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SCIENCE+PROGRESS

● GitLab

In the Yellow Environment

The Data Facility now offers GitLab, which is a GUI for managing your git repositories. This guide will explain how to set up and use the basic functionality offered by GitLab.

Initial Setup

You must first be logged into the Yellow Environment (rdpserv.cusp.nyu.edu) to access GitLab. If you forget or are unsure how to access the Yellow Environment, please consult the Accessing the Workspace section of the Data Hub.

Once logged in to the Yellow Environment, double-click the GitLab icon and log in with your CUSP ID.

Create SSH Key

1. Check if you already have a key by opening a Terminal window and running the following command. Make sure you using a "**Remote Terminal on cmpt**" from rdpserv or the Yellow Windows Desktop environment.

```
cat ~/.ssh/id_rsa.pub
```

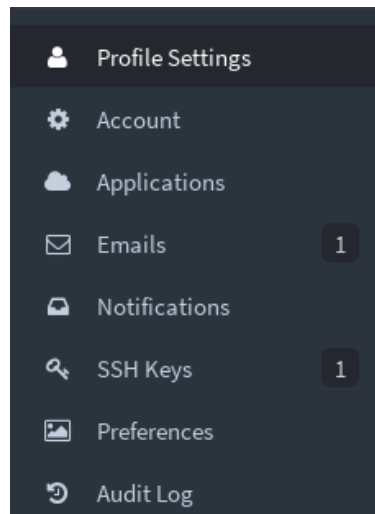2. If the file doesn't exist, create a key by running the command.

```
ssh-keygen -t rsa -C "your_email@nyu.edu"
```

3. Run the following command and copy the output.

```
cat ~/.ssh/id_rsa.pub
```

Add your SSH Key to GitLab

1. Return to GitLab. On the left side menu, click on **Profile Settings**, then click on **SSH Keys**. Then click on the green **Add SSH Key** button.

2. In the Key field, paste the output that you generated and copied from the steps in the previous section. Provide any Title you would like, such as "My key".

Using GitLab

Namespaces

The projects can have two namespaces: the owner name or a group name.

For example, if my username is "USER" and I want to create a project called "TEST" my project url is https://stgng/USER/TEST or USER/TEST.

But if I have a group called "MY_GROUP", I can create a project inside this group called "TEST". This way, my project url is https://stgng/MY_GROUP/TEST or MY_GROUP/TEST.

If you want to house several dependent projects under the same namespace, create a group.

Creating a Project

1. In GitLab, go to your Dashboard and click on **New project** on the right side of your screen.
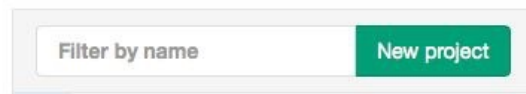

2. Fill in the required information. The first part of the project path is the namespace (individual or group) and the second is the project name. Click the **Create project** button when finished.

Creating a Group

Your projects in GitLab can be organized in 2 different ways: under your own namespace for single projects or under groups. If you organize your projects under a group, it works like a folder. You can manage your group members' permissions and access to the projects. To create a group, do the following.

1. From the Dashboard in GitLab, click on Groups, then the New Group button in the upper-right corner.
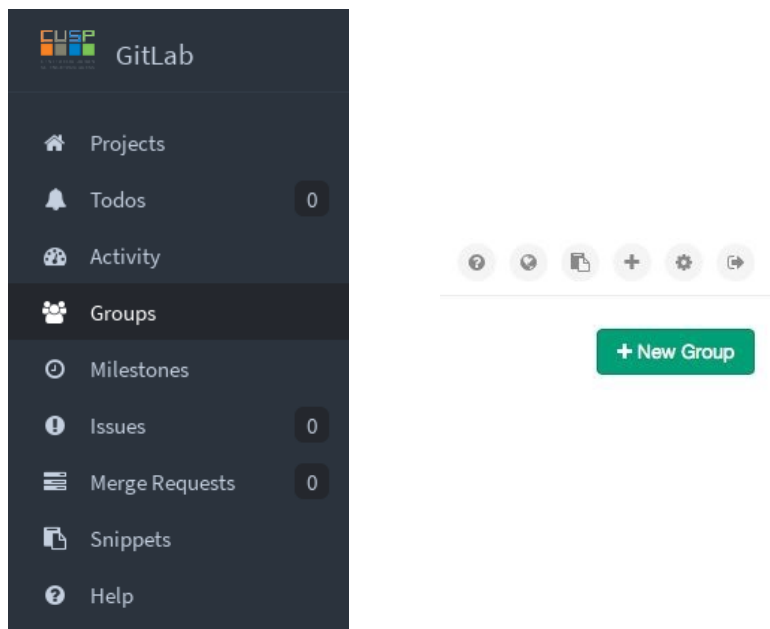
2. Here you can add a group path (or group name), a description of the group, and an avatar if you choose. Click **Create group** when finished.

Working on your project
Global setup
Before you begin working, it's helpful to set your name and email address in the Git configuration settings.

```
git config --global user.name "YOUR NAME"
git config --global user.email "YOUR_EMAIL@nyu.edu"
```

Clone your project
To work on a Git project you will need to clone it, which makes a local copy on the computer you are working from, which in this case is **cmpt**.

1. From your Dashboard in GitLab, select **Projects** and click on the project that you'd like to clone.

2. When you're in the project, click on the SSH text and copy the link.

3. Open a "**Remote Terminal on cmpt**" and enter the following command.

```
git clone <PASTE SSH HERE>
```

Committing and pushing
The following commands demonstrate how to move to your local repository, create a file, then add, commit, and push a change.

```
cd <REPOSITORY NAME>
echo "Hello World!" > README.md
git add README.md
git commit -m "add README"
git push -u origin master
```

Managing Project Members
You can manage the groups and users and their access levels on all of your projects. You can also personalize the access level you give each user on each project.

You should have master or owner permissions to add or import a new user to your project. The first step to add or import a user, go to your project and click on **Members** on the left side of your screen.
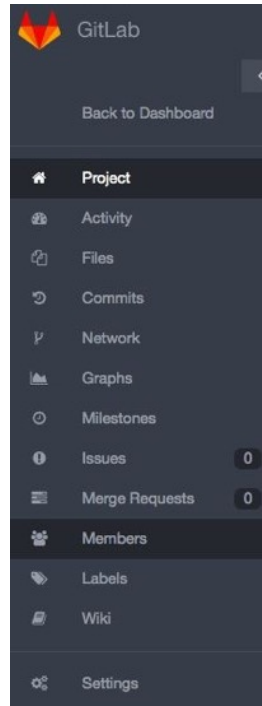

Add a user

1. Next to People, start typing the name or username of the user you want to add. If you can't find a user here, this user has likely never logged into GitLab before. Ask this user to log into GitLab before you try to add them as a member.
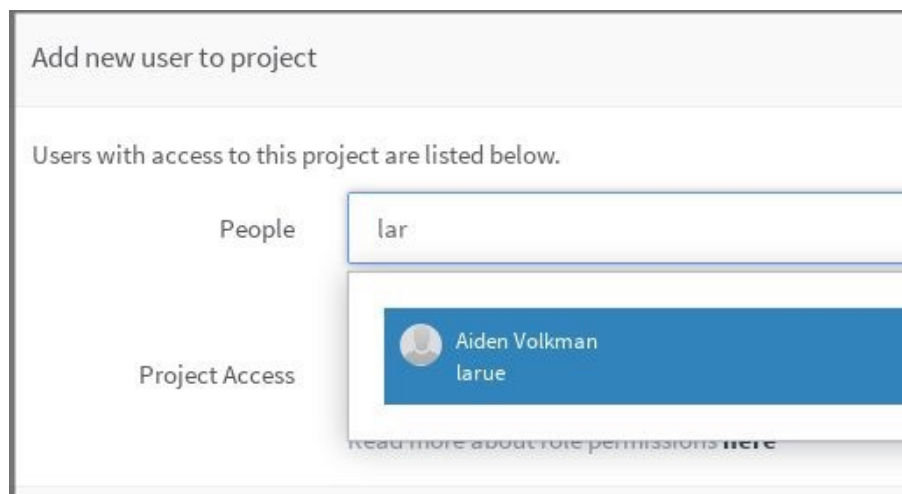
2. Select the user and the permission level that you'd like to give the user. Note that you can select more than one user.

There are 5 permission levels: Guest, Reporter, Developer, Master and Owner. Guest can only create comments and issues. Reporter has read permission (can pull from the remote repository). Developer has the write permission (can push into the repository). Master can manage the project and Owner can do everything. For more details, read this page on permission levels.
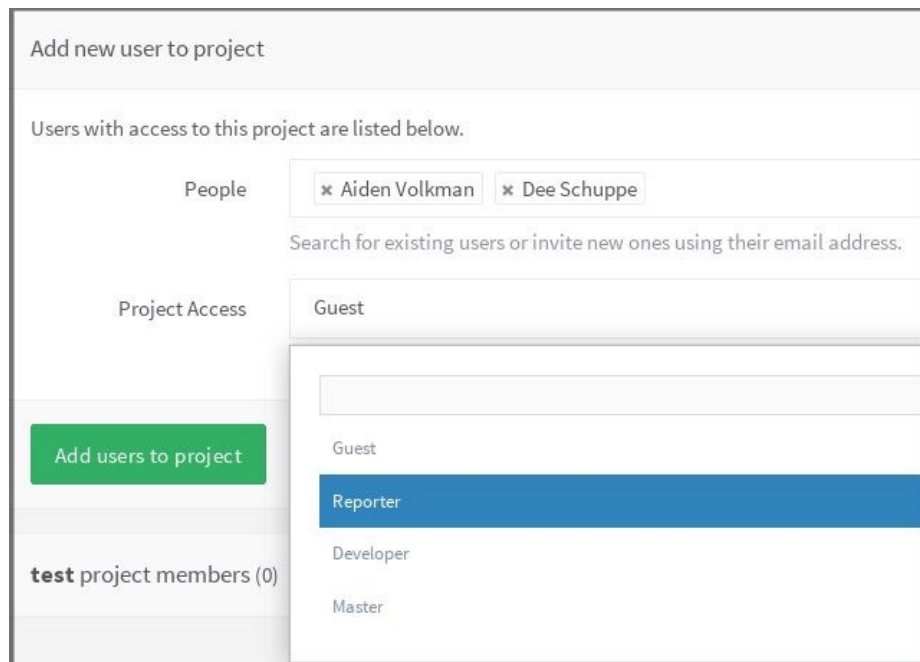

3. Once done, click **Add users to project** and they will be immediately added to your project with the permissions you gave them above. From there on, you can either remove an existing user or change their access level to the project.

Import users from another project

You can import another project's users in your own project by clicking the **Import members** button in the upper-right corner of the **Members** menu.

1. In the dropdown menu, you can the projects you are Master on.
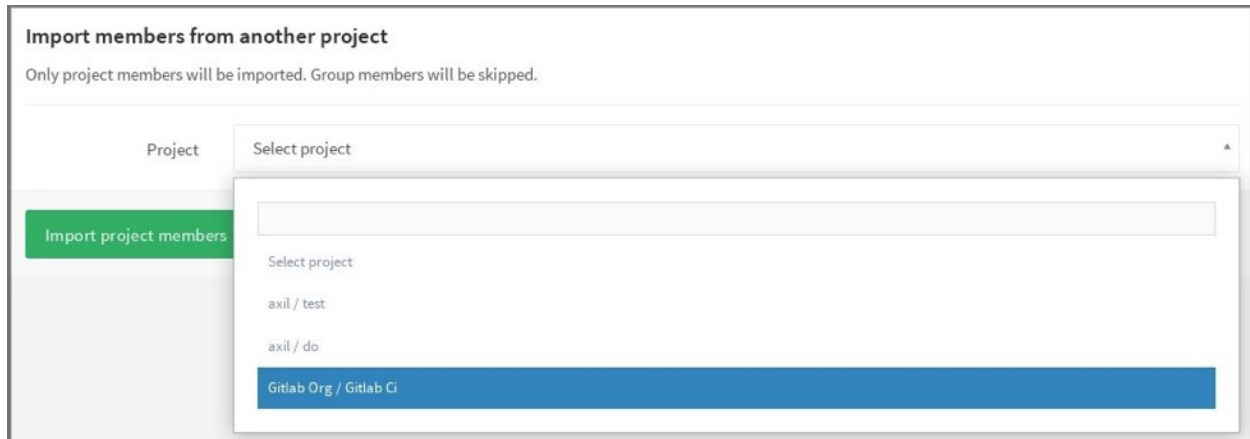
2. Select the one you want and click **Import project members**. A flash message notifying you that the import was successful will appear, and the new members are now in the project's members list. Notice that the permissions that they had on the project you imported from are retained.