EXPERIMENT NO.: 04

Title: Installation and configuration of own Cloud

Solution:

Own Cloud is a suite of client–server software for creating and using file hosting services. Own Cloud functionally has similarities to the widely used Dropbox. The primary functional difference between own Cloud and Dropbox is that own Cloud is primarily server software. (The company's own Cloud. Online is a hosted service.) The Server Edition of own Cloud is free and open-source, thereby allowing anyone to install and operate it without charge on their own private server.

ownCloud supports extensions that allow it to work like Google Drive, with online office suite document editing, calendar and contact synchronization, and more. Its openness avoids enforced quotas on storage space or the number of connected clients, instead of having hard limits (for example on storage space or number of users) limits are determined by the physical capabilities of the server.

ownCloud Features

Main features of ownCloud are:

- Open API, open source
- Clients for PC, Mac, Linux
- Native Apps for iOS, Android
- Password protected public links
- Notifications
- Collaboration
- Online document editing
- Comments, tagging
- Calendars and contacts
- External storage handling
- Activity feed & notifications
- Versioning and undelete
- Galleries
- Music and video playback
- Password storage
- Anti-virus scanning
- Integrated logging
- Quota management
- ownBrander

own Cloud Benefit:

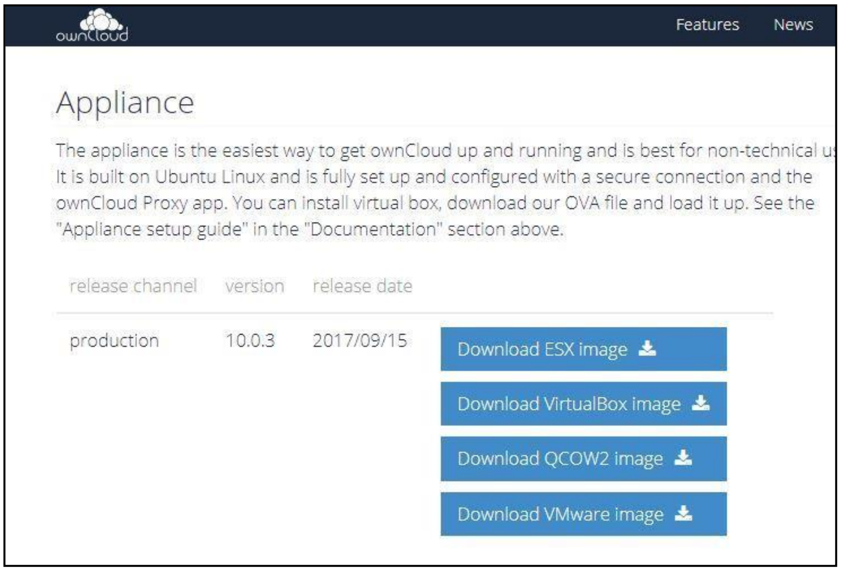
The main benefits of ownCloud are seamless file sharing and syncing, secure data viewing, and multiple device file access. Clients can effortlessly get to their information anytime and anywhere by utilizing the local Android and iOS applications, which can transfer pictures after they are taken automatically.

How To Install OwnCloud server on VirtualBox Virtual Machine

For the ownCloud Installation follows following Step:

Step 1:

Go to Owncloud.org websites download page.



Appliance

The appliance is the easiest way to get ownCloud up and running and is best for non-technical u
It is built on Ubuntu Linux and is fully set up and configured with a secure connection and the ownCloud Proxy app. You can install virtual box, download our OVA file and load it up. See the "Appliance setup guide" in the "Documentation" section above.

release channel	version	release date
production	10.0.3	2017/09/15

Step 2:

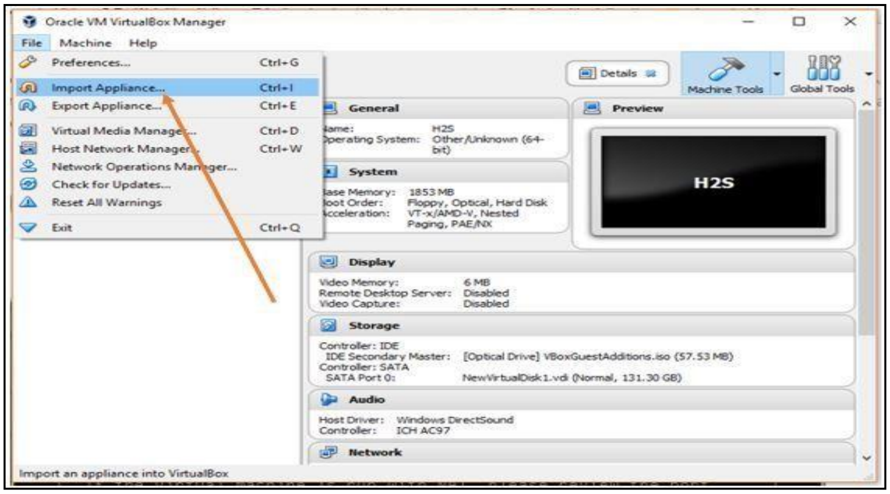
Download the OwnCloud Virtual appliance image according to your Virtual Machine software. Like here, in this tutorial we are using the Virtualbox, so we download the Virtualbox image.

Step 3:

After downloading the image(iso file), go to file menu on VirtualBox.

Step 4:

Click on the Import Appliance option.



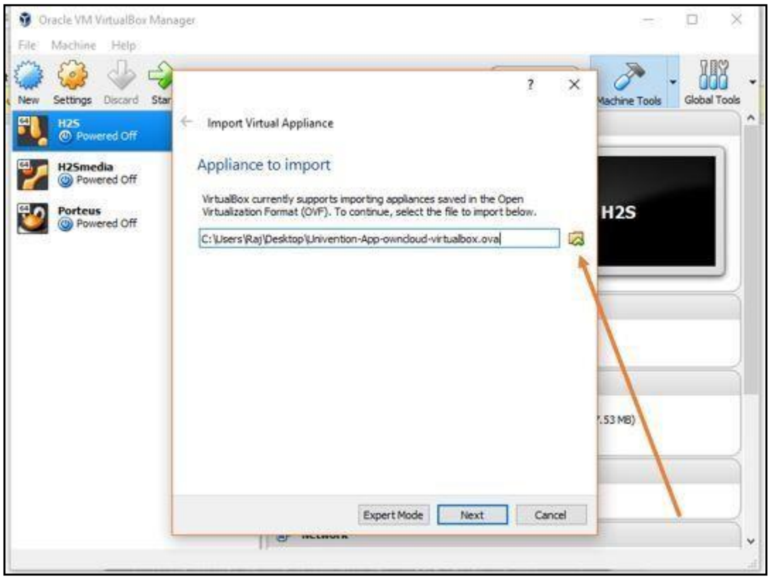
Oracle VM VirtualBox Manager
File Machine Help
Preferences... Ctrl+G
Import Appliance... Ctrl+I
Export Appliance... Ctrl+E
Virtual Media Manager... Ctrl+D
Host Network Manager... Ctrl+W
Network Operations Manager...
Check for Updates...
Reset All Warnings
Exit Ctrl+Q
Details
Machine Tools
Global Tools
General
Preview
H2S
System
Display
Storage
Audio
Network

Name: H2S
Operating System: Other/Unknown (64-bit)
Base Memory: 1853 MB
Boot Order: Floppy, Optical, Hard Disk
Acceleration: VT-x/AMD-V, Nested Paging, PAE/NX
Video Memory: 6 MB
Remote Desktop Server: Disabled
Video Capture: Disabled
Controller: IDE
IDE Secondary Master: [Optical Drive] VBoxGuestAdditions.iso (57.53 MB)
Controller: SATA
SATA Port 0: NewVirtualDisk1.vdi (Normal, 131.30 GB)
Host Driver: Windows DirectSound
Controller: ICH AC97

Import an appliance into VirtualBox

Step 5:

Now click on the file browser button and select the downloaded Virtualbox OVA image. Click on the Next button.



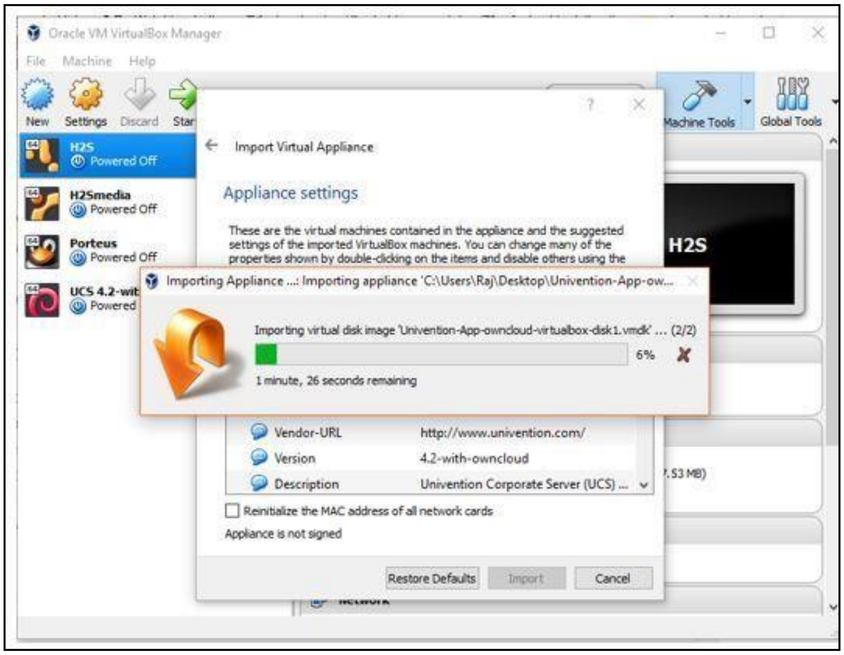
Appliance to import

VirtualBox currently supports importing appliances saved in the Open Virtualization Format (OVF). To continue, select the file to import below.

C:\Users\Raj\Desktop\Univention-App-owncloud-virtualbox.ova

Step 6:

After importing, if you want to change any appliance settings such network and storage. Then click on the Import button.



Import Virtual Appliance

Appliance settings

These are the virtual machines contained in the appliance and the suggested settings of the imported VirtualBox machines. You can change many of the properties shown by double-clicking on the items and disable others using the

Importing Appliance ...: Importing appliance 'C:\Users\Raj\Desktop\Univention-App-ow...

Importing virtual disk image 'Univention-App-owncloud-virtualbox-disk1.vmdk' ... (2/2)

6%

1 minute, 26 seconds remaining

Vendor-URL	http://www.univention.com/
Version	4.2-with-owncloud
Description	Univention Corporate Server (UCS) ...

□ Reinitialize the MAC address of all network cards

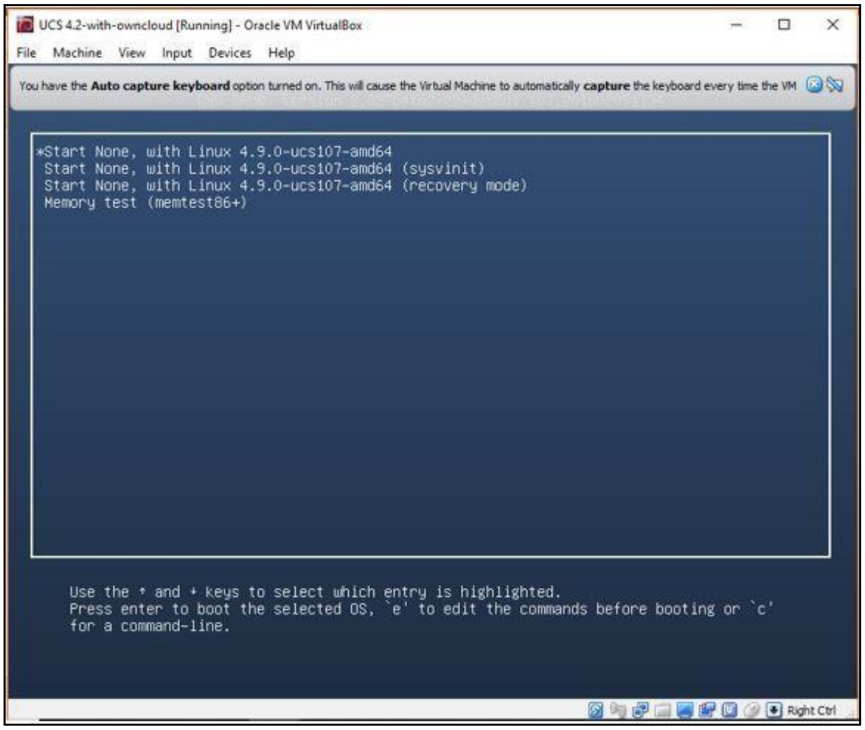
Appliance is not signed

Step 7:

Once the importing is complete, the Owncloud virtual will be shown on the left side panel in the powered off mode. To start it just double click on it.

Step 8:

After starting the Owncloud Virtual machine you get three options, leave the default option and just hit the enter button.


UCS 4.2-with-owncloud [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Right Ctrl

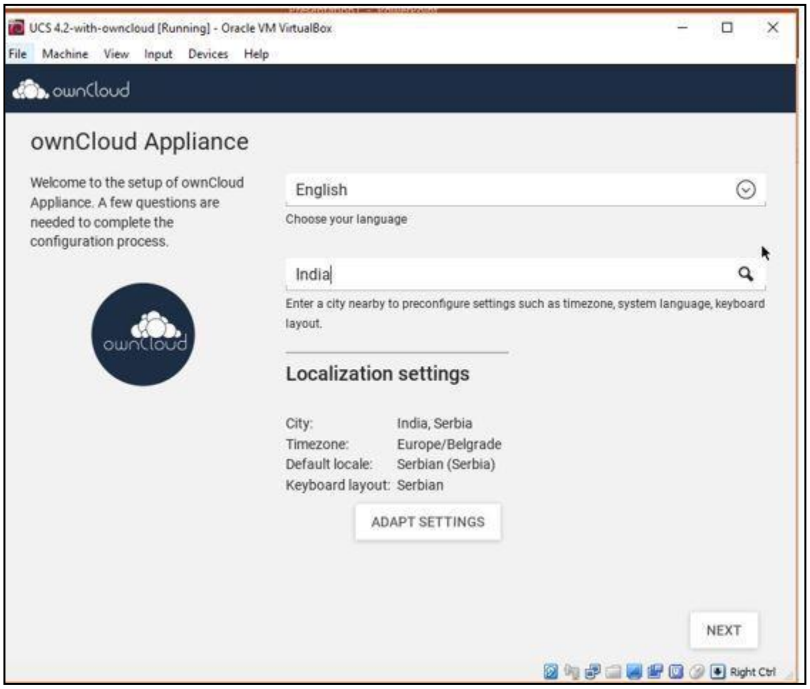
You have the **Auto capture keyboard** option turned on. This will cause the Virtual Machine to automatically **capture** the keyboard every time the VM

```
*Start None, with Linux 4.9.0-ucs107-amd64
 Start None, with Linux 4.9.0-ucs107-amd64 (sysvinit)
 Start None, with Linux 4.9.0-ucs107-amd64 (recovery mode)
 Memory test (memtest86+)

    Use the ↑ and ↓ keys to select which entry is highlighted.
    Press enter to boot the selected OS, `e' to edit the commands before booting or `c'
    for a command-line.
```

Step 9:

Finally, you will see the OwnCloud configuration screen. Choose your language and country after that click on the ADAPT settings to set the keyboard preference and other location settings.


UCS 4.2-with-owncloud [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
ownCloud
ownCloud
ADAPT SETTINGS
NEXT
Right Ctrl

ownCloud Appliance

Welcome to the setup of ownCloud Appliance. A few questions are needed to complete the configuration process.

English

Choose your language

India

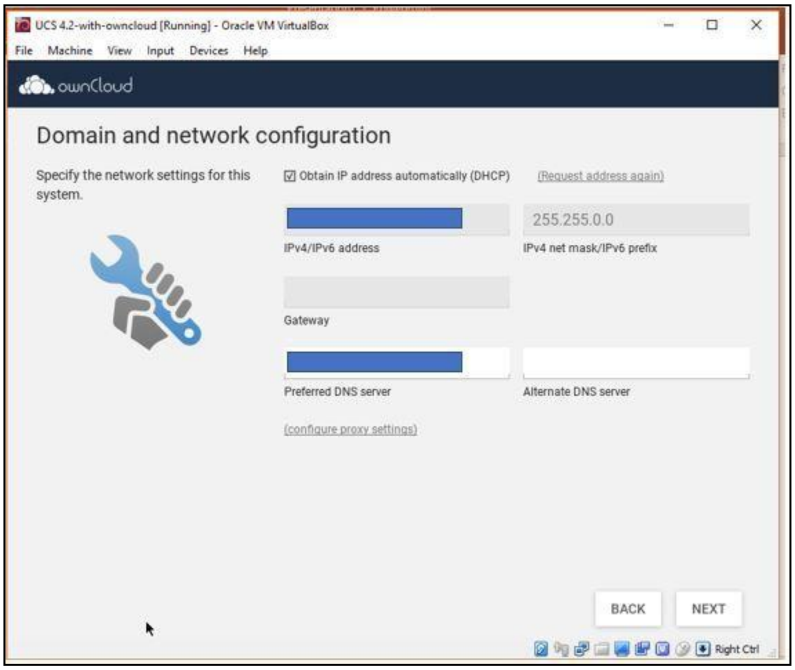
Enter a city nearby to preconfigure settings such as timezone, system language, keyboard layout.

Localization settings

City:	India, Serbia
Timezone:	Europe/Belgrade
Default locale:	Serbian (Serbia)
Keyboard layout:	Serbian

Step 10:

In this step configure the IP address to access the Owncloud locally. If you have router or DHCP, the machine will automatically assign the IP address. In case it not or you do not have the DHCP setup then uncheck the box given in the front of "Obtain the IP address automatically (DHCP)" and add the IP address manually.



UCS 4.2-with-owncloud [Running] - Oracle VM VirtualBox

Domain and network configuration

Specify the network settings for this system.

☑ Obtain IP address automatically (DHCP) (Request address again)

IPv4/IPv6 address: [redacted]

IPv4 net mask/IPv6 prefix: 255.255.0.0

Gateway:

Preferred DNS server: [redacted]

Alternate DNS server:

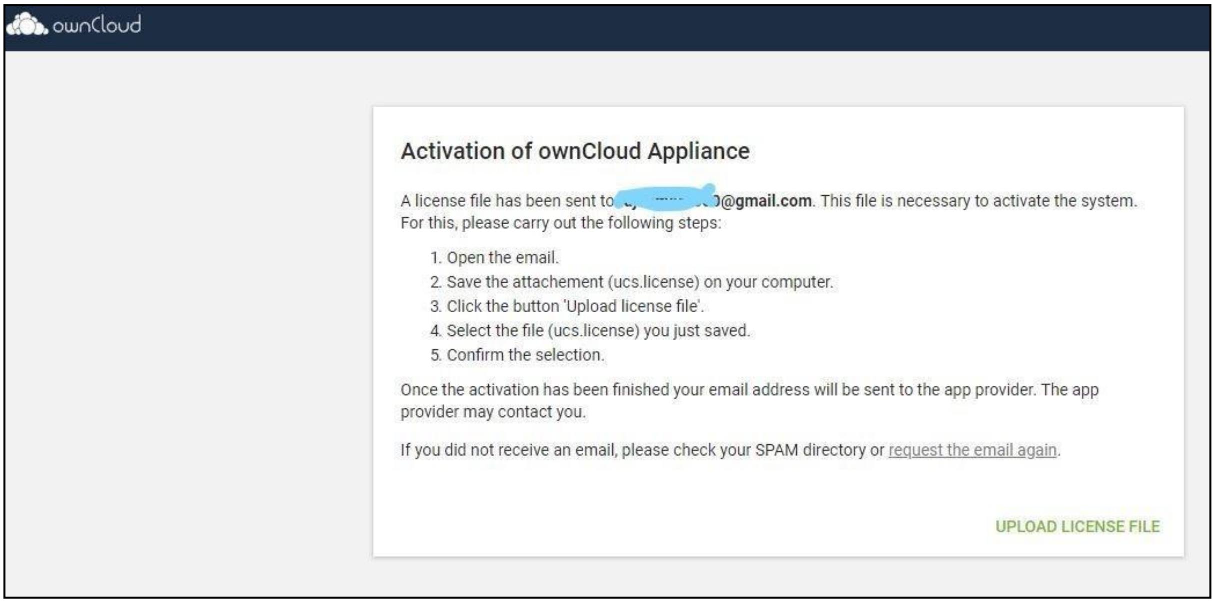
(configure proxy settings)

Step 11:

After setting up the Owncloud virtual machine, it will restart automatically and show you the IP address which you can use to access the OwnCloud locally on any system using the browser.

Step 12:

So, go to your browser and type that given IP address. The OwnCloud will open and ask you for the email address to send you the license to activate the Univention software that powered the Owncloud virtual machine. Once you get the license file just upload it and this software will get activated.



Activation of ownCloud Appliance

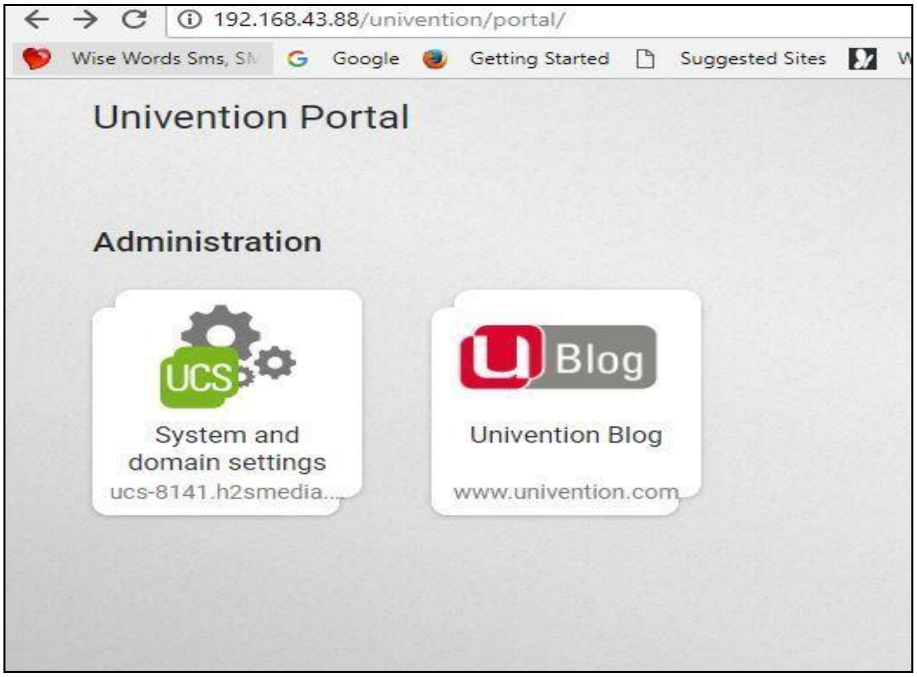
A license file has been sent to [redacted]@gmail.com. This file is necessary to activate the system. For this, please carry out the following steps:

1. Open the email.
2. Save the attachement (ucs.license) on your computer.
3. Click the button 'Upload license file'.
4. Select the file (ucs.license) you just saved.
5. Confirm the selection.

Once the activation has been finished your email address will be sent to the app provider. The app provider may contact you.

If you did not receive an email, please check your SPAM directory or request the email again.

Step 13:
After uploading, you will get a portal screen from where you need to select the administrative account that you have created while installing the OwnCloud. The username willbe **Administrator** but the password you have to enter is that you have been created for root account while installing the OwnCloud.



Univention Portal

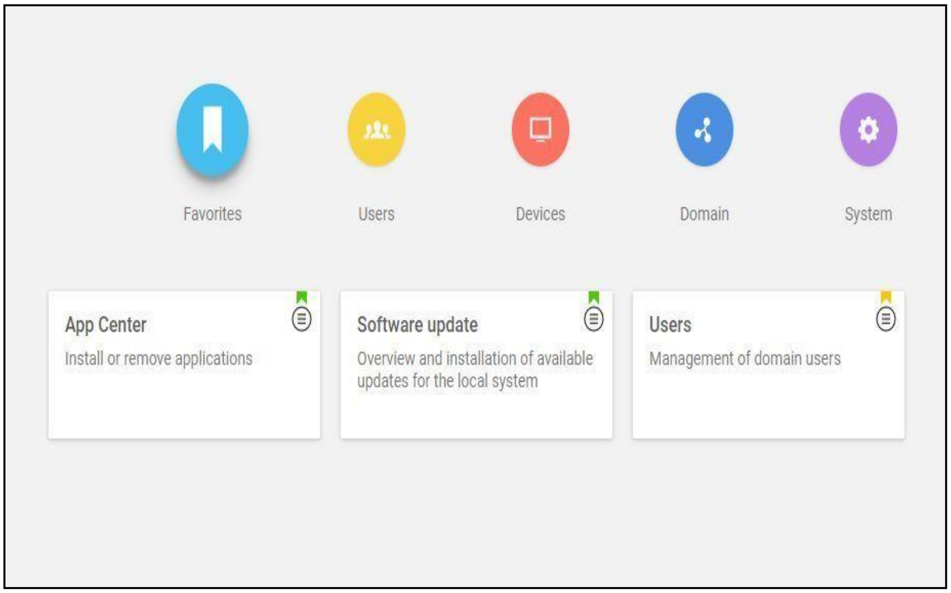
Administration

System and domain settings
ucs-8141.h2smedia....

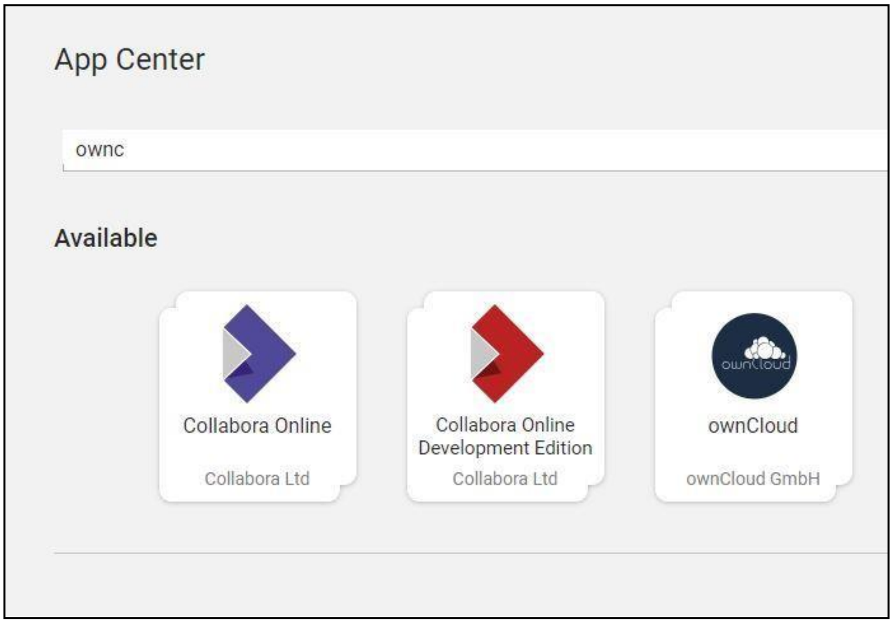
Univention Blog
www.univention.com

Step 14:

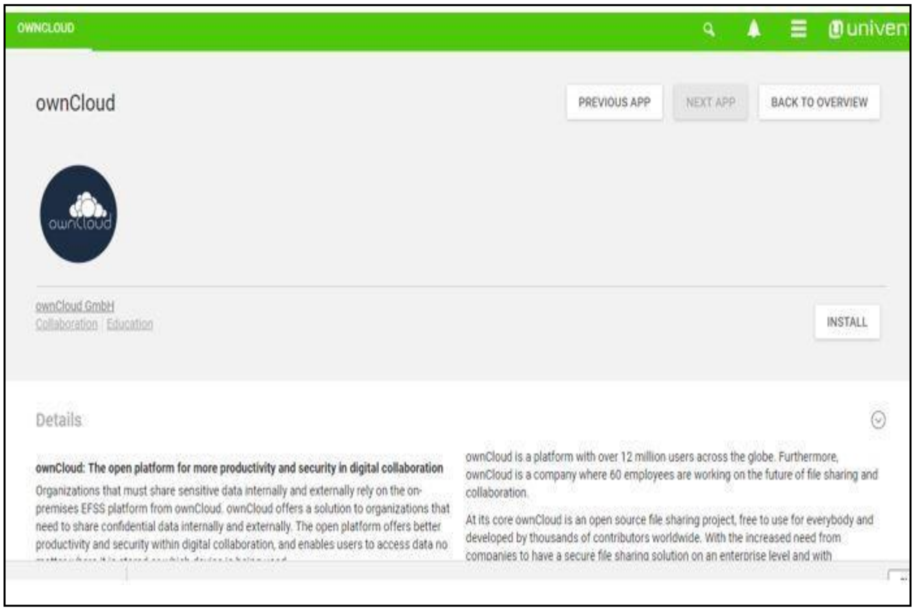
Once you get login then select the option APP Center.


Favorites
Users
Devices
Domain
System
App Center
Install or remove applications
Software update
Overview and installation of available updates for the local system
Users
Management of domain users

Step 15:
Now search for the OwnCloud and click on it, when appears.



Step 16:
After Clicking the OwnCloud app, it will open. Now, click on the **INSTALL** button to install the OwnCloud successfully.



ownCloud: The open platform for more productivity and security in digital collaboration

Organizations that must share sensitive data internally and externally rely on the on-premises EFSS platform from ownCloud. ownCloud offers a solution to organizations that need to share confidential data internally and externally. The open platform offers better productivity and security within digital collaboration, and enables users to access data no matter where it is stored or which device is being used.

ownCloud is a platform with over 12 million users across the globe. Furthermore, ownCloud is a company where 60 employees are working on the future of file sharing and collaboration.

At its core ownCloud is an open source file sharing project, free to use for everybody and developed by thousands of contributors worldwide. With the increased need from companies to have a secure file sharing solution on an enterprise level and with

OR

Another Ways install and configure the ownCloud.

Step 1:

The ownCloud server package does not exist within the default repositories for Ubuntu. However, ownCloud maintains a dedicated repository for the distribution that we can add to our server.

To begin, download their release key using the curl command and import it with the apt-key utility with the add command:

```
curl
https://download.owncloud.org/download/repositories/10.0/Ubuntu_18.04/Release.key |
sudo apt-key add -
```

Step 2:

The ‘Release.key’ file contains a PGP (Pretty Good Privacy) public key which apt will use to verify that the ownCloud package is authentic.

In addition to importing the key, create a file called owncloud.list in the sources.list.d directory for apt. The file will contain the address to the ownCloud repository.

```
echo 'deb http://download.owncloud.org/download/repositories/10.0/Ubuntu_18.04/ /' |
sudo tee /etc/apt/sources.list.d/owncloud.list
```

Step 3:

Now, we can use the package manager to find and install ownCloud. Along with the main package, we will also install a few additional PHP libraries that ownCloud uses to add extra functionality. Update your local package index and install everything by typing:

```
sudo apt update
sudo apt install php-bz2 php-curl php-gd php-imagick php-intl php-mbstring php-xml php-zip owncloud-files
```

Step 4:

Adjusting the Document Root

The ownCloud package we installed copies the web files to /var/www/owncloud on the server. Currently, the Apache virtual host configuration is set up to serve files out of a different directory. We need to change the DocumentRoot setting in our configuration to pointto the new directory.

You find which virtual host files reference your domain name or IP address using the apache2ctl utility with the DUMP_VHOSTS option. Filter the output by your server's domain name or IP address to find which files you need to edit in the next few commands:

```
sudo apache2ctl -t -D DUMP_VHOSTS | grep server_domain_or_IP
```

The output will probably look something like this:

```
Output
*:443                server_domain_or_IP (/etc/apache2/sites-enabled/server_domain_or_IP-le-
ssl.conf:2)
       port       80       namevhost       server_domain_or_IP       (/etc/apache2/sites-
enabled/server_domain_or_IP
```

Step 5:

In the parentheses, you can see each of the files that reference the domain name or IP address we'll use to access ownCloud. These are the files you'll need to edit.

For each match, open the file in a text editor with sudo privileges:

$sudo nano /etc/apache2/sites-enabled/server_domain_or_IP.conf

Inside, search for the DocumentRoot directive. Change the line so that it points to the /var/www/owncloud directory:

```
<VirtualHost *:80>
   . . .
   DocumentRoot /var/www/owncloud
   . . .
</VirtualHost>
```

Step 6:

Save and close the file when you are finished. Complete this process for each of the files that referenced your domain name (or IP address if you did not configure a domain for your server).

When you are finished, check the syntax of your Apache files to make sure there were no detectable typos in your configuration:

$sudo apache2ctl configtest

```
Output
Syntax OK
```

Depending on your configuration, you may see a warning about setting ServerName globally. As long as the output ends with Syntax OK, you can ignore that warning. If you see additional errors, go back and check the files you just edited for mistakes.

If your syntax check passed, reload the Apache service to activate the new changes:

sudo systemctl reload apache2

Step 7:
Configuring the MySQL Database
Before we move on to the web configuration, we need to set up the database. During the web-based configuration process, we will need to provide an database name, a database username, and a database password so that ownCloud can connect and manage its information within

MySQL.

Begin by logging into your database with the MySQL administrative account:

sudo mysql

Step 8:
If you set up password authentication for MySQL root account, you may have to use this syntax instead:

mysql -u root -p

Step 9:

Create a dedicated database for ownCloud to use. We will name the database owncloud for clarity:

Mysql> CREATE DATABASE owncloud;

Step 10:

create a separate MySQL user account to manage the newly created database. Creating one-function databases and accounts is a good idea from a management and security standpoint. As with the naming of the database, choose a username that you prefer. We elected to go with the name owncloud in this guide.

GRANT ALL ON owncloud.* to 'owncloud'@'localhost' IDENTIFIED BY 'owncloud_database_password';

Step 11:
With the user assigned access to the database, perform the flush privileges operation to ensure that the running instance of MySQL knows about the recent privilege assignment:

Mysql> FLUSH PRIVILEGES;

You can now exit the MySQL session by typing:

Mysql> exit

With the ownCloud server installed and the database set up, we are ready to turn our attention to configuring the ownCloud application.

Step 12:

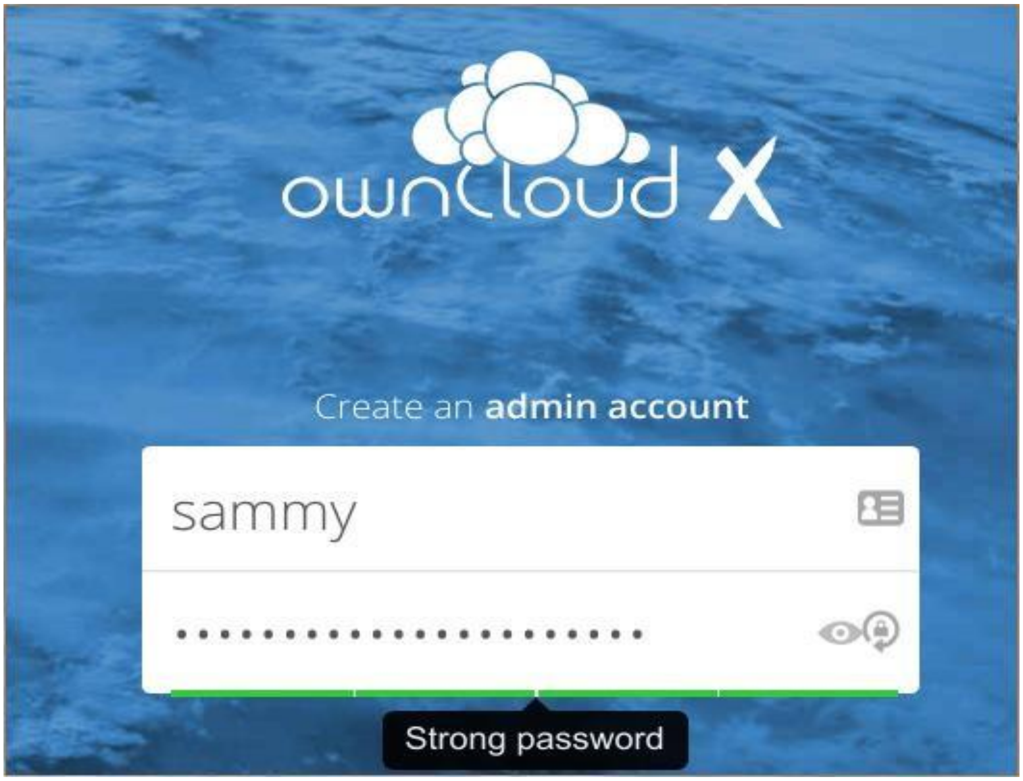
Configuring ownCloud

To access the ownCloud web interface, open a web browser and navigate to the following address:

https://server_domain_or_IP

Step 13:

Create an admin account by choosing a username and a password. For security purposes it is not recommended to use something like “admin” for the username:



ownCloud X

Create an **admin account**

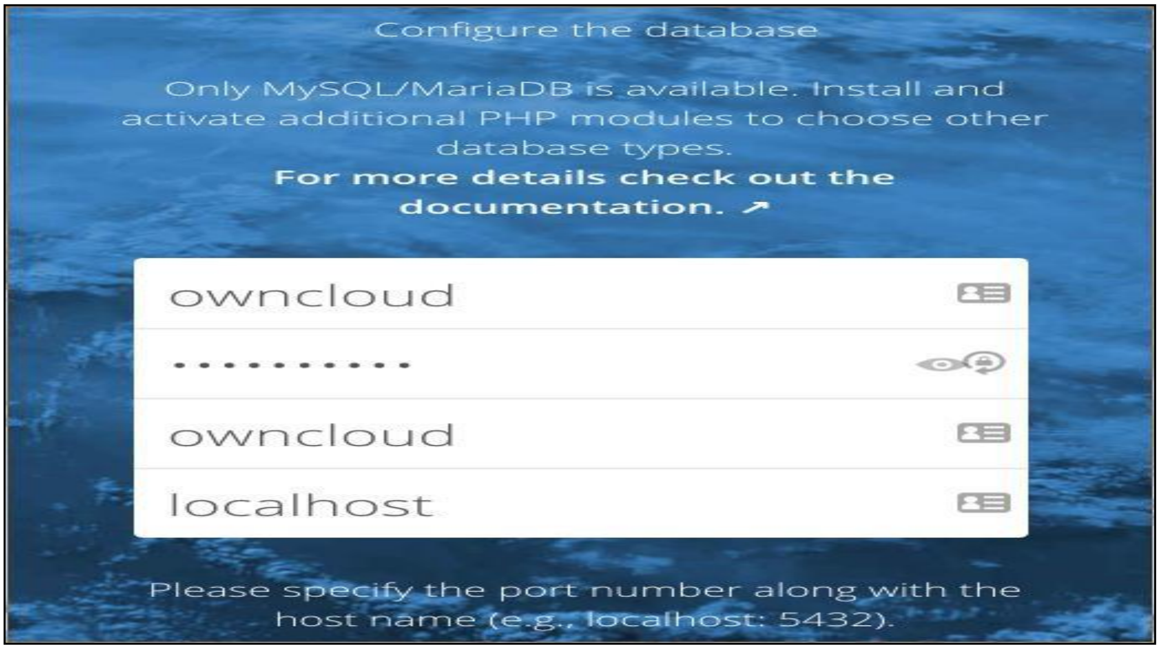
sammy

••••••••••••••••••••••

Step 14:

Next, leave the **Data folder** setting as-is and scroll down to the database configuration section.

Fill out the details of the database name, database username, and database password you created in the previous section. If you used the settings from this guide, both the database name and username will be owncloud. Leave the database host as localhost:



Configure the database

Only MySQL/MariaDB is available. Install and activate additional PHP modules to choose other database types.

For more details check out the documentation. ↗

owncloud

••••••••••

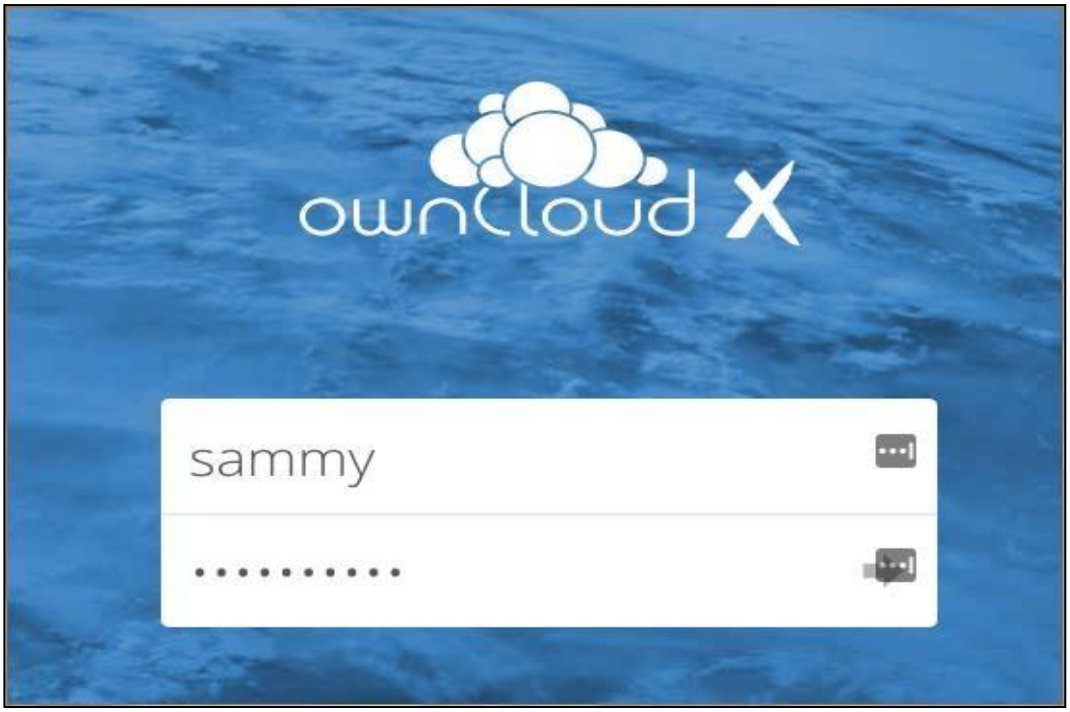
owncloud

localhost

Please specify the port number along with the host name (e.g., localhost: 5432).

Step 15:

Click the **Finish setup** button to finish configuring ownCloud using the information you've provided. You will be taken to a login screen where you can sign in using your new account:



Step 16:

On your first login, a screen will appear where you can download applications to sync your files on various devices. You can download and configure these now or do it at a later time. When you are finished, click the **x** in the top-right corner of the splash screen to access the main interface: