

### What is Athena?

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- Campus-wide UNIX/Linux environment
- Kerberos authentication system
- AFS distributed filesystem
- Zephyr messaging system
- Large collection of software available in “lockers”
- Personal storage and web space
- Printing infrastructure
- Consistent work environment across different workstations



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### Where is Athena?

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- Public clusters around campus
  - Door combination is 58489
  - Changes once a year  
`athena% tel1me combo`
- Quickstations
- Dorm clusters
- Departmental labs
- Your own PC with Linux-Athena installed



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### Why should you use it?

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- Access to academic software
  - Maple, MATLAB, Mathematica, ChemDraw, AutoCAD, much more
- 1 GB of personal storage/web space, backed up nightly
- Easy collaboration and group storage via AFS file system
- Familiarity with a UNIX-type environment can be helpful for many jobs/internships
- Consistent environment



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### 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 your departmental username
  - @sloan.mit.edu
  - @media.mit.edu
  - @math.mit.edu

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### 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
  - athena% **passwd**
- Use a strong password
  - boyfriend/girlfriend's name = bad
  - Combination of letters, numbers, and punctuation or symbols = good

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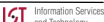
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### When to share your password

- ~~A friend needs files from your account~~
- ~~Your parents want to read your e-mail~~
- ~~The Registrar needs it for your classes~~
- ~~IS&T needs it to help fix a problem in your account~~
- NEVER!
- No one (besides you) needs to know your password
- No legitimate MIT office or group will ask for or need your password

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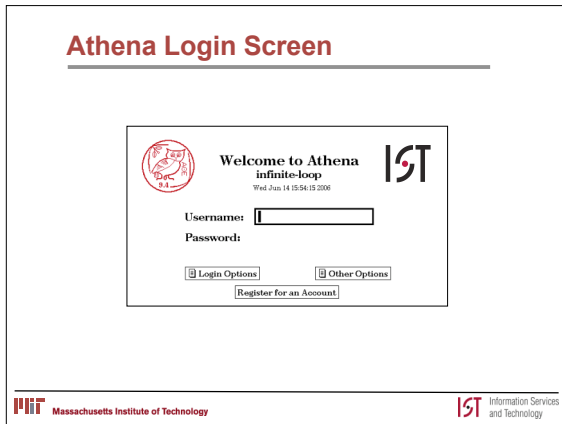
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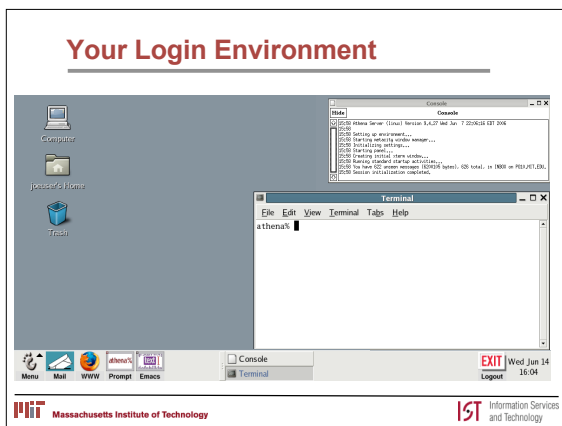
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### Finding Clusters & Printers

- athena% xcluster
- athena% cview
- athena% cview printers

```

-- Cluster status as of Wed Jun 14 16:29:22 2006: --
CLUSTER  SUN/B100  SUN/B1500  PC/LINUX  OTHER  TOTAL
         fre/tot  fre/tot    fre/tot   fre/tot  fre/tot
-----
BARKER5  -          5 / 6     -         -       5 / 6
M1-142   10 / 10   5 / 5     9 / 10   -       24 / 25
M66-080  7 / 8    0 / 1     9 / 13   -       16 / 22
    
```

```

-- Printer status as of Wed Jun 14 16:30:22 2006: --
PRINTER  CLUSTER  STATUS  JOBS  PRINTER  CLUSTER  STATUS  JOBS
-----
barker   BARKER6  up      0     bob      M1-142   up      0
plato    M1-142   up      6     colfu    M2-032   down    0
celine   M2-225   up      0     sanda    M4-167   up      0
    
```

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### Cluster Rules

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- No food or drink
- You cannot “reserve” a workstation by staying logged in
  - Except in 37-332 and 37-318, with some caveats
  - After 10 minutes of being idle, a screensaver activates
  - After 10 more 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
  - athena% **xlock**
  - Choose “Lock Screen” from the “foot” menu



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### More Rules

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- MITnet and Athena Rules of Use
  - <http://web.mit.edu/olh/Rules/>
- MIT Stopit
  - <http://web.mit.edu/stopit/>
  - Can help if another MIT user is harassing you electronically
  - Also handles copyright violations



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### Common Software

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- Mozilla Firefox web browser
- Evolution e-mail client
- OpenOffice office suite
- Acrobat Reader PDF viewer
- Nautilus File Manager & CD burning



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## More Software

- What Runs Where
  - <http://web.mit.edu/acs/www/whereruns.html>
  - What's available and how to use it
- Student Information Processing Board (SIPB)
  - Student group
  - Maintains 'sipb' and 'outland' lockers, among others
  - Not really supported by IS&T - contact SIPB instead

## UNIX Command Line

- Terminology
  - Directory = folder
  - Athena prompt/shell prompt = athena%
- Basic Commands
  - Shown on next slide
  - In general, type a command, then press Enter/Return

## UNIX Command Line

<code>ls</code>	List contents of current directory
<code>pwd</code>	Show name of current directory
<code>cd ..</code>	Go back/up one level
<code>mkdir directoryname</code>	Create the directory <i>directoryname</i>
<code>cd directoryname</code>	Change current directory to <i>directoryname</i>
<code>cp file1 file2</code>	Copy <i>file1</i> to a new file called <i>file2</i>
<code>cp file1 directoryname</code>	Copy <i>file1</i> to the directory <i>directoryname</i>
<code>mv file1 file2</code>	Move (rename) <i>file1</i> to a new file called <i>file2</i>
<code>mv file1 directoryname</code>	Move <i>file1</i> into the directory <i>directoryname</i>
<code>delete file1</code>	Mark <i>file1</i> for deletion, will be deleted in 3 days
<code>undelete file1</code>	Restore the previously deleted file <i>file1</i>

### Nautilus File Manager

- “Computer” and “username’s Home” icons on Desktop
- Works somewhat like Windows Explorer or Macintosh Finder
- Useful for managing files without the command line
- Can also be used to easily create CD-R or CD-RW discs



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### Kerberos

- Authentication system developed at MIT
- Your password is used to obtain ‘tickets’, which are in turn used to identify you to various services
- Tickets last 10 hours, at which point they must be renewed
- Allows you to use many services without typing your password each time
- Tickets obtained automatically at login



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### AFS

- World-wide distributed filesystem
- Your personal home directory:
  - /afs/athena.mit.edu/user/j/tr/jruser
- Can be accessed via the web, AFS clients, secure FTP clients
- 1 GB of quota for your home directory
- Default subdirectories
  - Private, Public, www, OldFiles
- Automatically backed up
  - OldFiles is a nightly snapshot



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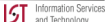
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**Lockers**

- Collections of software or files in AFS
- Your home directory is also a locker with your username
- Lockers need to be “attached” in order to use them
- Your home directory is attached by default
- Attach your friend’s locker
  - athena% **attach janeuser**
- Add lockers to run software
  - athena% **add ooffice**
  - athena% **ooffice &**
- Lockers available under /mit/lockername

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**Your web space**

- /mit/username/www
- Accessible via <http://web.mit.edu/username/www/>
- Do not violate copyright laws or harass others
- CGI, PHP, etc will not work
  - SIPB has a service - <http://scripts.mit.edu>
- HTTP password protection does not work
  - Can be restricted to MIT users via certificates
  - SIPB has a service for password protection

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**Permissions in AFS**

- Permissions are set with a combination of up to 7 “rights”
  - **R**ead, **L**ist, **I**nsert, **D**elete, **W**rite, **l**oc**K**, **A**dminister
  - Represented by the boldface letters above
  - Or use the words “read”, “write”, “all”, and “none”
- All permissions are on a per-directory basis, not per-file
- Special users:
  - system:anyuser - anyone, including web users
  - system:expunge - the automated expunger for deleted files
- If you want a directory to be shared via the web, all directories that contain it must be “listable” by “system:anyuser”

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## Assigning Permissions

- You're working with janeuser, billuser, and bobuser

```
athena% mkdir group-project
athena% fs sa group-project janeuser write
athena% fs sa group-project billuser read
athena% fs sa group-project bobuser read
```

- bobuser just dropped the class

```
athena% fs sa group-project bobuser none
```

- Permissions are inherited

- To view permissions

```
athena% fs la group-project
Access list for group-project is
Normal rights:
system:expunge ld
system:anyuser l
joeuser rldwka
janeuser rldwk
billuser rl
```

## Zephyr

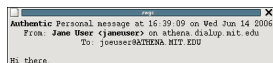
- Instant messaging with other MIT users and other Zephyr sites (CMU, etc)
- Ad-hoc discussion groups
  - Everything from politics and Red Sox scores to help from your TA or professor
- Get notified when your friends log in and out
- Get notifications of cluster closings or service outages

## Zephyr examples

- What you type:

```
athena% zwrite joeuser
Type your message now. End with control-D or a dot on a line by itself.
Hi there.
Message queued for joeuser... sent
```

- What they see:



```

Authentic Personal message at 16:39:09 on Wed Jun 14 2006
From: Joe User (joeuser) on athena-dislop.mit.edu
To: joeuser@ATHENA.MIT.EDU
Hi there.
```



### Jabber

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- New instant messaging service
- Chat with MIT users and other Jabber users (Google Talk)
- Use the Gaim client on Athena
  - athena% **gaim &**
- Your Jabber ID is *username@mit.edu*
- Buddies must authorize each other in order to see their login status, and sometimes to chat
- The Gaim client can also be used for AOL (AIM), ICQ, MSN Messaging, IRC, and Yahoo chat



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### Printing

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- High-capacity laser printers in every cluster
- Most dorms have at least one printer
- Color printer available in W20
- Print from Athena workstations or your Mac/PC
- Print double-sided to conserve paper
- No fees for printing
  - Dorms may charge fees or have quotas for their printers
- Printers are not photocopiers



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### Transferring Files to/from AFS

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- AFS client on your Windows, Linux, or OS X machine
- Secure FTP clients for Windows, Linux and OS X
- Burn CD-R/CD-RW discs on some Athena workstations
- Public files can be downloaded via the web
- Diskette
- USB flash drives



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### E-Mail

- 1 GB quota
- Attachments limited to 25MB, some file types prohibited (.exe)
- WebMail - <http://webmail.mit.edu>
- Spam Screening
- Auto-responder
- Mail forwarding
- E-mail forwarding for life through Alumni Association
  - You will get a new @alum.mit.edu address

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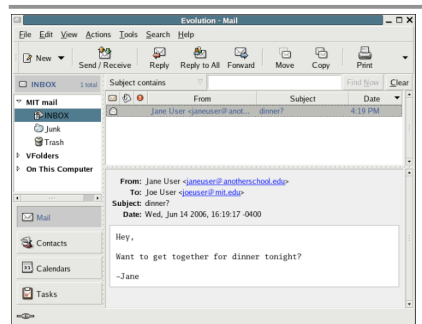
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### Evolution E-mail Client



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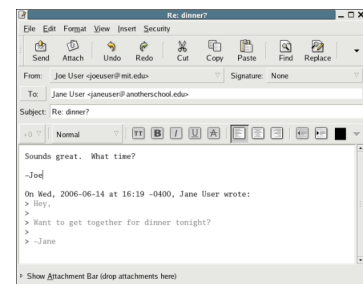
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### Evolution, continued



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### OpenOffice

- Similar to Microsoft Office
- To start it:
  - Foot Menu ⇒ Editing/Publishing ⇒ Office Productivity Suites
  - athena% **add office**
  - athena% **office &**
- Can read and write Microsoft Word, PowerPoint, and Excel documents (and other formats)
  - Fonts may look a little different when converted
- New documents created in OpenOffice must be explicitly saved in Microsoft Office formats if you wish to use them with Microsoft Word, PowerPoint, or Excel.



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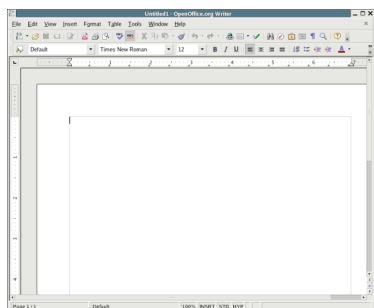
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### OpenOffice Writer



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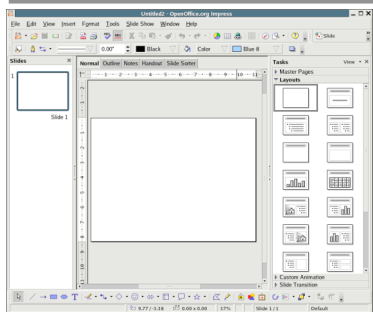
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### OpenOffice Impress



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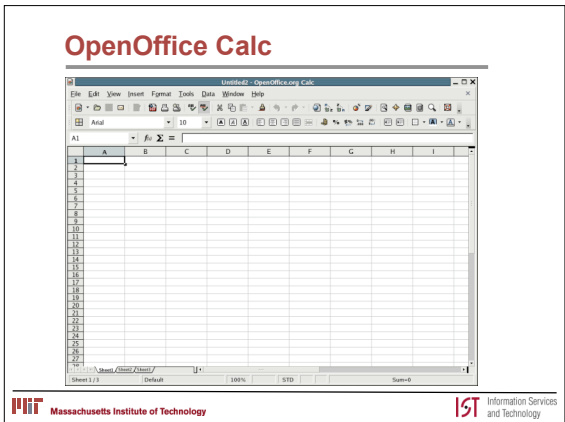
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### Remote Access

- Remote access clients for Mac & PC at <http://web.mit.edu/software/>
- Any Secure Shell (SSH) client
  - athena.dialup.mit.edu
- <http://athena.dialup.mit.edu>
  - Java-based SSH client
- Linux-Athena on your x86 PC

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### Getting Help

- Web-based tutorials
  - <http://web.mit.edu/olh/>
- Training Classes
- Athena Consulting/OLC
  - x3-4435 or <http://web.mit.edu/consult/www/>
- IS&T Web Pages
  - <http://web.mit.edu/ist/>
- Student Information Processing Board (SIPB)
  - Volunteer student group
  - [sipb@mit.edu](mailto:sipb@mit.edu), <http://www.mit.edu/sipb/>

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