**How to use cluster for UPPAAL Stratego?**

References:

<https://github.com/DEIS-Tools/DEIS-MCC>

#1. Access to the cluster.

https://github.com/DEIS-Tools/DEIS-MCC/blob/main/setup/SETUP.md

Graphical user interface, text, application, email

Description automatically generated

Below is my config file – I use my id (sj81ko@cs.aau.dk)

Text

Description automatically generated

Once you have ready the config file, you can use command to access the cluster. You should put password for access the cluster.

$ ssh deismcc

Text

Description automatically generated

If you can see the screen as below with your account, you are now in cluster 😊

Text

Description automatically generated

**#2. Setup your own environment in the cluster.**

Perform the commands below from your *local* system. If you are outside the university campus, you can replace “deismcc” below by “deismcc\_proxy” and use vpn for access to the cluster.

**2-1. For using UPPAAL Stratego, send extracted UPPAAL Stratego folder from your local computer to the cluster.**

The idea is same as 2-1, described as above. You can use the command “scp -r” with local location where Stratego folder located and cluster information with your id. If you want to install Stratego to specific folder of cluster(i.e., stratego10), you may add your folder name right after your id.

$scp -r stratego /stratego10 deismcc:/nfs/home/cs.aau.dk/sj81ko

$scp -r stratego/stratego10 deismcc:/nfs/home/cs.aau.dk/sj81ko/stratego10

**2-2. Send files/folders from your local computer to the cluster.**

Start new command window for transfer materials from the local location. The command “scp -r” comes first and “local location of the file or folders” comes later. After that, “cluster location” comes finally. For example, location of local computer of below command is “Documents/IFAC23” and cluster location of below is “deismcc\_proxy:/nfs/home/cs.aau.dk/sj81ko”. You can use your id instead of my id.

$scp -r Documents/JLAMP2023 deismcc:/nfs/home/cs.aau.dk/sj81ko/cJLAMP2023

**#3. You should ask memory for your use.**

https://github.com/DEIS-Tools/DEIS-MCC/blob/main/usage/CHEAT-SHEET.md

3-1. check current usage of the cluster. You can choose the machine whose STATE is “idle”. For instance, you can use naples [04-09], not naples [01-03].

$ sinfo

Text

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$ squeue

Graphical user interface

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Use below command for allocate memory for you.

$ srun --partition rome -w rome06 --pty bash

**3-2. Using Stratego model.xml, run Stratego with command below.**

The command composed of (location of Stratego) and (the location of model.xml)

$ IFAC/stratego10/bin/verifyta IFAC\_onepond\_sensor\_gaussian\_test.xml

If you want to fileout for the result, you can use below command. Then the result will be now shown at the screen, but will be saved at the result.txt file.

$ stratego10/bin/verifyta cJLAMP2023/costchange/JLAMP\_ADHS\_1000cost\_90000runs\_opt.xml > result\_opt.txt