Guide For Configuring a DX Router For Serial Access To A Linux Box

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Overview

The purpose of this guide is to help the users to configure a remote serial access to a Linux box. It involves configuration steps that need to be taken on a DX router, as well as the Linux server, to access the server via the serial port. As there are various Linux flavors and distributions available to the users, so the location of the required directories and files may be slightly different but in general it is mostly the same as the all Linux releases follow the same directory structure.

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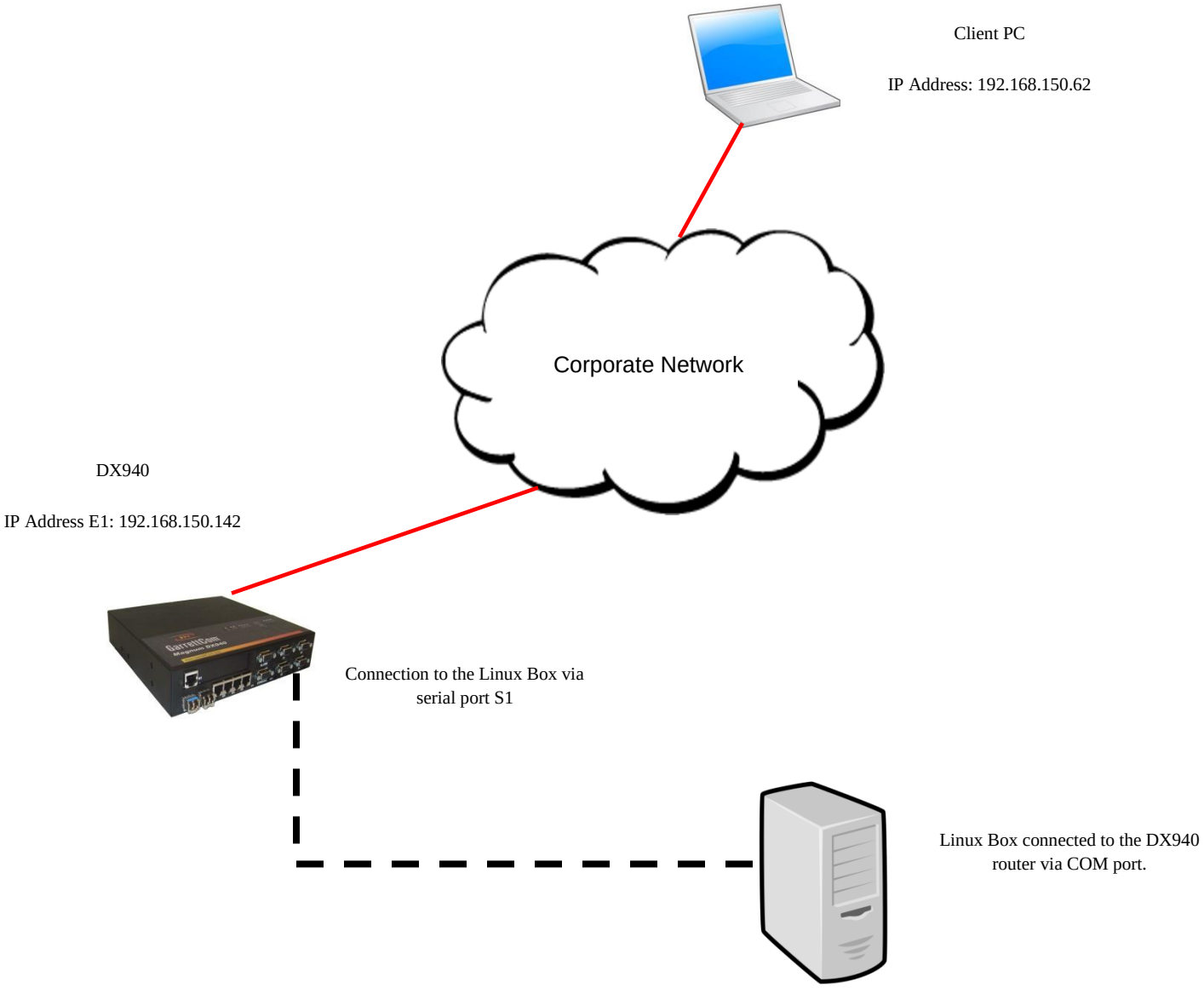
The Setup



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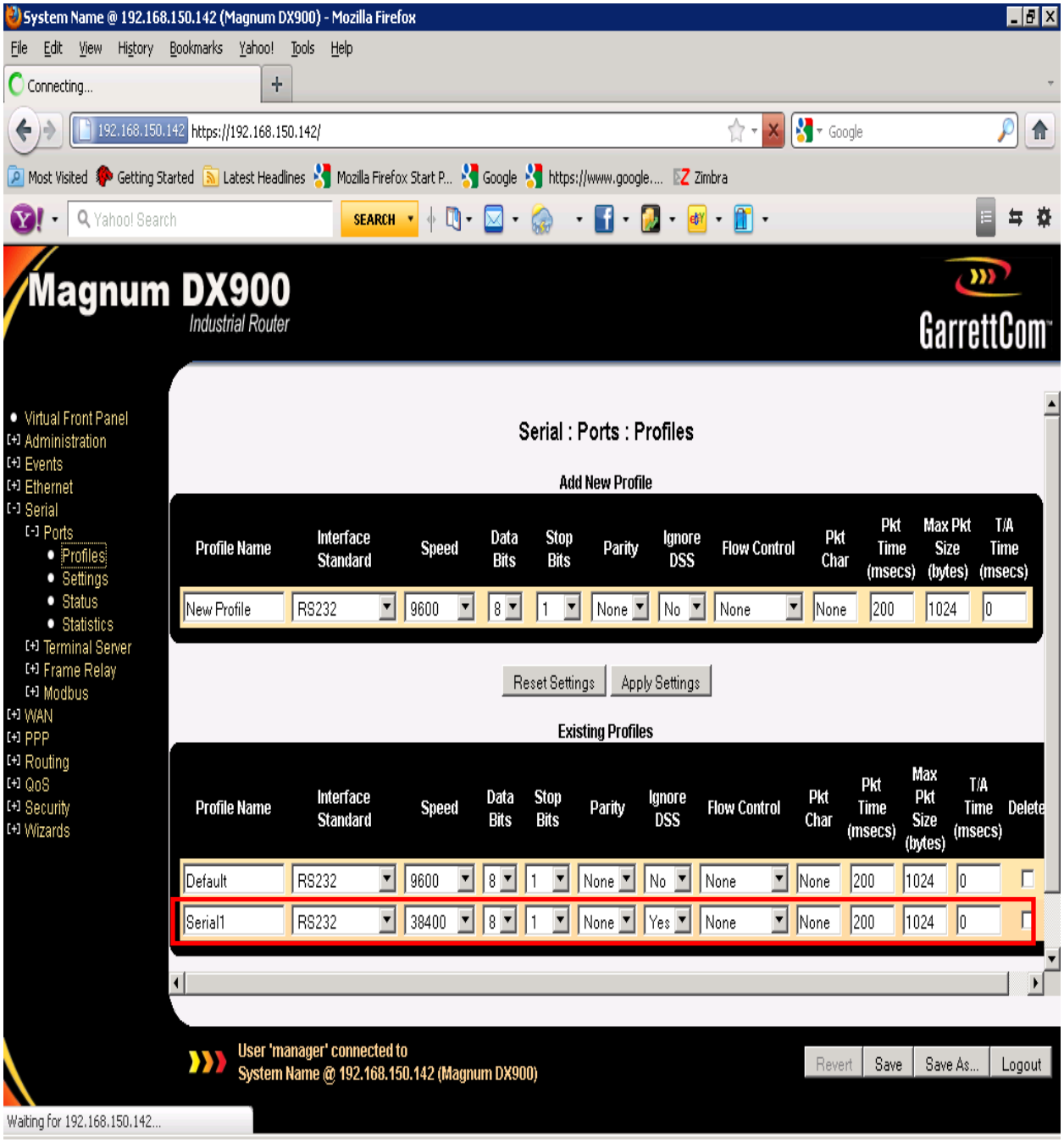
Configuring the DX Router For Serial Access To The Linux Box

Click on Serial>Ports>Profile and create a new one. We made profile “Serial 1” with speed: 38400, data bits:8 parity: none stop bit:1



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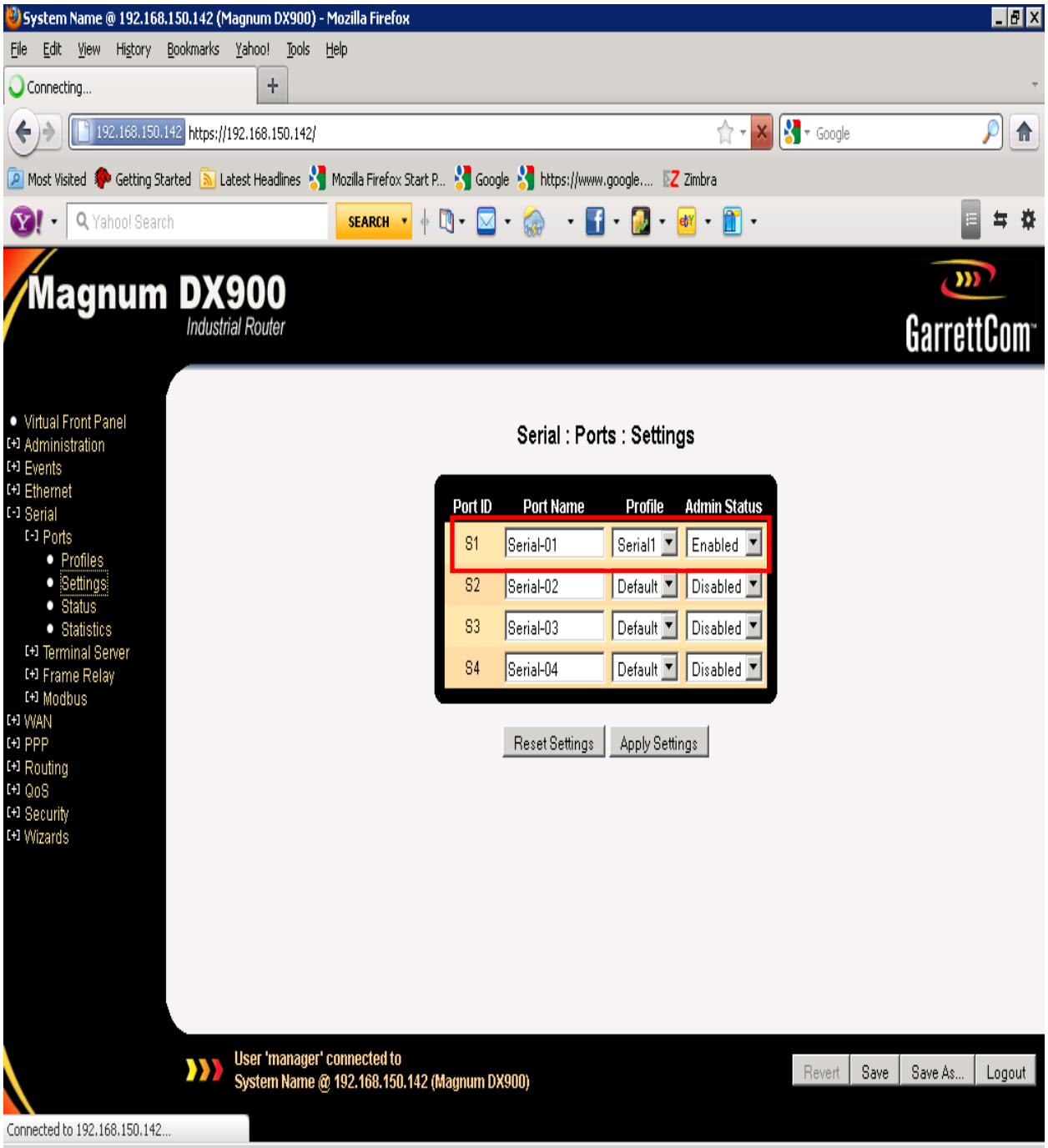
Click on “Settings” under “Profiles” and select the profile “Serial1” for serial port S1.



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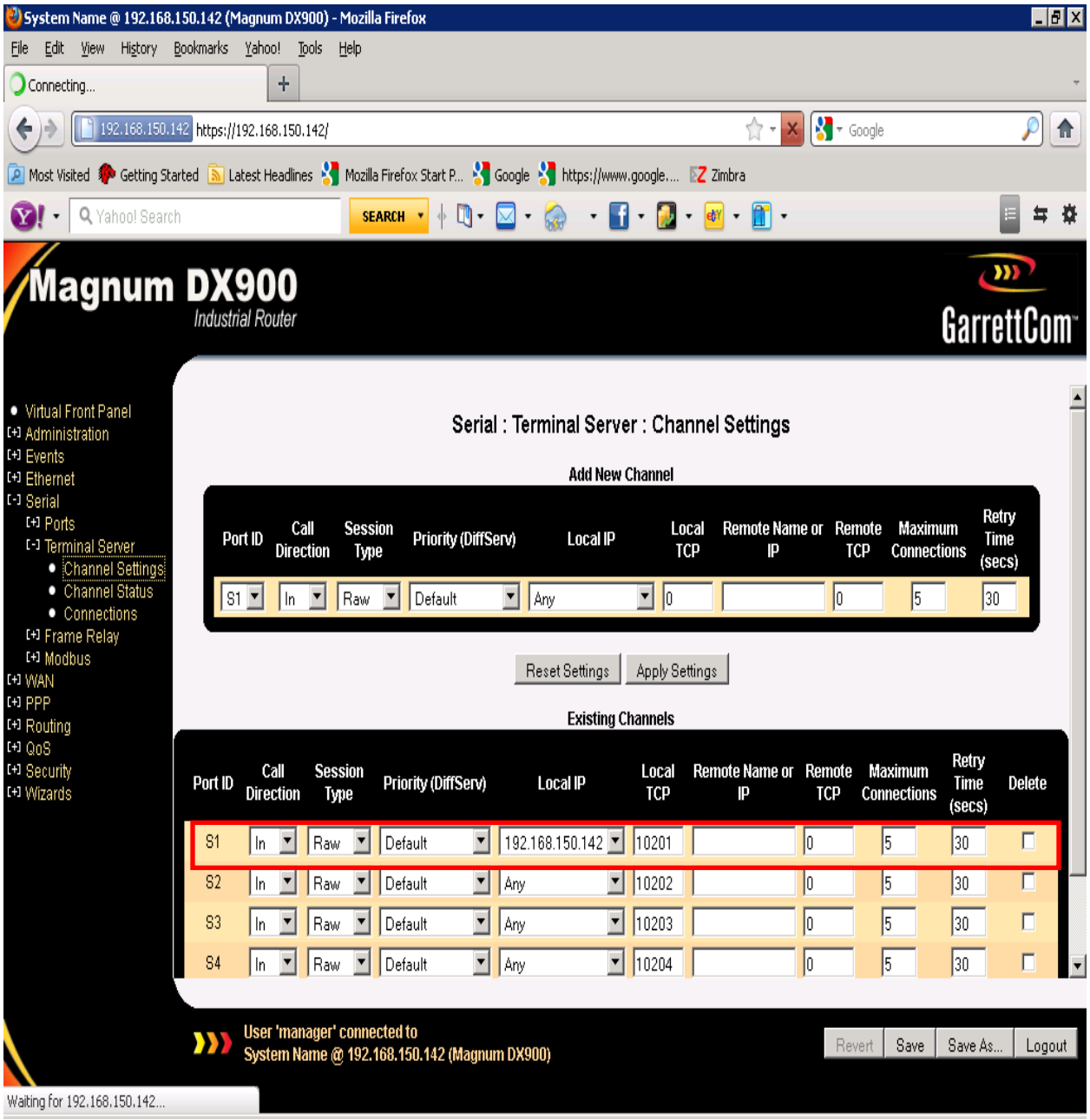
Click on Terminal Server>Channel Settings. Use the same settings as shown except, the local ip will be the DX40's ip address.



That is all we have to do on the DX router. Make sure that Unix Server 's console port is connected to the RS232 (Serial) interface of the DX40 router with a NULL Modem cable.

Next we will discuss, how to setup the Linux Server's console port for access through the DX router.

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Configuring The Linux Server For Access Via The Serial/COM Port

For testing the Unix/Linux access, we used Ubuntu Linux server running 10.* version. On the Linux box, first determine the console port on the system through the following command:

dmesg | grep tty

It should give the following output

[0.000000] console [tty0] enabled.

Then create a new file in /etc/init/ttyS0.conf and add the following lines

ttyS0 - getty

#

This service maintains a getty on ttyS0 from the point the system is

started until it is shut down again.

start on stopped rc RUNLEVEL=[2345]

stop on runlevel [!2345]

respawn

exec /sbin/getty -L 38400 ttyS0 vt102

***Please note that speed in the last line here “38400” should match the speed defined under Serial>Profiles page.

#sudo start tty0

Then go to /etc/default/grub and add these lines

GRUB_CMDLINE_LINUX="console=tty0 console=ttyS0,115200n8"
GRUB_TERMINAL=serial
GRUB_SERIAL_COMMAND="serial --speed=38400 --unit=0 --word=8 --parity=no --stop=1"

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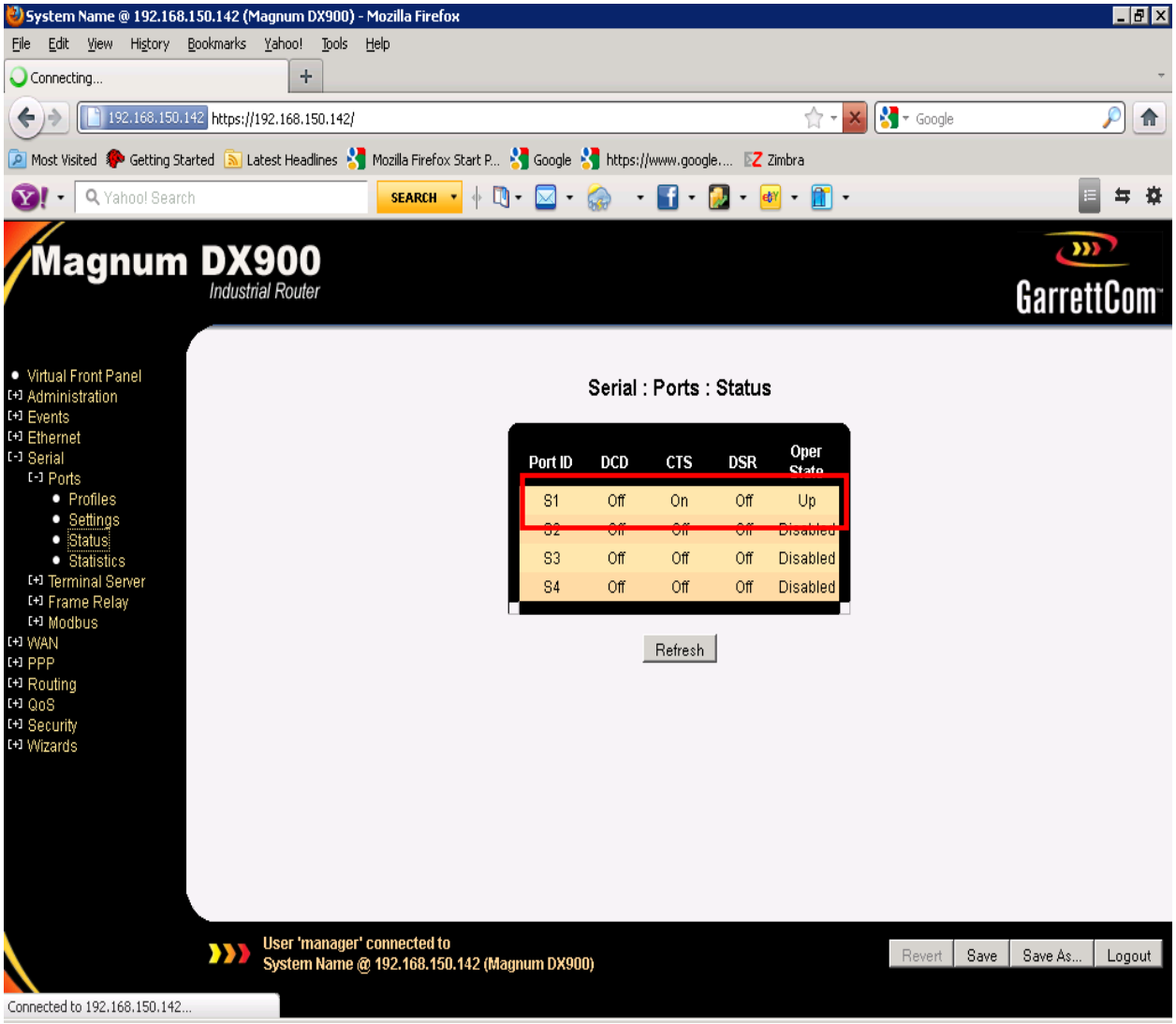
Save the file after making the above changes and update grub

sudo update-grub

Once the above is done, the setup is complete.

To test the connectivity, just open any telnet client and point it to the DX40 router ip address and use the port number defined as “Local TCP” under “Terminal Server>Channel Settings”.

To check the configuration, go to Serial>Ports>Status



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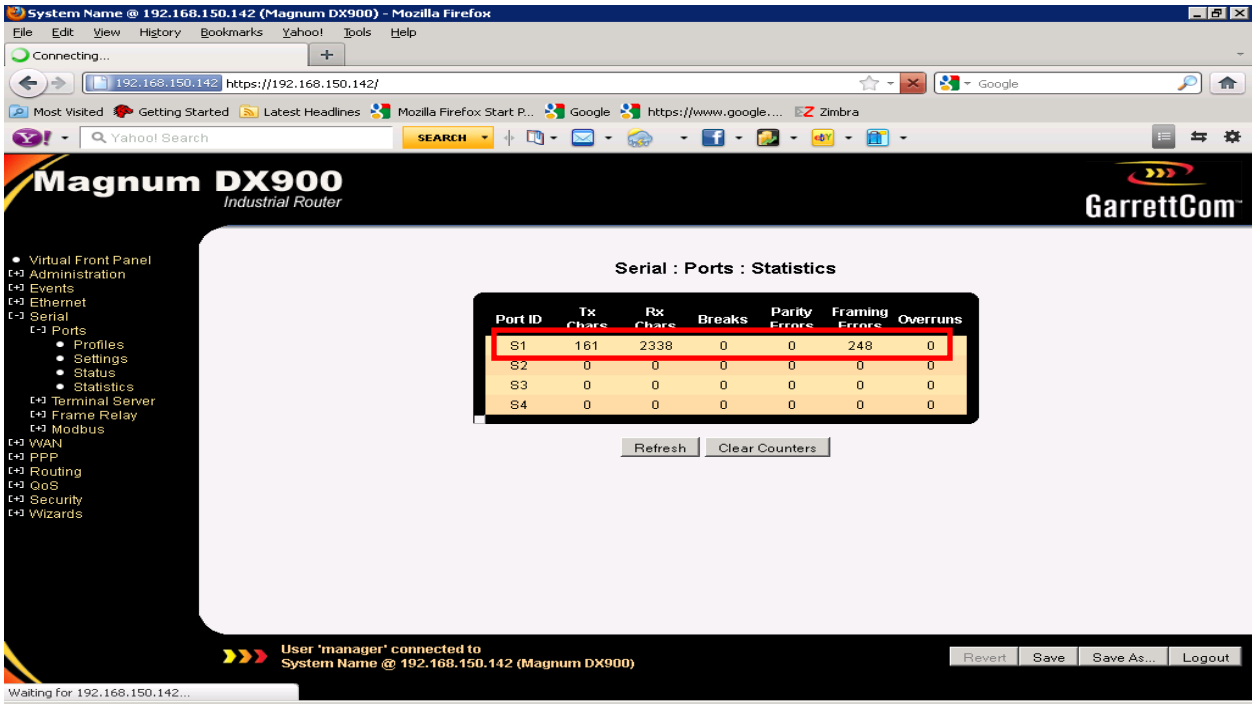
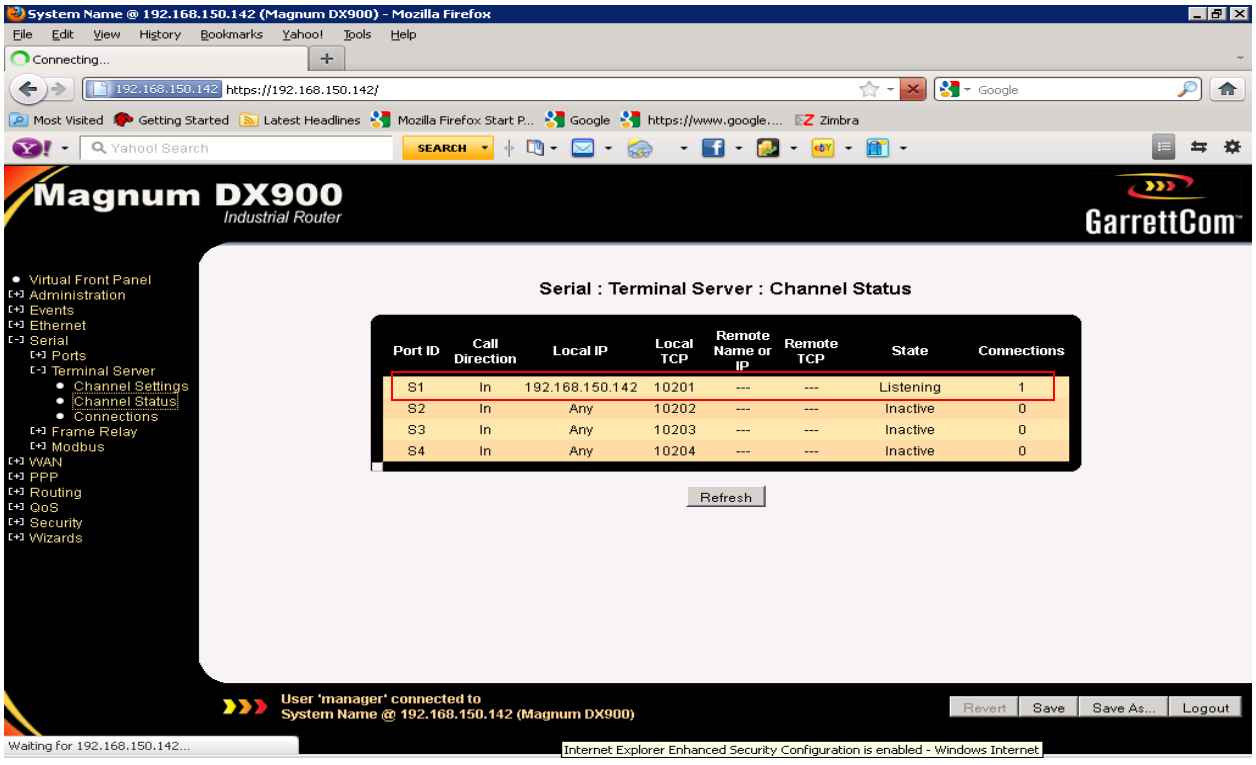
Serial>Ports>Statistics



To check current connections Serial>Terminal Server>Channel Status



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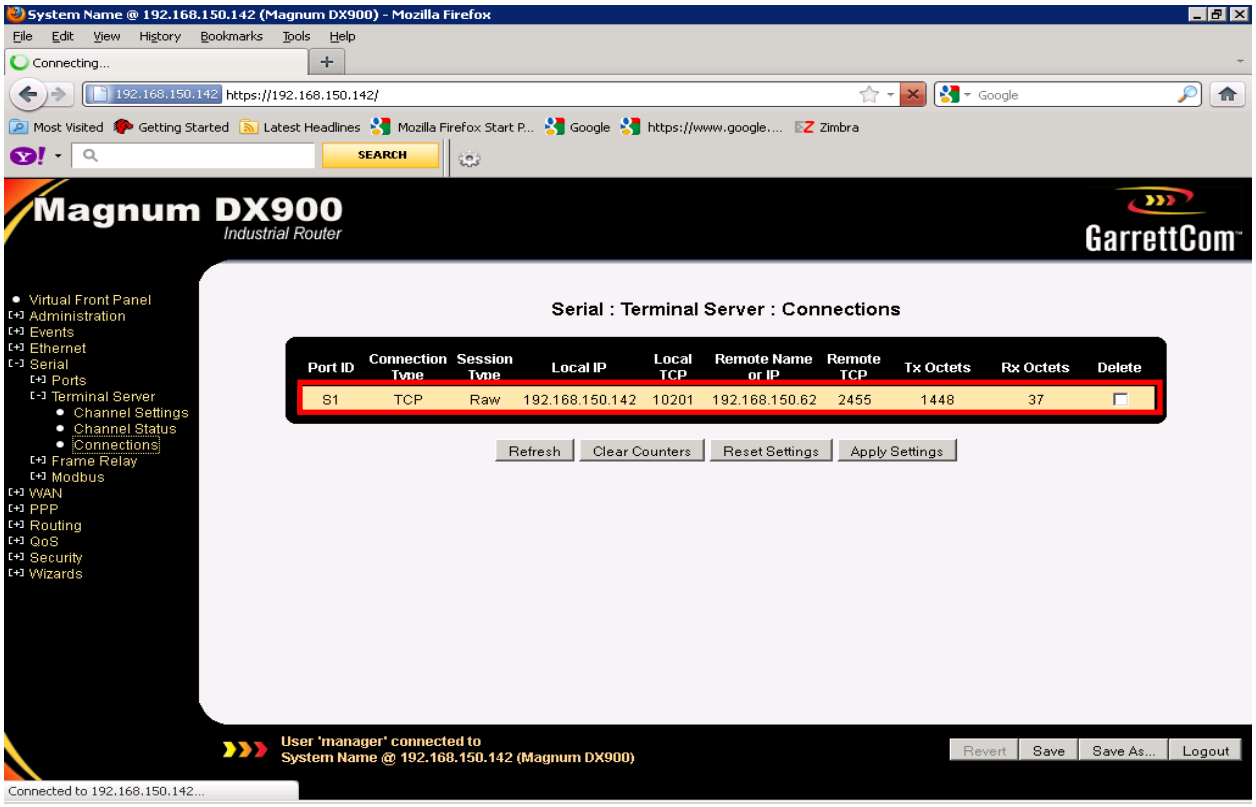
Check connections.



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