

Essential OS Commands for Linux

DOS Command	Linux Command
dir	ls -l
cd <directory>	cd <directory>
mkdir or md <directory>	mkdir <directory>
rmdir or rd <directory>	rmdir <directory>
chdir	pwd
del or erase <file>	rm <file>
copy and xcopy <file>	cp and cp -R <file>
find or findstr <file>	grep <string> <file>
comp <file1> <file2>	diff <file1> <file2>
edit <file>	nano or vim or emacs <file>
ping <host>	ping <host>
reboot	reboot

Tips and Tricks for Hands-On Session

- The password will always be "password"
- Lines starting with \$ are commands to be executed
 - Replace # with a number (your participation number during the training)
- Command should be executed as root user
 - Happens automatically if Terminal is opened or if text editor is used
- Character \ is line break symbol, which allows to break a line when typed
- Watch out for invalid XML/configuration errors
 - Consult Debugging SP Handout for hints to resolve problems

Service Provider Binaries and Paths

- **Shibboleth Daemon binary**

Linux/Unix: `/usr/sbin/shibd`

Win: `C:\opt\shibboleth-sp\sbin\shibd.exe`

- **Shibboleth main configuration file**

Linux/Unix: `/etc/shibboleth/shibboleth2.xml`

Win: `C:\opt\shibboleth-sp\etc\shibboleth\shibboleth2.xml`

- **Shibboleth Libraries/Modules/Extensions**

Linux/Unix: `/usr/lib/shibboleth/*.so`

Win: `C:\opt\shibboleth-sp\lib/*.so`

Important directories

- `/etc/shibboleth/`
 - Master and supporting configuration files
 - Locally maintained metadata files
 - HTML templates (to customize the look & feel of service)
 - Logging configuration files (*.logger)
 - Credentials (certificates and private keys)
- `/var/run/shibboleth/` and `/var/cache/shibboleth/`
 - UNIX socket
 - remote metadata backups
- `/var/log/shibboleth/`
 - `shibd.log` and `transaction.log` files
- `/var/log/apache2/`
 - `native.log` (is written by `mod_shib` web server module)

File Editing Commands for Terminal Editor

Editor	nano	vim
Open file	\$ nano <file>	\$ vim <file>
Save file	<ctrl>-o	<esc>, :w
Save and exit	<ctrl>-x	<esc>, :wq
Search string	<ctrl>-w, string	<esc>, / string
Go to line number	<ctrl>--, number	<esc>, number , <shift>-G

gedit is the recommended text editor. Is started as root user. Its icon is in the launch bar on the left side of the desktop.

Debugging SP Problems on Linux

1. Make sure the edited XML config file is valid and correct XML with:
\$ xmlwf /etc/shibboleth/shibboleth2.xml
\$ sudo shibd -t or
\$ sudo shibd -tc /etc/shibboleth/shibboleth2.xml
2. Stop Shibboleth daemon with:
\$ /etc/init.d/shibd stop
3. Increase log verbosity of shibd by setting log level to DEBUG in:
/etc/shibboleth/shibd.logger
4. Have a look at log file and search ERROR or CRIT messages in:
\$ tail -f /var/log/shibboleth/shibd.log
5. Start Shibboleth daemon again with:
\$ /etc/init.d/shibd start
6. If you fixed an error, also restart Apache with:
\$ /etc/init.d/apache2 restart
Don't forget to set log level back to INFO for a production service