

HCMUT Cluster User Guide
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About this document

Ho Chi Minh City University of Technology (HCMUT) is contributing a cluster system to the PRAGMA Testbed. This document is a user guide for Pacific Rim Applications and Grid Middleware Assembly resources and includes:

- requirements for users
- procedures for getting an account
- hardware specifications and available Grid software
- support staff

According to future administrative decisions, HCMUT may modify this document.

Requirements for users

HCMUT requests all users to fulfill the following conditions:

- All users must belong to one of member organizations of either HCMUT or PRAGMA.
- All users participating in HCMUT must comply with the operating principles of HCMUT.
- All users participating in PRAGMA must comply with the operating principles of PRAGMA.
- All users must have concrete purposes for using resources of HCMUT.
- All users must contribute to HCMUT/PRAGMA through the use of resources of HCMUT/PRAGMA.
- All users must have a user certificate issued by a HCMUT/PRAGMA trusted CA.

PRAGMA trusts the following CAs: AIST, AusGrid, BMG, DOEGrids, ESnet, KISTI, NCSA, NPACI, ThaiGrid, USM.

Procedures for obtaining a user certificate are available on the PRAGMA-GOC home page.

Procedures for getting an account

In order to obtain an account for using resources of HCMUT, send the following information to Tran Ngoc Minh.

- Full Name
- Affiliation
- Address
- Country
- Phone and fax number
- Email address
- Purpose for using HCMUT resources
- Contribution to HCMUT and/or PRAGMA
- Desired account name (1st: 2nd : 3rd choices:)

- ssh public key
- User certificate issued by a HCMUT/PRAGMA Trusted CA

The application will be reviewed by the administrators of HCMUT resources within a few days of receipt of the application. The administrators will verify whether the applicant fulfills the requirements. If the application is approved, HCMUT will create an account and send the necessary information to the applicant. Otherwise, the applicant will be notified that the request is rejected. Basically, a newly created account will be valid until the end of year. You are expected to move your files from HCMUT resources to your resources by the expiration of your account. If you want to keep your account and files, you are required to renew your account every year. HCMUT will remind all users to renew accounts and inform them of the procedures required when the expiration date gets close.

You can login to HCMUT resources via an ssh command using RSA authentication. HCMUT will NOT inform you of your initial UNIX password.

An ssh public key and your user certificate should be sent as attachments to your application.

A mapping of your subject name to your local account will be added to the grid-mapfile on the HCMUT resources.

Hardware specifications and available Grid software

HCMUT is providing a Linux cluster, called Supernode2. Supernode2 includes 1 master node and 64 compute nodes:

- Master node
 - Dual Xeon 2.4GHz Hyper Threading
 - 2GB ECC DDRAM
 - 40GB HDD
 - 2 Gigabit Ethernet ports
 - 1 Fast Ethernet port
- Compute node
 - Dual Xeon 2.4GHz Hyper Threading
 - 1GB ECC DDRAM
 - 40GB HDD
 - 1 Gigabit Ethernet ports
 - 1 Fast Ethernet port

At the moment, we just provide 4 compute nodes for non-HCMUT members due to some reasons. The number of compute nodes will be enlarged in the future.

We are using Torque version 2.1.2 to manage the cluster. Users' home directories are shared among all nodes by NFS. On Supernode2, the Globus gatekeeper is running on the master node and compute nodes can be utilized via the Globus jobmanager.

- Primitive Software
 - The operating system used on master node is 2.4.21-4.ELsmp, and general GNU tools are also installed.

- GCC version 3.2.3
- Grid Software
 - Globus Toolkit 4.0.3
 - GLOBUS_LOCATION = /usr/grid/globus
 - MDS is not running at this moment

Support staff

HCMUT cluster are maintained by support staff. Your requests will be processed in a best-effort manner by the staff.