

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

File Editing Commands for Terminal Editor

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

“nano” is recommended for Linux beginners without GUI
Alternative for GUI users: Gnome “Text Editor” on desktop

Tips and Tricks for Hands-On Session

- Don't enable the wireless network during the workshop!
This could break your connectivity with other workshop hosts!
- Lines starting with `$` are commands to be executed
- Character `\` is line break symbol,
which allows to break a line when typed
- Watch out for invalid XML/configuration errors
 - `$ shibd -tc /etc/shibboleth/shibboleth2.xml`
 - Reports errors regarding well-formedness and schema validity
 - `$ xmlwf /path/some-XML-File.xml`
 - Reports errors and line/column number if XML is not well-formed
 - E.g. `shibboleth2.xml:261:2: mismatched tag`

More Tips and Tricks for Hands-On Session

- Restart the Shibboleth daemon shibd after every change
 - shibd automatically reloads config but only restarts "reveal" errors
 - Alternatively, look at the log file for errors
- Restart browser or delete session cookies after changes
 - Should not be necessary but is safer

- In Non-GUI Mode, use SSH to connect to VM

```
$ ssh root sp#.example.org
```

Open two ssh connections (terminals) to your VM

```
Then use $ tail -f /var/log/shibboleth/shibd.log
```

on one terminal

- On the VM you will find a web page with useful bookmarks
In your web browser open: `https://sp#.example.org/`

Debugging SP Problems on Linux

- Make sure the edited XML config file is valid and correct XML with:

```
$ xmlwf /etc/shibboleth/shibboleth2.xml
```

```
$ /usr/sbin/shibd -tc /etc/shibboleth/shibboleth2.xml
```

- Stop Shibboleth daemon with:

```
$ /etc/init.d/shibd stop
```

- Increase log verbosity of shibd by setting log level to DEBUG in:

```
/etc/shibboleth/shibd.logger
```

- Have a look at log file and search ERROR or CRIT messages in:

```
$ tail -f /var/log/shibboleth/shibd.log
```

- Start Shibboleth daemon again with:

```
$ /etc/init.d/shibd start
```

- If you fixed an error, also restart Apache with:

```
$ /etc/init.d/httpd restart
```

Available Users on Test IdP

- **demouser/password**

```
Givenname surname: Pierre Mustermann
Affiliation:       staff
Entitlements:      http://example.ch/res/99999
                  http://publisher-xy.com/e-journals
```

- **demostudent/password**

```
Givenname surname: John Doe
Affiliation:       student
Entitlements:      http://channel8.msdn.com/user
                  http://www.switch.ch/aai/agreement-2011
```

- **demostaff/password**

```
Givenname surname: Hans Muster
Affiliation:       staff
Entitlements:      http://unil.ch/aai/resources/biblio92
                  http://switch.ch/aai/agreement-01021
```