I begin this assignment by adding a new name to the web server. As you have done this several times before, I will hope that you know how.
joe@ns1-thegummibear:~$ dig @localhost nutty.thegummibear.com | grep nutty
; <<< DiG 9.10.3-P4-Ubuntu <<< @localhost nutty.thegummibear.com
; nutty.thegummibear.com. IN A
joe@ns1-thegummibear:~$ echo "nutty is the new name that I have given to refer to www. Note that I haven't removed any configuration, only added a CNAME"
nutty is the new name that I have given to refer to www. Note that I haven't removed any configuration, only added a CNAME
joe@ns1-thegummibear:~$
I also did work to add a new user to my MAIL machine
joe@mail-thegumibear:~$ cat /etc/passwd | grep chancho
chancho:x:1006:1006:,,,:/home/chancho:/bin/bash
joe@mail-thegumibear:~$
joe@www-thegummibear:~$ echo "I also added a new virtual host file to apache"
I also added a new virtual host file to apache
joe@www-thegummibear:~$
This is a placeholder page which will be replaced by my webmail client soon.
echo "We will NOT be installing anything using apt-get this time. We will install from source"
Install roundcube, the webmail client

Download the file using wget
## Stable version

<table>
<thead>
<tr>
<th>PACKAGE</th>
<th>SIZE</th>
<th>SHA-256 CHECKSUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.2 - Dependent (*)</td>
<td>3.4 MB</td>
<td>6c647ed28ea0ae1b730a1784018b63884e65ed6036208e9c3a6ee62123fe856d</td>
</tr>
<tr>
<td>1.2.2 - Complete</td>
<td>3.7 MB</td>
<td>b919e797b8bf5ed34748d067dc281f4f529ad71dbdad8904bdc0e2258912666ef</td>
</tr>
<tr>
<td>Framework: 1.2.2</td>
<td>1.2 MB</td>
<td>825aad508ac3e89f7c498814ec89b2e19a0dc8a10edc28b39964d00681139bee</td>
</tr>
<tr>
<td>LTS Version: 1.1.6 (**)</td>
<td>3.1 MB</td>
<td>84483513a53edfb64acde16dfe52cd756c6b8bdc2c09c80a7bda2839795a12</td>
</tr>
<tr>
<td>LTS Version: 1.0.9 (**)</td>
<td>3.9 MB</td>
<td>e4825234146230a585326b2d6e573df1d586495f3566a5e85c2c59fd837569e2</td>
</tr>
</tbody>
</table>

* Dependent packages only contain sources which are licensed under the GPL, but they require some third-party packages to be installed along with Roundcube. All requirements are listed in the INSTALL instructions within the package file.

** Long Term Support with low maintenance mode. This means only security updates and rare fixes of serious issues will go into these release branches.

### Other sources and downloads

- Roundcube can also be installed through auto installers like [softaculous.com](https://softaculous.com) or cPanel.
- The [BitNami Roundcube Stack](https://bitnami.com) provides a one-click installer for various platforms and cloud services.
- Via the [Cloudron](https://cloudron.io) app store. Each Cloudron is a fully equipped mail server and has sieve integration.
- [Roundcube for OS X Server installer](https://topicdesk.com) by topicdesk.com.
- Various Unix/Linux distributions provide Roundcube via their package managers. Check your local package repository.
root@www-thegummibear:~# echo "I downloaded the 1.2.2 complete"
I downloaded the 1.2.2 complete
root@www-thegummibear:~#
root@www-thegummibear:~# echo "Extract it"
Extract it
root@www-thegummibear:~#
root@www-thegummibear:~# ls
roundcubemail-1.2.2  roundcubemail-1.2.2-complete.tar.gz
root@www-thegummibear:~#
root@www-thegummibear:~# ls
roundcubemail-1.2.2  roundcubemail-1.2.2-complete.tar.gz
root@www-thegummibear:~# less roundcubemail-1.2.2/INSTALL
INSTALLATION

1. Decompress and put this folder somewhere inside your document root
2. Make sure that the following directories (and the files within)
   are writable by the webserver
   - /temp
   - /logs
3. Create a new database and a database user for Roundcube (see DATABASE SETUP)
4. Point your browser to http://url-to-roundcube/installer/
5. Follow the instructions of the install script (or see MANUAL CONFIGURATION)
6. After creating and testing the configuration, remove the installer directory
7. Check Known Issues section of this file

CONFIGURATION HINTS

IMPORTANT! Read all comments in defaults.inc.php, understand them
and configure your installation to be not surprised by default behaviour.
Moved to my document root
root@www-thegummibear:/var/www/html/nutty.thegummibear.com# ls
index.html  roundcubemail-1.2.2
root@www-thegummibear:/var/www/html/nutty.thegummibear.com#
root@www-thegummibear:~# echo "Already created a database on db server and a user with permissions to connect from this server"
Already created a database on db server and a user with permissions to connect from this server
root@www-thegummibear:~#
1. Decompress and put this folder somewhere inside your document root
2. Make sure that the following directories (and the files within)
   are writable by the webserver
   - /temp
   - /logs
3. Create a new database and a database user for Roundcube (see DATABASE SETUP)
4. Point your browser to http://url-to-roundcube/installer/
5. Follow the instructions of the install script (or see MANUAL CONFIGURATION)
6. After creating and testing the configuration, remove the installer directory
7. Check Known Issues section of this file

CONFIGURATION HINTS

IMPORTANT! Read all comments in defaults.inc.php, understand them
and configure your installation to be not surprised by default behaviour.

Roundcube writes internal errors to the 'errors' log file located in the logs
directory which can be configured in config/config.inc.php. If you want ordinary
PHP errors to be logged there as well, enable the 'php_value error_log' line
:
Roundcube Webmail Installer

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

Checking PHP version

Version: **OK** (PHP 7.0.8–0ubuntu0.16.04.3 detected)
Checking PHP extensions

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

- PCRE: **OK**
- Session: **OK**
- XML: **NOT OK**
- JSON: **OK**
- PDO: **OK**
- OpenSSL: **OK**

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

- FileInfo: **OK**
- Libiconv: **OK**
- Exif: **OK**
echo "looks like we are missing a few things, let's see if we can fix them"
looks like we are missing a few things, let's see if we can fix them
Certain Linux distributions do not have this extension included in the minimum PHP package. It can usually be found in one of the "optional" php-* packages.

For CentOS, you will need to run "yum install php-xml", which provides this extension.

On Fedora 16, you can use
yum -y install php-xml
and then be sure to add
extension=dom.so
I am just following the suggested readings. I have never installed this before.
root@www-thegummibear:~# echo "See if ubuntu has this same package"
See if ubuntu has this same package
root@www-thegummibear:~#
root@www-thegummibear:~# apt-cache search php-xml
php-pear - PEAR Base System
php-xmlrpc - XMLRPC-EPI module for PHP [default]
php7.0-xml - DOM, SimpleXML, WDDX, XML, and XSL module for PHP
php7.0-xmlrpc - XMLRPC-EPI module for PHP
php-xml - DOM, SimpleXML, WDDX, XML, and XSL module for PHP [default]
php-xml-htlsax3 - SAX parser for HTML and other badly formed XML documents
php-xml-parser - XML parsing class based on PHP's bundled expat
php-xml-rpc2 - PHP XML-RPC client/server library
php-xml-serializer - swiss-army knife for reading and writing XML files
php-xml-svg - XML_SVG API
root@www-thegummibear:~#
root@www-thegummibear:~# sudo apt-get install php7.0-xml
After installing that dom module, I had to restart apache and php, then reload the page.
Checking PHP extensions

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

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

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

- FileInfo: **OK**
- Libiconv: **OK**
- Exif: **OK**
root@www-thegummibear:~# echo "Do the same for any missing modules"
Do the same for any missing modules
root@www-thegummibear:~#
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
- Exif: OK
echo "I don't care about the optional modules, and the next button allows me to continue at the bottom of the page, so I continue"
The next page, you should be able to figure out the configuration options.

Your db is remote, put the required settings there.

Put the required settings to connect to imap and smtp.
Copy the config file where indicated
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/nutty.thegummibear.com/roundcubemail-1.2.2/temp/: **OK**
/var/www/html/nutty.thegummibear.com/roundcubemail-1.2.2/logs/: **OK**

Check DB config
/var/www/html/nutty.thegummibear.com/roundcubemail-1.2.2/temp/: OK
/var/www/html/nutty.thegummibear.com/roundcubemail-1.2.2/logs/: OK

Check DB config

DSN (write): OK
DB Schema: NOT OK (Database not initialized)

Initialize database

Test filetype detection

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

Test SMTP config

Server: mail.thegummibear.com
Port: 587
echo "Might as well initialize it!"
Might as well initialize it!
mysql> show tables

+-----------------------------+
| Tables_in_roundcube         |
| cache                       |
| cache_index                 |
| cache_messages              |
| cache_shared                |
| cache_thread                |
| contactgroupmembers         |
| contactgroups               |
| contacts                    |
| dictionary                  |
| identities                  |
| searches                    |
| session                     |
| system                      |
| users                       |
+-----------------------------+

14 rows in set (0.00 sec)

mysql>
echo "Might as well initialize it!"
Might as well initialize it!

echo "The initializer created all those!"
The initializer created all those!
I had to now manually edit the config file to specify some good options

```
root@www-thegummibear:~# echo "I had to now manually edit the config file to specify some good options"
```

I had to now manually edit the config file to specify some good options
// %n - hostname ($_SERVER['SERVER_NAME'])
// %t - hostname without the first part
// %d - domain (http hostname $_SERVER['HTTP_HOST'] without the first part)
// %s - domain name after the '@' from e-mail address provided at login screen
// For example %n = mail.domain.tld, %t = domain.tld
// WARNING: After hostname change update of mail_host column in users table is
// required to match old user data records with the new host.

$config['default_host'] = 'ssl://mail.thegummibear.com';

$config['imap_conn_options'] = array(
    'ssl' => array(
        'verify_peer' => false,
        'verify_peer_name' => false,
    ),
);

// TCP port used for IMAP connections
//$config['default_port'] = 993;
$config['default_port'] = 143;

// ------------------------------------------
// SMTP
// ------------------------------------------
// SMTP server host (for sending mails).
Test it by sending and receiving some emails
root@www-thegummibear:~# echo "In your roundcube install directory, there is also a logs directory which could prove informative"
In your roundcube install directory, there is also a logs directory which could prove informative
root@www-thegummibear:~#