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| **Cornell High Energy Synchrotron Source** |
| **Doc#:** REF-COMP-002 | **Reference:** CHESS Basic Linux Guide | **Prepared by:** ZB |
| **Rev.:** 1 | **Revision Date:** 11/02/12 | **Date Effective:** | **Date Expires:** | **Approved by:**  |

**Basic Navigation and Controls**

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| **Command** | **Opt** | **Description** | **Example** |
| **Tab** key |  | Autocomplete file or path name. |  |
| **[↑]** Arrow |  | Recall previous commands. |  |
| **[Ctrl] + C** |  | Kill current command. |  |
| **pwd** |  | Print working directory. | pwd |
| **cd** path |  | Change directory to path. cd .. moves up one directory level. cd alone will go to home directory. | cd /home/specuser/Macroscd ..cd |
| **ls** | -l | Lists contents of current directory. -l displays file details | ls  |
| **halt** |  | Shut down computer. | halt |
| **reboot** |  | Reboots computer. | reboot |
| **su** username |  | Switch user. No username will attempt login as root. | su specadm |
| **sudo** username |  | Allows username to perform an action as root if privileges are set.  | sudo specadm rm file |
| **exit** |  | Log out and return to previous user. | exit |

**File Structure**

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| **Command** | **Opt** | **Description** | **Example** |
| **/path/file** |  | Run executable file. | /home/test/start.cmd |
| **./file** |  | Run executable file in current directory. | ./start.cmd |
| **mkdir** /path/new\_folder/ |  | Make a new directory new\_folder, in location /path/ | mkdir /home/test/dir/ |
| **rmdir** /path/folder\_name/ | -r | Remove directory folder\_name, in location path. | rmdir /home/test/dir/ |
| **cp** /path/file /path2/copied\_file |  | Copy file in directory /path/ to /path2/ as new file file2 | cp /test/file1 /test/file2 |
| **mv** /path/file /path2/file |  | Move file in directory /path/ to directory /path2/. (like Cut & Paste) | mv /test/file /test2/file |
| **rm** /path/file | -r | Remove file (delete). | rm /test/file |
| **chmod** /path/file | -R | Change file/folder read/write permissions. Example gives full permissions within /test/ to all users  | chmod –R 777 /home/specuser/test/ |

**Information**

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| **Command** | **Opt** | **Description** | **Example** |
| **ps** | -ax | List all processes | ps –ax |
| **killall** process\_name | -9 | Kill process\_name. -9 extra-kills process. | killall st.cmd |
| **man** command\_name |  | Displays manual for command. “q” to quit. | man spec |
| **help** command\_name |  | Displays help file for command. | help ifconfig |
| **less** file |  | View file content. “q” quits. | less st.cmd |
| **ifconfig** |  | Display Network Configuration. | ifconfig |
| **gedit** file |  | Opens file in *Gedit* text editor. NOTE: Not always available | gedit st.cmd |
| **vi** file |  | Opens file in *vi*, an in-terminal text editor. *NOTE: Appendix for details on vi commands and usage.* | vi st.cmd |

**Remote Services**

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| **Command** | **Opt** | **Description** | **Example** |
| **ssh** username@hostname |  | Open a remote connection to hostname | ssh specuser@ops1 |
| **sftp** username@hostname |  | Open secure file transfer connection to hostname | sftp specuser@ops1 |
| **put** /path/file /remotepath/remotefile |  | *sftp* command - transfers file from local computer to remote in /path/ | put /home/specuser/file /home/opsuser/file |
| **get** /remotepath/remotefile/ /localpath/localfile |  | *sftp* command - to transfer file from remote computer to local in /path/ | get /home/opsuser/file /home/specuser/file |
| **telnet** ip\_address port |  | Open serial connection to IP and port. | telnet 192.168.182.93 4001 |
| **[Ctrl] + ]** |  | Close *telnet* connection |  |
| **exit** |  | Close *ssh, sftp, telnet* | exit |

**Printer Commands**

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| **Command** | **Opt** | **Description** | **Example** |
| **lpr** /path/file |  | Print file. | lpr /home/test/st.cmd |
| **lpq** |  | Display print queue. | lpq |
| **lprm** job\_number |  | Removes job\_number from print queue. No job number removes current job. | lprm 99 |
| **/sbin/service cups restart** |  | Stops/restarts printing service. *NOTE: requires root access.* | /sbin/service cups restart |

**Appendix I – *vi* Commands**

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| **Command** | **Opt** | **Description** | **Example** |
| **vi** /path/file |  | Open file in *vi*. | vi /Macros/userlist.mac |
| **Arrow Keys** |  | Move cursor. |  |
| **i** |  | Insert text before cursor. |  |
| **a** |  | Append text after cursor. |  |
| **[ESC] Key** |  | Exit “Edit” mode. |  |
| **u** |  | Undo/redo last command (not in Edit mode). |  |
| **:w** |  | Write out changes (save). |  |
| **:q** |  | Quit vi. |  |
| **:wq** |  | Save and quit vi. |  |
| **:q!** |  | Quit without saving. |  |

**Revision History**

Rev. 1 – Initial document (11/02/12 - ZB)