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**Class: L.Y. BTech Computer (L2)**

**Subject: Cloud Computing Lab**.

**Aim:** Write a Program to Create, Manage and group User accounts in your Own Cloud by Installing Administration features.

**Theory:**

**What is OwnCloud?**

OwnCloud is a file server that enables secure storage, collaboration and sharing.

It is convenient to store files in the cloud, so they are available on any device and can be shared with a few clicks. There are a lot of popular providers like Google, Apple, Facebook, Twitter and Dropbox. With a lot of these vendors, files are stored and processed beyond users control. With U.S. firms, files are subject to the Cloud Act and thus to government snooping.

ownCloud helps users regain their digital sovereignty. It provides lots of convenient features, too, but also stores files securely and efficiently. There are no backdoors, you can check, it’s open source. Users can install ownCloud themselves or rent a managed instance.

You want to use ownCloud to benefit from the upsides of the public clouds while being in control of your data.

**Various modes that are provided for users in ownCloud are as follows:**

## **Anonymous**

* Is not a regular user.
* Has access to specific content made available via public links.
  + Can be password-protected (optional, enforced, policy-enforced).
  + Can have an expiration date (optional, enforced, enforced dependent on password).
* Has no personal space
* Has no file ownership (ownership of uploaded/created files is directed to sharer).
* Has no use of clients?
* Quota is that of the sharer.
* Permissions are those granted by the sharer for specific content, e.g., *view only*, *edit*, and *File Drop*.
* Can only use file and viewer apps, such as PDF Viewer and Collabora Online.

## **Guest**

* The Guest’s app is available on the ownCloud Marketplace. You must install and enable it first.
* Is a regular user with restricted permissions, identified via e-mail address.
* Has no personal space.
* Has no file ownership (ownership of uploaded/created files is directed to sharer).
* Has access to shared space. The permissions are granted by the sharer.
* Is not bound to the inviting users.
* Can use all clients.
* Fully auditable in the enterprise edition.
* Can be promoted to group administrator or administrator, but will still have no personal space.
* Apps are specified by the admin (whitelist).

**Standard User**

* Is a regular user (from LDAP, ownCloud user backend, or another backend)
* Has personal space. Permissions are granted by the administrator.
* Shared space: Permissions as granted by sharer.
* Apps: All enabled, might be restricted by group membership.

## **Federated User**

* Is not an internal user.
* Can trust a federated system.
* Has access to shared space through users on the considered ownCloud system.
* Can share data with the considered system (accept-/rejectable).

## **ownCloud Group Administrator**

* Is a regular user, such as from LDAP, an ownCloud user backend, or another backend.
* Can manage users in their groups, such as adding and removing them, and changing quota of users in the group.
* Can add new users to their groups and can manage guests.
* Can enable and disable users.
* Can impersonate users in their groups.
* Custom group creation may be restricted to group admins.

# **ownCloud Administrator**

* Is a regular user (from LDAP, ownCloud user backend, or another backend).
* Can configure ownCloud features via the UI, such as sharing settings, app-specific configurations, and external storages for users.
* Can manage users, such as adding and removing, enabling and disabling, quota and group management.
* Can restrict app usage to groups, where applicable.
* Configurable access to log files.
* Mounting of external shares and local shares (of external filesystems) is disabled by default.

# **System Administrator**

* Is not an ownCloud user.
* Has access to ownCloud code (e.g., config.php and apps folders) and command-line tool (occ occ).
* Configures and maintains the ownCloud environment

(*PHP*, *Web Server*, *DB*, *Storage*, *Redis*, *Firewall*, *Cron*, and *LDAP*, etc.).

* Maintains ownCloud, such as updates, backups, and instals extensions.
* Can manage users and groups, such as via occ.
* Has access to the master key when storage encryption is used.
* Storage admin: Encryption at rest, which prevents the storage administrator from having access to data stored in ownCloud.
* DB admin: Calendar/Contacts etc. DB entries not encrypted.

# **Auditor**

* Is not an ownCloud user.
* Conducts usage and compliance audits in enterprise scenarios.
* App logs (especially Auditlog) can be separated from ownCloud log. This separates the Auditor and Sysadmin roles. An audit.log file can be enabled, which the Sysadmin can’t access.
* Best practice: parse separated log to an external analysing tool.

## **Code:**

**Create User:**

sudo -u www-data php occ user:add \

--display-name="Vedant Kulkarni" \

--group="users" \

--group="db-admins" \

[--email=](mailto:--email%3Der.saurabhwani1@gmail.com)kulvedant24@gmail.com vedant

**Output:**

Enter password:

Confirm password:

The user "vedant" was created successfully

Display name set to "Vedant Kulkarni"

Email address set to ["kulvedant24@gmail.com"](mailto:er.saurabhwani1@gmail.com)

User "vedant" added to group "users"

User "vedant" added to group "db-admins"

**Disable Users** sudo -u www-data php occ user:disable vedant

**Enable Users** sudo -u www-data php occ user:enable vedant

**Deleting A User** sudo -u www-data php occ user:delete vedant

**Conclusion:**

OwnCloud provides various user modes for:

-user management that proves important

-when handling tier systems in access

-authorization and helps in abstraction of

-data as well as control the CRUD.