source,shell_exec,proc_open,phpinfo
[...]
```

If you modify `/etc/php5/apache2/php.ini`, please do not forget to restart Apache afterwards:

```
/etc/init.d/apache2 restart
```

Please note that you must not disable any functions in the `php.ini` file for the command line, `/etc/php5/cli/php.ini`, because if you do, ISPConfig will not work correctly anymore!

Fedora/CentOS/OpenSUSE:

These distributions come with just one `php.ini` file which is used by `mod_php`, Fast-CGI/CGI, and command-line PHP. Therefore we cannot disable PHP functions in that `php.ini` file because that would also affect command.line PHP, and ISPConfig would not work anymore.

But you can disable functions individually for each web site in ISPConfig, either through the Custom `php.ini` settings field (if you use Fast-CGI, CGI, or SuPHP), or through the Apache directives field (if you use Mod-PHP), both on the Options tab of a web site (see chapter 4.6.1.1).

In the Custom `php.ini` settings field, you can place something like

```
disable_functions =
exec,passthru,popen,ini_set,system,show_source,shell_exec,proc_open,phpinfo
```

In the Apache directives field, you can use the `php_flag disable_functions` directive, one

directive per function, e.g. as follows:

```
php_flag disable_functions exec
php_flag disable_functions passthru
php_flag disable_functions popen
php_flag disable_functions ini_set
php_flag disable_functions system
php_flag disable_functions show_source
php_flag disable_functions shell_exec
php_flag disable_functions proc_open
php_flag disable_functions phpinfo
```

## 6.2 Enabling SSL For The ISPConfig Web Interface

(These instructions are for Debian/Ubuntu.)

The ISPConfig control panel login is running on http by default. This short tutorial shows you how to enable SSL encryption (https) for the ISPConfig vhost.

Make the directory for the SSL certificate:

```
mkdir /etc/apache2/ssl cd /etc/apache2/ssl
```

Create the SSL certificate files:

```
openssl genrsa -des3 -out ispserver.key 4096

openssl req -new -key ispserver.key -out ispserver.csr

openssl x509 -req -days 3650 -in ispserver.csr \
-signkey ispserver.key -out ispserver.crt

openssl rsa -in ispserver.key -out ispserver.key.insecure

mv ispserver.key ispserver.key.secure

mv ispserver.key.insecure ispserver.key
```

Enable the mod\_ssl module:

```
a2enmod ssl
```

Edit the ISPConfig vhost file...

```
vi /etc/apache2/sites-available/ispconfig.vhost
```

... and insert the following lines between the `<VirtualHost &hellip;.></VirtualHost>` tags:

```
SSLEngine On
SSLCertificateFile /etc/apache2/ssl/ispserver.crt
SSLCertificateKeyFile /etc/apache2/ssl/ispserver.key
```

Restart Apache2:

```
/etc/init.d/apache2 restart
```

The ISPConfig control panel login is now reachable on port 8080 by https.

## 6.3 Using SuExec For The ISPConfig Web Interface

(These instructions are for Debian/Ubuntu.)

Before you do this, you should close all browser windows where you use ISPConfig because afterwards the current sessions will be invalid.

Open `/etc/apache2/sites-available/ispconfig.vhost`

```
vi /etc/apache2/sites-available/ispconfig.vhost
```

... and comment out the `<IfModule mod_php5.c>...</IfModule>` section:

```
[...]
# <IfModule mod_php5.c>
#   DocumentRoot /usr/local/ispconfig/interface/web/
#   AddType application/x-httpd-php .php
# <Directory /usr/local/ispconfig/interface/web>
#   Options FollowSymLinks
#   AllowOverride None
#   Order allow,deny
#   Allow from all
#   php_value magic_quotes_gpc      0
# </Directory>
# </IfModule>
```

```
[...]
```

Then delete the following symlink...

```
rm -f /var/www/ispconfig
```

... and restart Apache:

```
/etc/init.d/apache2 restart
```

## 6.4 What Are Secure Settings For Web Sites Created Through ISPConfig?

- Use Fast-CGI, CGI, or SuPHP instead of Mod-PHP.
- Always activate suExec if you use Fast-CGI or CGI.
- Enable only the features that you really need. For example, if you don't need SSI for a web site, then don't enable it.

## 6.5 How Do I Make fail2ban Monitor Additional Services?

(These instructions are for Debian/Ubuntu.)

By default, fail2ban monitors the SSH service and tries to block users with too many failed login attempts for this service. But fail2ban can also be used to monitor additional services and block users with too many failed login attempts. This tutorial has more details about it:

[http://www.howtoforge.com/fail2ban\\_debian\\_etch](http://www.howtoforge.com/fail2ban_debian_etch)

### 6.5.1 PureFTPd

Open `/etc/fail2ban/jail.local` :

```
vi /etc/fail2ban/jail.local
```

Add the following section at the end:

```
[...]
[pureftpd]

enabled = true
port = ftp
filter = pureftpd
logpath = /var/log/syslog
maxretry = 3
```

Then create the file `/etc/fail2ban/filter.d/pureftpd.conf` :

```
vi /etc/fail2ban/filter.d/pureftpd.conf
```

```
[Definition]
failregex = .*pure-ftpd: \(.*@<HOST>\) \[WARNING\] Authentication failed for user.*
ignoreregex =
```

Restart fail2ban:

```
/etc/init.d/fail2ban restart
```

## 6.5.2 SASL

Open `/etc/fail2ban/jail.local`

```
vi /etc/fail2ban/jail.local
```

... and make sure you have the following section in it:

```
[...]
[sasl]

enabled = true
port = smtp
filter = sasl
failregex = warning: [-_\.w]+[<HOST>]: SASL (?LOGINPLAIN(?:CRAMDIGEST)-MD5) authentication failed
logpath = /var/log/mail.log
maxretry = 5
[...]
```



Restart fail2ban:

```
/etc/init.d/fail2ban restart
```

## 6.5.3 Courier

Open /etc/fail2ban/jail.local

```
vi /etc/fail2ban/jail.local
```

... and make sure you have the following two sections in it:

```
[...]
[courierpop3]

enabled = true
port    = pop3
filter  = courierlogin
failregex = courierpop3login: LOGIN FAILED.*ip=[.]*:<HOST>]
logpath  = /var/log/mail.log
maxretry = 5

[courierimap]

enabled = true
port    = imap2
filter  = courierlogin
failregex = imapd: LOGIN FAILED.*ip=[.]*:<HOST>]
logpath  = /var/log/mail.log
maxretry = 5
[...]
```

Restart fail2ban:

```
/etc/init.d/fail2ban restart
```

## 6.5.4 Dovecot

Open `/etc/fail2ban/jail.local` :

```
vi /etc/fail2ban/jail.local
```

Add the following section at the end:

```
[...]
[dovecot-pop3imap]

enabled = true
filter = dovecot-pop3imap
action = iptables-multiport[name=dovecot-pop3imap, port="pop3,imap", protocol=tcp]
logpath = /var/log/mail.log
maxretry = 20
findtime = 1200
bantime = 1200
```

Then create the file `/etc/fail2ban/filter.d/dovecot-pop3imap.conf` :

```
vi /etc/fail2ban/filter.d/dovecot-pop3imap.conf
```

```
[Definition]
failregex = (? : pop3-login|imap-login): (? :Authentication failure|Aborted login \|(auth failed|Aborted login \|(tried to use
disabled|Disconnected \|(auth failed).*rip=(?P<host>\S*).*
ignoreregex =
```

Restart fail2ban:

```
/etc/init.d/fail2ban restart
```

## 7 Troubleshooting

### 7.1 How Do I Find Out What Is Wrong If ISPConfig Does Not Work?

1) Did all jobs finish? Take a look at the job queue (Monitor > System State (All Servers) > Show Jobqueue ) (see chapter 4.10.1.3). Jobs that are listed there are either not yet completed (i.e., ISPConfig is still working on them) or did not complete because of some kind of problem.

2) If there are open jobs, please check if there are messages with the status "error" in the system log (Monitor > System State (All Servers) > Show System-Log ) (see chapter 4.10.1.2). If there are, please try to fix the error. After you have fixed the error, please delete the error message from the system log in ISPConfig, so that ISPConfig can continue to process the open jobs.

3) If it is not clear what is causing the error, please set the log level to Debug under System > System > Server Config (see chapter 4.9.2.2). After one or two minutes, there should be more detailed messages in ISPConfig's system log (Monitor > System State (All Servers) > Show System-Log ).

4) If this still doesn't help, then go to the command line of the server on which the error happens (on multiserver systems, it is often the slave and not the master) and run (as root):

```
crontab -e
```

Comment out the server.sh cron job:

```
##### /usr/local/ispconfig/server/server.sh > /dev/null 2>> /var/log/ispconfig/cron.log
```

Then run the command:

```
/usr/local/ispconfig/server/server.sh
```

This will display any errors directly on the command line which should help you to fix the error. If you have fixed the error, please don't forget to uncomment the server.sh cron job again.

