

Downloading Folders from Cloud

Using Google Drive

1. First we created an app 'Google-Cloud-Integration' with necessary scopes on <https://console.cloud.google.com/> and enabled a google drive api.
2. For the google-drive api we created credentials OAuth client ID along with redirect uris and then downloaded a json file containing client-id and client-secret.
3. The file is renamed as 'client_secrets.json' and placed in the same directory where we created the cloud_integration.py.
4. Now the required libraries such as os, streamlit, pydrive2.auth, pydrive2.drive, and dropbox are imported.
5. The script directory is obtained using `os.path.dirname(os.path.realpath(__file__))`, and the path to the client secrets file is defined by joining the script directory with 'client_secrets.json'.
6. We defined an `authenticate()` function to authenticate with Google Drive using `GoogleAuth` from `PyDrive`. It sets the client configuration file to the `client_secrets_path` and authenticates using the local web server.
7. So after running the `cloud_integration.py`, the user will be requested to enter the url, desired name for the folder and then instructed to complete the authentication by logging-in.
8. If the user has access to the folder, it will be downloaded in the desired path otherwise it displays 'User is not authorized'.

Using Dropbox

1. First we created an app 'dropbox' and set the type of access to full dropbox in (<https://www.dropbox.com/developers/apps>).
2. We configured the app settings and headed to the "OAuth 2" section and generated an "OAuth 2 access token" and each and every token will have an expiry time of 30 minutes.

3. Now after running the `cloud_integration.py`, streamlit opens then if we opt for the dropbox cloud service, we will be requested to enter the generated access token in the "Enter your Dropbox access token" field on the Home page.
4. After the link is entered we will be requested to specify the folder which we want to download on the streamlit app.
5. If the user has access to the folder, it will be downloaded in the desired path otherwise it will not download.

Points to remember.

1. In addition to this we can select 'help' on streamlit to get an overview to get an instructive assistance to the user.
2. The user needs to register an app in <https://console.cloud.google.com/> and <https://www.dropbox.com/developers/apps> to use the services
3. The json file needs to be renamed and change the path as per the requirement for accessing the google drive service.
4. The access token has to be copied from the dropbox and make sure to use within 30 minutes/ generate a new token.