



# 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 offer tutorials and HOWTOs. However, the quality of these tutorials is 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.



# Troubleshooting Linux – X server

- Trouble Shooting the X server
  - To kill an application: ALT-F4
  - To kill X: CTRL-ALT-BACKSPACE

## 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



## 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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