Getting Started with Athena

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On this page:

- What is Athena?
- About This Document
- Interacting with Athena
- Logging Out
- Working with Windows
  - Workspaces
- Applications on Athena
- Browsing the Web
  - Certificates
- Email on Athena
  - Checking your email
  - Sending Email
  - Forwarding Your Mail to Another Address
- Instant Messaging on Athena
  - Zephyr on Athena
- Working with Files
- Backing Up and Restoring Files
  - The Importance of Backing Up Your Files
  - Using ~/OldFiles for File Restoration
- Protecting Your Account
  - Keeping Your Files Safe
  - Choosing a Password
  - Changing Your Password
- Related Links

What is Athena?

Athena is MIT's UNIX-based campus-wide academic computing facility. The Athena system provides computing resources to over 14,000 users across the MIT campus. Athena users have access to software to help them write papers, create graphs, analyze data, communicate with their colleagues, play games, and perform countless other tasks, as well as software designed specifically for class work.

About This Document

This document assumes you have already registered for an Athena account and know your username and password. If not, see How do I register for an MIT Kerberos account?.

The conventions used in Athena documents for describing special characters are:

- **Ctrl-x** means press **x** while holding down the **Control** key.
- **command** specifies a command to type at the shell prompt (in the Terminal window).
- **joeuser@athena$** represents a shell prompt. Your shell prompt will include your username and the name of the machine you're currently logged into.
- **Applications > Accessories > Terminal** specifies a menu path. In this example, you would select the Applications menu, then Accessories, then Terminal.

Interacting with Athena

Alternatively, you can connect remotely to IS&T's athena.dialup service via your web browser or via SSH .

If you would like to have Athena on your personal computer, you can follow the instructions for the installation of Debathena, Athena's latest software client, at How do I install Debathena on my personal computer?.

Logging Out

You should always make sure to log out of your session when you are through working on Athena. If you do *not* log out but simply leave the terminal, your private workspace will be accessible to whoever next uses that workstation.

You can log out using any of the methods explained below. With any of these, you should be sure to wait a few seconds at your workstation to make sure that the system actually logs you out. You can tell that you have logged out successfully if your windows disappear and the initial login window reappears on your screen.

- Logging Out From a Workstation
  The top right corner of your screen should contain a menu that displays your full name and an icon of a power button. This menu can be used to log out of your workstation by choosing **Log Out**. The workstation will ask you to confirm that you want to log out, and if you do so, your session will end.

- Logging Out from a Terminal Window
  You may also type "logout" at the system prompt in a Terminal window:

```
joeuser@athena$ logout
```

Working with Windows

The X Window System lets you divide your workstation's screen into one or more windows, which you can manipulate using the mouse, the keyboard, or both. A *window manager* organizes these windows and lets you raise, lower, or minimize windows. The window manager also creates virtual desktops. You can move some windows to *virtual desktops*, and then switch back and forth between them.

- The Terminal Window
  One of the windows that appears on your screen by default is the Terminal window. The Terminal window allows you to interact with the operating system by typing various commands at the command prompt (shell prompt). This document only covers the use of specific commands in the Terminal window. For more information on the shell prompt, see Working With the Command Line.

- The Window Manager (Metacity)
  The window manager lets you shuffle, move, and resize the windows on your screen, and also creates the various elements that get associated with each window, such as title bars and edges. The default window manager on Athena is called Metacity.
  - **Move a Window:** To move a window, click and drag the title bar with the left mouse button. The window will also be raised to the top of the stack of windows on the screen when you move it.
  - **Resize a Window:** Position the mouse cursor along the edge of the window you want to resize and click and drag with the left button to resize the window.
  - **Minimize (Iconify) and Maximize a Window:** In the upper right corner of every window, there are three boxes. One contains a line at the bottom; another, a half-shaded box; and the last an X. To minimize (iconify) a window, click on the one with the line at the bottom. (The half-shaded box maximizes the window - makes it take up your entire screen; the X destroys the window.) When you iconify a window, it disappears form the screen and the entry for that window in the panel task list has brackets around the name of the program.
  - **Deiconify a Window:** Deiconifying a window means restoring the window to its old size and location. To deiconify a window, click once on the name of the window in the task list. The task list is the list of program names in the panel on the bottom of your screen.
  - **Raising and Lowering Windows:** If you have a large number of windows on your screen, you may notice that some windows are obscured by other windows. The active window (the application you're currently using) will be on top of these other windows. To raise another window on top, simply click in it and it will become active and appear on top of other windows. If you want a window to be on top of other windows regardless of whether or not it's the active window, you can right-click on the title bar of the window and choose **Always on Top**.

Workspaces

Workspaces, or "virtual desktops" allow you manage multiple large windows on your screen. Rather than switching between windows by raising and lowering them, you can move some windows to a second workspace, and switch between the two workspaces. By default, you have two workspaces, but you can add additional ones.

- **Switch Workspaces:** To switch to another workspace, you can use the **Workspace Switcher icon** in the bottom panel. You'll see a representation of the windows you have on each workspace. Click the right half of the icon to switch to the right-hand workspace. You can also use **Ctrl+Alt+Left Arrow** and **Ctrl+Alt+Right Arrow** to switch to the workspace to the left or right of your current workspace.
- **Moving Windows to Workspaces:** If you right-click on the title bar of a window, you can choose **Move to Workspace Right** or **Move to Workspace Left** to move the window to the workspace to the right or left of your current workspace.

Applications on Athena

There are hundreds of applications available in the Athena environment, ranging from general purpose word processors to highly specialized bioinformatics software. The full list is available on the What Runs Where website. Some of the more common applications are listed below:

- **Word Processing, Spreadsheets, Presentations**

OpenOffice.org is the primary Office suite on Athena. It's compatible with Microsoft Office and can open and save documents in Microsoft Word, Excel, or PowerPoint format. You can launch it by choosing **Applications > Office**.

- **Photos and Images**
  The F-Spot Photo Manager can organize collections of photos in your home directory, and can import photos from many types of digital cameras.

  The GIMP Image Editor is a powerful image editing program that is quite similar to Adobe Photoshop^TM^

  Both of these are available under **Applications > Graphics**.

- **Academic Software**
  Certain commercial software packages are available on Athena. The most popular ones can be accessed from the Locker Software item in the Applications menu, and the full list is available at What Runs Where. The popular packages include:
  - **MATLAB**: A mathematical software package that lets you manipulate and perform calculations on matrixes of numbers.
  - **Maple**: A symbolic math program that allows you to enter calculations in traditional mathematical notation.
  - **Mathematica**: A mathematical software package.
  - **SAS**: A statistics software package.
  - **Stata**: A statistics software package.
  - **Tecplot**: A fluid dynamics plotting and post-processing program.
  - **Xess**: An alternative spreadsheet application.

Browsing the Web

Firefox is the primary web browser installed on Athena. If you have used Firefox on Mac OS or Windows, it should be almost identical on Athena.

To launch Firefox, click on the Firefox icon at the top panel or choose **Applications > Internet > Firefox Web Browser**. The first time you launch Firefox, you may see a window with a list of Add-Ons or Extensions, which you can close.

Certificates

An MIT Personal Certificate identifies you to various websites at MIT (such as WebSIS) so that you don't have to type your password every time you visit a web page. Certificates are configured to expire on June 30 of each year and must be renewed annually.

To obtain a certificate, visit the Certificates at MIT page and click on the **Get MIT Personal Certificate link**. If you experience difficulty obtaining your certificate, see the troubleshooting tips in the Knowledge Base.

Email on Athena

Checking your email

You can check your email on Athena using the Evolution email client. To launch Evolution, click on the **envelope icon** in the top panel or navigate to **Applications > Internet > Athena Mail**.

Once Evolution opens, you can read your mail by clicking on the **MIT mail** item in the left column and then **Inbox**. Your messages will appear in the top half of the window. If it has been a while since your last login, they may be a short delay while Evolution downloads all the new messages. Clicking on an individual message in the top half of the window causes it to be displayed in the bottom half of the window.

Sending Email

Click the **New** button at the top of the screen or navigate to **File > New > Mail Message** to open the *Compose Message* window where you can specify the recipient, subject, and body of your message. You can attach files to the message by clicking the **Attach** button at the top of the *Compose Message* window.

Evolution can also be used to manage your Calendar and Address Book.

Forwarding Your Mail to Another Address

To forward your email for the summer (or for any length of time), use the **chpobox -s** command followed by the address to which you want it forwarded. For instance, if you want to forward your mail to joeuser@example.com:

```
joeuser@athena$ chpobox -s joeuser@example.com
```

When you come back, you can cancel the forwarding with the command:

```
joeuser@athena$ chpobox -p
```

Instant Messaging on Athena

Zephyr on Athena

Zephyr is a means of contacting other users who are logged in on Athena. With zephyr, you can send messages to other people who are logged in on Athena and they can reply with their own messages. Athena also uses zephyr to inform you of relevant changes or problems. This section discusses the basics of zephyr: how to determine if a user is logged in and how to communicate with that user.

- Checking if a User is Logged In
  To check if a user is logged in and able to receive zephyrgrams (the messages sent by the Zephyr system), use the **zlocate** command with their username:

  ```
  joeuser@athena$ zlocate jruser
  ```

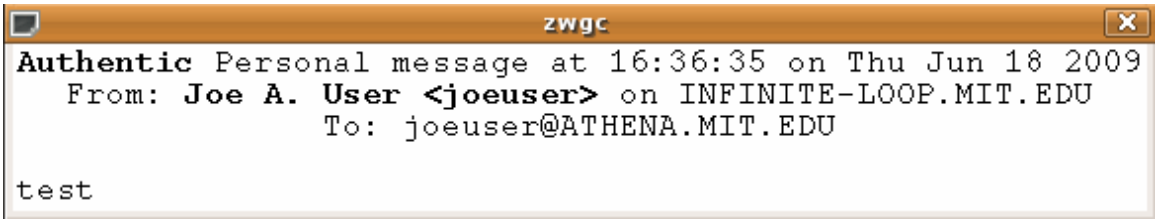
  If the user is logged in and currently receiving zephyrgrams, this will say where they are currently are logged in and what time they logged in. If they are not logged in or are not receiving zephyrgrams, this will say "Hidden or not logged in".

  ```
  joeuser@athena$ zlocate janeuser
  ```

- Sending Zephyrgrams
  To send a zephyrgram, use the **zwrite** command followed by the username of the person you want to send a zephyrgram to. You will then type the body of the message and end with a single dot on a line by itself. For example:

  ```
  joeuser@athena$ zwrite joeuser
  Type your message now. End with control-D or a dot on a line by itself. test
  .
  ```

  The recipient would then see a window like this appear on their screen:

  Clicking on the window with the left mouse button will cause it to disappear. If a user was not logged in or had chosen to hide his or her location, the sender would see something like this:

  ```
  joeuser@athena$ zwrite janeuser
  janeuser: Not logged in or not subscribing to messages
  ```

  For more information on these and the many other features of zephyr, see Zephyr on Athena

Working with Files

Athena makes it easy to manage the files stored in your account. The Nautilus file manager provides a graphical interface to the files in your account, similar to Windows Explorer or Mac OS Finder. The Places menu provides easy access to your home directory. To get a graphical view

of the files in your account, select **Home Folder** from the *Places* menu.

Your folders and files are represented with icons. In many cases, Nautilus will display a preview of the document in icon form so you can easily locate the documents you're looking for.

- Creating CDs or DVDs
  Navigate to **Applications > Accessories > CD/DVD Creator**. Drag files and folders into the CD/DVD Creator window. When you're ready to create the CD, click the **Write to Disc** button. You can purchase blank CDs and DVDs at many locations, including the MIT Coop.

- Using Flash Drives (Thumb Drives)
  You can use most USB flash drives (or any USB storage device) on Athena.

- Using iPods and other MP3 players
  When you connect a digital music player (such as an iPod), the operating system will usually detect it and will open the Rhythmbox media player. You can use this to play files from your portable device and add new files to the device. The Rhythmbox player is also configured to connect to many popular Internet Radio stations and streaming music sites such as last.fm.

> **Note:** Due to limitations imposed by Apple, you may not be able to access your music on iPod Touch and iPhone devices.

Backing Up and Restoring Files

Throughout your stay at MIT, you will store many files on Athena that are important to you (such as your thesis). Athena automatically backs up your files; there are also many advantages to making your own backups. This section describes how to take advantage of Athena's backups and how to make your own.

The Importance of Backing Up Your Files

On Athena, files are occasionally lost or damaged--you may accidentally destroy the file through misuse of the **rm** command, for example, or (although it is rare) the fileserver your files are stored on may have a problem. Although Athena regularly clones your personal locker and backs up all user files to tape, it may not be possible or feasible to restore some files that you permanently delete. It is a good idea to save often and to keep *backup* copies.

Backing up a file means making a copy of it in a form you can take away with you and store in a safe place (for Athena, you burn floppies or use external disks). Backing up files is a good idea for several reasons:

- If a file is important, backing it up gives you a copy in case you accidentally remove your original version on Athena. (If you make daily backups of your important files, you only have to worry about losing at most a day's work.)
- If you need to have immediate access to your files (e.g., your term paper or thesis is due tomorrow), backing them up lets you access them on your local workstation even if there is some temporary problem with the network or your fileserver.
- If you are developing a large program or document, making and keeping backup copies at important points in the development process can preserve the program or document in known states, which is useful if you need to restore or review earlier versions.
- Backing up important files regularly is the best way to avoid the extreme anxiety that comes from accidentally removing an important file.

Athena staff will try to restore your files from a backup tape if the disk drive that holds your locker fails, but any files created or modified after the backup tape was made *cannot* be restored. In addition, it typically takes about eight hours to restore the contents of one disk from tape. If you manage to injure your own files in some way, Athena cannot get them back for you unless they are extremely important, such as your thesis. So, while Athena will do what it can to keep backup copies of your files, it makes sense to have your own backup plan too.

If you are going to back up your files, plan to set up a backup cycle with a rotation of two or more backup sets. If you keep multiple copies of your backups, you'll be covered if you accidentally mangle one of them.

Using ~/OldFiles for File Restoration

Backup volumes are updated to be identical to the regular volume (cloned) on a regular basis (almost daily, if not daily), and the old copied data is destroyed. You can see a snapshot of your locker (as it was when it was last cloned) in the directory ~/OldFiles. (Since OldFiles is a separate volume, even though it points to the same bits, it does not count against your quota.) Its purpose is to allow you to recover a file if it is mistakenly removed or to let you undo modifications. Unfortunately, there is no direct way to find out when the backup was created.

Thus, if you deleted a file this morning and your locker was cloned last night, you should find a copy of yesterday's version of the file in ~/OldFiles. You can't edit it there (because it is a cloned volume, and cloned volumes are read-only), but you can copy it from ~/OldFiles into your normal locker to work on it again.

Protecting Your Account

Over time you will come to store many files in your Athena account. In addition, you can use your Athena account to access many files and

locations not available to everyone on the Internet. A person acting maliciously could therefore masquerade as you and cause damage which you would be responsible for. This section details methods of preventing others from accessing your account and your privileges.

Keeping Your Files Safe

Athena machines are not completely private and secure. There are, however, steps you can take to make access to your files very difficult and ensure that your files will not be destroyed. All users, from the beginner to the most advanced, should take these simple precautions:

- Never lend your account to another person (e.g., by telling anyone your password or leaving someone logged into your account).
- Keep your password secret. Never tell it to anyone, not even someone claiming to work for MIT; there is no legitimate reason for someone to ask you for it.
- Never respond to any email messages that request your password. All such messages are fraudulent, even if they appear to come from MIT and/or threaten account deactivation.
    - Legitimate deactivation notices are sent out in November and January, but those messages will never request your password.
- Do not change the default file protection without reason. The present default file protection on Athena prevents the casual browser from gaining access to your files; it is set so that anyone can list the names of the files in your top-level directory by default, but no one except you can read and write them. If you want to allow other users to read your files, you can change your default file protection or make use of your ~/Public and ~/Private directories. See ist:Sharing Files for more information on file protections and how to change them.
- Do not leave your workstation unattended while you are logged in. If you need to step away from your workstation, activate the screen saver by choosing Lock Screen from the power menu. It only takes a couple of seconds for somebody to compromise your account.
- Keep backup copies of critical files, such as your thesis.

Choosing a Password

Your password should be something that you will remember but that cannot be easily guessed by others. The following are some points to keep in mind when choosing a password:

Do choose:

- At least 6 characters, preferably a mix of alphabetical and numeric characters and punctuation that is easy to remember but difficult to guess.
- A mixture of upper- and lowercase; passwords are case sensitive.
- Something obscure; for instance, you might deliberately misspell a term or use an odd character in an otherwise familiar term, such as phnybon instead of funnybone.
- An acronym for your favorite saying, e.g., GykoR-66 for "Get your kicks on Route 66."

Don't choose:

- Your real name in any form (first, middle, last, maiden, spelled backward, nickname, initials, etc.).
- Your username, part of your username, or your username spelled backward.
- Any common name, name of a close relative, friend, or pet, or name from popular culture, e.g., Spock.
- Any significant numbers: phone, office, social security, license plate, address, birthday, anniversary, etc.
- Any word in any dictionary.
- A password made up entirely of digits.

Changing Your Password

Remember that your password is the key to your account and access to the system. Once someone has your password, that user *is* you on the system.

It is a good idea to change your password regularly (at least once a semester is a good rule of thumb). To change your password, type:

```
joeuser@athena$ passwd
```

The program asks you for your old password, then has you type in the new password twice. Neither your old password nor your new one appears on the screen as you type it.

Your new password takes effect immediately. If after typing **passwd**, you decide not to change your password, you can exit and keep your old password by pressing **Ctrl-c**.

You can also change your password on the web at Change Your Kerberos Password.

If you have forgotten your password or get the message "Login failed" when you try to log in and type your password correctly, you can go to the Athena User Accounts office (third floor, E19; x3-1325; accounts@mit.edu) during office hours to resolve the problem. Remember to bring some form of photo ID.

Related Links

- Athena at MIT
- Athena On-Line Help
- Working with the Command Line
- AFS on Athena
- AthenaStock Answers
- Debathena Landing Page