ACCESS TO GPU NODE AT VIT, PUNE

WRITTEN BY: SABANE SANMAN

VALIDATED BY: PROF. PREMANAND GHADEKAR

Contents

- Objective
- Audience
- Node Specification
- First time access

Objective

This document covers the steps involved in accessing the GPU node hosted inside VIT campus and helps you with some basic commands to execute your source code.

Audience

This document is intended for first time users of the GPU node. This document assumes that you have basic working knowledge of UNIX environment.

Node Specification

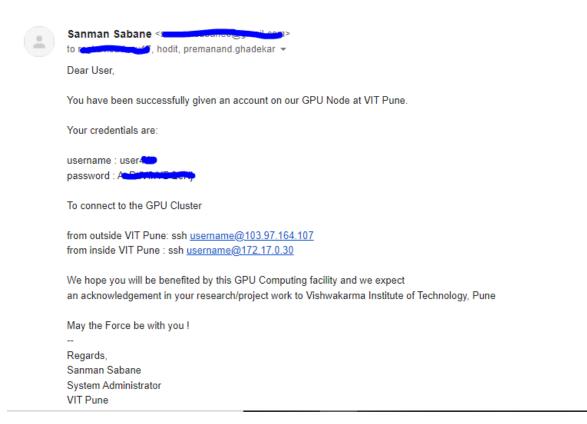
The GPU Node hosted at VIT Campus has the following specification

Sr. No	Item	Specification
1	CPU	2 x Intel Xeon Silver 4114 CPU Clocked @ 2.20GHz with 40 Cores (80 threads)
2	RAM	128GB DDR4-2666 ECC Memory
3	GPU	Nvidia Tesla V100 PCIE 32GB CPU with 5210 CUDA Cores & 640 Tensor Cores
4	Storage	4 TB HDD Storage
5	Network	100 Mb/s Ethernet interface

First time access

To access the GPU node, please fill the <u>access form</u> with appropriate details. Upon validation you will receive an email from the institute with your access credentials.

Your account details for GPU node at VIT D



The email will have the assigned username and the password for your account. Please save these details locally and download and install MobaXterm to connect to the node. If you are **inside the VIT campus**, please use the IP **172.17.0.30** to connect to the node. If you are **outside the VIT campus**, please use the IP **103.97.164.107** to connect to the node.

Here we are using MobaXterm to connect to the node. After installation click on *start local terminal* and use the SSH command to connect to the node. For e.g. If you have received username as user1 in the email then the command will look like `ssh <u>user1@103.97.164.107</u>`. Press Enter and you will get prompt to type in the password. Input the password and press enter (Note: You will not be able to see the password when you are typing it as MobaXterm uses shadow password.) You can also copy the password and paste it by pressing Shift + Insert.

Fig1. MobaXterm start screen

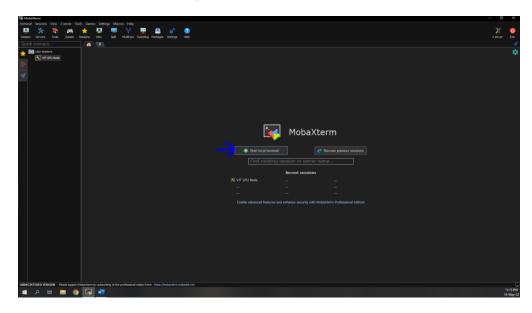


Fig2. Upon successful login you will be greeted with the following screen

```
* MobaXterm Personal Edition v22.0 * (SSH client, X server and network tools)

* SSH session to sanman@103.97.164.107

* Direct SSH : /

* SSH compression : /

* SSH-browser : /

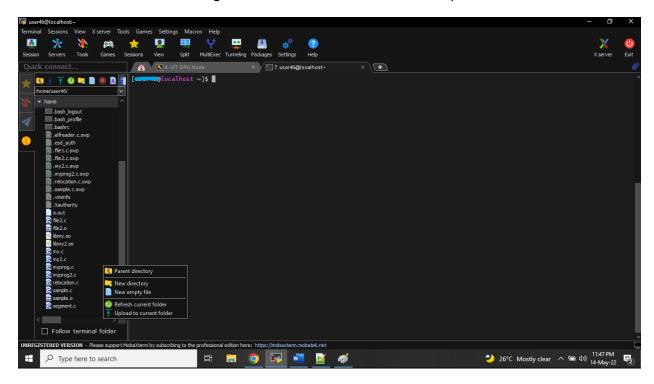
* X11-forwarding : / (remote display is forwarded through SSH)

* For more info, ctrl+click on help or visit our website.

Last login: Sat May 14 17:10:20 2022 from **COLORNAL STANDARD STANDARD
```

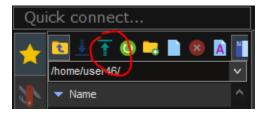
On the left pane you can click in the empty space and click on *New Directory* to create a folder in your home directory. Input the desired name and click on *OK*, double click to enter into the newly created directory.

Fig3. New Folder Creation in home directory



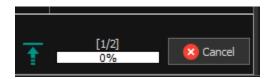
In the same left pane, you can see the *Upload to current folder icon* which will help you to upload your source code files from your local laptop to the GPU node. Click on the icon after entering the newly created directory and chose the files that you want to upload on the GPU node.

Fig4. Upload source code files into folder



In the same left pane, you can monitor the progress of the files that are being uploaded.

Fig4. Progress of files being uploaded



After successfully uploading the files, you can execute your code. Please try and run your code locally on your laptop in a Linux environment to be able to take advantage of the resources available on the GPU node.