Computing@MIT: Overview

Introduction to Athena

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Information Services & Technology
Agenda

• Using the MIT network (MITnet) and Securing your Data

• Computing resources offered by IS&T

• Where to go for help

• Your Athena account and the Athena environment
The Knowledge Base
Ask • Find • Share

My IT Question Search for Answers

Found 1 search result(s) for Your IT Question

http://kb.mit.edu
The MIT Network (MITnet)
The Wireless Network

• Accessible from most MIT buildings

• MIT Secure
  • Encrypted Connection
  • Authenticate with MIT email username and password

• MIT Guest
  • Limited access to MITnet
  • Intended for guests of the MIT network

Connect to MIT secure wireless
Connect to MIT secure wireless

The Knowledge Base
Ask • Find • Share

Q: How to connect to MIT SECURE wireless

Overview
The wireless network named “MIT” is a completely open network. This means that any data you transmit via the wireless network without ensuring that it’s first encrypted will be sent over the network in the clear.

IS&T recommends using MIT SECURE or MIT SECURE N instead of the regular MIT or MIT N wireless networks unless your network card, operating system or device does not support the WPA2 Enterprise security method. The MIT and MIT N networks will be phased out in 2012.

The MIT SECURE and MIT SECURE N wireless networks use the wireless protected access (WPA) protocol to encrypt all of your network traffic between your computer and the MIT wireless network controllers (in MIT server locations).

Click on the Windows Menu and select Control Panel

Type Network and Sharing in the upper right hand corner

Click Network and Sharing Center

Click Manage Wireless Networks
Computing in the Dorms

- One wired network port per MIT student
  Free ethernet cables available for students living in MIT Dorms

- Open and direct connection to the internet
  
  **There is no firewall … yet**

- At least one in each dorm:
  - *Athena Quickstation*
  - *High capacity laser printer*
MITnet Guidelines (Rules of Use)

- MIT Policies for IT use:
  [http://ist.mit.edu/about/policies](http://ist.mit.edu/about/policies)
- MITnet & Athena Rules of Use:
  [http://ist.mit.edu/services/athena/olh/rules](http://ist.mit.edu/services/athena/olh/rules)

- Some rules:
  - Don’t violate the intended use of the network
  - No extended networks (hubs, routers, switches)
  - Use bandwidth responsibly
  - Don’t violate privacy or copyright laws
Copyright & File Sharing

Copyright Frequently Asked Questions (FAQ)

• Did you know:
  – Bittorrent automatically shares your files
  – Files on sharing sites can contain viruses

• Alternatives
  – Amazon MP3 and video on demand, iTunes, LAMP
  – royalty free music, internet radio, Hulu.com
  – open source software and freeware

http://web.mit.edu/copyright
Securing Your Computer & Data at MIT
The Internet Threat

Spam
Phishing
Fraud
Weak passwords
Social engineering

MITnet

Denial of Service Attack
Virus
Trojan
Scareware
Unpatched software
Phishing & Spam

- **Phishing**: fake emails or sites claiming to be your bank, email provider, etc.
- Ignore/do not reply (and DON’T give your passwords or other personal info)

- **Spam**: unwanted, unsolicited mail
- Use Spam Quarantine service and update sender list
- Don’t contribute!
Patches & Updates

Usually happens by default… Make sure you allow it to!

- Operating System (Windows, Mac OS X updates)
- Anti-Malware and Anti-Virus

Heavily exploited

- Flash
- Java

- Microsoft Office suite
- Other third party software

http://ist.mit.edu/secure
Virus & Spyware Protection

- Sophos security software (free for MIT)
- Windows more vulnerable because of market share
- Spyware and Trojans: use additional protection such as Microsoft Security Essentials
  - Sophos malware protection free for students after July 1.
  - [http://ist.mit.edu/sophos](http://ist.mit.edu/sophos)
Theft on Campus

• More than 100 electronic devices lost/stolen each year on campus.

• Physically lock your laptop using cables/locks

• Do not leave items unattended or in an unlocked room - it only takes **60 seconds** for a thief to take your possessions

http://ist.mit.edu/secure

http://ist.mit.edu/security/support/loss
Data Protection

Back up your data

- Music, pictures, address book, email, resume, lab projects, research papers

CD/DVD writer, USB key or external HD

Athena Account space (not encrypted)

TimeMachine on OS X 10.5 and later

• Encryption

http://web.mit.edu/infoprotect/encryption.html
MIT Certificates

• Identifies you to MIT web sites
  – websis, Stellar, wikis, many more

• Unique to each browser
  – Certificates installed with Safari will not work in Firefox

Certificates at MIT

Touchstone
Your Kerberos username and password
Where to Go for Help
Residential Computing

- Residential Computing Consultants (RCCs) assigned to every dorm

- Support and advice for connecting to network, computers and other peripherals

- Submit help requests to the Residential Computing Consultants web page [http://rcc.mit.edu](http://rcc.mit.edu) or call (617) 258-9444
IS&T Help Desk - Call Center

• Technical assistance for IS&T supported products and services
• General computer help
• http://ist.mit.edu/support/servicedesk

• Hours of operation:
  – Mon-Fri, 8am - 6pm (Tuesdays 5pm)
• Contact us via phone, email or web

helpdesk@mit.edu  (617) 253-1101
IS&T Help Desk: In-Person Consultation

- Walk-in Hours (E17):
  - Mon-Fri, 9:15am - 5pm
- By appointment (one per hour) or walk in

- 15 minute problem assessment at no charge
Computer Repairs

- Hardware service contracts for Apple and Dell
- Hardware upgrades
- OS and Software installation and upgrades
- Backup and restore
- Troubleshoot and remove virus, spyware, and adware
- Software repairs are fee based ($60/hr)

Building E17, Monday - Friday 9:15AM - 5PM
Introduction to Athena
What is Athena?

• Campus-wide Linux environment
  – Based on Ubuntu Linux
• Personal file storage (AFS)
  – Personal website
  – Student group websites
• Jabber messaging systems
• Printing infrastructure
• Academic software installed in "lockers"
What is Debathena?

- The software that powers the Athena clusters
- Provides Athena services and environment on Ubuntu Linux and Debian Linux
- Flexible, customizable, easy to use
- Provides as much or as little Athena compatibility as you desire
- [http://debathena.mit.edu](http://debathena.mit.edu)
Where is Athena?

- Public clusters around campus
  - Door combination is 37619 (or swipe ID card in W20)
  - Changes once a year
    
    joeuser@athena:~$ tellme combo

- Quickstations
- Dorm clusters
- Departmental computing labs
- Athena Dialup (remote access) servers
Athena Clusters
Group Work Spaces
Laptop Stations
Finding Clusters

• Computing at MIT: The Map

  joeuser@athena:~$ xcluster
  - displays graphical map of campus with clusters

  joeuser@athena:~$ cview

  -- Cluster status as of Mon Aug 22 16:58:44 2011: --
<p>|</p>
<table>
<thead>
<tr>
<th>PC/LINUX</th>
<th>PC/LNX64</th>
<th>OTHER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLUSTER</td>
<td>fre/tot</td>
<td>fre/tot</td>
<td>fre/tot</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>BARKER5</td>
<td>-</td>
<td>4 / 5</td>
<td>-</td>
</tr>
<tr>
<td>BARKER6</td>
<td>-</td>
<td>7 / 7</td>
<td>-</td>
</tr>
<tr>
<td>M2-032</td>
<td>-</td>
<td>13 / 16</td>
<td>-</td>
</tr>
<tr>
<td>M2-225</td>
<td>-</td>
<td>10 / 13</td>
<td>-</td>
</tr>
</tbody>
</table>
Cluster Rules

• No food or drinks
  – Seriously, no food or drinks.

• No cellphones, music, or loud conversations

• You cannot leave a workstation unattended for long simulations
  – After 20 minutes, you can be logged out if the cluster is full and you’re not there

• Save your work early & often

• Activate the screensaver if you need to leave the cluster briefly

• Clean up after yourself
Cluster Computers

- Please don't power off, unplug, or rearrange equipment

- Broken equipment? E-mail hotline@mit.edu
Your Athena username

- Also called your Kerberos principal
- Your e-mail address without the @mit.edu part
  - `username@mit.edu`
- Cannot be changed
- May be different from departmental username
  - `username@math.mit.edu`
  - `username@sloan.mit.edu`
Your Kerberos password

- Used to log in to Athena, check e-mail
- Can (and should) be changed frequently
  - Once a term is a good guideline
    - `$ passwd`
- Use a strong password
  - Not boyfriend/girlfriend's name
  - A combination of letters, numbers, punctuation, and symbols
Welcome to Athena

This workstation is running the newest release of Debethena. For more information, visit http://debethena.mit.edu/precise

Attention: Use of Athena facilities is restricted to MIT students, faculty, staff, and other Athena account owners.
Logging In

• Enter your username, and press Enter

• Other session types:
  – "Athena TTY (Terminal) Session"
  – "Login Without Customizations"
Your Login Environment
Launcher

- Lens ("Start Menu")
- Home directory
- Firefox
- LibreOffice Writer ("Word")
- LibreOffice Excel ("Excel")
- LibreOffice Impress ("PowerPoint")
- Software Center
- System Settings
- Current application (Terminal)
- Workspaces
- Trash
Launcher

• White triangles on the left indicate the active application; triangles on the right indicate the number of open windows

• Right-click on launcher icons to open applications or perform other actions
  – "Lock" items to launcher to keep them there.
  – "Unlock" to remove them.
  – Click and hold, then drag to re-arrange
Launcher

- The Lens (Ubuntu logo) lets you launch other programs
- Click, and begin typing the name of the program, then select the program you want from the resulting list
Launcher

- At the bottom of the lens window, you can browse various file types, including applications.
Logging Out

- Always log out
  - "Log Out" from the power menu
- or `logout` in the Terminal
The Screensaver

- Lock your screen when you step away
- Unlock when you return
- "Log Out" button will appear after 20 minutes of idle time
Menubars

• Name at top left of screen indicates active application

• Menubars are shared across all applications, at the top of the screen

• …but they're hidden until you move the mouse to the top of the window
File Management

• "Go" menu
  – Access home folder and other folders
• Or "Home" folder in launcher
Nautilus File Browser
AFS

- World-wide distributed filesystem
- Your personal home directory:
  - /afs/athena.mit.edu/user/j/o/joeuser
  - /mit/joeuser
- 2 GB of quota for your home directory
- Default subdirectories
  - Private, Public, www, OldFiles
- Automatically backed up
  - OldFiles is a nightly snapshot
Lockers

• Collections of software or files in AFS
• Your home directory is also a locker with your username
• Lockers are available under the /mit path
  
  • $ ls /mit/janeuser
  
  • $ cp /mit/janeuser/shared/report.doc ~

• Add lockers to run software
  
  • $ add matlab
  $ matlab &
Jabber

- Chat with MIT users and other Jabber users (Gmail Chat)
- Use the Pidgin client
Jabber

• Your Jabber ID is username@mit.edu
  – Account automatically configured in Pidgin

• Buddies must authorize each other in order to see their login status

• The Pidgin client can also be used for AOL (AIM), ICQ, MSN Messaging, IRC, and Yahoo chat
  – Select Manage Accounts from the Accounts menu
Remote Access to Athena

• Athena "dialup" servers
  – athena.dialup.mit.edu is a load balancer directing you to the server with the least load
  – ftp.dialup.mit.edu, x.dialup.mit.edu are the same servers

• Connect using SSH for login sessions
  – With optional X11 forwarding

• Connecting using SCP, SFTP, or Kerberized FTP for file transfer
Remote Login to Athena: Mac OSX

• Use the **Terminal** application to connect to Athena for a terminal-style login session

```
$ ssh joeuser@athena.dialup.mit.edu
```

• Use the **X11** application to connect to Athena and run graphical applications (e.g. MATLAB, Maple, etc)

```
$ ssh -Y joeuser@athena.dialup.mit.edu
```
Remote Login to Athena: Windows

- Use the **SecureCRT** (download from IS&T website) to connect to Athena for a terminal-style login session.

![SecureCRT Connection to Athena](image)
Remote Login to Athena: Windows

- Use the **X-Win32** (download from IS&T website) to connect to Athena and run graphical applications
Transferring Files to/from AFS

• Secure FTP clients
  – Windows: **SecureFX**
  – Mac OS X: **Fetch**

• Recordable CDs and DVDs
  – Insert a blank disc to launch CD/DVD creator

• Public files can be downloaded via the web

• USB flash drives (“thumb drives”)
E-Mail (http://owa.mit.edu)

- 2 GB quota
- Attachments limited to 25MB, some file types prohibited (.exe)

- Spam Quarantine Service
  - You will get an email every day with a list of mail it thinks is spam.
  - You can “release” valid messages, which will then appear in your INBOX

- Deleted messages **purge** after 14 days
LibreOffice (a.k.a. OpenOffice)

• Similar to Microsoft Office
• Can open and save
  – PowerPoint
  – Excel
  – Word
• Save files in Microsoft formats (.doc, .xls, .ppt) in order to use them with Microsoft Office
Help with Athena

• Web-based tutorials
  – http://ist.mit.edu/services/athena/olh

• Athena Consulting/OLC
  – http://ist.mit.edu/support/olc

• Answers to common questions
  – http://kb.mit.edu
Questions?

- Any questions?

- This presentation is online at: