

A Beginner-Friendly Guide for Linux / Start Learning Linux Quickly...

How to Install Roundcube Webmail on CentOS/RHEL 8/7

[Aaron Kili](#) | Last Updated: February 18, 2021 | [Postfix Mail Server](#) | [26 Comments](#)

Roundcube is a free and open-source, fully-featured web-based multilingual IMAP webmail software, with an application-like user interface that is fully functional and customizable, and uses the latest web standards. It is built using PHP and offers full functionality that you can expect from a modern email client.

Roundcube Features:

- It's multilingual, supports over 70 languages.
- Supports a Find-as-you-type address book.
- Supports multiple sender identities.
- Offers sophisticated privacy protection.
- Has a full-featured address book with groups and LDAP connectors.
- Offers richtext/HTML message composing.
- Supports searching for messages and contacts.
- Supports Int. domain names (IDNA).
- Supports folder manipulation, shared folders, and ACL.
- Extensible using the Plug-in API.



- Has a plug-in API for flexible extensions and so much more.

Recommended System Requirements:

1. A [CentOS 8/RHEL 8](#) or [CentOS 7/RHEL 7](#) Server with Minimal Install.
2. Apache or Nginx webserver
3. PHP and MySQL/MariaDB database
4. SMTP and IMAP server with IMAP4 rev1 support

For the scope of this article, we assume that you already have a running Postfix email server with virtual users, otherwise, follow our guides setup:

1. [Setting Up Postfix Mail Server and Dovecot with MariaDB – Part 1](#)
2. [Configure Postfix and Dovecot Virtual Domain Users – Part 2](#)
3. [Install and Integrate ClamAV and SpamAssassin to Postfix Mail Server – Part 3](#)

Testing Environment:

For the purpose of this article, I will be installing **Roundcube Webmail** on a [Linode CentOS VPS](#) with an Nginx web server, static IP address **192.168.0.100**, and hostname **mail.tecmint.com**.

Step 1: Install Nginx, PHP-FPM, and MariaDB in CentOS 8/7

1. First start by enabling [EPEL](#) and **REMI** repositories and install **Nginx**, **PHP**, **PHP-FPM**, and **MariaDB** server on your **CentOS** system.

```
rpm [CentOS/RHEL 8]
rpm [CentOS/RHEL 7]
```

```
l php-xml php-mysql php-mbstring php-pspell php-imagick mariadb-server
```



2. Once you have successfully installed all the packages, start the Nginx web server, enable it to auto-start at boot time and check if its up and running.

```
# systemctl start nginx
# systemctl enable nginx
# systemctl status nginx
```



3. Next, if you have a system firewall enabled, you need to open port **80** for external requests.

```
# firewall-cmd --permanent --add-port=80/tcp
# firewall-cmd --reload
```

4. Next, you need to configure **PHP-FPM** to work properly. Open the file **/etc/php.ini** using a command-line text editor.

```
# vim /etc/php.ini
```



```
cgi.fix_pathinfo=0
```

Also, uncomment the directive `;date.timezone` and set its value to your **timezone**.

```
date.timezone = "Africa/Kampala"
```

Once you are done, save the file and exit.

5. Then start **PHP-FPM** service, enable it to auto-start at boot time, and check if it is up and running, as follows.

```
# systemctl start php-fpm
# systemctl enable php-fpm
# systemctl status php-fpm
```

Step 2: Secure MariaDB Server and Create Roundcube Database

6. Now start the MariaDB service using the following commands.

```
# systemctl start mariadb
# systemctl enable mariadb
# systemctl status mariadb
```

7. The default MariaDB installation is unsecure. You need to run the security script which comes with the binary package, to secure it. You will be asked to set a root password, remove anonymous users, disable root login remotely, and remove the test database.

```
# mysql_secure_installation
```



8. Now login to the MariaDB database, create a database for **Roundcube**, and grant the user to appropriate permissions on the database (remember to set a strong/secure password in a production environment).

```
# mysql -u root -p
MariaDB [(none)]> CREATE DATABASE roundcubemail /*!40101 CHARACTER SET
MariaDB [(none)]> CREATE USER 'roundcube'@'localhost' IDENTIFIED BY '=2
MariaDB [(none)]> GRANT ALL PRIVILEGES ON roundcubemail.* TO 'roundcube
MariaDB [(none)]> FLUSH PRIVILEGES;
MariaDB [(none)]> exit
```

9. Next, import the Roundcube table layout to the newly created database.

```
# cd /var/www/html/roundcubemail/
# mysql -u root -p roundcubemail < SQL/mysql.initial.sql
```

Step 3: Download Roundcube Package

10. In this step, download the latest stable version (**1.4.9** at the time of this writing) of Roundcube



```
/roundcubemail/releases/download/1.4.9/roundcubemail-1.4.9-complete.tar.g
.tar.gz
/roundcubemail
```

11. Next, set the appropriate permissions on the Roundcube webroot files.

```
# chown -R nginx:nginx /var/www/html/roundcubemail
```

Step 4: Configure Nginx Server Block For Roundcube Web Installer

12. Now create an Nginx server block for the Roundcube under **/etc/nginx/conf.d/** (you can name the file the way you want but it should have a **.conf** extension).

```
# vim /etc/nginx/conf.d/mail.example.com.conf
```

Add the following configuration in the file.

```
server {
    listen 80;
    server_name mail.example.com;

    root /var/www/html/roundcubemail;
    index index.php index.html;

    #i# Logging
    access_log /var/log/nginx/mail.example.com_access_log;
    error_log /var/log/nginx/mail.example.com_error_log;
```



```
location ~ ^/(README.md|INSTALL|LICENSE|CHANGELOG|UPGRADING)$ {  
    deny all;  
}  
  
location ~ ^/(config|temp|logs)/ {  
    deny all;  
}  
  
location ~ /\. {  
    deny all;  
    access_log off;  
    log_not_found off;  
}  
  
location ~ \.php$ {  
    include /etc/nginx/fastcgi_params;  
    #fastcgi_pass 127.0.0.1:9000;  
    fastcgi_pass unix:/var/run/php-fpm/php-fpm.sock;  
    fastcgi_index index.php;  
    fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;  
}  
}
```

Save the file and close it.

13. Next, open the file **/etc/php-fpm.d/www.conf** to make a few changes to **PHP-FPM** web directive.

```
# vim /etc/php-fpm.d/www.conf
```





Change the user **apache** to **nginx** in the following variables.

```
user = nginx
group = nginx
```

Then comment out the line **listen = 127.0.0.1:9000** and set the listen variable to listen on a Unix socket set in the nginx server block file:

```
listen = /var/run/php-fpm/php-fpm.sock
```

Also, set the permissions for UNIX socket, uncomment and change the lines to:

```
listen.owner = nginx
listen.group = nginx
listen.mode = 0660
```




```

; Default Value: none
;prefix = /path/to/pools/$pool

; Unix user/group of processes
; Note: The user is mandatory. If the group is not set, the default user's group
;       will be used.
; RPM: apache user chosen to provide access to the same directories as httpd
user = nginx
; RPM: Keep a group allowed to write in log dir.
group = nginx

; The address on which to accept FastCGI requests.
; Valid syntaxes are:
;   'ip.add.re.ss:port'   - to listen on a TCP socket to a specific IPv4 address on
;                           a specific port;
;   '[ip:6:addr:ess]:port' - to listen on a TCP socket to a specific IPv6 address on
;                           a specific port;
;   'port'                - to listen on a TCP socket to all addresses
;                           (IPv6 and IPv4-mapped) on a specific port;
;   '/path/to/unix/socket' - to listen on a unix socket.
; Note: This value is mandatory.
;listen = 127.0.0.1:9000

listen = /var/run/php-fpm/php-fpm.sock

; Set listen(2) backlog.
; Default Value: 511
;listen.backlog = 511

; Set permissions for unix socket, if one is used. In Linux, read/write
; permissions must be set in order to allow connections from a web server.
; Default Values: user and group are set as the running user
;                  mode is set to 0660
listen.owner = nginx
listen.group = nginx
listen.mode = 0660

; When POSIX Access Control Lists are supported you can set them using
-- INSERT --

```

18,31

4%

Configure PHP-FPM

Once you are done, save the file and close it.

14. Then restart the **Nginx** and **PHP-FPM** services to apply the recent changes, as follows.

```
# systemctl restart nginx php-fpm
```

Step 5: Access Roundcube Web UI

15. Before you start the install wizard, to avoid any session errors, set the appropriate permissions



```
# ls -ld /var/lib/php/session/  
# chown :nginx /var/lib/php/session/  
# ls -ld /var/lib/php/session/
```

16. Now open a browser and use the address <http://mail.example.com/installer> (replace domain with the server name you set while creating an Nginx server block for Roundcube) to access the web installer. If all PHP versions, extensions, and **php.ini/htaccess** settings are correct, you will see the following screenshot, click on **Next** to go to the configurations page.

```
http://mail.example.com/installer  
OR  
http://IP-address/installer
```




Roundcube Webmail Installer

mail.example.com/installer/

80%

Search



open source webmail software

How-to Wiki

Roundcube Webmail Installer

1. Check environment

2. Create config

3. Test config

Checking PHP version

Version: **OK** (PHP 7.2.9 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**

The next couple of extensions are *optional* and recommended to get the best performance:

Fileinfo: **OK**
Libiconv: **OK**
Intl: **OK**
Exif: **OK**
LDAP: **OK**
GD: **OK**
Imagick: **OK**

Checking available databases

Check which of the supported extensions are installed. At least one of them is required.

MySQL: **OK**
PostgreSQL: **NOT AVAILABLE** (See <http://www.php.net/manual/en/ref.pdo-pgsql.php>)
SQLite: **OK**
SQLite (v2): **NOT AVAILABLE** (See <http://www.php.net/manual/en/ref.pdo-sqlite.php>)
SQL Server (SQLSRV): **NOT AVAILABLE** (See <http://www.php.net/manual/en/ref.pdo-sqlsrv.php>)
SQL Server (DBLIB): **NOT AVAILABLE** (See <http://www.php.net/manual/en/ref.pdo-dblib.php>)
Oracle: **NOT AVAILABLE** (See <http://www.php.net/manual/en/book.oci8.php>)

Check for required 3rd party libs

This also checks if the include path is set correctly.

PEAR: **OK**
Auth_SASL: **OK**
Net_SMTP: **OK**
Net_IDNA2: **OK**
Mail_mime: **OK**
Net_LDAP3: **OK**

Checking php.ini.htaccess settings

The following settings are *required* to run Roundcube:

file_uploads: **OK**
session.auto_start: **OK**
mbstring.func_overload: **OK**
suhosin.session.encrypt: **OK**

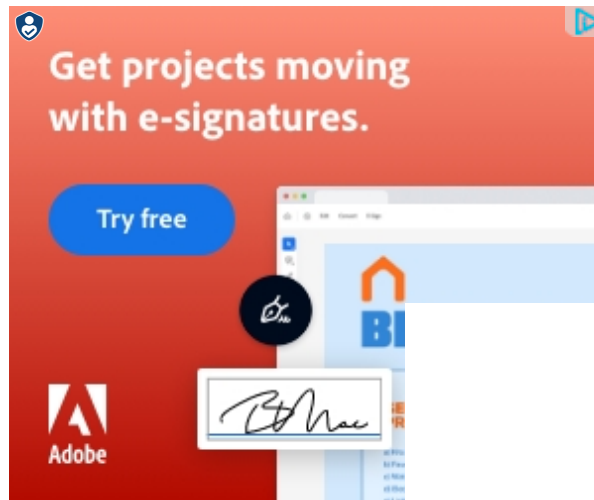
The following settings are *optional* and recommended:

allow_url_fopen: **OK**
date.timezone: **OK**

NEXT

Access Roundcube Webmail Installer





17. The configurations page allows you to set up your Roundcube instance. We will only explain the important options for the scope of this guide.

Under the **General Configuration**, set a **product_name** for example **Example.com Webmail**.

Roundcube Webmail Installer

mail.example.com/installer/index.php?_step=2

roundcube open source webmail software

Roundcube Webmail Installer

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

General configuration

product_name

 The name of your service (used to compose page titles)

support_url

 Provide an URL where a user can get support for this Roundcube installation.
 PLEASE DO NOT LINK TO THE ROUNDcube.NET WEBSITE HERE!
 Enter an absolute URL (including http://) to a support page/form or a mailto: link.

skin_logo

 Custom image to display instead of the Roundcube logo.
 Enter a URL relative to the document root of this Roundcube installation.

temp_dir

 Use this folder to store temp files (must be writeable for webserver)

des_key

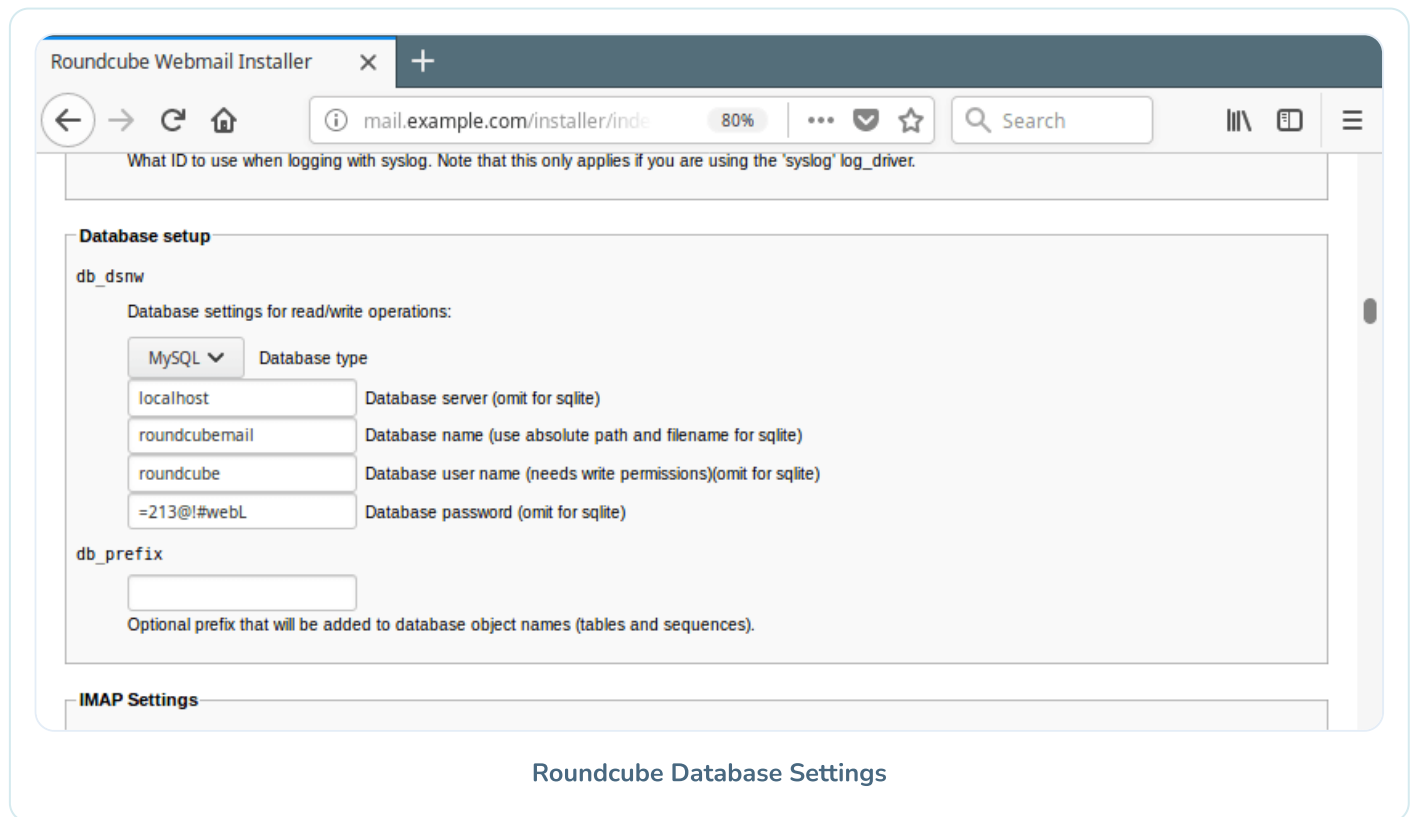
 This key is used to encrypt the users imap password before storing in the session record
 It's a random generated string to ensure that every installation has its own key.

ip_check
☐ Check client IP in session authorization
 This increases security but can cause sudden logouts when someone uses a proxy with changing IPs.

enable_emailcheck



Go to **Database setup**, enter the **database host, name, user,** and **password** to connect to the MySQL server.



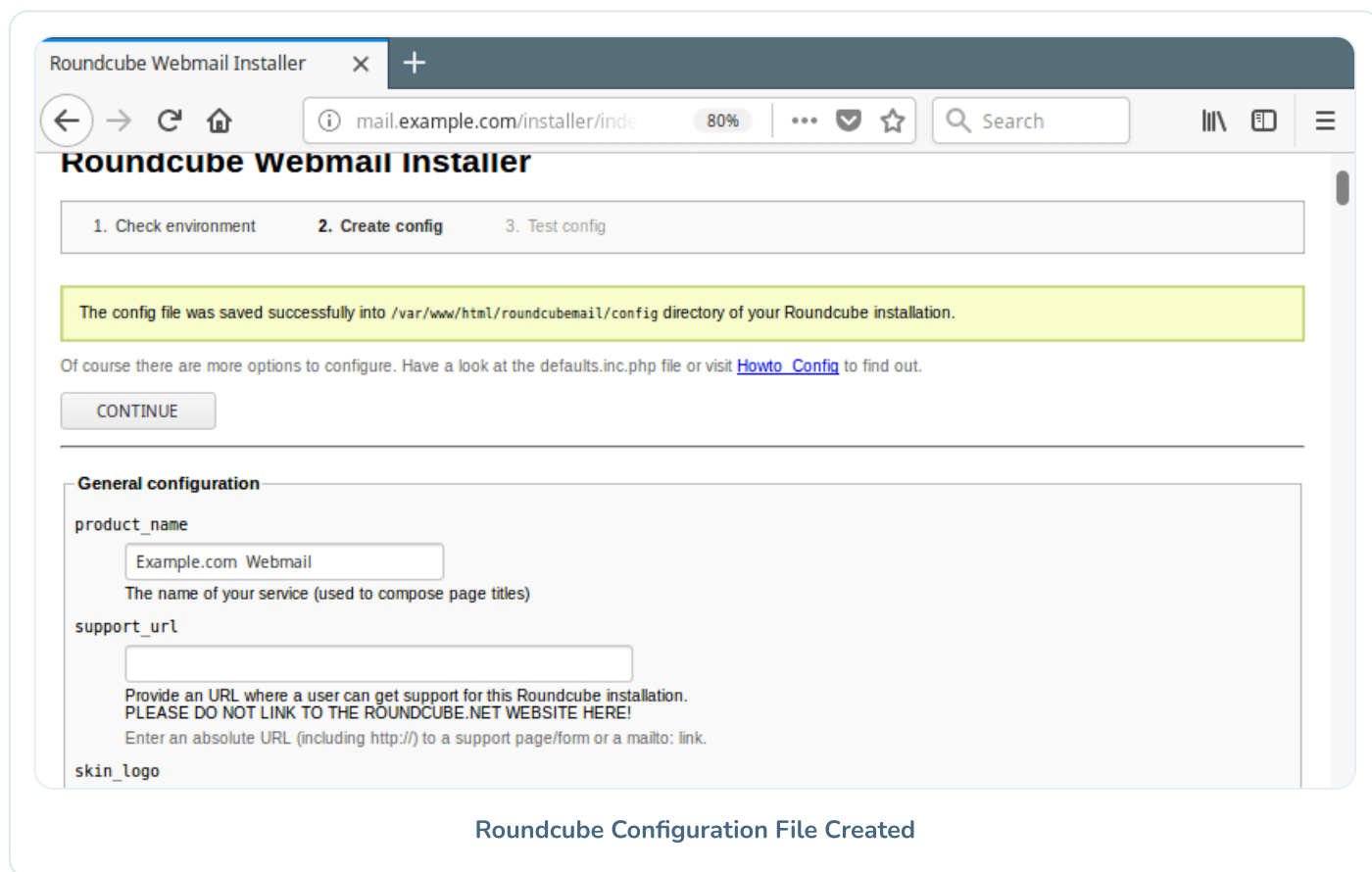
The screenshot shows a web browser window titled "Roundcube Webmail Installer" with the URL "mail.example.com/installer/index.php". The page displays the "Database setup" section. At the top, a note states: "What ID to use when logging with syslog. Note that this only applies if you are using the 'syslog' log_driver." Below this, the "db_dsnw" section is titled "Database settings for read/write operations:". It includes a "Database type" dropdown menu set to "MySQL". Below the dropdown are four input fields: "localhost" for "Database server (omit for sqlite)", "roundcubemail" for "Database name (use absolute path and filename for sqlite)", "roundcube" for "Database user name (needs write permissions)(omit for sqlite)", and "=213@!#webl" for "Database password (omit for sqlite)". Below these fields is the "db_prefix" section with an empty input field and the text "Optional prefix that will be added to database object names (tables and sequences)." At the bottom of the form, the "IMAP Settings" section is partially visible. The entire form is titled "Roundcube Database Settings" at the bottom.

Then scroll down to **IMAP** and **SMTP** settings and enter the IP address of your **IMAP** and **SMTP** server, if its the same server on which you are running Roundcube, leave it as “**localhost**” and also specify other necessary parameters.

You can specify other settings according to your needs, once you are done, click on **Create Config**.

18. You should now see a message saying “**The config file was saved successfully into /var/www/html/roundcubemail/config directory of your Roundcube installation.**” Click on **Continue**.





19. You can review your configuration from the **Test config page** as shown in the following screenshot.





Roundcube Webmail Installer

1. Check environment

2. Create config

3. Test config

Check config file

defaults.inc.php: **OK**config.inc.php: **OK**

Check if directories are writable

Roundcube may need to write/save files into these directories

/var/www/html/roundcubemail/temp/: **OK**/var/www/html/roundcubemail/logs/: **OK**

Check DB config

DSN (write): **OK**DB Schema: **OK**DB Write: **OK**DB Time: **OK**

Test filetype detection

Fileinfo/mime_content_type configuration: **OK**Mimetype to file extension mapping: **OK**

Test SMTP config

Server

Port

Username

Password

Sender

Recipient

Test IMAP config

Server

Port

Username

Password

After completing the installation and the final tests please **remove** the whole installer folder from the document root of the webserver or make sure that `enable_installer` option in `config.inc.php` is disabled.

These files may expose sensitive configuration data like server passwords and encryption keys to the public. Make sure you cannot access this installer from your browser.

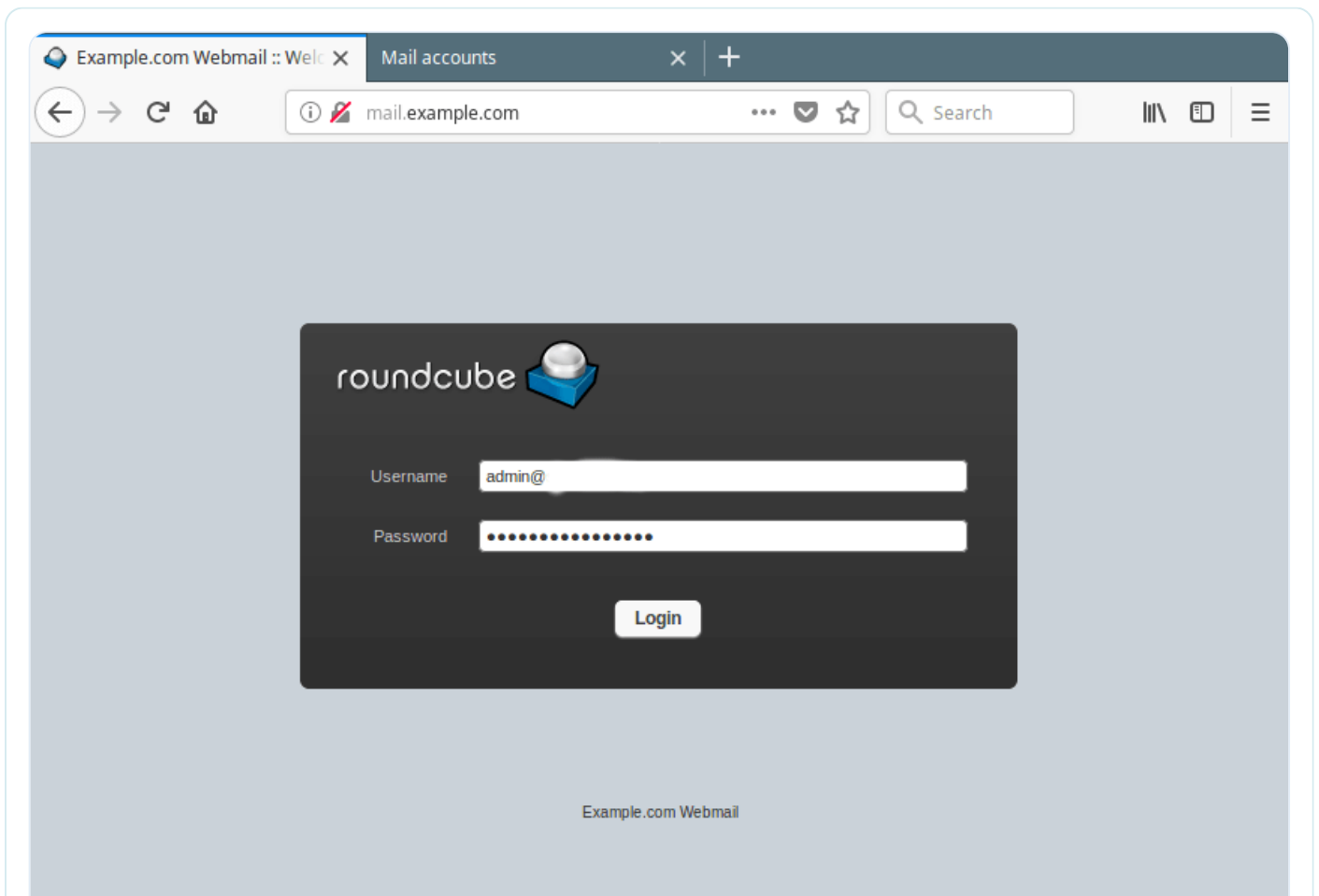




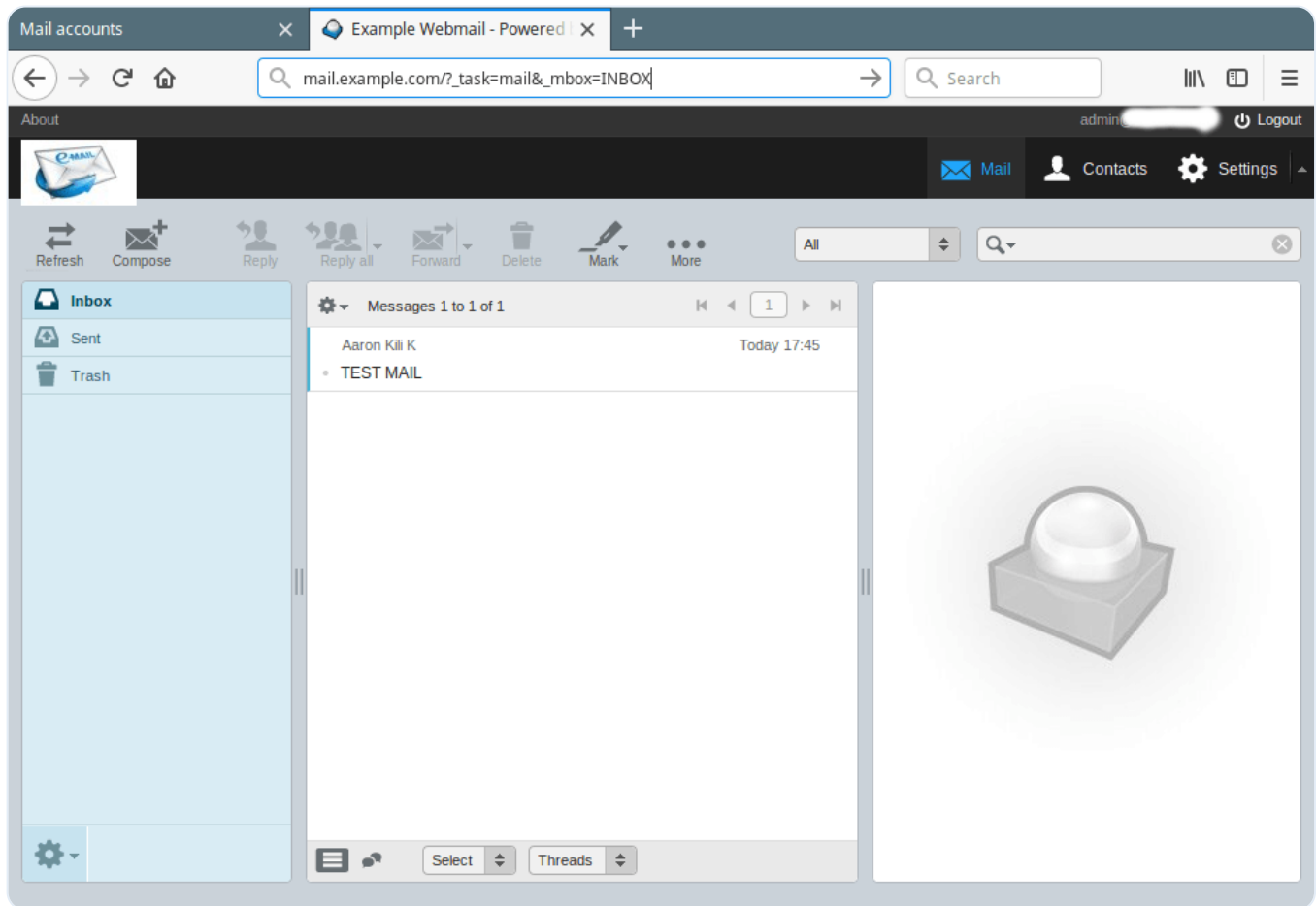
20. Next, remove the whole installer folder (which contains files that may expose sensitive configuration data like server passwords and encryption keys to the public) from the Roundcube root directory (or make sure that the **enable_installer** option in **config.inc.php** is **disabled**).

```
# rm -rf /var/www/html/roundcubemail/installer
```

21. Finally, use the URL **http://mail.example.com** to access the Roundcube login page. Enter your user name and password to view your mails.



Roundcube Webmail Login



Roundcube Webmail Access

Summary

Roundcube is a widely used, fully-featured web-based multilingual mail client. In this article, we showed how to install the latest stable version of **Roundcube Webmail** on a **CentOS/RHEL 8/7** with the Nginx web server. If you have any questions, use the feedback form below to reach us.

🔗 [roundcube webmail](#), [webmail email client](#)

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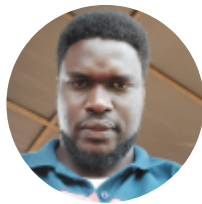


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Aaron Kili

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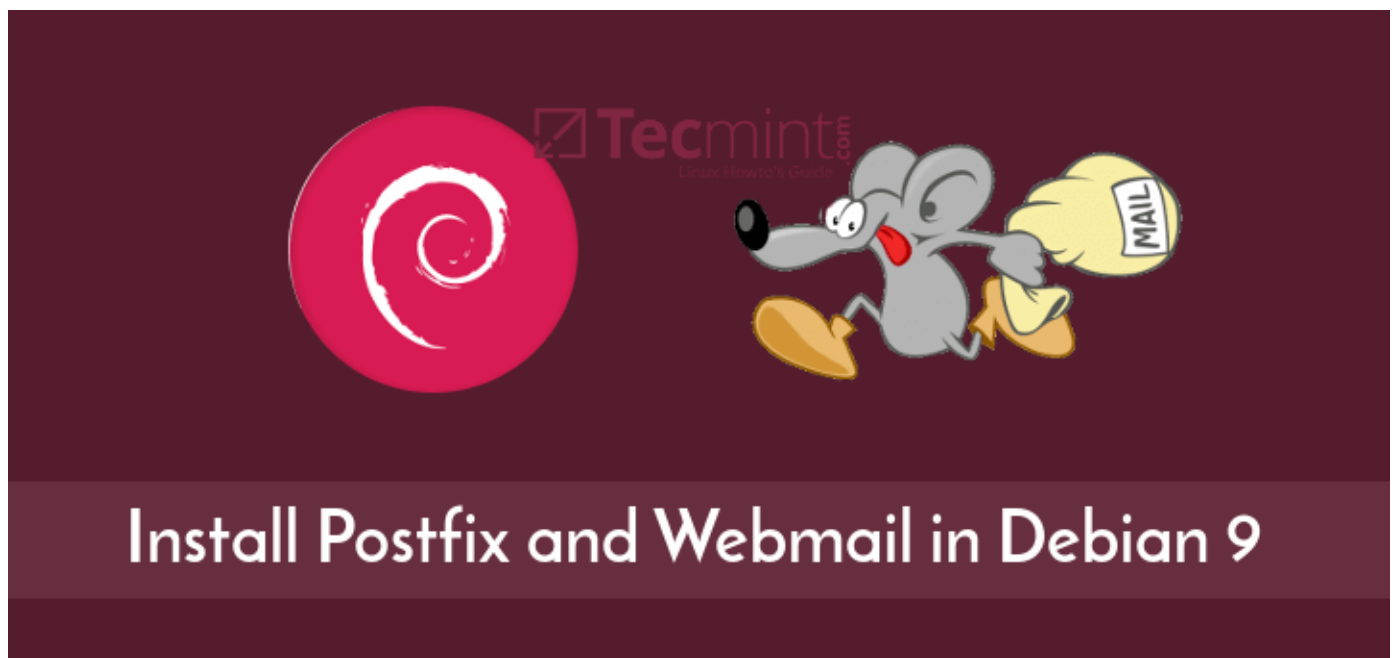
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Dhanu

[May 11, 2023 at 1:13 pm](#)

Hi,

Thanks for article, but I am getting below error.

504 Gateway Time-out

[Reply](#)

Hoang Quynh

[May 13, 2021 at 11:31 am](#)

Dear Admin

Reference Step 5. Unable to access `http://mail.example.com/installer`. I configured **nginx.conf** to use `/var/www/html/` but i am getting **403** forbidden.

What do I do next?

Thanks



[Reply](#)

Admin



Ravi Saive

[May 14, 2021 at 9:05 am](#)

@Hoang,

Seems issue with your Nginx server block file – **mail.example.com.conf**. Please check the nginx server logs to troubleshoot the error...

[Reply](#)

[← Older Comments](#)

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