



National Cybersecurity R&D Laboratory

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OpenStack [Beta] User Accounts Creation Manual

Version: V_0.2

02 April 2022

Version Control

Version	Date	Amended by	Summary of Changes
0.1	23 Mar 2022	NCL Biz Team	
0.2	02 April 2022	Liu Yuancheng	

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1. Introduction

Doc description:

This manual will describe how to create a user account in National Cybersecurity R&D Lab (NCL) OpenStack [Beta] Testbed and a NCL gateway user account for customer. The document contents two main section, the **User Accounts Creation** section (section 2) will introduce the detail steps to generate two accounts:

- **NCL OpenStack [Beta] Testbed web account:** Account to login the testbed webpage to do the instance configuration.
- **NCL OpenStack [Beta] Gateway account:** Account to login the gateway to access the VM.

The further technical support section (section 3) will cover the business service part what should business team should follow up after created and tested the customer's two new accounts.

The main procedure to create the two new accounts for user is shown below:

1. Create a Jira user issue ticket.
2. Login the testbed and create an OpenStack [Beta] Testbed web account.
3. Login the NCL gateway to create a gateway account.
4. Send the testbed web account and gateway account to user for testing.
5. Close the Jira user issue ticket.

Doc Type:

Internal User [Testbed Admin/ Business Team] Manual

Doc Remark:

- **Customer:** The key contact person and the one who make payment to us.
- **User:** the person who will use our NCL service such as access the instance.

2. User Accounts Creation

Follow the section 2.1 to 2.3 below to create the two accounts for a new user.

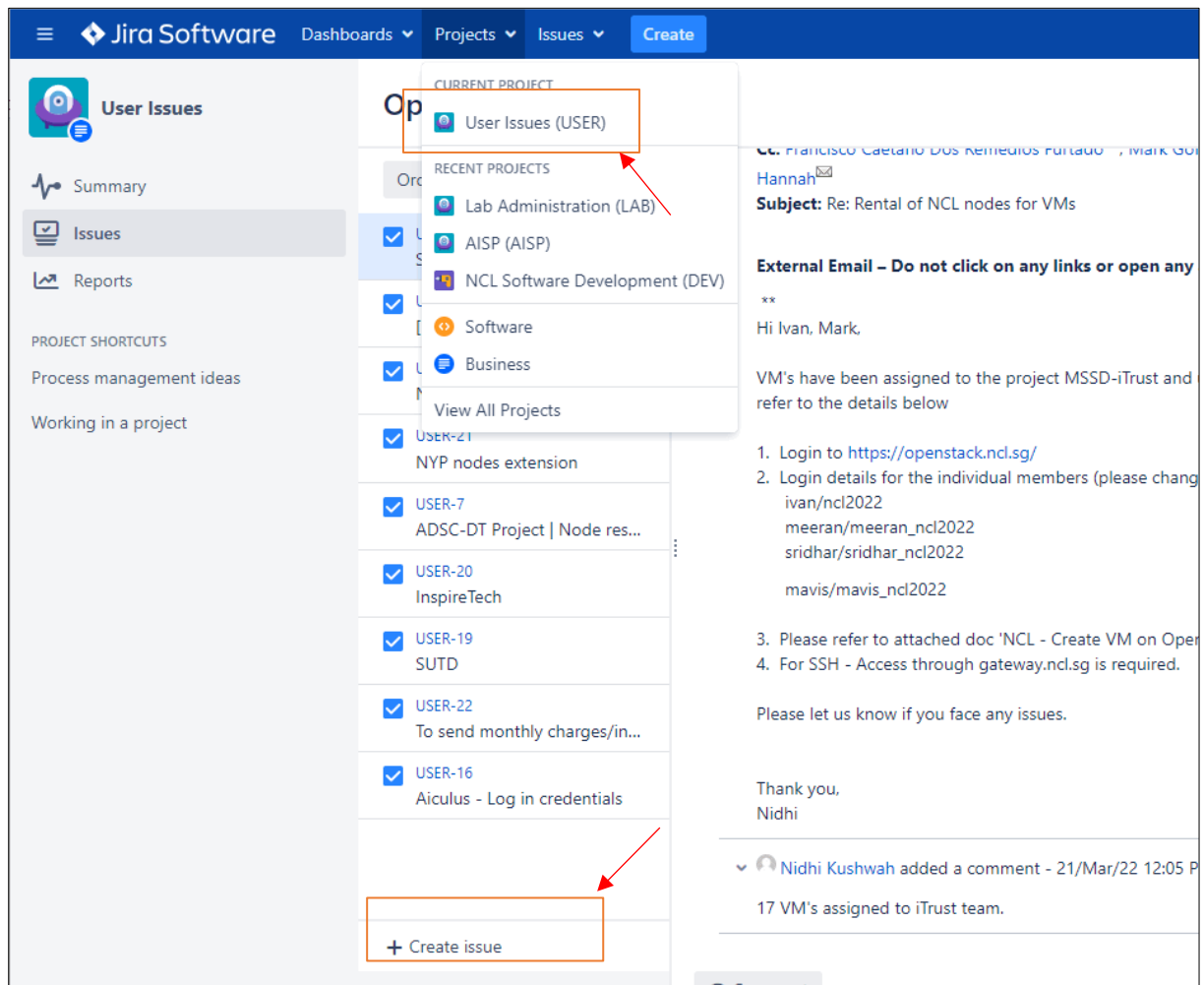
2.1 Create Jira User Issue Ticket

NCL Biz Team/Testbed Administrator needs to create a new Jira ticket for a new user under "**User Issues**" in NCL-Jira for progress tracking and assign this customer to a particular Biz Team staff.

NCL-Jira link: <https://jira.ncl.sg/secure/Dashboard.jspa>

Login account/password: <your Jira account>/<password>

Jira user issue ticket creation: Projects => User Issues (USER) => + Create issue. (As shown below)



After created the Jira user issue ticket, the Biz Team staff who was assigned with the user issue ticket needs to send an email to ask the customer to fill in the NCL order from (a google form), which will specify all technical details, like how many VMs and how much resource (CPU/RAM/Storage) in a VM.

NCL order from link:

2.2 Create an OpenStack [Beta] Project and Web User Account

NCL Biz Team staff needs to create a testbed web user account and at least one project in OpenStack [Beta] testbed based on the customer's request in NCL order from.

2.2.1 Login OpenStack [Beta] Admin Web

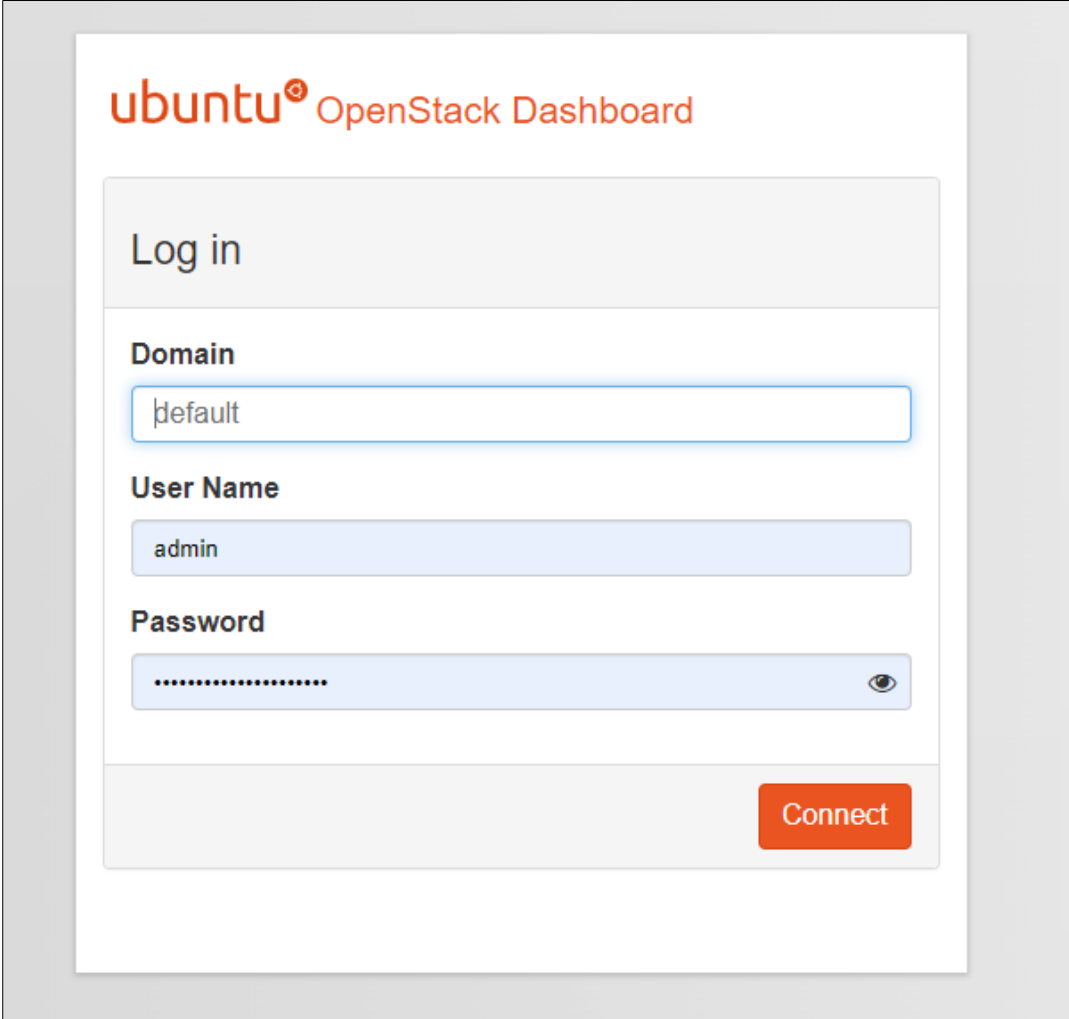
OpenStack [Beta] Testbed Admin Link: <https://openstack.ncl.sg>

Login as admin (as shown in the below image):

Domain: default

Username/password: admin/<refer to doc NCL_Assets_Info.xlsx>

Log in page view:



The screenshot shows the Ubuntu OpenStack Dashboard login interface. At the top, the logo "ubuntu OpenStack Dashboard" is displayed. Below it is a "Log in" section with three input fields: "Domain" (containing "default"), "User Name" (containing "admin"), and "Password" (containing masked characters). A "Connect" button is located at the bottom right of the login section.

ubuntu[®] OpenStack Dashboard

Log in

Domain

default

User Name

admin

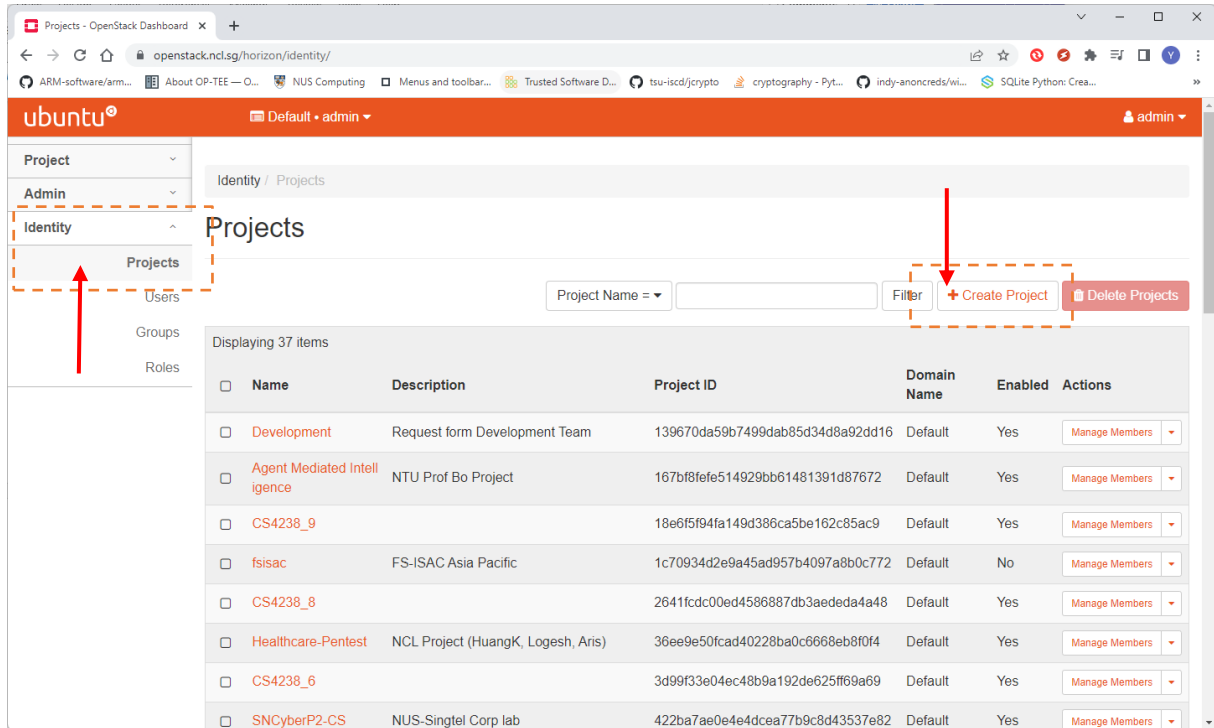
Password

.....

Connect

2.2.2 Create a New OpenStack Project

After login the OpenStack [Beta] Admin Web, select "**Identity**" tab in the left navigation panel. Then select "**Projects**" tab under "**Identity**", press the "+ Create Project" button at the top of the projects list. (As marked below)



The screenshot shows the OpenStack Admin Web interface. The left navigation panel has a red arrow pointing to the 'Identity' tab. The main content area shows the 'Projects' tab. At the top of the projects list, there is a '+ Create Project' button, which is highlighted with a red arrow. Below the button is a table of existing projects.

Name	Description	Project ID	Domain Name	Enabled	Actions
Development	Request form Development Team	139670da59b7499dab85d34d8a92dd16	Default	Yes	Manage Members
Agent Mediated Intelligence	NTU Prof Bo Project	167bf8fefe514929bb61481391d87672	Default	Yes	Manage Members
CS4238_9		18e6f5f94fa149d386ca5be162c85ac9	Default	Yes	Manage Members
fsisac	FS-ISAC Asia Pacific	1c70934d2e9a45ad957b4097a8b0c772	Default	No	Manage Members
CS4238_8		2641fcdc00ed4586887db3aeded4a48	Default	Yes	Manage Members
Healthcare-Pentest	NCL Project (HuangK, Logesh, Aris)	36ee9e50fcad40228ba0c6668eb8f0f4	Default	Yes	Manage Members
CS4238_6		3d99f33e04ec48b9a192de625ff69a69	Default	Yes	Manage Members
SNCyberP2-CS	NUS-Singtel Corp lab	422ba7ae0e4e4dcea77b9c8d43537e82	Default	Yes	Manage Members

After clicked "+Create Project" button, the project creation window will pop-up (as shown below). Fill in a unique project name in the "**Project Information**" tab. [Optional] Add customer information and request in the description text field as a reference.

The 'Create Project' dialog box is shown with the 'Project Information' tab selected. It contains the following fields and options:

- Domain ID:** A text input field with the value 'default'.
- Domain Name:** A text input field with the value 'Default'.
- Name:** A required text input field (indicated by a red asterisk).
- Description:** A large text area for project description.
- Enabled:** A checkbox that is checked.
- Buttons:** 'Cancel' and 'Create Project' buttons at the bottom right.

[Optional] Add project members (users) in the “**Project Members**” tab if customer required (or use the default users setting as shown below). You can also add existing users to this new project under “**Project Members**” tab after the project has already been created.

The 'Create Project' dialog box is shown with the 'Project Members' tab selected. It displays a list of users available for assignment:

All Users	Filter	Project Members	Filter
idsychs		No users.	
mavis			
linyin2			
glance			
dominic			
sravana			
hannah			
ariscr			
kewen			
ruomu			
tselbush			

Each user in the 'All Users' list has a blue '+' button next to it. The 'Project Members' list is currently empty, showing 'No users.'.

[Optional] Add project Groups in the “**Project groups**” tab (or use the default setting as shown below).

Create Project

Project Information * Project Members **Project Groups** Quota *

All Groups Filter

Threat_Intelligent	+
Healthcare-Pentest	+
Healthcare Testbed	+
Agent Mediated Intelligence	+

Project Groups Filter

No groups.

Cancel **Create Project**

Configure the quota based on customer's order form under the "**Quota**" tab (as shown below). Importantly, please **specify the quota** (esp. for vCPU, RAM, Storage) for this new project, which will be the upper bound of computing resource this project can utilise.

Warning: In our system, 1G = 1024M instead of 1000M. This is very important when specifying a TIGHT quota for RAM/Storage size! Alternatively, you may give some buffer, e.g., at most 4100MB RAM size.

Create Project

Project Information * Project Members Project Groups Quota *

Metadata Items *

128

VCPUs *

20

Instances *

10

Injected Files *

5

Injected File Content (Bytes) *

10240

Key Pairs *

100

Length of Injected File Path *

255

Volumes *

10

Volume Snapshots *

10

Total Size of Volumes and Snapshots (GiB) *

1000

RAM (MB) *

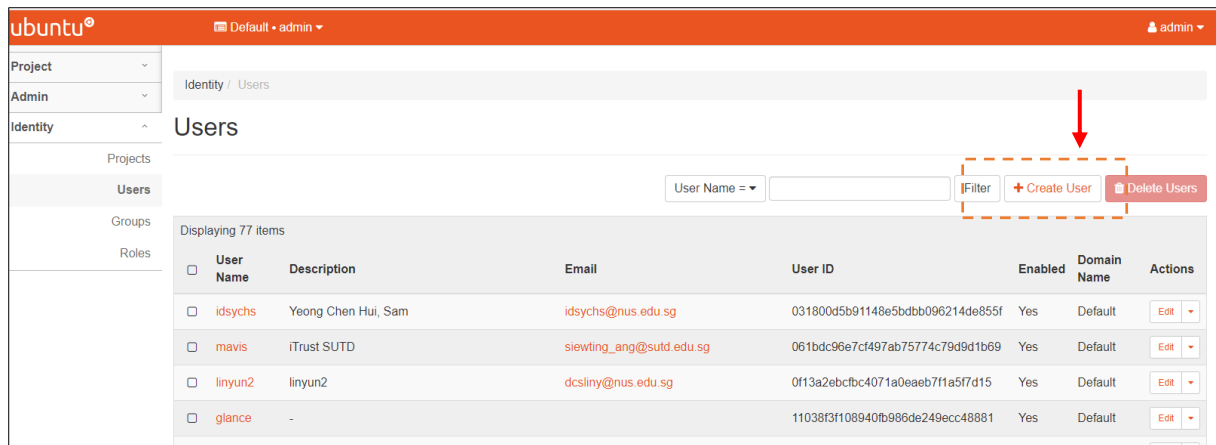
51200

Security Groups *

After Finished all the tabs [Project Information, Project members, Project Groups, Quota] setting, press the **“Create Project”** button at the bottom of popup dialog to create the project.

2.2.3 Create a New OpenStack [Beta] Testbed Web Account

After created the new project for the customer, in the left navigation panel, under **"Identity"**, click **"Users"**, then click **"Create User"** button to add a new user account. (As shown below)



Fill in the pop-up user creation dialog as shown below.

Primary Project Selection: It's important to add the newly created user account to some project or domain (You can add the user to the project you created in previous section 2.2.2). Otherwise, the user will fail to login and see the error message: "You are not authorized for any projects or domains."

Role Selection: You need specify the privilege of the user under "**Role**". 3 types of roles are available here: *_member_*; *admin*; *user*. You may grant "*_member_*" or "*user*" or both to customer. **Warning:** Never grant "admin" role to customers!

The 'Create User' dialog box is shown with the following fields and values:

- Domain ID: default
- Domain Name: Default
- User Name: admin
- Description: (empty text area)
- Email: (empty text field)
- Password: (masked with dots)
- Confirm Password: (empty text field)
- Primary Project: MyProject
- Role: user

2.3 Create a NCL Gateway Account

Follow below steps to create a NCL gateway access account for the user:

Step_1: SSH access to the GW

On your local machine, open a cmd terminal and run SSH cmd:

```
ssh ncl@gateway.ncl.sg
```

ncl@gateway.ncl.sg's password: <refer to doc NCL_Assets_Info.xlsx >

Step_2: Create unique user <name> in NCL gateway

After success log in NCL gateway, run below cmd to create a unique username:

```
sudo useradd -m -s /bin/bash <username>
```

```
#cmd example: sudo useradd -m -s /bin/bash ncl-testuser
```

Step_3: Set password for that user (Don't miss the <name> of the user)

```
sudo passwd < username >
```

```
#cmd example: sudo passwd ncl-testuser
```

Step_4: Test user login to double confirm

Log out the admin and login with the user/password you created in previous steps to confirm:

```
ssh <username>@gateway.ncl.sg
```

2.4 [Optional] Create a GPU Account

Follow below steps to create a GPU server access account for the user:

Step_1: Login **LDAPserver** to create a user profile (<userID.ldif>) with below contents:

```
dn: uid=< userID >,dc=prod,dc=ncl,dc=sg
objectClass: inetOrgPerson
objectClass: posixAccount
objectClass: shadowAccount
uid: <userID>
sn: <userID>
givenName: <userID>
cn: <userID>
displayName: <userName>
uidNumber: <userID number>
gidNumber: 10000
userPassword: {CRYPT}x
gecos: <userID>
loginShell: /bin/bash
homeDirectory: /home/<userID>
```

Step_2: After created the user profile, run the user creation cmd:

```
ldapadd -x -D cn=admin,dc=prod,dc=ncl,dc=sg -W -f <userID>.ldif
```

Step_3: Change the user password with below cmd:

```
ldappasswd -x -D cn=admin,dc=prod,dc=ncl,dc=sg -W -S uid=<userID>,dc=prod,dc=ncl,dc=sg
```

Step_4: Login **LDAPclient** to confirm the user login:

Login the GPU node (GPU-X), create directory with below cmd and test login from GPU-X Node with the new user created.

```
sudo mkdir /home/<userID>
sudo chown -R <userID>:ldapusers /home/<userID>
sudo login
```

3. Business Service

NCL Biz Team member needs to follow the below steps to finish the customer business service.

3.1 Update Two User Accounts to Customer

Update the customer with the two accounts: OpenStack [Beta] Testbed web account and the NCL gateway account by email. The email template is shown below:

Dear [Customer],

NCL OpenStack Testbed web user account

An NCL OpenStack Testbed web account has been created for you with credentials as follows:

Username: [username]

Password: [password]

You may access the Openstack platform with your credentials through web browser at openstack.ncl.sg to manage your instance.

NCL OpenStack Gateway user account [#1]

An OpenStack gateway account has been created for you with credentials as follows.

Username: [username]

Password: [password]

You can SSH remote connect to your instance VM at gateway.ncl.sg.

...

NCL OpenStack Gateway user account [#N]

An OpenStack gateway account has been created for you with credentials as follows.

Username: [username]

Password: [password]

You can SSH remote connect to your instance VM at gateway.ncl.sg.

Please kindly change your password upon logging in and keep it private to yourself.

Please reach out if you require any assistance.

Thanks,

NCL Support

3.2 Support Service

Business team members need to finish the below service steps if needed:

- Send the Linux VM creation and remote access manual to customer.
Document: **NCL_OpenStack_Beta_LinuxVM_User_Manual.pdf**
- Send the Windows VM creation and remote access manual to customer.
Document: **NCL_OpenStack_Beta_WindowsVM_User_Manual.pdf**
- If Biz Team is incapable to answer some tech questions, forward questions to Tech Team and open a Jira ticket. Later, record the question and answer to FAQ, so that in the future for similar questions, Biz Team can answer them without asking Tech Team again.
- Every month (or season), send invoice to customer and collect payment.
- When the service period ends, close the ticket.

----- <END> -----