Login To Server : ssh -o HostKeyAlgorithms=+ssh-rsa -o PubkeyAcceptedKeyTypes=+ssh-rsa 20i190001@10.119.2.14 -p 22

ssh -oHostKeyAlgorithms=+ssh-rsa 20i190001@10.119.2.14

1). **Minotaur links**

https://drive.google.com/drive/folders/1UA6wefpP-QgK\_2DGaUVfh2c3Ev7iNzBL

https://people.seas.harvard.edu/~yaron/AM221-S16/lecture\_notes/AM221\_lecture9.pdf

Nitesh@8699

209fea7c0d0465a1cd0537620d5c4d4a

79cda9b1a888f471afb3da4a77c3581a

2).To connect internet on the server:

curl --location-trusted -u 20i190001:a8e86cee7cf26b92d38c6e3c7ea2598b "https://internet.iitb.ac.in/login.php" > /dev/null

3).How to Use Putty pscp to Copy Files to/from a Remote Server

for transfer files from local computer to server:

pscp -P 22 instances.zip 20i190001@10.119.2.14:/scratch/minotaur/

pscp -P 22 result.zip 20i190001@10.119.2.14:/scratch/nitish.dumoliya/minotaur/instances/results/instancesResults/

pscp -P 22 quadratic\_instance\_result.zip 20i190001@10.119.2.14:/scratch/nitish.dumoliya/minotaur/instances/results/instancesResults/

for get the files from server to local computer:

scp -P 22 20i190001@10.119.2.12:/home/mustafa.vora/184190001\_lab\_pythoncode.py C:\Users\ASUS\Desktop\

4).Mustafa vora files

20i190001@kanjur:/home/mustafa.vora/minotaur/instances/outputs/AllInstanceRunAug2021$ vim mglobRuns.par

20i190001@kanjur:/home/mustafa.vora$ vim rough.par

20i190001@kanjur:/home/mustafa.vora/minotaur/instances/outputs/AllInstanceRunAug2021$ cat <filename> | parallel --eta -j 10 '{}'

/scratch/nitish.dumoliya/minotaur/build/bin/mglob /scratch/nitish.dumoliya/minotaur/instances/minlplib/nl/autocorr\_bern20-03.nl --bnb\_time\_limit 60 &> /scratch/nitish.dumoliya/minotaur/instances/results/instancesResults/autocorr\_bern20-03\_result.show

5) **Vim Text Editor Command**

Save & exit capital ZZ (Shift zz)

Exit without saving capital ZQ (shift zq)

to save a file that's read only, use the following command

:wq!

:q exit the vim

Capital G move down into bottom

gg move to top of the file

yy copy the line

p paste down the line

P paste up to the line

V selecting line of code or visual the lines

^ go to initial word of line

f then press the key where you want to go in the line

d % delete the code between the { } when your curser is on {

d t ( or { or / , <, >, : delete the code between the (), {}

\* Go the next same word

type “gg” to move the cursor to the first line of the file, assuming it is not already there. Then type dG to delete all the lines or text in it

6). **Linux commands:**

**screen commands:**

screen --help

1) Create a new screen : screen -S <screen name>

2) Code for the screen that is running: screen -r <screen name>

3) list of running screen: screen -ls

4) detached the screen ctrl + a + d

5) Create a new window in screen session ctrl + a + c

6) To killing the screen window ctrl + a + k , To killing all windows in a screen ctrl + a + \

7) To see how many windows are open ctrl + a + w

8) next window ctrl + a + n

9) previous window ctrl + a + p

10) To jump the window ctrl + a + windows no. or ctrl + a + " and then select the window

11) To rename the window ctrl + a + A

12) To quit the screen screen -X -S <screen name> quit

13) To split the screen vertically ctrl + a + | then ctrl + a + tab then ctrl + a + windows no.

14) To split the screen horizontally ctrl + a + S then ctrl + a + tab then ctrl + a + windows no.

15) To close the windows ctrl + a + X

16) To detached the screen screen -d -r <screen name>

17) screen key bindings ctrl + a + ? then ctrl + a + : then type the command from the key bindings

18) To see previous results in screen ctrl + a then press esc

**Other Commands**

Run a python file in Linux by following command: Python3 <file name.py>

Run the multiple scripts of a file parallel at a time : cat <file name> | parallel --eta --time\_out 4200 -j 10 '{}'

**count files in a directory on Linux :** ls | wc -l

copy the file and

scp -P 22 20i190001@10.119.2.12:/home/mustafa.vora/instances/outputs/report.py C:\Users\ASUS\Desktop\

pscp -P 22 quadratic\_instances\_result.par 20i190001@10.119.2.14:/scratch/nitish.dumoliya/minotaur/instances/results/instancesResults1/

scp -P 22 20i190001@10.119.2.13:/scratch/nitish.dumoliya/minotaur/instances/results/instancesResults/MinlpLib\_instances\_results.xlsx C:\Users\ASUS\Desktop\

MinlpLib\_instances\_results.xlsx

scp -P 22 20i190001@10.119.2.12:/home/mustafa.vora/184190001\_lab\_pythoncode.py C:\Users\ASUS\Desktop\

pscp -P 22 COCON\_ICLR2021-main.zip bheeshmsharma@balamurugan:/bheeshm

bheeshmsharma

bheeshmsharma@123

bheeshmsharma@balamurugan

/build/ sudo checkinstall make install

cd

sudo mkdir /usr/local/share/coin-or

export PATH=$PATH:/usr/local/share/coin-or/bin/

echo $PATH

7665779324

1990

wget http://openslr.elda.org/resources/12/train-other-500.tar.gz

C++ command in Linux Terminal :

Run a file : g++ -c main.cpp

G++ -c Cube.cpp

g++ -o main main.o Cube.o

./main

IDE (Integrated Development Environment)

Minotaur command

make clean

make uninstall

ccmake ..

make VERBOSE=1

Git Command

git status

* Create repositories

git init Turn an existing directory into a git repository

git clone [url] Clone (download) a repository that already exists on GitHub, including all of the

files, branches, and commits

git push

* changes in files and use bellow command (Local to github)

git add .

git status

git commit -m “Fixed a bug”

git push -u origin master

* github to local

Change file in github than type below command in local git bash terminal

git pull origin master

* Configure user information for all local repositories

git log

git config --global user.name “Nitish Dumoliya” Sets the name you want attached to your commit transactions

git config –global user.email “niteshdumoliya8699@gmail.com”

Sets the email you want attached to your commit transactions

git config --global color.ui auto Enables helpful colorization of command line output

AMPL Command :

Convert .mod file into .nl file ampl -ogfile file.mod

Skills :

excellent design and coding skills in object-oriented C++

the ability to build and maintain a large, well-structured body of code,

the discipline to meet commercial-grade software quality requirements and product release schedules

You should have experience with IDEs such as Microsoft Visual Studio, a source code control system, a bug or issue tracking system, profilers and debuggers

Experience writing parallel code and/or network-aware code is a definite plus.

* Optimization: Simplex method for linear programming, a barrier or interior point method, a gradient-based nonlinear method, or an evolutionary, genetic algorithm, tabu or scatter search based method for

continuous optimization; plus a Branch and Bound method, cutting plane (or Branch and Cut) method, or discrete heuristics method for integer/discrete optimization.

* Simulation: Monte Carlo methods, including random number generation, stratified sampling, generation of correlated samples, distribution and correlation fitting, simulation optimization, stochastic linear

programming, or robust optimization methods

* Data Mining: Machine learning and multivariate statistical methods for large datasets, such as feature selection, linear and logistic regression, principal components and/or latent semantic analysis, k-nearest

neighbors, classification and regression trees, ensemble methods, neural networks and/or deep learning

Essential:

● Experience in writing optimized C++ code

● Understanding of Convex Optimization/Nonlinear Optimization

● Experience with Gradient-based Optimization, Dynamic Programming

● Experience with solving optimization problems in any domain

● Experience with continuous-time optimization algorithms or optimization libraries like NLopt, qpOASES, IPOPT

● Strong fundamentals in Linear Algebra, Probability, Differential Geometry

● Parallel Programming and GPU-based code optimization

**Good to have:**

● Experience in exploiting parallel processing via C++

● Code optimisation for embedded devices

● Worked on Nvidia based compute boards

● Writing low-latency, real-time code

**Personality Traits:**

● Strong Analytical thinking and problem solving ability

● Ability to work with a distributed and diverse team of researchers, developers, and engineers

● Ready to learn new concepts, stay up-to-date with the state-of-the-art in the field and implement them

● Ability to work within deadlines and dynamic work environment

● Excellent English language communication skills, both written and verbal