Chapter 6
Troubleshooting Linux
We will be Covering …

Chapter 6 Troubleshooting Linux

• Getting System Help
  • -- The man Command
• Getting Online Help
  • -- Tutorials and Howtos Website
• Troubleshooting X
• Linux Safe Mode
Troubleshooting Linux - “man” & GUI Help

• Getting System Help
  • The “man” Command
    • Describes and show usage of commands.
    • From the Command Prompt, type: man [any command]
  • Fedora >> Help
    • Gives a complete tutorial on specific application and/or command.
    • Available in GUI

Getting System Help --- The man Command

Linux to a beginner may seem complex and difficult as there are many commands and files to remember. Fortunately, most Linux distributions come with a system help manual which assists a user to use a switch in a command or edit a file.

To use “man” from the Command Prompt
In the command prompt, type:
# man [the command to lookup]

To get help from the desktop:
1. Go to Fedora -> Help
2. Select the Categories and Topics
Troubleshooting Linux – Getting Online Help

• Getting Online Help --- Tutorials and HOWTOs Website
  • docs.linux.com
  • tldp.org

Getting Online Help

There are many websites that offers tutorials and HOWTOs. However, the quality of these tutorials are numerous and uneven in quality. It is recommended that the user visit reputable and reliable websites to obtain help. Furthermore, the following websites are quite encompassing covering a wide range of topics.

docs.linux.com
Docs.linux.com is a repository of howtos and tutorials. This website usually contains handy tips and tricks on the usage of linux applications.

tldp.org
linuxdoc.org is the official place where the Linux Documentation Project publishes the "Howtos", "Guides", and "Man pages". The documentation is organized alphabetically and in categories.
Trouble Shooting the X server

Even as the Linux Kernel is known to be very stable, there are many applications that are used in Linux known to be still under development. Applications that has not been released as stable may be used in an X environment. These applications may contain bugs which compromises system stability. It is important that a user possesses some X server troubleshooting skills to tackle these situations.

If for some reason in the GUI environment, an application has stopped responding, the following steps can be used to fix the problem:

Procedure:
1. Press ALT-F4 to kill an application that has stopped responding.
2. If procedure one does not work, save all the work in other windows, and press CTRL-ALT-BACKSPACE. This will kill the X server. If the system logs into the system using a graphical interface, then the system will end up in the login screen. If the system logs in from the text login interface, the system will end up at a command prompt. Type “startx” to restart the X server again.

If for some reason the X server fails to start or keeps going back to the command prompt with an error message, use the following steps in the next slide to reconfigure the X server.
Troubleshooting Linux – Configuring X server

• Trouble Shooting the X server
  • Configuring X: redhat-config-xfree86
  • To start the GUI, at command prompt type: startx

Configuring X server:

Procedure:
1. At a command prompt in Fedora, type:
   # redhat-config-xfree86.
2. Reconfigure X with the menu.
3. Set the configurations with the following values:
   In Settings Tab:
   Resolution: 1024x768
   Color Depth: Millions of Colors
   In Hardware Tab:
   Monitor Type: Compaq 140
   Video Card: Intel 845

If redhat-config-xfree86 fails to run, use the following steps in a command prompt to fix the problem:

Procedure:
1. At a command prompt in Fedora, type:
   # XFree86 -configure
2. Backup the old file XF86Config to XF86Config.bak by typing:
   # mv /etc/X11/XF86Config /etc/X11/XF86Config.bak
3. Copy a newly created file XF86Config.new in the current directory to /etc/X11/XF86Config. Do this by typing:
   # cp /XF86Config.new /etc/X11/XF86Config
4. Restart the X server by typing:
Troubleshooting Linux – Linux Safe Mode

- Linux Safe Mode
  - Switching to runlevel 1, Linux’s safe mode level.
  - At command prompt, type: telinit 1
  - Booting to safe mode from GRUB.

Linux Safe Mode

The Linux safe mode is attained by passing an argument into the boot parameters. A user may want to enter this mode to perform system maintenance tasks or even for the recovery of the root password. When in safe mode, there is potential that more harm can be done to the system if the user is not careful.

To enter into safe mode from GRUB

Procedure:
1. Reboot the system and at the GRUB boot image selection menu, press “e” to add a parameter to the boot parameters.
2. Use the arrow key to select the line with “kernel... ... ...” and press “e” again.
3. Go to the end of the line and add the word “single”.
4. Press “b” to boot with the parameters.

After entering the parameter, the boot process should boot as normal and drop the user at a command prompt without logging in. When the required tasks is done in the safe mode, type “exit” to continue with the rest of the boot process.
Thank You!

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http://training.bytebot.net/linux/