

MIE COMPUTING SERVICES ORIENTATION FOR PROFESSORS

Welcome to the Mechanical & Industrial Engineering department. The purpose of this document is to familiarize new Professors to the services, policies, procedures, and fees regarding the use of the MIE department research computer network.

MIE Computing Services offices are located on the 4th floor of the Mechanical building, in offices MC402B and MC402D. The staff consists of Ray Low (978-3660/ ray@mie), Oscar del Rio (978-8830, oscar@mie), and Joey Wong (978-0807, joey@mie). If a general request for computer/network assistance is required, an email should be sent to computing@mie, which will alert all Computing Services staff to the request simultaneously.

THE MIE RESEARCH NETWORK

The MIE department maintains a network dedicated for the use of faculty, researchers, supervised research graduate students, and departmental administrative staff. This network is a separate entity from the ECF/ECFPC network, which is primarily dedicated for teaching and course work. The MIE research network extends through portions of 5 buildings currently occupied by the department. The operating speed of the network is gigabit on the departmental fibre backbone, with 100mb speeds to the research labs and offices via cat5e cables. If required, special arrangements may be discussed regarding obtaining gigabit speeds to an individual research lab. However, this may require the purchase of equipment at the researcher's expense.

WIRELESS NETWORKING

In addition to the hardwired department research network, some areas may have access to the university wireless UTORWIN network. This wireless network is operated by UTCNS, separately from the MIE department. Currently wireless is available in the following vicinity of MIE building space...MC402, MC331, MC325, MC215, RS303, MB123, MB225, and BA8256. For security reasons, the MIE department DOES NOT PERMIT the installation of wireless devices on the MIE research network. Any unauthorized wireless devices detected on the MIE research network, will have it's connection port disabled immediately. If a research lab not located in one of the above mentioned wireless areas should require UTORWIN wireless access, special arrangements may be made by first contacting MIE Computing Services staff. The installation of the wireless will likely require the purchase of a "bridge" (not router) type wireless device, to comply with university policy. The cost of the wireless equipment will be at the research lab's expense.

To learn more about the UTORWIN wireless network on campus, you may visit the UTCNS web wireless web page at <http://www.wireless.utoronto.ca/>

VPN NETWORK ACCESS

There are two VPN services which are available to staff, faculty, and students with accounts on the MIE research network. UofT provides a VPN service which permits access to the Campus network from a remote internet location as if their computer were located locally on campus. In addition to the UofT VPN, MIE also provides a similar VPN service for the departmental research network. You can learn more by visiting the MIE Computing Services and UofT VPN web pages at...

<http://www.mie.utoronto.ca/computing/vpn.html>

<http://www.vpn.utoronto.ca/>

SOFTWARE

Typically software used for teaching are installed on the ECF/ECFPC network servers. ECF/ECFPC will periodically notify instructors via mass email, to provide their course software requirements well in advance of the new term start. Your list (and new software installation media if available) should be forwarded to Ray Low, who will in turn make the necessary installation requests with ECF/ECFPC. Channelling these requests through MIE Computing Services will help permit improved monitoring and control of MIE teaching software in use on the ECF/ECFPC network. It is best to provide the software as early as possible, since some software will not function correctly in the higher security server environment of ECF/ECFPC. It may require time for ECF/ECFPC to troubleshoot new software installations, if possible.

In addition to teaching software, MIE Computing Services manages and arranges purchases of software licenses for Ansys and Matlab, on behalf of the various MIE research groups. If your research group require access to one or both of these software applications, you should contact Ray Low for a cost quotation.

Other software applications available at UofT, are sold via Information Commons. You may contact Ray Low for more information, or visit the IC website at

<http://www.utoronto.ca/ic/software/>

SERVICES

EMAIL SERVICE Email/User accounts are provided to all faculty and research graduate students on request. An application form can be downloaded from the computing services web page located off the MIE departmental web site. The completed form must be approved/signed by the student's supervisor, indicating the supervisor will be responsible for the payment of any fees accumulated by the student resulting from the use of department servers. The form should be returned to MIE Computing Services offices, or placed into one of the Computing Services staff mailboxes located in the MC134 main office.

RESEARCH LAB SERVER BACKUPS On request, the department provides nightly backups of all servers within the department including research labs. There is currently no charge for this service. The backup limit per research lab is 100 gigabytes.

SERVER STORAGE If space is available, the department provides storage of research servers within one of the MIE air-conditioned computer rooms. The fee for storage of servers, is the university NASM rate of \$200/sq meter/year (with a minimum charge of \$50/computer/year). As an example, a typical PC size server would cost \$50/year, while a cluster cabinet would be \$400/year. These fees if applicable, will appear on the supervisor's January monthly invoice at the end of the year for which it is due. (See fees & Invoicing section below)

Note #1: The fee stated above is for storage only. If special power requirements are necessary (eg. Multiple circuits, special voltage, etc. required for clusters), the cost of installation would be charged separately.

Note #2: Since space is limited, the use of the computer room storage service is for networked "operational" servers only.

Note #3: Access to the MIE computer rooms are restricted to MIE Computing Services staff only. Computers stored within, will not be accessible to your graduate students except remotely via the network.

COPIER PRINTING The department operates three photocopier located in MC110, RS212, and BA8116. These copiers have the capability of providing high speed printing via the network. To access the printing capabilities of these copiers, you will require software and drivers installed onto your office/lab computers. Contact MIE Computing Services if you wish to have copier printing configured on your computers. In addition, you will be required to enter your assigned copier security PIN number. You may contact the MIE main office MC134 if you do not know your PIN code. Note: for research, there is a billable per page fee associated with the use of these copiers. For instructions on printing to the copier, please view the "Printing to the Ricoh copiers" document listed under "General Information" on the Computing Services page of the MIE web site.

Note: Ricoh copier printing is not available from Unix and MAC computers.

TECHNICAL SUPPORT

As well as maintaining the central network and department servers, MIE Computing Services provides computer support for individual research workstations and servers located within the various labs and offices. The service includes hardware/software installation & troubleshooting. For hourly fees, please see the “fee & invoicing” section below.

FEES & INVOICING

Each month, all supervisors with outstanding fees will receive an invoice (sample included at end of this document). The invoice is accompanied by a list of all user accounts associated with that supervisor. In addition, there will be a list of departmental server CPU and Disk storage usage fees, per user account associated with the supervisor. Details of these fees are as follows...

USER ACCOUNTS

Each user research account throughout the MIE network, is assessed a fee based on the following criteria...

\$3 per regular user account, up to a maximum of 10 accounts. Each regular user account beyond 10, is assessed a fee of \$1. Guest accounts (occasional users) are assessed a fee of \$1 per account. A list of regular and guest accounts are provided to each supervisor, with their monthly invoice. It is the responsibility of each supervisor to review the list, and notify Computing Services if an account should be closed. The account will be immediately closed (without warning), on receipt of the closure instruction from the supervisor. If a student wishes to continue using the account (eg. after graduating), he/she must make the necessary arrangements with the supervisor who is responsible for paying the monthly fees.

Note #1: Faculty and department staff are not charged for their user accounts.

Note #2: The supervisor's monthly invoices are automatically generated by the department server on the 27th of each month. Instructions to close accounts must be received prior to that date to be reflected on the invoice for that month.

DEPARTMENTAL SERVER CHARGES

There are currently two fees which are automatically generated on the supervisor's monthly invoice, relating to the usage of department servers. These fees include server CPU and disk storage. The disk storage fee is calculated at a rate of \$0.50/megabyte/month after the first 25 megabytes of storage space. The CPU charge is calculated at \$10/cpu-hour.

CPU time is typically accumulated by executing programs on the server, or the processing of email. Users with a large inbox and/or have their email configured to check for new mail frequently, will generate higher CPU fees.

Disk space charges occur when data files are created or uploaded onto the department server. The storage fees are automatically accumulated by the system throughout the month, whether the data is uploaded permanently or temporarily.

Note: It is recommended supervisors purchase a separate server for their research lab, to be used for the execution of programs and storage of data. Research lab servers are not charged for CPU and disk storage.

TECHNICAL SUPPORT

The time required to provide this additional research service, is charged to individual supervisors on an hourly basis. Charges that would typically fall into this category would be hardware/software purchasing, computer & peripheral installation & troubleshooting, etc. The current hourly rates are as follows...

\$49/hour if charged to accounts with no overhead eg. NSERC.

\$47/hour if charged to accounts with overhead eg. contracts and grants.

\$66/hour for all other non-MIE related work eg. Work performed for other departments.

OTHER INVOICED AMOUNTS

In addition to the fees discussed in this document, an invoice may also contain entries for other amounts relating to software and purchases made on behalf of the supervisor. eg...

- Vendor part costs purchased on behalf of the supervisor, to complete authorized repairs to research computers etc.
- Information Commons renewal fees for research software licenses managed by the department on behalf of the supervisor ie. Ansys, Matlab.



MIE Computing Services Invoice

Invoice date: 14-Jul-08

Please Note: Charges will be deducted from NSERC operating grants unless instructed otherwise.
Section A) charges, if any, will be deducted from alternate accounts you specify as follows:
\$47/hr-research contract, \$49/hr-research grant, \$47/hr-Provincial Centres of Excellence, \$66/hr-all other accounts.

Qty Amount

Test Supervisor

Total amount due: \$287.32 **

B) MIE Computing Services Purchase recoveries			
	Hard drive	1	\$90.00
D) Departmental Server System charges (see attached pages for details)			
	Charges for CPU usage @ \$10.00/cpu-hr		\$27.32
E) Software Licensing Fee's due			
09/15/2008	ANSYS installed on host COMPUTER NAME		\$135.00
F) Monthly User Account Charge (see attached pages for details)			
	Charges for User accounts @ \$3.00/account (maximum 10)		\$30.00
	Charges for User accounts @ \$1.00/account (exceeding 10)		\$4.00
	Charges for Guest accounts @ \$1.00/account		\$1.00

Summary of computer accounts

Sponsor: Test Supervisor

Group ID: testgrp

Date: 06/27/2008

Total number of accounts: 16

Active users: 14

student1	Student1 name
student2	Student2 name
student3	Student3 name
student4	Student4 name
student5	Student5 name
student6	Student6 name
student7	Student7 name
student8	Student8 name
student9	Student9 name
student10	Student10 name
student11	Student11 name
student12	Student12 name
student13	Student13 name
student14	Student14 name

Guest accounts: 1

guest1	Guest name
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No charge: 1

prof	Test Supervisor
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SPONSOR: Test Supervisor
GROUP: testgrp

BILLING PERIOD: June 2008

USER	CPU	DISK	PRINTING	TOTAL
prof	\$ 2.50	\$ 0.00	\$ 0.00	\$ 1.00
student1	\$ 0.00	\$ 0.00	\$ 0.00	\$ 1.58
student2	\$ 2.50	\$ 0.00	\$ 0.00	\$ 0.01
student3	\$ 1.50	\$ 0.00	\$ 0.00	\$ 0.00
student4	\$ 1.00	\$ 0.00	\$ 0.00	\$ 0.04
student5	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.01
student6	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
student7	\$ 2.50	\$ 0.00	\$ 0.00	\$ 0.00
student8	\$ 2.50	\$ 0.00	\$ 0.00	\$ 0.00
student9	\$ 2.50	\$ 0.00	\$ 0.00	\$ 0.00
student10	\$ 2.50	\$ 0.00	\$ 0.00	\$ 0.00
student11	\$ 0.50	\$ 0.00	\$ 0.00	\$ 0.00
student12	\$ 2.00	\$ 0.00	\$ 0.00	\$ 0.00
student13	\$ 2.50	\$ 0.00	\$ 0.00	\$ 0.00
student14	\$ 2.50	\$ 0.00	\$ 0.00	\$ 0.00
guest1	\$ 2.32	\$ 0.00	\$ 0.00	\$ 0.00
TOTAL	\$ 27.32	\$ 0.00	\$ 0.00	\$ 27.32