

# Servidor de Correo

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## 1. Preliminares

### 1.1. Configuración de red estática

```
root@ladynightmare:~# cd /etc/netplan
root@ladynightmare:/etc/netplan# cp 50-cloud-init.yaml 01-netcfg.yaml
root@ladynightmare:/etc/netplan# mv 50-cloud-init.yaml 50-cloud-init.yaml.bak
```

Modificamos el archivo `.yaml` para asignarle la IP estática:

```
GNU nano 2.9.3                                01-netcfg.yaml

# This file is generated from information provided by
# the datasource.  Changes to it will not persist across an instance.
# To disable cloud-init's network configuration capabilities, write a file
# /etc/cloud/cloud.cfg.d/99-disable-network-config.cfg with the following:
# network: {config: disabled}
network:
  version: 2
  renderer: networkd
  ethernets:
    enp0s3:
      dhcp6: true
      dhcp4: true
    enp0s8:
      dhcp6: true
      dhcp4: false
      addresses:
        - 192.168.0.20/24
      nameservers:
        addresses:
          - 192.168.0.20
```

Tenemos dos redes configuradas, es por eso que aparecen tanto `enp0s3` como `enp0s8`.

### 1.2. Instalación de Apache y PHP

```
root@ladynightmare:/etc/netplan# apt install apache2 php libapache2-mod-php php-xml php-mbstring php-intl php-pear php-zip_
```

### 1.3. Instalación de zip/unzip, Git y composer

```
root@ladynightmare:/etc/netplan# apt install zip unzip git composer
```

### 1.4. Servidor Apache, Bind9 y zona directa/inversa

```
root@ladynightmare:/etc/netplan# apt install bind9 bind9-doc_
```

```

root@ladynightmare:/etc/netplan# service apache2 restart
root@ladynightmare:/etc/netplan# service apache2 status
* apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Drop-In: /lib/systemd/system/apache2.service.d
            └─apache2-systemd.conf
   Active: active (running) since Fri 2019-02-01 10:07:24 UTC; 3s ago
     Process: 22738 ExecStop=/usr/sbin/apachectl stop (code=exited, status=0/SUCCESS)
     Process: 11854 ExecReload=/usr/sbin/apachectl graceful (code=exited, status=0/SUCCESS)
     Process: 22743 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Main PID: 22759 (apache2)
     Tasks: 6 (limit: 1110)
   CGroup: /system.slice/apache2.service
           └─22759 /usr/sbin/apache2 -k start
             22764 /usr/sbin/apache2 -k start
             22765 /usr/sbin/apache2 -k start
             22766 /usr/sbin/apache2 -k start
             22767 /usr/sbin/apache2 -k start
             22769 /usr/sbin/apache2 -k start

Feb 01 10:07:24 ladynightmare systemd[1]: Starting The Apache HTTP Server...
Feb 01 10:07:24 ladynightmare apachectl[22743]: AH00558: apache2: Could not reliably determine the s
Feb 01 10:07:24 ladynightmare systemd[1]: Started The Apache HTTP Server.

```

Escribimos en el archivo de configuración de bind nuestras zonas directa e inversa.

```

GNU nano 2.9.3 /etc/bind/named.conf.local

//
// Do any local configuration here
//

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "ladynightmare.es" {
    type master;
    file "/etc/bind/ladynightmare.db";
};

zone "0.168.192.in-addr.arpa" {
    type master;
    file "/etc/bind/ladynightmare.rev";
};

```

Creamos el fichero de zona directa y lo editamos.

```

GNU nano 2.9.3 /etc/bind/ladynightmare.db

;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ladynightmare.es. root.ladynightmare.es. (
; Serial
                        2          ; Refresh
                        604800     ; Retry
                        86400      ; Expire
                        2419200    ; Negative Cache TTL
                        604800 )
;
@         IN      NS       dns.ladynightmare.es.
@         IN      MX       10 mail.ladynightmare.es.
dns       IN      A        192.168.0.20
mail      IN      A        192.168.0.20

```

Hacemos lo mismo con la zona inversa.

```
GNU nano 2.9.3 /etc/bind/ladynightmare.rev
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ladynightmare.es. root.ladynightmare.es. (
                                2          ; Serial
                                604800     ; Refresh
                                86400      ; Retry
                                2419200    ; Expire
                                604800 )   ; Negative Cache TTL
;
@         IN      NS       dns.ladynightmare.es.
@         IN      MX       10 mail.ladynightmare.es.
20        IN      PTR      mail.ladynightmare.es.
```

## 1.5. Modificación de */etc/php/7.2/apache2/php.ini*

Añadimos las extensiones necesarias:

```

GNU nano 2.9.3 /etc/php/7.2/apache2/php.in

;extension=fileinfo
;extension=gd2
;extension=gettext
;extension=gmp
;extension=intl
;extension=imap
;extension=interbase
;extension=ldap
;extension=mbstring
;extension=exif      ; Must be after mbstring as it depends on it
;extension=mysqli
;extension=oci8_12c  ; Use with Oracle Database 12c Instant Client
;extension=odbc
;extension=openssl
;extension=pdo_firebird
;extension=pdo_mysql
;extension=pdo_oci
;extension=pdo_odbc
;extension=pdo_pgsql
;extension=pdo_sqlite
;extension=pgsql
;extension=shmop
;extension=dom.so
; The MIBS data available in the PHP distribution must be installed
; See http://www.php.net/manual/en/snmp.installation.php
;extension=snmp

;extension=soap
;extension=sockets
;extension=sqlite3
;extension=tidy
;extension=xmlrpc

```

También configuramos el huso horario y el tamaño máximo de los archivos.

```

[Date]
; Defines the default timezone used by the date functions
; http://php.net/date.timezone
date.timezone = "Europe/Madrid"

```

```

; Maximum allowed size for uploaded files.
; http://php.net/upload-max-filesize
upload_max_filesize = 20M

```

```

; Maximum size of POST data that PHP will accept.
; Its value may be 0 to disable the limit. It is ignored if POST data reading
; is disabled through enable_post_data_reading.
; http://php.net/post-max-size
post_max_size = 20M

```

```
; overload(replace) single byte functions by mbstring functions.
; mail(), ereg(), etc are overloaded by mb_send_mail(), mb_ereg(),
; etc. Possible values are 0,1,2,4 or combination of them.
; For example, 7 for overload everything.
; 0: No overload
; 1: Overload mail() function
; 2: Overload str*() functions
; 4: Overload ereg*() functions
; http://php.net/mbstring.func-overload
mbstring.func_overload = 0
```

## 1.6. Comprobamos los ficheros de zona

```
root@ladynightmare:/etc/netplan# named-checkconf
root@ladynightmare:/etc/netplan# named-checkconf -z
zone ladynightmare.es/IN: loaded serial 2
zone 0.168.192.in-addr.arpa/IN: loaded serial 2
zone localhost/IN: loaded serial 2
zone 127.in-addr.arpa/IN: loaded serial 1
zone 0.in-addr.arpa/IN: loaded serial 1
zone 255.in-addr.arpa/IN: loaded serial 1
```

## 1.7. Reiniciamos Bind y añadimos las reglas

```
root@ladynightmare:/etc/netplan# service bind9 restart
root@ladynightmare:/etc/netplan# ufw allow Bind9
Rules updated
Rules updated (v6)
```

## 1.8. MySQL

Instalamos MySQL:

```
All done!
root@ladynightmare:/etc/netplan# mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.25-0ubuntu0.18.04.2 (Ubuntu)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

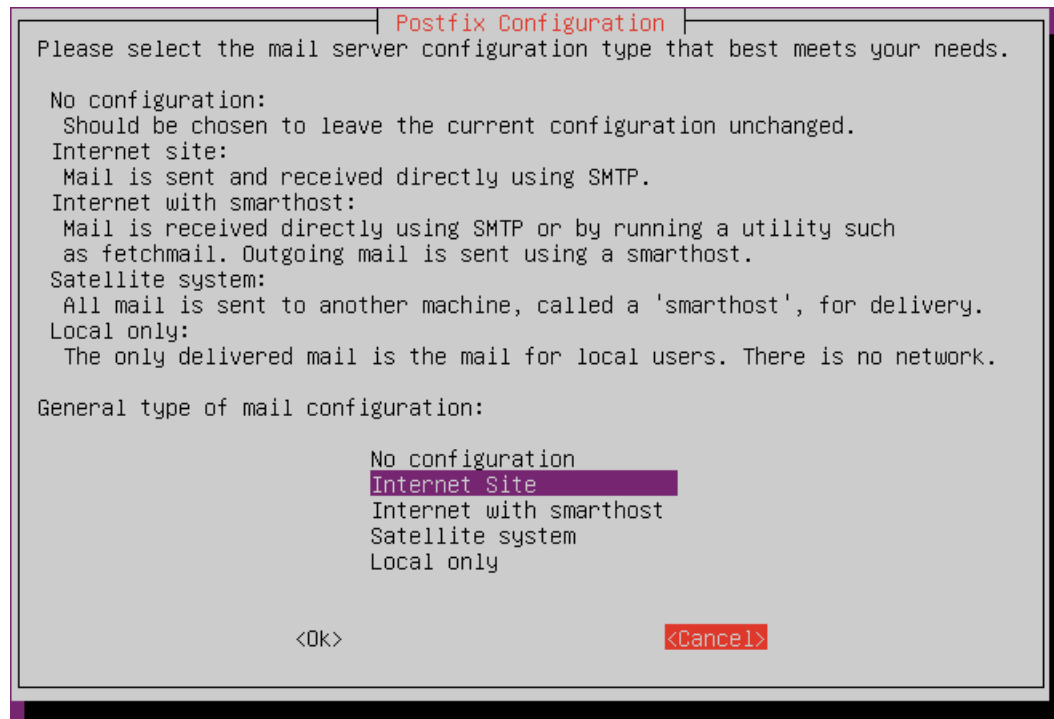
mysql> alter user 'root'@'localhost' identified with mysql_native_password by 'IAMRoot2.'
-> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your
MySQL server version for the right syntax to use near 'identified with mysql_native_password by 'IAM
Root2.'" at line 1
mysql> ;alter user 'root'@'localhost' identified with mysql_native_password by 'IAMRoot2.';
ERROR:
No query specified

Query OK, 0 rows affected (0.00 sec)

mysql> flush privileges
-> ;
Query OK, 0 rows affected (0.00 sec)
```

## 1.9. Postfix

Instalamos Postfix:



Y reiniciamos el servicio:

```
root@ladynightmare:/etc/netplan# service postfix restart
root@ladynightmare:/etc/netplan# service postfix status
• postfix.service - Postfix Mail Transport Agent
  Loaded: loaded (/lib/systemd/system/postfix.service; enabled; vendor preset: enabled)
  Active: active (exited) since Fri 2019-02-01 11:31:40 UTC; 3s ago
  Process: 23254 ExecStart=/bin/true (code=exited, status=0/SUCCESS)
  Main PID: 23254 (code=exited, status=0/SUCCESS)

Feb 01 11:31:40 ladynightmare systemd[1]: Starting Postfix Mail Transport Agent...
Feb 01 11:31:40 ladynightmare systemd[1]: Started Postfix Mail Transport Agent.
```

Creamos el directorio donde se guardarán los correos y las tablas de mapeo de correo y las cuentas del sistema:

```
root@ladynightmare:/etc/netplan# postconf -e "home_mailbox=Maildir/"
```

```
root@ladynightmare:/etc/netplan# postconf -e "virtual_alias_maps=hash:/etc/postfix/virtual"
```



```
GNU nano 2.9.3 /etc/postfix/virtual
cristina@ladynightmare.es ladynightmare

root@ladynightmare:/etc/netplan# postmap /etc/postfix/virtual_
```

Reiniciamos Postfix y añadimos las reglas al firewall:

```
root@ladynightmare:/etc/netplan# service postfix restart
root@ladynightmare:/etc/netplan# service postfix status
• postfix.service - Postfix Mail Transport Agent
  Loaded: loaded (/lib/systemd/system/postfix.service; enabled; vendor preset: enabled)
  Active: active (exited) since Fri 2019-02-01 11:31:40 UTC; 3s ago
  Process: 23254 ExecStart=/bin/true (code=exited, status=0/SUCCESS)
  Main PID: 23254 (code=exited, status=0/SUCCESS)

Feb 01 11:31:40 ladynightmare systemd[1]: Starting Postfix Mail Transport Agent...
Feb 01 11:31:40 ladynightmare systemd[1]: Started Postfix Mail Transport Agent.
```

## 1.10. Snail

```
root@ladynightmare:/etc/netplan# apt install s-nail
```

Configuramos que se pueda enviar un correo sin tener el árbol de directorios y que se guarde una copia de los mensajes enviados.

```
# Startup into interactive mode even if the (given) mailbox is empty.
set emptystart

set folder=Maildir
set record=+sent
```

Añadimos una variable de entorno MAIL para usarlo en cada inicio de sesión:

```
root@ladynightmare:/etc/netplan# echo "export MAIL=~/.Maildir" >> /etc/bash.bashrc
```

```
root@ladynightmare:/etc/netplan# echo "export MAIL=~/.Maildir" > /etc/profile.d/mail.sh
```

```
root@ladynightmare:/etc/netplan# source /etc/profile.d/mail.sh
```

## 2. Enviamos correos

### 2.1. Creamos los usuarios

Creamos los usuarios zipi y zape:

```
root@ladynightmare:/etc/netplan# adduser zipi
```

```
root@ladynightmare:/etc/netplan# adduser zape
```

Mandamos un correo a zipi:

```
zape@ladynightmare:~$ s-nail -Snorecord zipi
Subject: hola
jaja
jeje
^D
-----
Envelope contains:
To: zipi
Subject: hola
Send this message [yes/no, or recompose]? yes
```

```
zape@ladynightmare:~$ s-nail zipi@ladynightmare.es
Subject: hola
jajajaja
jejejeje
^D
-----
Envelope contains:
To: zipi@ladynightmare.es
Subject: hola
Send this message [yes/no, or recompose]? yes
```

Nos autenticamos en los usuarios y comprobamos que los directorios están creados:

```
zipi@ladynightmare:~$ ls
Maildir
zipi@ladynightmare:~$ ls -R
.:
Maildir
./Maildir:
cur new sent tmp
./Maildir/cur:
./Maildir/new:
./Maildir/tmp:
```

Comprobamos los correos:

```
zipi@ladynightmare:~$ s-nail
s-nail version v14.9.6. Type '?' for help
/home/zipi/Maildir: 2 messages 2 new
+N 1 zape      2019-02-01 12:36  15/430  hola
 N 2 zape      2019-02-01 12:37  15/455  hola
? _
```

## 2.2. Courier

Instalamos el paquete de courier:

```
root@ladynightmare:/etc/netplan# apt install courier-imap
```

## 2.3. Roundcube

Nos descargamos Roundcube del repositorio de GitHub y lo descomprimos:

```
root@ladynightmare:/etc/netplan# wget https://github.com/roundcube/roundcubemail/releases/download/1.3.8/roundcubemail-1.3.8-complete.tar.gz
```

```
root@ladynightmare:/etc/netplan# tar -xvf roundcubemail-1.3.8-complete.tar.gz -C /var/www
```

Cambiamos los permisos y el propietario:

```
root@ladynightmare:/etc/netplan# cd /var/www
root@ladynightmare:/var/www# mv roundcubemail-1.3.8 roundcube
root@ladynightmare:/var/www# chown -R www-data:www-data roundcube
root@ladynightmare:/var/www# chmod 775 -R roundcube/logs roundcube/temp
```

Cambiamos la configuración:

```
root@ladynightmare:/var/www# cd /etc/apache2/sites-available/
root@ladynightmare:/etc/apache2/sites-available# cp 000-default.conf roundcube.conf
```

```
GNU nano 2.9.3 roundcube.conf Modified
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

ServerName mail.ladynightmare.es
ServerAdmin ladynightmare@ladynightmare.es
DocumentRoot /var/www/roundcube

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
```

```

root@ladynightmare:/etc/apache2/sites-available# a2ensite roundcube.conf
Enabling site roundcube.
To activate the new configuration, you need to run:
systemctl reload apache2

```

```

root@ladynightmare:/etc/apache2/sites-available# a2dissite 000-default
Site 000-default disabled.
To activate the new configuration, you need to run:
systemctl reload apache2

```

```

root@ladynightmare:/etc/apache2/sites-available# a2enmod rewrite
Enabling module rewrite.
To activate the new configuration, you need to run:
systemctl restart apache2
root@ladynightmare:/etc/apache2/sites-available# service apache2 reload
root@ladynightmare:/etc/apache2/sites-available# service apache2 restart
root@ladynightmare:/etc/apache2/sites-available# service apache2 status
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Drop-In: /lib/systemd/system/apache2.service.d
            └─apache2-systemd.conf
   Active: active (running) since Fri 2019-02-01 12:51:05 UTC; 6s ago
     Process: 24186 ExecStop=/usr/sbin/apachectl stop (code=exited, status=0/SUCCESS)
     Process: 24172 ExecReload=/usr/sbin/apachectl graceful (code=exited, status=0/SUCCESS)
     Process: 24191 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Main PID: 24204 (apache2)
    Tasks: 6 (limit: 1110)
   CGroup: /system.slice/apache2.service
           └─24204 /usr/sbin/apache2 -k start
             └─24209 /usr/sbin/apache2 -k start
               └─24210 /usr/sbin/apache2 -k start
                 └─24211 /usr/sbin/apache2 -k start
                   └─24212 /usr/sbin/apache2 -k start
                     └─24215 /usr/sbin/apache2 -k start

Feb 01 12:51:05 ladynightmare systemd[1]: Starting The Apache HTTP Server...
Feb 01 12:51:05 ladynightmare apachectl[24191]: AH00558: apache2: Could not reliably determine the s
Feb 01 12:51:05 ladynightmare systemd[1]: Started The Apache HTTP Server.
lines 1-21/21 (END)

```

Creamos una tabla y un usuario:

```

root@ladynightmare:/etc/apache2/sites-available# mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.25-0ubuntu0.18.04.2 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database roundcubemail /*!40101 CHARACTER SET utf8 COLLATE utf8_general_ci*/;
Query OK, 1 row affected (0.07 sec)

```

```
mysql> create user 'roundcube'@'localhost' identified by 'IAMRoot2.';
Query OK, 0 rows affected (0.11 sec)

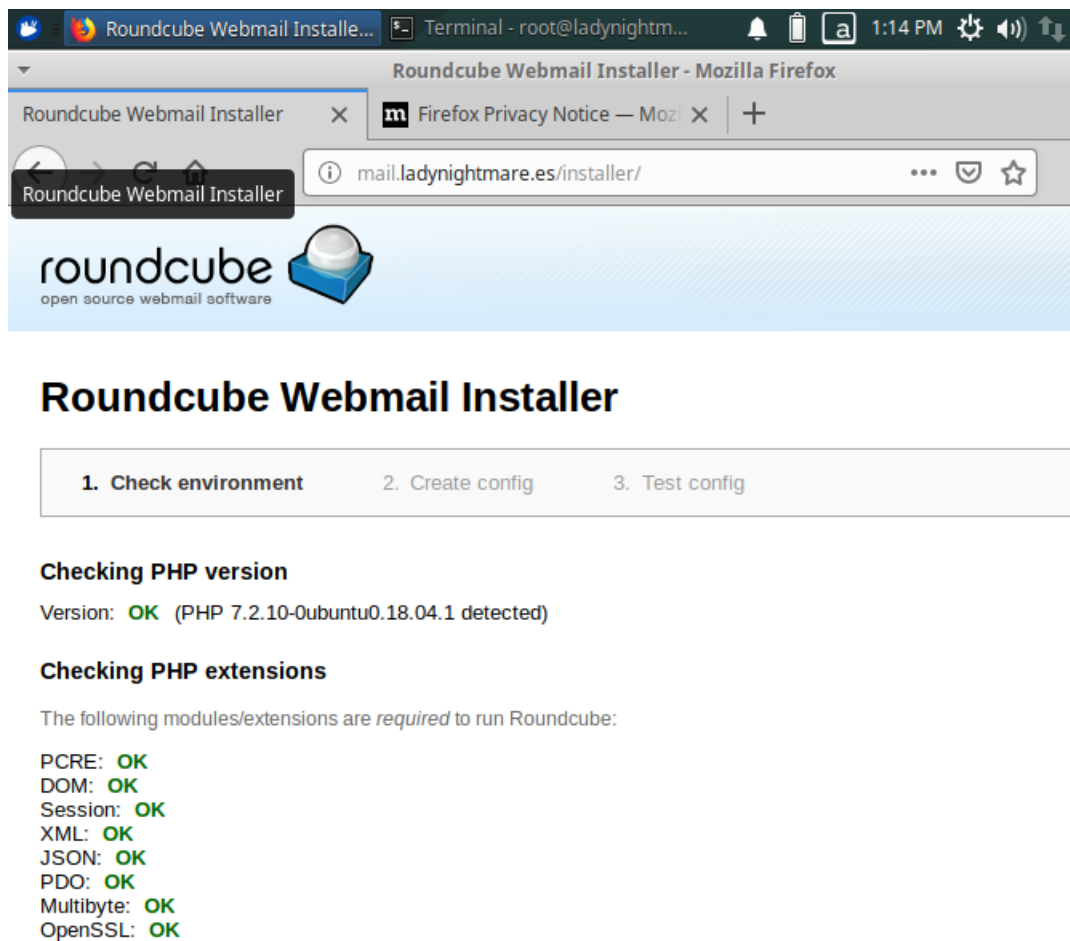
mysql> grant all privileges on roundcubemail.* to 'roundcube'@'localhost';
Query OK, 0 rows affected (0.02 sec)

mysql> flush privileges;
Query OK, 0 rows affected (0.03 sec)
```

Cargamos la información en la base de datos:

```
root@ladynightmare:/etc/apache2/sites-available# mysql -u roundcube -p roundcubemail < /var/www/roundcube/SQL/mysql.initial.sql
Enter password:
```

Accedemos a <http://mail.ladynightmare.es/installer>:



**Roundcube Webmail Installer**

1. Check environment    2. Create config    3. Test config

**Checking PHP version**

Version: **OK** (PHP 7.2.10-0ubuntu0.18.04.1 detected)

**Checking PHP extensions**

The following modules/extensions are *required* to run Roundcube:

PCRE: **OK**  
DOM: **OK**  
Session: **OK**  
XML: **OK**  
JSON: **OK**  
PDO: **OK**  
Multibyte: **OK**  
OpenSSL: **OK**

ip\_check



Check client IP in session authorization

This increases security but can cause sudden logouts when someone uses a proxy with changing IPs.

### Database setup

db\_dsnw

Database settings for read/write operations:

MySQL ▾

Database type

localhost

Database server (omit for sqlite)

roundcubemail

Database name (use absolute path and filename for sqlite)

roundcube

Database user name (needs write permissions)(omit for sqlite)

IAmRoot2.

Database password (omit for sqlite)

db\_prefix

Optional prefix that will be added to database object names (tables and sequences).

Accedemos al correo y comprobamos que, efectivamente, podemos ver nuestra bandeja de entrada.

