

Using Encrypted Authentication Methods

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Overview

At Carnegie Mellon, the campus servers DO NOT allow authentication methods that transmit your login information (i.e., user ID and password) using clear-text.

- Clear-text transmission methods transfer your user ID and password WITHOUT converting them to an encrypted form. In other words, your user ID and password are readable to outsiders who may attempt to intercept and use your information.
- Encrypted methods such as SSH (Secure Shell), SSL (Secure Sockets Layer), or TLS (Transport Layer Security) provide strong authentication and secure communication methods that protect you from attacks.

If your computer is managed by a Carnegie Mellon departmental computing administrator, please consult that person to be sure that you are using supported authentication methods. Otherwise, refer to the charts below if you need help with converting to, or have questions about email, FTP and Telnet clients that access Computing Services' servers via supported encrypted authentication methods.

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Popular Email Clients used on Campus

The following chart lists some of the more popular email clients that are used with the campus' Cyrus mail system. If you use any of these clients and want to verify that it is configured for authenticated encryption, follow the links.

Email Client	Details
*Outlook 2007	To verify that Outlook is configured correctly, follow steps included in the <i>Outlook 2007: Installing and Configuring</i> (http://www.cmu.edu/computing/doc/email/outlook/2007/index.html) document.
*Outlook 2003	To verify that Outlook is configured correctly, follow steps included in the <i>Outlook 2003: Installing and Configuring</i> (http://www.cmu.edu/computing/doc/email/outlook/2003/index.html) document.
*Entourage (Mac)	To verify that Entourage is configured correctly, follow steps included in the <i>Entourage: Configuring</i> (http://www.cmu.edu/computing/doc/email/entourage/index.html) document.
*Webmail	NO ACTION IS NECESSARY. Webmail uses a secure authentication method.
*Pine (on Andrew Unix)	NO ACTION IS NECESSARY. Pine on Andrew Unix uses a secure authentication method.
Mozilla 1.7	To verify that Mozilla is configured correctly, follow steps included in the <i>Using Nonsupported Email Client</i> (http://www.cmu.edu/computing/doc/email/nonsupported/index.html) document.
Thunderbird 1.5	To verify that Thunderbird is configured correctly, follow steps included in the <i>Using Nonsupported Email</i>

	<i>Client</i> (http://www.cmu.edu/computing/doc/email/nonsupported/index.html) document.
Mail for Mac OS X	To verify that Mail is configured correctly, follow steps included in the <i>Using Nonsupported Email Client</i> (http://www.cmu.edu/computing/doc/email/nonsupported/index.html) document.
Other (e.g., PDA, phone based clients)	Verify your settings; see the SSL Settings section of the <i>Using Nonsupported Email Client</i> (http://www.cmu.edu/computing/doc/email/nonsupported/index.html) document.

*Indicates e-mail client that is supported by Computing Services.

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Popular FTP Clients Used on Campus

The following chart lists some of the more popular FTP clients that are used on campus. If you use any of these clients and want to verify that it is configured for authenticated encryption, follow the links.

FTP client	Details
* SSH Secure Shell	NO ACTION IS NECESSARY. SSH Secure Shell uses a secure authentication method. Link to SSH Secure Shell documentation (http://www.cmu.edu/computing/doc/software/ssh/index.html)
* FuguSFTP	NO ACTION IS NECESSARY. FuguSFTP uses a secure authentication method. Link to FuguSFTP documentation (http://www.cmu.edu/computing/doc/software/fugu/index.html)
* Fetch 5.05	NO ACTION IS NECESSARY. Fetch 5.05 uses a secure authentication method. Link to Fetch documentation (http://www.cmu.edu/computing/doc/software/fetch/index.html)
KerbFTP	Switch to using SSH Secure Shell now! Visit the My Andrew (https://www.cmu.edu/myandrew/software/SSHSecureShell/) web service and follow steps to download and install the SSH Secure Shell client (https://www.cmu.edu/myandrew/software/SSHSecureShell/) . Link to SSH Secure Shell documentation (http://www.cmu.edu/computing/doc/software/ssh/index.html)
Fetch 4.0.3 or lower	Upgrade to Fetch 5.05 NOW. Visit the My Andrew (https://www.cmu.edu/myandrew/software/Fetch/) web service and follow steps to download and install Fetch

	5.05 (https://www.cmu.edu/myandrew/software/5.05) . Link to Fetch documentation (http://www.cmu.edu/computing/doc/software/5.05)
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*Indicates FTP client that is supported by Computing Services.

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Popular Telnet Clients

The following chart lists some of the more popular Telnet clients that are used on campus. If you use any of these clients and want to verify that it is configured for authenticated encryption, follow the links.

Telnet client:	Details
*SSH Secure Shell	NO ACTION IS NECESSARY. SSH Secure Shell uses a secure authentication method. Link to SSH Secure Shell documentation (http://www.cmu.edu/computing/doc/software/ssh/index.html)
*Terminal (for Mac)	Terminal offers a SSH connection option. Be sure to select that option when connecting to our servers. Link to Terminal documentation (http://www.cmu.edu/computing/doc/software/terminal/index.html)
Nifty Telnet	Switch to using SSH Secure Shell now! Visit the My Andrew (https://www.cmu.edu/myandrew/) web service and follow steps to download and install the SSH Secure Shell client (https://www.cmu.edu/myandrew/software/SSHSecureShell/) . Link to SSH Secure Shell documentation (http://www.cmu.edu/computing/doc/software/ssh/index.html)
CMU Telnet	Switch to using Terminal for Mac now! Link to Terminal documentation (http://www.cmu.edu/computing/doc/software/terminal/index.html)

*Indicates Telnet client that is supported by Computing Services.

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Andrew Web Publishing Service (AWPS)

The Andrew Web Publishing System (AWPS) supports encrypted SSH transport. Refer to the FTP Clients chart for help with determining which client to use.

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Macromedia Dreamweaver FTP

Macromedia Dreamweaver contains functionality that allows you to transfer your files directly to a publication server from within the Dreamweaver application. IF YOU USE THIS FEATURE, you should refer to the chart below. IF YOU DO NOT use this feature, you can disregard this section.

Note: Overall, the Dreamweaver transfer feature IS NOT SUPPORTED by Computing Services and is not recommended for inexperienced users.

If you use this version of Dreamweaver:	Perform this action:
Dreamweaver 8.0 and Dreamweaver MX 2004	Configure Dreamweaver to use SFTP. Link to Dreamweaver documentation (http://www.cmu.edu/computing/doc/contributed/dreamweaver.pdf)
Dreamweaver MX *	Upgrade to Dreamweaver 8.0 or Dreamweaver MX 2004.
Prior to MX	Upgrade to Dreamweaver 8.0 or Dreamweaver MX 2004.

Note: To determine which version of Dreamweaver you are using, do the following:

- Windows: Launch Dreamweaver and select **Help > About Dreamweaver**. The flash screen and version number appear.
- Mac: Launch Dreamweaver and select **Dreamweaver > About Dreamweaver**. The flash screen and version number appear.

* Dreamweaver MX, which was released prior to Dreamweaver MX 2004, contains FTP functionality but does not support secure FTP. Macromedia has published a Tech Note entitled "[SSH and SSL encryption for FTP connections](http://www.macromedia.com/cfusion/knowledgebase/index.cfm?id=tn_16159)". This Tech Note outlines steps for using an SSH Client with Dreamweaver MX FTP. The SSH tunnel approach described in the Tech Note is a general mechanism for putting an extra level of security on top of older, insecure protocols. However, the steps recommended in this Tech Note WILL NOT work in our environment.

Departments may purchase Dreamweaver under the the campus' Adobe volume license agreement for a minimal media charge and license fee.

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