



Information Services  
and Technology

Computing@MIT: Overview

Introduction to Athena

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Information Services & Technology

# Agenda

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- 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

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My IT Question

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KB

**<http://kb.mit.edu>**

# The MIT Network (MITnet)

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# The Wireless Network

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- 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

KB

Connect to MIT secure wireless



How to connect to MIT SECURE wireless (Hermes)

http://kb.mit.edu/confluence/display/istcontrib/How+to+connect+to+MIT+SECURE+wireless

MIT Home Login for more

## The Knowledge Base

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Created: 08/19/2010 01:19  
 Modified: 05/08/2012 08:49

### Q:How to connect to MIT SECURE wireless

On this page:

[Overview](#)

[Answer](#)

[Windows XP](#)

[Windows 7](#)

[Mac OS X](#)

[Ubuntu Linux](#)

[Mobile Devices](#)

[See Also:](#)

### 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).

Windows 7 - How to connect to MIT SECURE wireless (Hermes)

http://kb.mit.edu/confluence/display/istcontrib/Windows+7+...

Google Maps YouTube Wikipedia News (545) Popular

## Windows 7

Windows 7 should automatically configure most settings for MIT SECURE without a problem. You may receive an error message about a Windows Security Alert. Please see the following article for more information: <http://kb.mit.edu/confluence/x/NYV2>

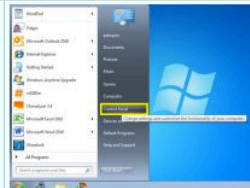
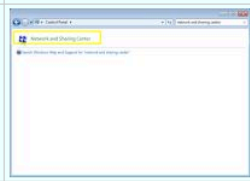
If you are having trouble with connecting to MIT SECURE, please follow the directions below.

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

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- One wired network port per MIT student

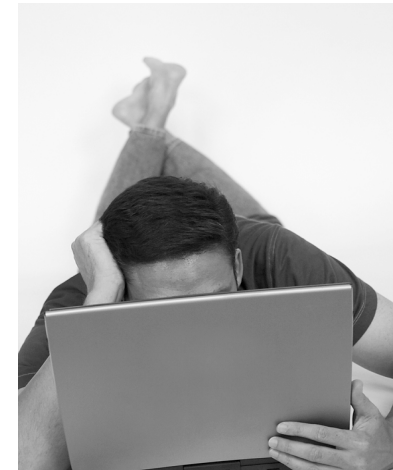


Free ethernet cables available for students living in MIT Dorms

- 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)

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- MIT Policies for IT use:

<http://ist.mit.edu/about/policies>

- MITnet & Athena Rules of Use:

<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

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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



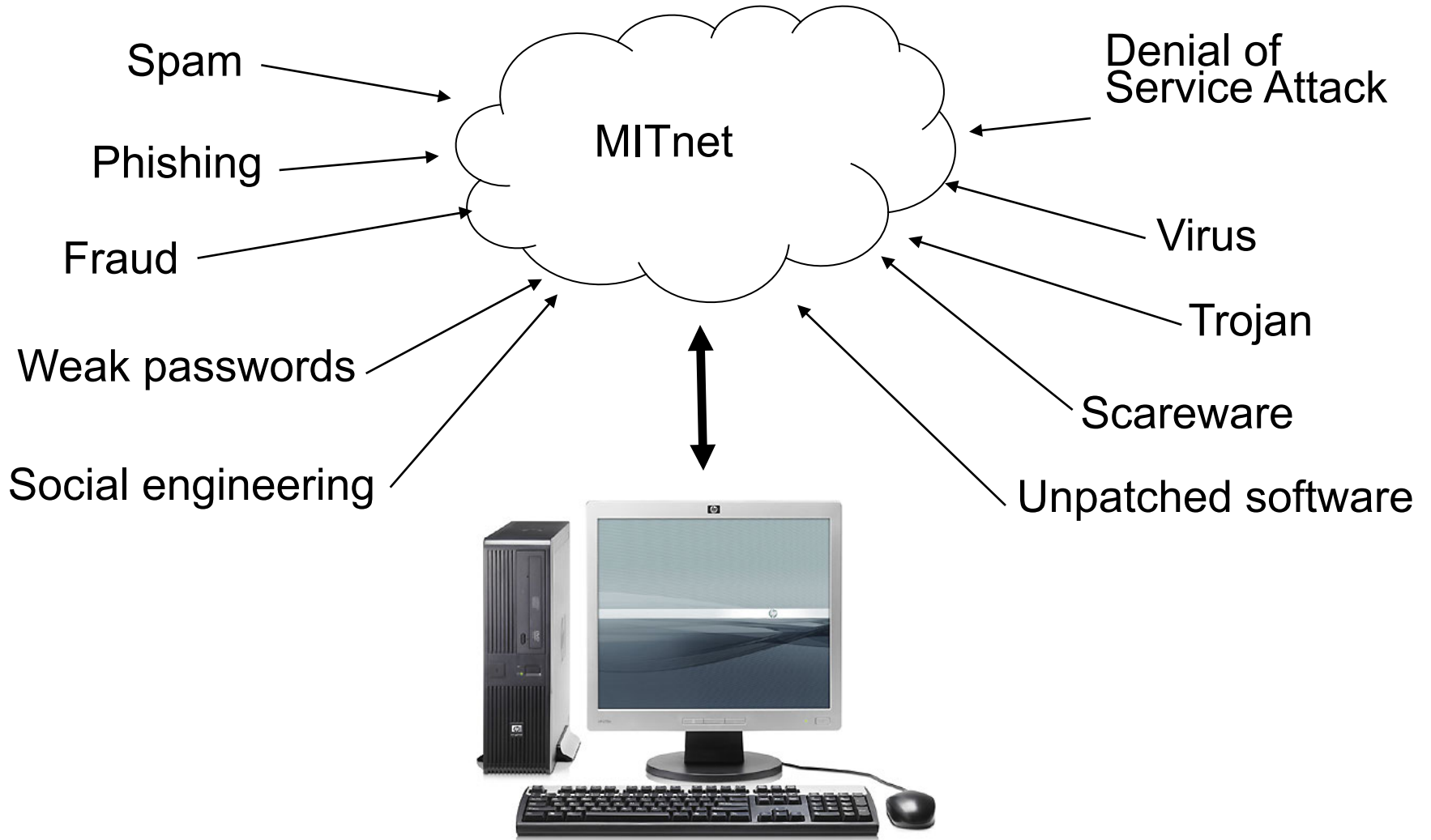
<http://web.mit.edu/copyright>

# Securing Your Computer & Data at MIT



# The Internet Threat

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# Phishing & Spam

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- **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!

<http://ist.mit.edu/secure>

KB

Phishing or Spam

# Patches & Updates

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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

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- 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/secure>



# Theft on Campus

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- 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/security/support/loss>

<http://ist.mit.edu/secure>

# Data Protection

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## 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>



<http://ist.mit.edu/secure>



# MIT Certificates

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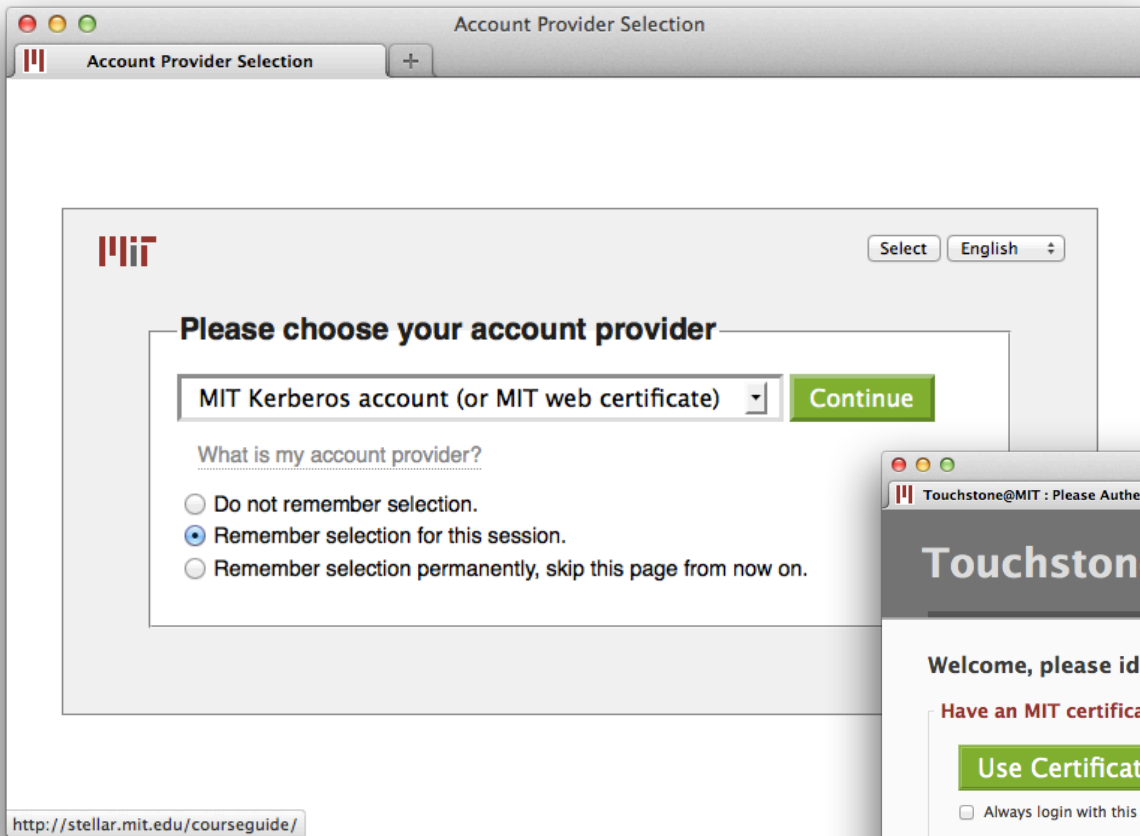
- Identifies you to MIT web sites
  - webspis, Stellar, wikis, many more
- Unique to each **browser**
  - Certificates installed with Safari will not work in Firefox

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Certificates at MIT

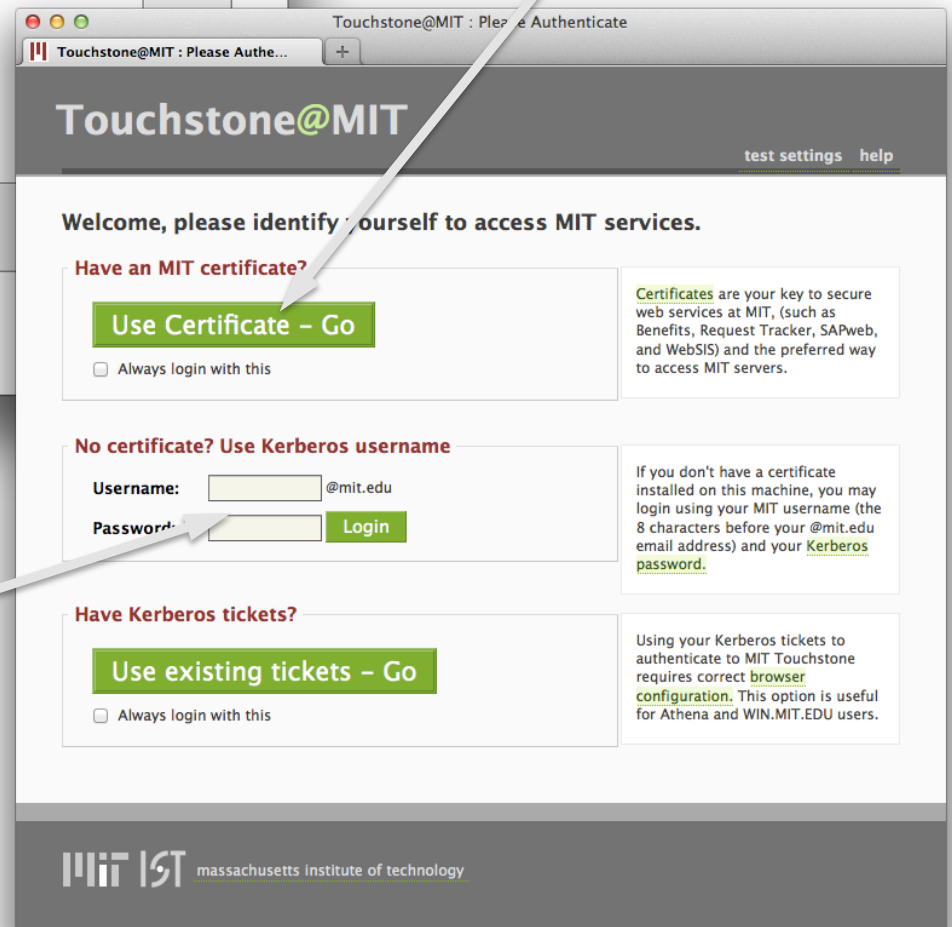
## Touchstone

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# MIT Certificates

Your Kerberos  
username and  
password



# Where to Go for Help



# Residential Computing

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- 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> or call (617) 258-9444

KB

Residential Computing

# IS&T Help Desk - Call Center

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- 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](mailto: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

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- 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?

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- 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?

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- 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>



# Where is Athena?

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- 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

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# Finding Clusters

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- 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:  --
          PC/LINUX  PC/LNX64  OTHER      TOTAL
CLUSTER  fre/tot    fre/tot    fre/tot    fre/tot
-----
BARKER5   -          4 / 5      -          4 / 5
BARKER6   -          7 / 7      -          7 / 7
M2-032    -         13 / 16    -         13 / 16
M2-225    -         10 / 13    -         10 / 13
```

# Cluster Rules

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- 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

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- Please don't power off, unplug, or rearrange equipment
- Broken equipment? E-mail [hotline@mit.edu](mailto:hotline@mit.edu)



© 1999, Twentieth Century Fox

# Your Athena username

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- 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

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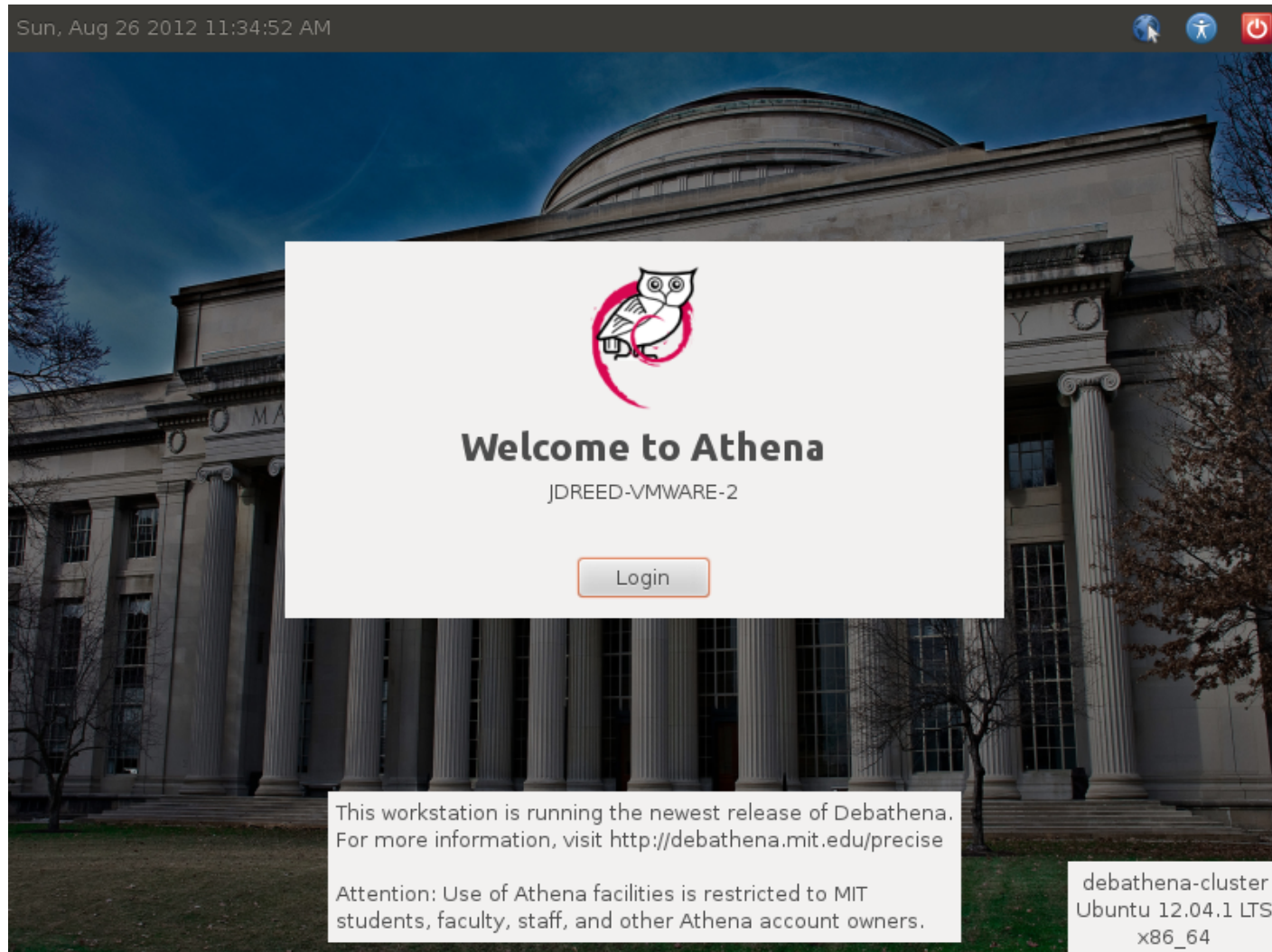
- Used to log in to Athena, check e-mail
- Can (and should) be changed frequently
  - Once a term is a good guideline
    - `$ passwd`

- Use a strong password

 boyfriend/girlfriend's name

 combination of letters, numbers, punctuation, and symbols

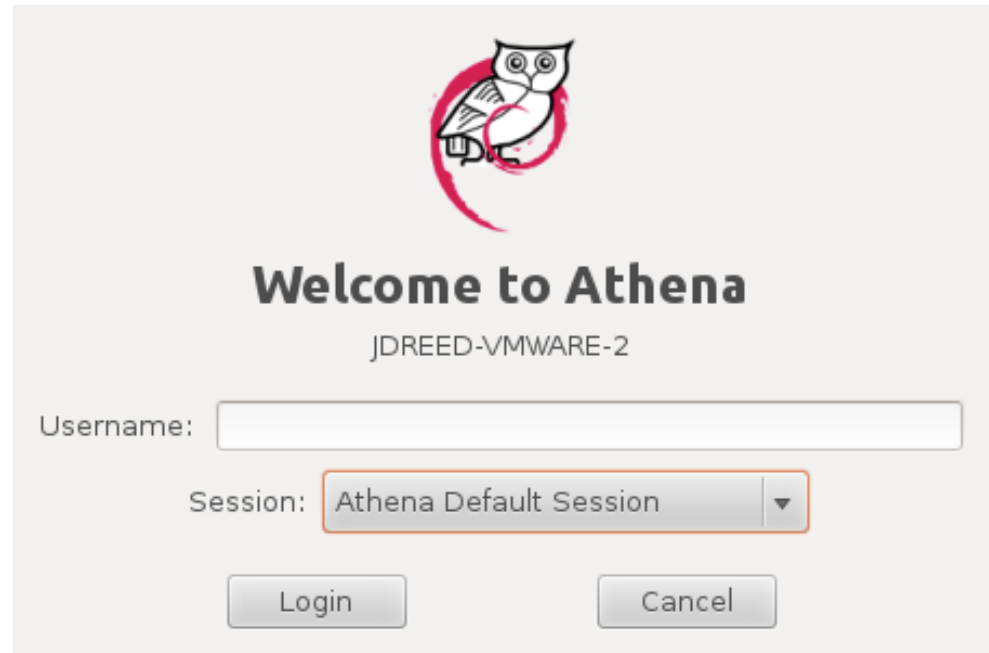
# Athena Login Screen



# Logging In

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- Enter your username, and press Enter

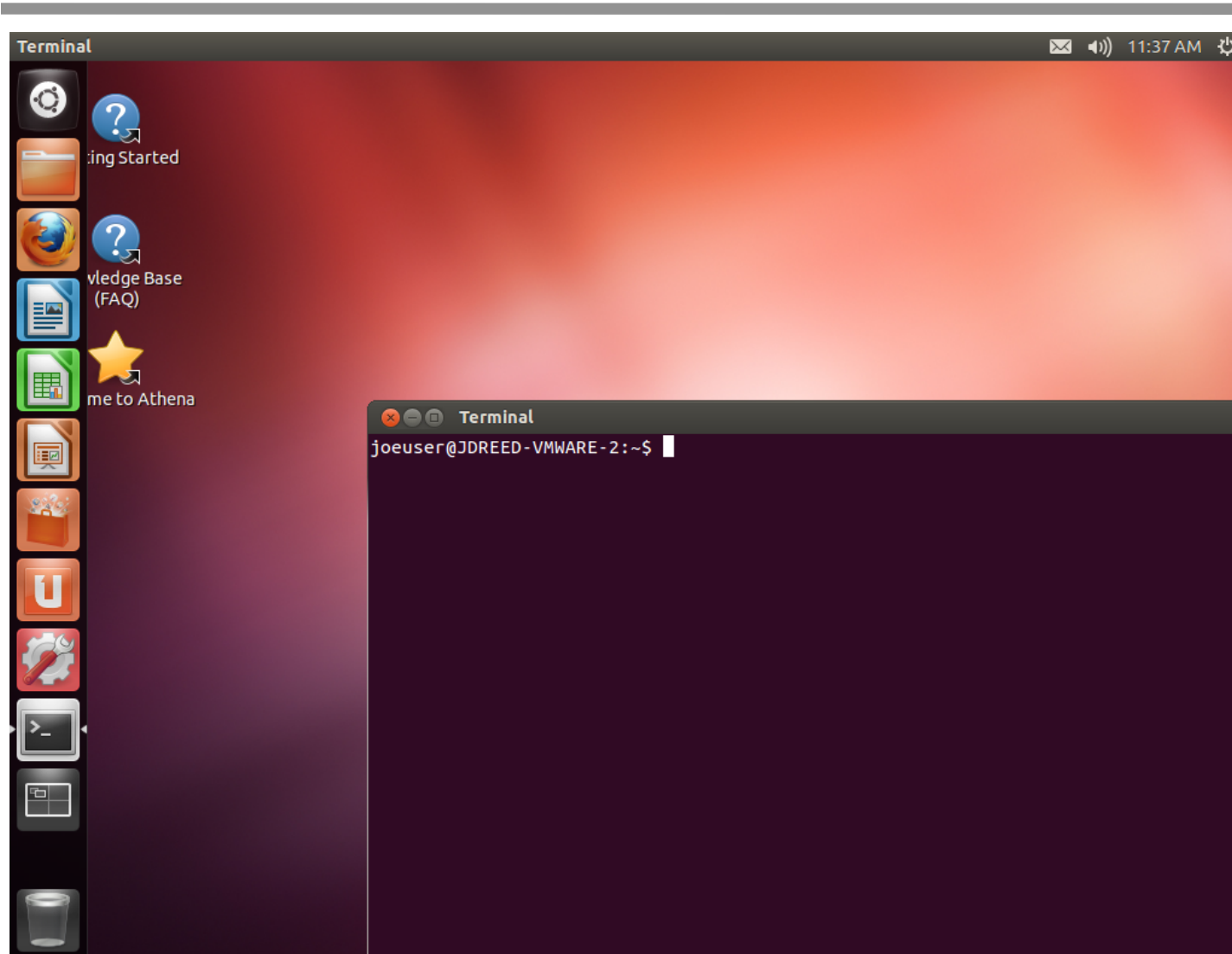


Username:

Session:

- Other session types:
  - "Athena TTY (Terminal) Session"
  - "Login Without Customizations"

# Your Login Environment



# Launcher

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- Lens ("Start Menu")
- Home directory
- Firefox
- LibreOffice Writer ("Word")
- LibreOffice Excel ("Excel")
- LibreOffice Impress ("PowerPoint")

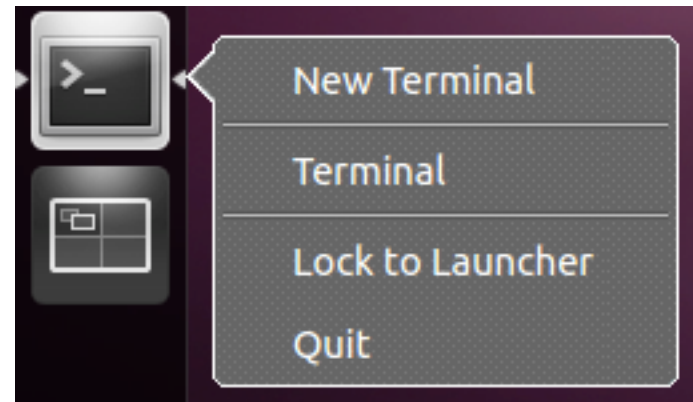


- Software Center
- System Settings
- Current application (Terminal)
- Workspaces
- Trash

# Launcher

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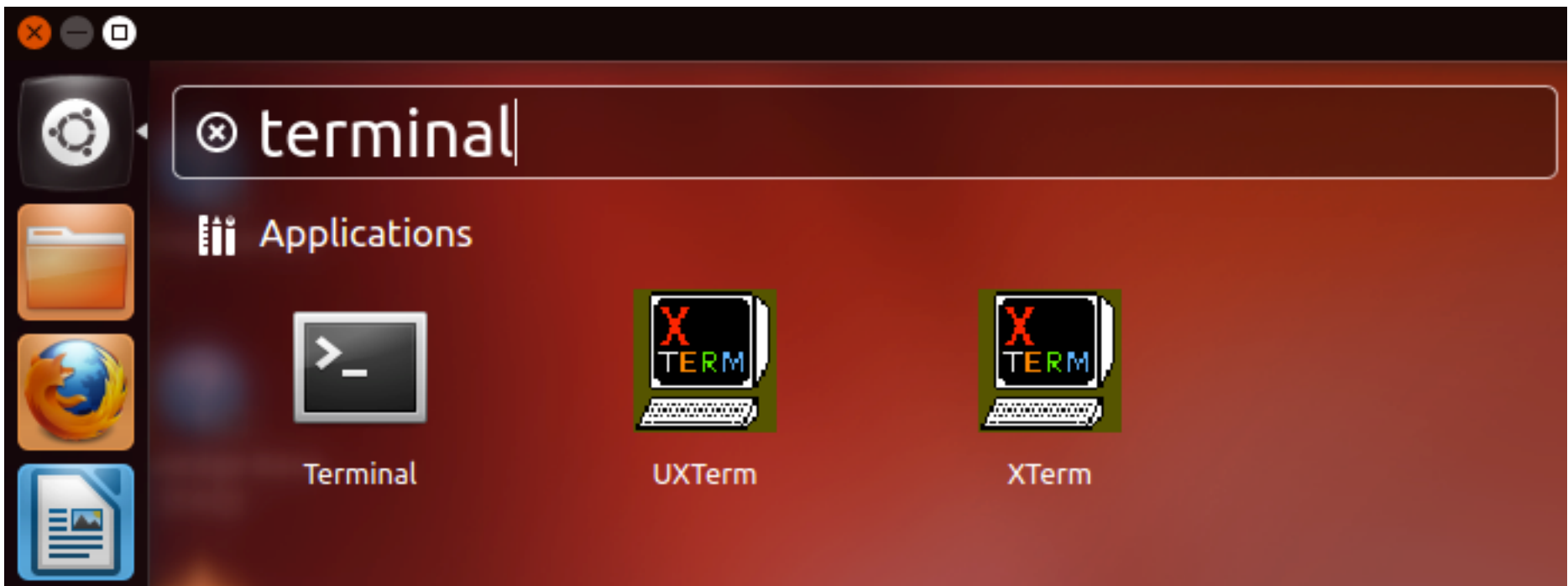
- White triangles on the left indicate the active application; triangles on the right indicate the number of open windows
- Right-click on launcher icons to open applications or perform other actions
  - "Lock" items to launcher to keep them there.
  - "Unlock" to remove them.
  - Click and hold, then drag to re-arrange



# Launcher

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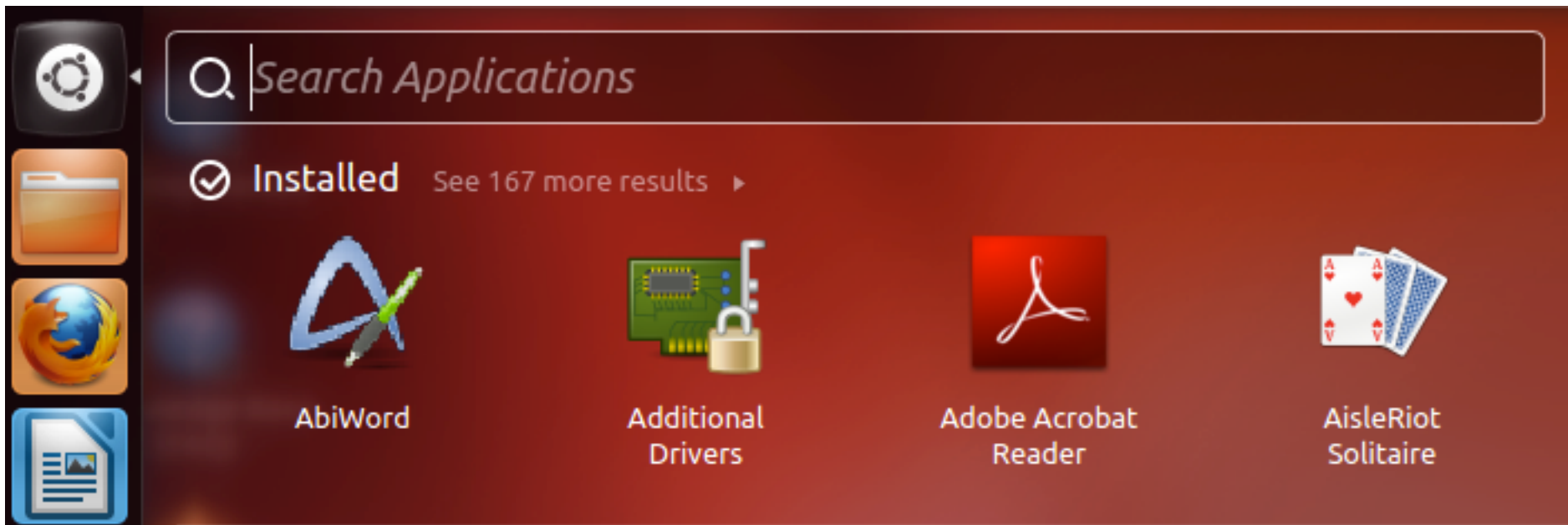
- The Lens (Ubuntu logo) lets you launch other programs
- Click, and begin typing the name of the program, then select the program you want from the resulting list



# Launcher

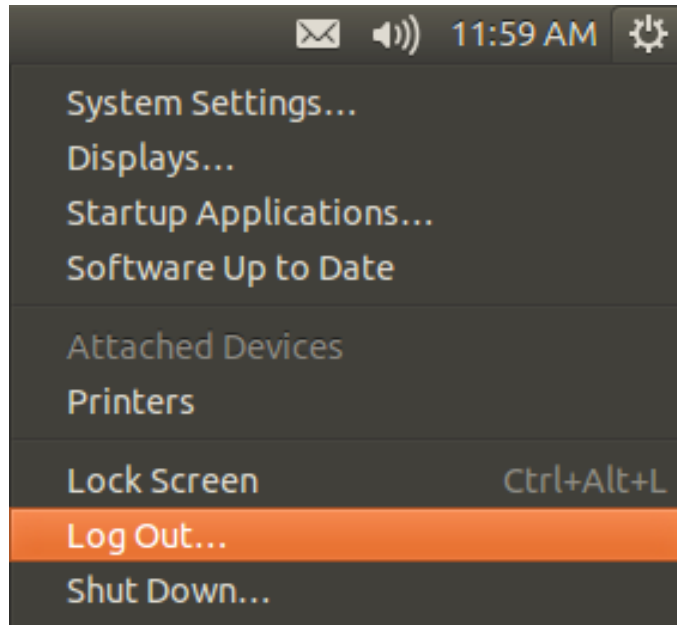
---

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

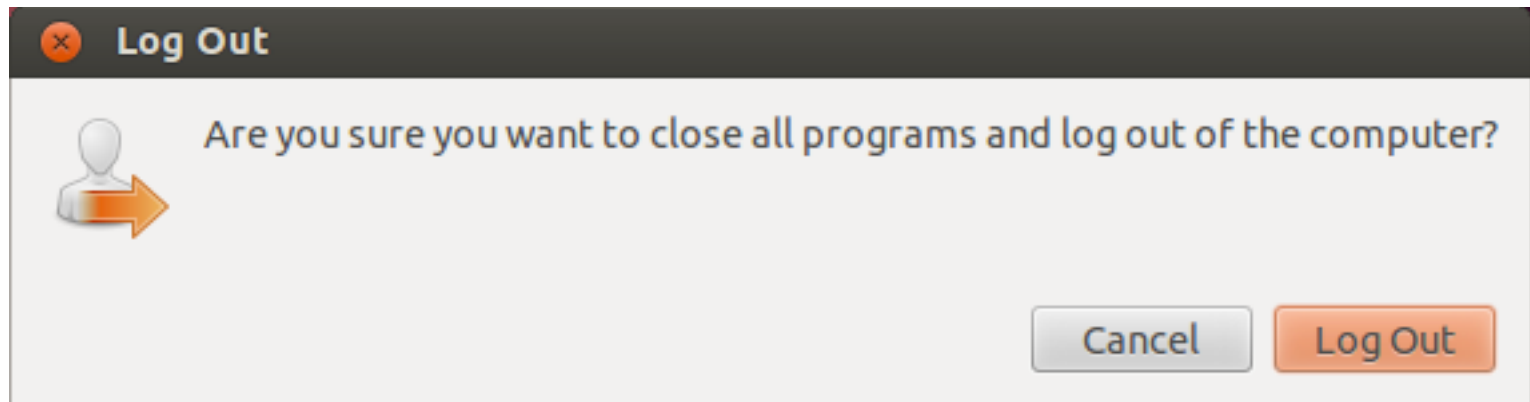


# Logging Out

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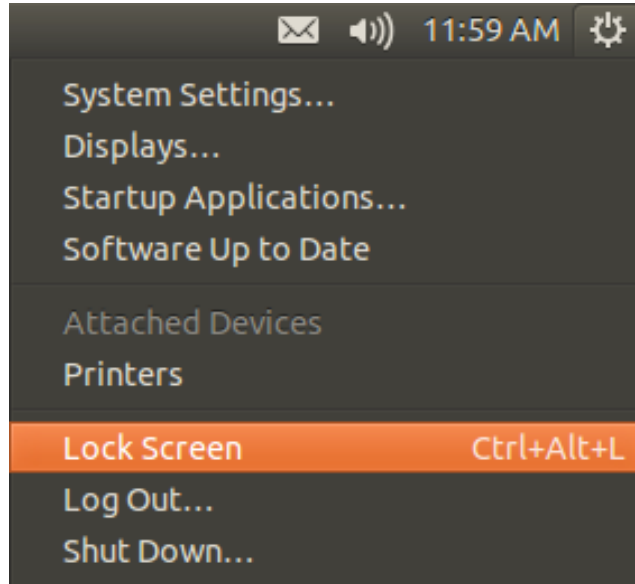
- Always log out
  - "Log Out" from the power menu
  
- or `logout` in the Terminal



# The Screensaver

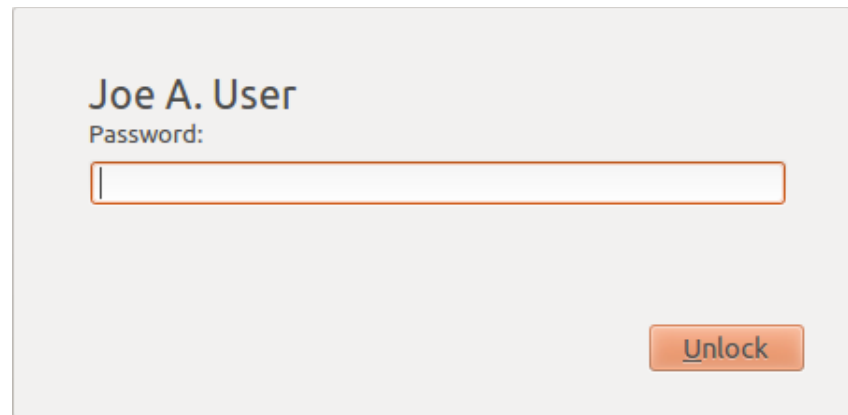
---

- Lock your screen when you step away



- "Log Out" button will appear after 20 minutes of idle time


- Unlock when you return



# Menubars

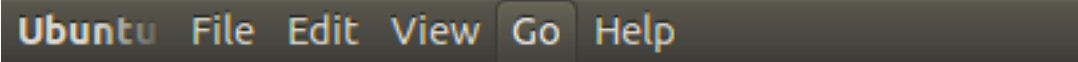
---

- Name at top left of screen indicates active application
- Menubars are shared across all applications, at the top of the screen



Ubuntu Desktop

- ...but they're hidden until you move the mouse to the top of the window



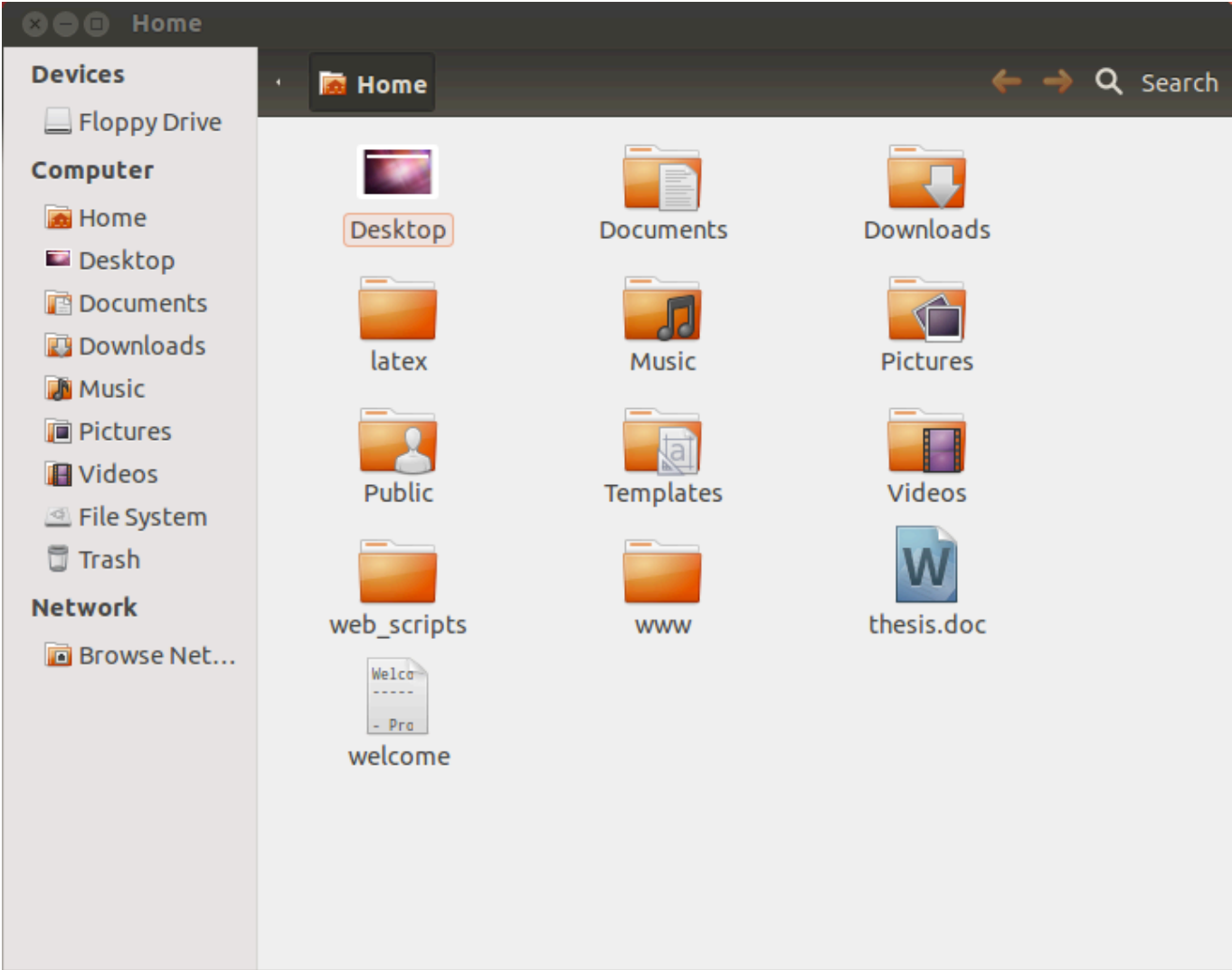
Ubuntu File Edit View Go Help

# File Management

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- "Go" menu
  - Access home folder and other folders
- Or "Home" folder in launcher

# Nautilus File Browser



# AFS

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- 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

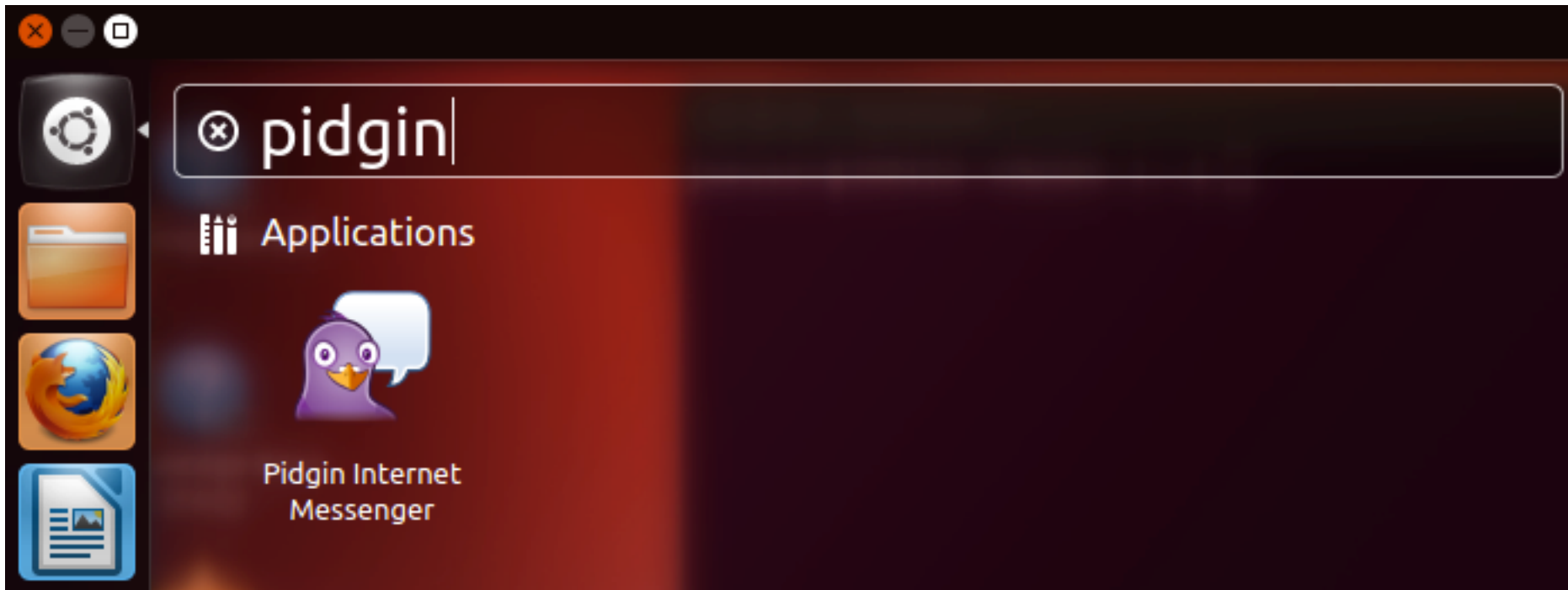
---

- 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

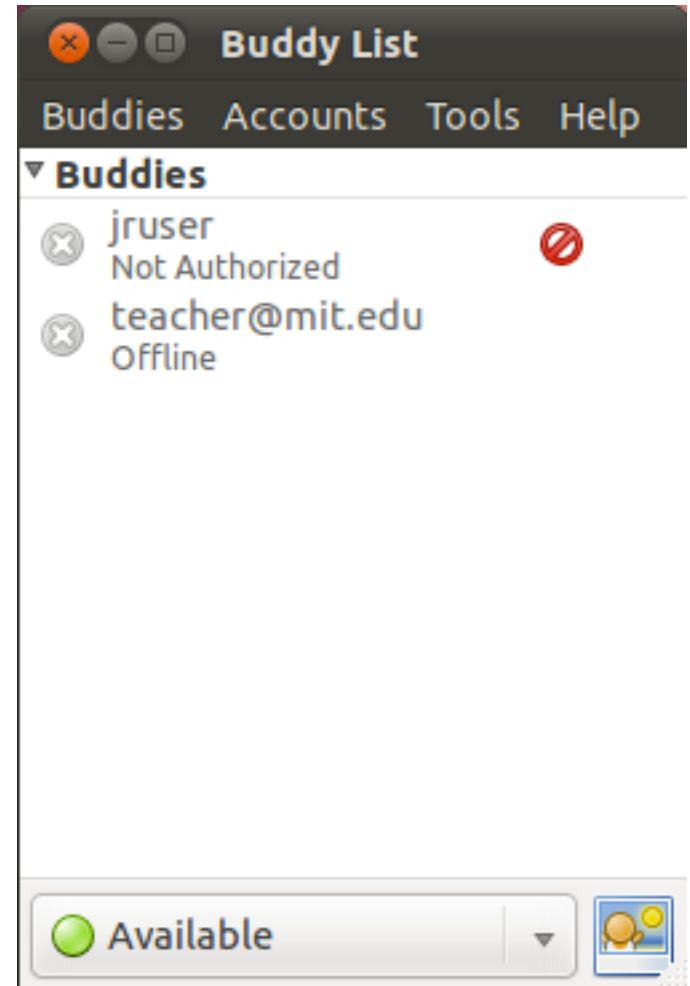
---

- 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



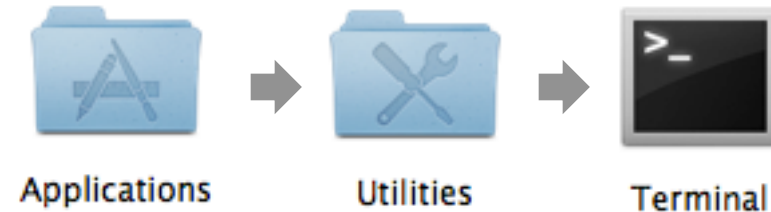
# Remote Access to Athena

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- 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

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

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

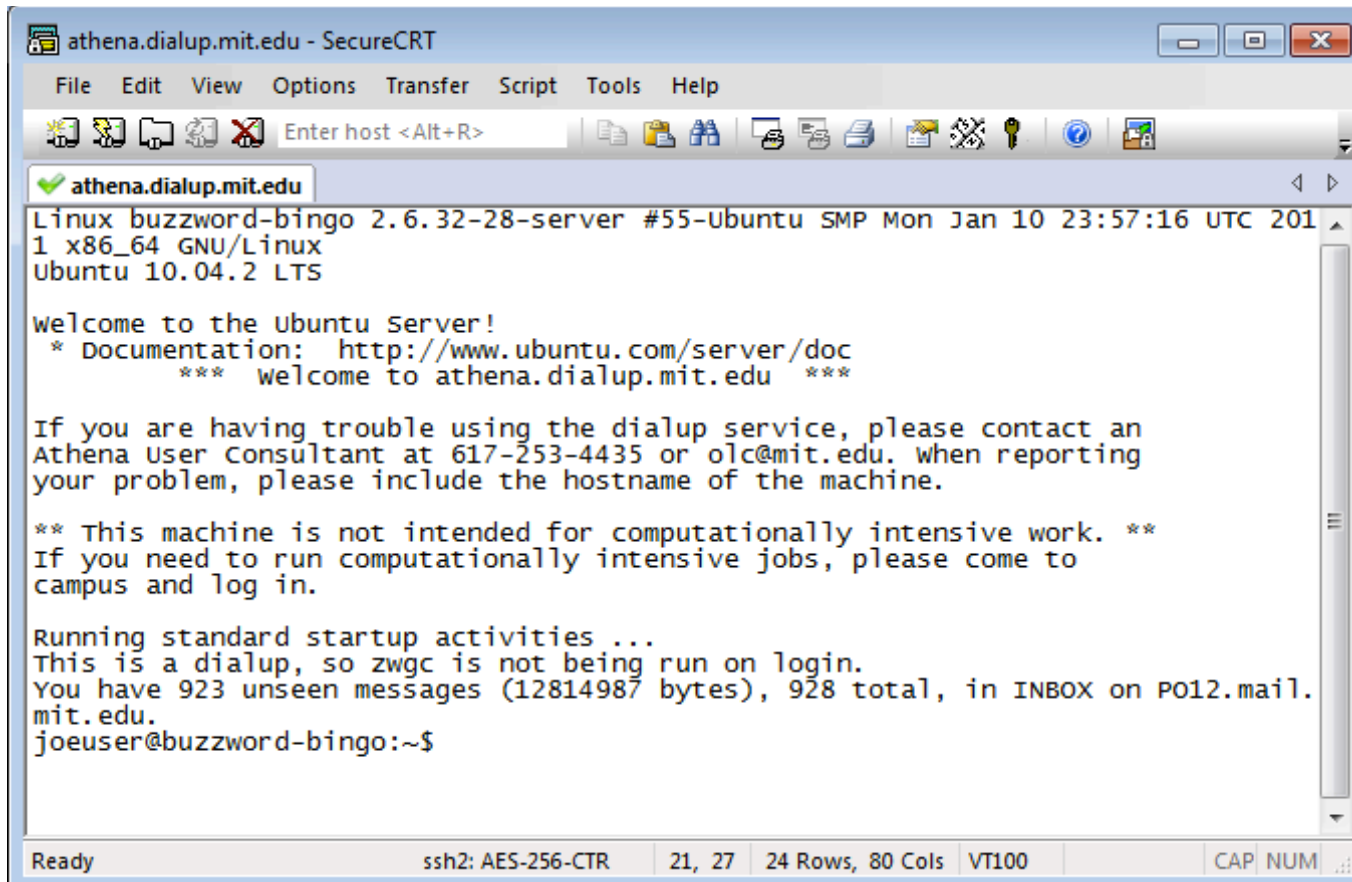


- Use the **X11** application to connect to Athena and run graphical applications (e.g. MATLAB, Maple, etc)

```
$ 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



```
athena.dialup.mit.edu - SecureCRT
File Edit View Options Transfer Script Tools Help
Enter host <Alt+R>
athena.dialup.mit.edu
Linux buzzword-bingo 2.6.32-28-server #55-Ubuntu SMP Mon Jan 10 23:57:16 UTC 201
1 x86_64 GNU/Linux
Ubuntu 10.04.2 LTS

welcome to the Ubuntu Server!
* Documentation: http://www.ubuntu.com/server/doc
*** welcome to athena.dialup.mit.edu ***

If you are having trouble using the dialup service, please contact an
Athena User Consultant at 617-253-4435 or o1c@mit.edu. When reporting
your problem, please include the hostname of the machine.

** This machine is not intended for computationally intensive work. **
If you need to run computationally intensive jobs, please come to
campus and log in.

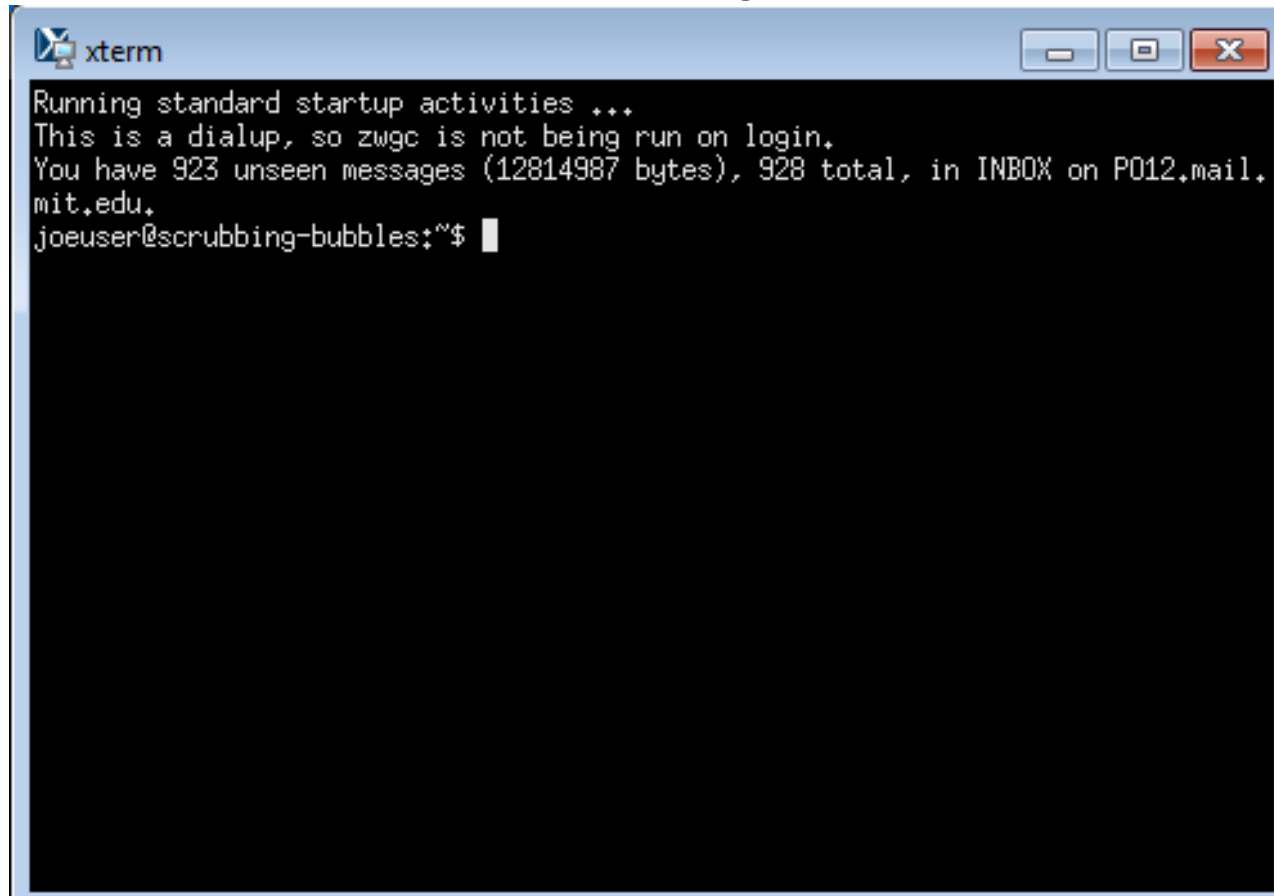
Running standard startup activities ...
This is a dialup, so zwgc is not being run on login.
You have 923 unseen messages (12814987 bytes), 928 total, in INBOX on PO12.mail.
mit.edu.
joeuser@buzzword-bingo:~$

Ready          ssh2: AES-256-CTR    21, 27    24 Rows, 80 Cols    VT100    CAP NUM ..
```

# Remote Login to Athena: Windows

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



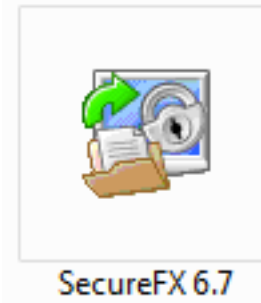
```
xterm
Running standard startup activities ...
This is a dialup, so zwc is not being run on login.
You have 923 unseen messages (12814987 bytes), 928 total, in INBOX on P012.mail.
mit.edu.
joeuser@scrubbing-bubbles:~$
```

# Transferring Files to/from AFS

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- 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”)



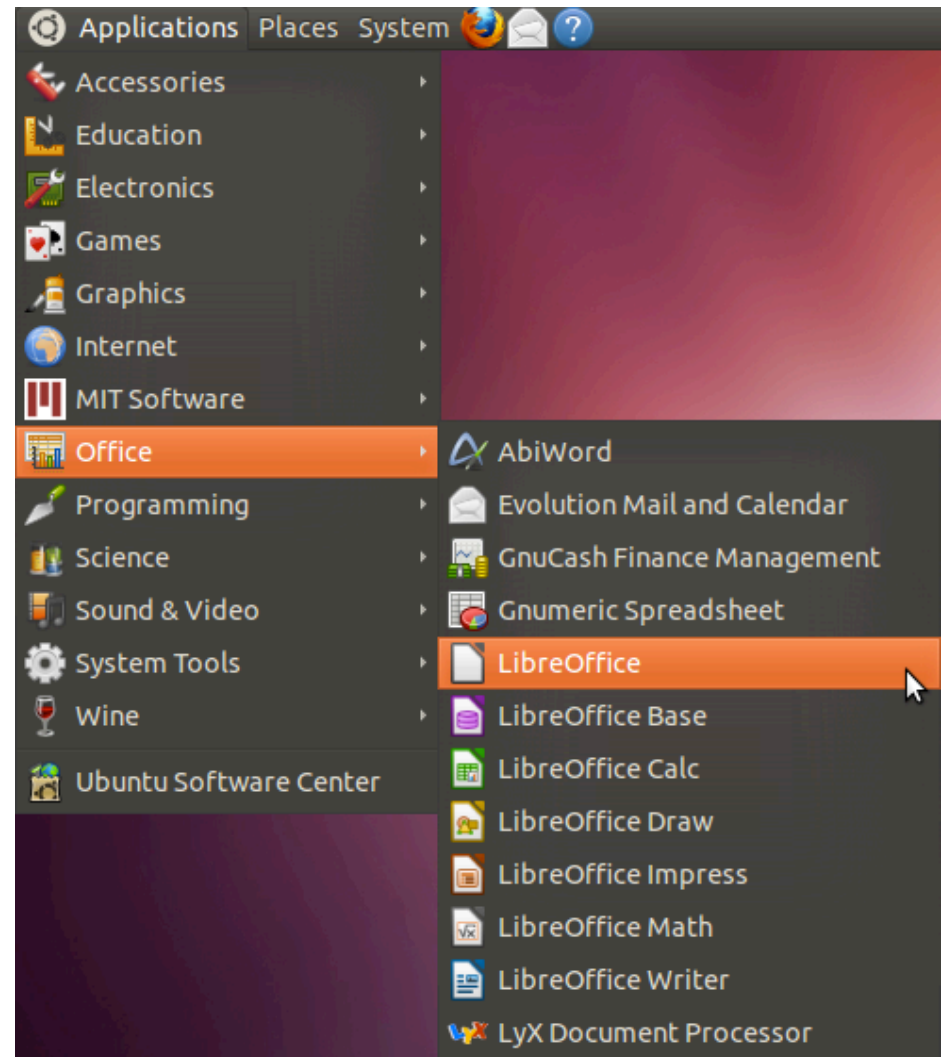
# E-Mail (<http://owa.mit.edu>)

---

- 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

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- 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?

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- Any questions?
  
- This presentation is online at:
  - <http://mit.edu/ist/helpdesk/mites-2014.pdf>