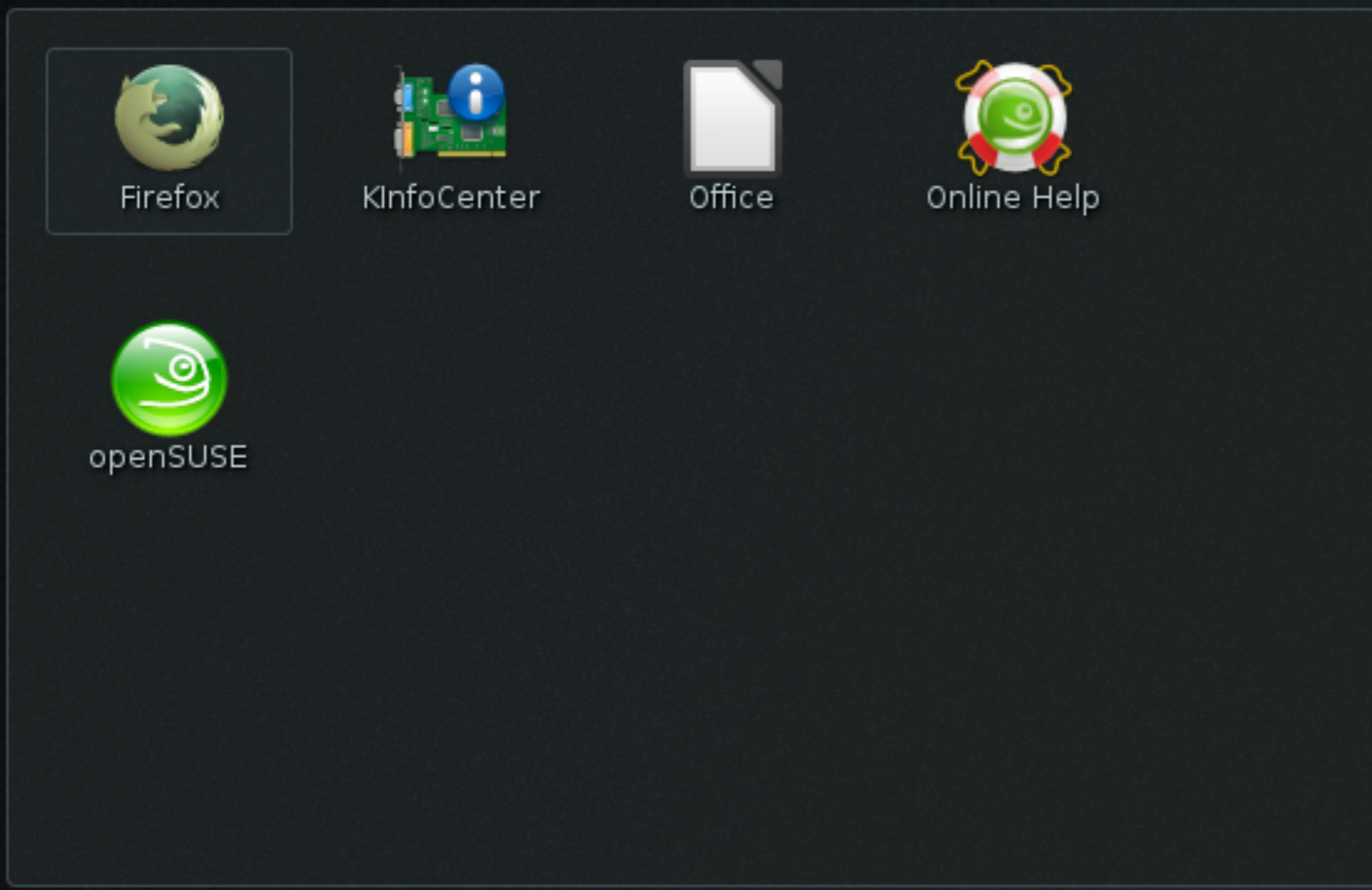


OpenSUSE 13.1 iperf3 client setup

The presentation will download iperf3 program, compile, and start the server portion of the program. This will enable a iperf3 client machine to contact the server and test the network speed.

Preuss

4/28/2014



A collection of desktop icons on a dark background. The icons are arranged in two rows. The top row contains Firefox (a globe), KInfoCenter (a circuit board), Office (a document), and Online Help (a gear with a green circle). The bottom row contains the openSUSE logo (a green swirl).

The presentation logs into OpenSUSE.



Firefox



KInfoCenter



openSUSE

Virtual Machine Settings

Hardware

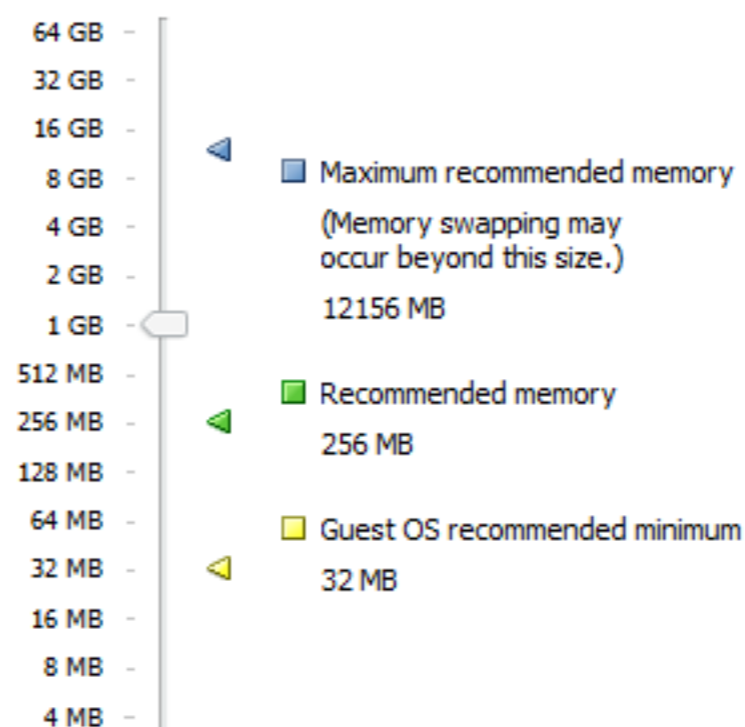
Options

Device	Summary
Memory	1 GB
Processors	1
Hard Disk (SCSI)	30 GB
CD/DVD (IDE)	Auto detect
Floppy	Auto detect
Network Adapter	Bridged (Automatic)
USB Controller	Present
Sound Card	Auto detect
Display	Auto detect

Memory

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

Memory for this virtual machine: MB



Add...

Remove

OK

Cancel

Help

The presentation insures the virtual machine is running in bridged mode. The presentation does not show checking the IP addresses.

Index of /software

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
 Parent Directory		-	
 iperf-3.0.1.tar.gz	10-Jan-2014 13:37	330K	
 iperf-3.0.1.tar.gz.sha256	10-Jan-2014 14:30	85	
 iperf-3.0.2.tar.gz	10-Mar-2014 10:45	1.5M	
 iperf-3.0.2.tar.gz.sha256	10-Mar-2014 10:45	85	
 iperf-3.0.3.tar.gz	26-Mar-2014 11:16	343K	
 iperf-3.0.3.tar.gz.sha256	26-Mar-2014 11:17	85	
 iperf-3.0.tar.gz	09-Dec-2013 16:55	425K	
 perfsonar-fw-check.sh	16-Jan-2014 09:13	3.1K	

Apache/2.2.15 (CentOS) Server at stats.es.net Port 80


```
preuss@msctc-linux-spring2014a:~> cd Downloads/  
preuss@msctc-linux-spring2014a:~/Downloads> ls  
iperf-3.0.3.tar.gz iperf-3.0.3.tar.gz.sha256 ossec-hids-2.7.1.tar.gz  
preuss@msctc-linux-spring2014a:~/Downloads> tar xzvf iperf-3.0.3.tar.gz
```

The presentation opens the command prompt as shown.

The presentation changes directories as shown. This is done with the `cd Downloads` command. The directory listing is done with the `ls` command.

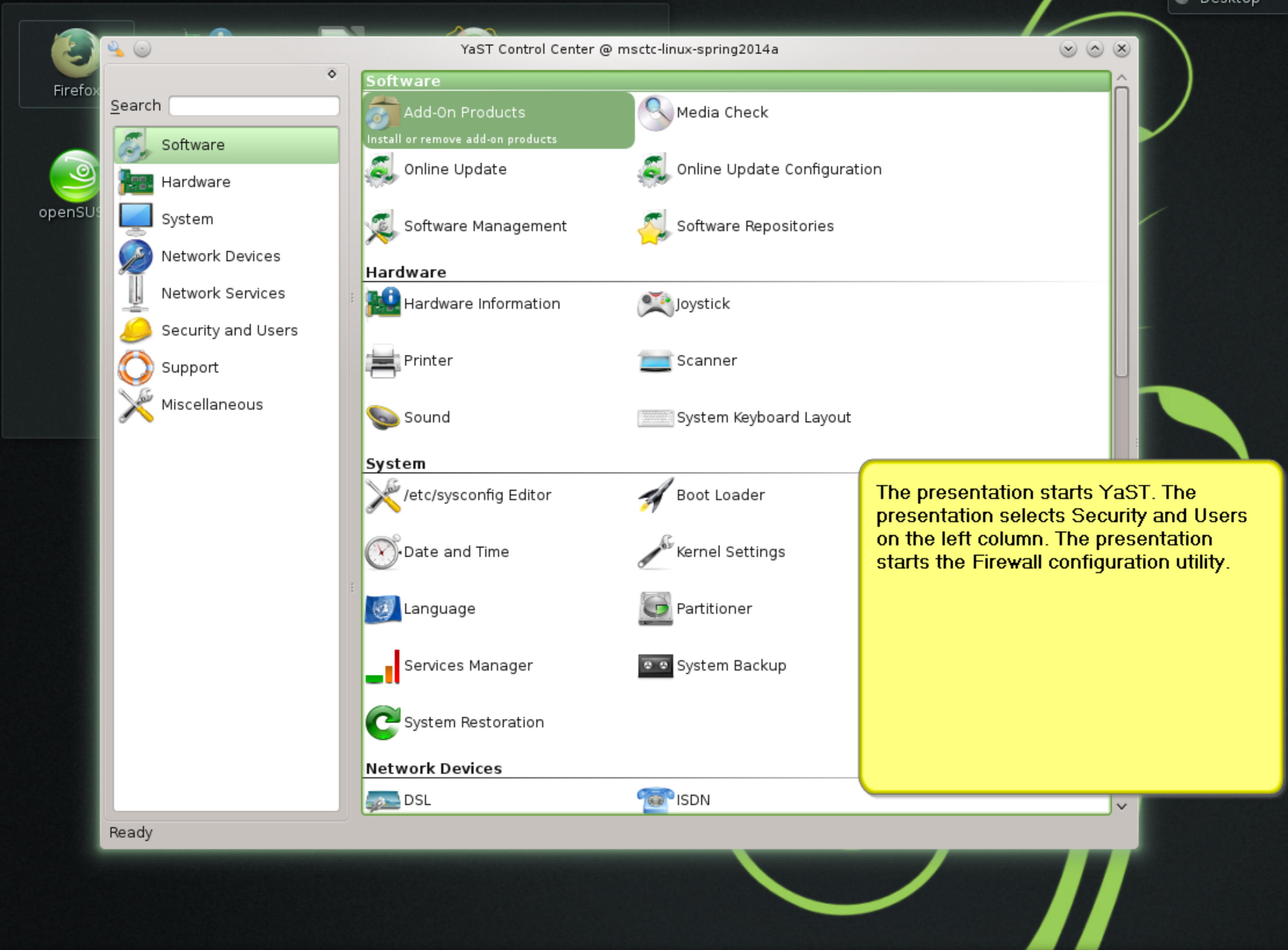
The last command is a tar unzip command. You may need to change the version number of iperf3 depending on your download.


```
ic-mic.o ../src/libiperf.la
libtool: link: gcc -g -Wall -g -O2 -g -o .libs/mic mic-mic.o ../src/.libs
/libiperf.so
gcc -DHAVE_CONFIG_H -I. -I../src -g -Wall -g -O2 -MT mis-mis.o -MD -MP
-MF .deps/mis-mis.Tpo -c -o mis-mis.o `test -f 'mis.c' || echo './'`mis.c
mv -f .deps/mis-mis.Tpo .deps/mis-mis.Po
/bin/sh ../libtool --tag=CC --mode=link gcc -g -Wall -g -O2 -g -o mis m
is-mis.o ../src/libiperf.la
libtool: link: gcc -g -Wall -g -O2 -g -o .libs/mis mis-mis.o ../src/.libs
/libiperf.so
make[1]: Leaving directory `/home/preuss/Downloads/iperf-3.0.3/examples'
make[1]: Entering directory `/home/preuss/Downloads/iperf-3.0.3'
make[1]: Nothing to be done for `all-am'.
make[1]: Leaving directory `/home/preuss/Downloads/iperf-3.0.3'
preuss@msctc-linux-spring2014a:~/Downloads/iperf-3.0.3> su
Password:
msctc-linux-spring2014a:/home/preuss/Downloads/iperf-3.0.3 # make install
```

The presentation becomes root to run the next command. The next command is make install as shown.

```
msctc-linux-spring2014a: /home/preuss/Downloads/iperf-3.0.3 # ldconfig  
msctc-linux-spring2014a: /home/preuss/Downloads/iperf-3.0.3 #
```

The presentation runs the ldconfig command after make install. This makes the newly installed libraries available to the programs.



Search

- Software
- Hardware
- System
- Network Devices
- Network Services
- Security and Users
- Support
- Miscellaneous

Software

- Add-On Products
Install or remove add-on products
- Online Update
- Software Management
- Media Check
- Online Update Configuration
- Software Repositories

Hardware

- Hardware Information
- Joystick
- Printer
- Scanner
- Sound
- System Keyboard Layout

System

- /etc/sysconfig Editor
- Date and Time
- Language
- Services Manager
- System Restoration
- Boot Loader
- Kernel Settings
- Partitioner
- System Backup

Network Devices

- DSL
- ISDN

The presentation starts YaST. The presentation selects Security and Users on the left column. The presentation starts the Firewall configuration utility.

Ready

YaST Control Center @ msctc-linux-spring2014a

Search []

- Software
- Hardware
- System
- Network Devices
- Network Services
- Security and Users**
- Support
- Miscellaneous

- LDAP Client
- NFS Client
- NTP Configuration
- Mail Server
- NIS Client
- Network Services (xinetd)

YaST2

- Start-Up**
- Interfaces
- Allowed Services
- Masquerading
- Broadcast
- Logging Level
- Custom Rules

Firewall Configuration: Start-Up

Service Start

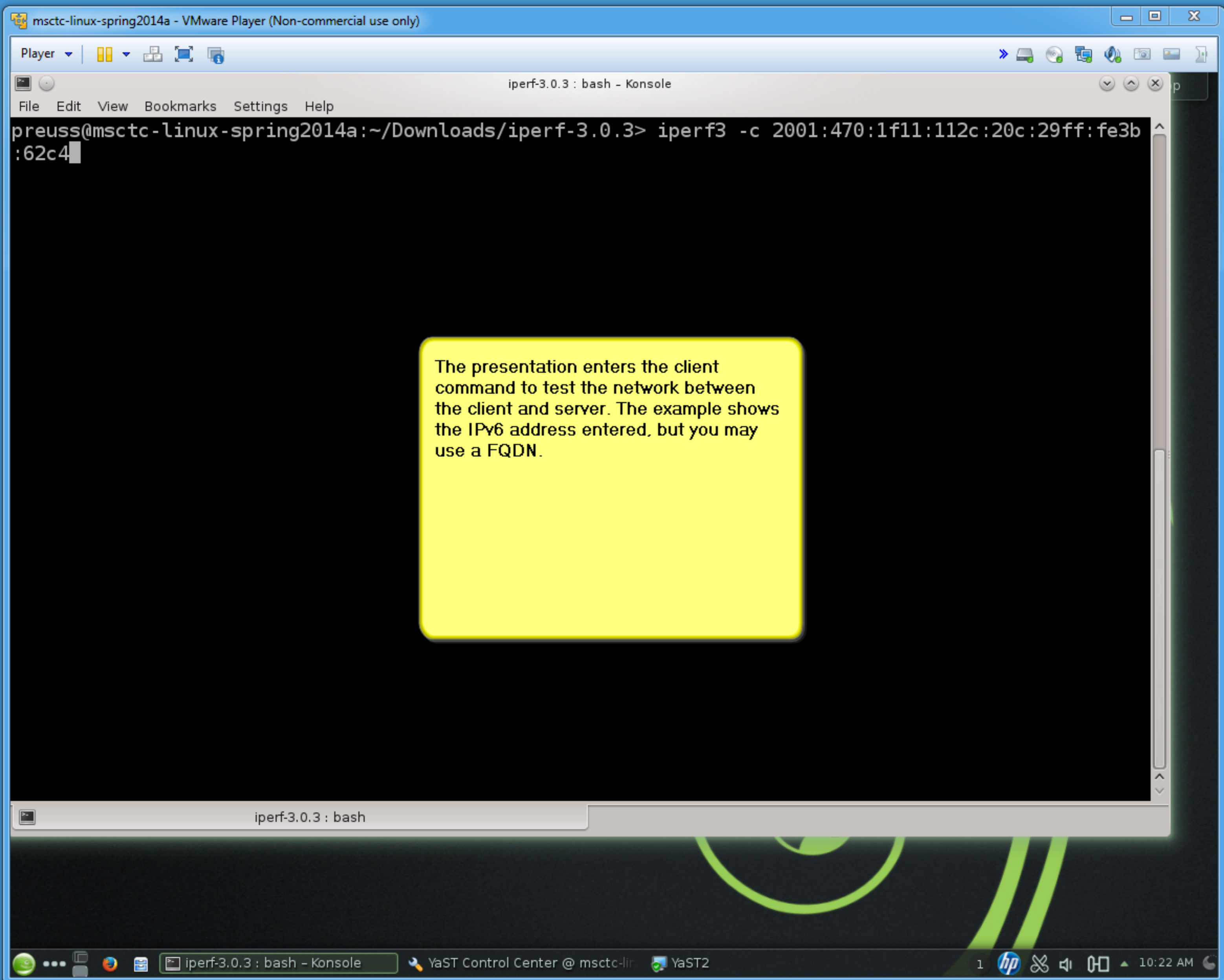
Enable Firewall Automatic Starting
 Disable Firewall Automatic Starting

Switch On and Off

Current Status: Firewall is not running

The presentation selects Stop Firewall Now. The presentation leaves this screen alone and turns to the client system.

Remember to Start Firewall Now once you are done with the tests.



The presentation enters the client command to test the network between the client and server. The example shows the IPv6 address entered, but you may use a FQDN.

```
preuss@msctc-linux-spring2014a:~/Downloads/iperf-3.0.3> iperf3 -c 2001:470:1f11:112c:20c:29ff:fe3b:62c4
```

preuss@msctc-linux-spring2014a:~/Downloads/iperf-3.0.3> iperf3 -c 2001:470:1f11:112c:20c:29ff:fe3b:62c4

Connecting to host 2001:470:1f11:112c:20c:29ff:fe3b:62c4, port 5201

[4] local 2001:470:1f11:112c:20c:29ff:fe80:bbc6 port 44237 connected to 2001:470:1f11:112c:20c:29ff:fe3b:62c4 port 5201

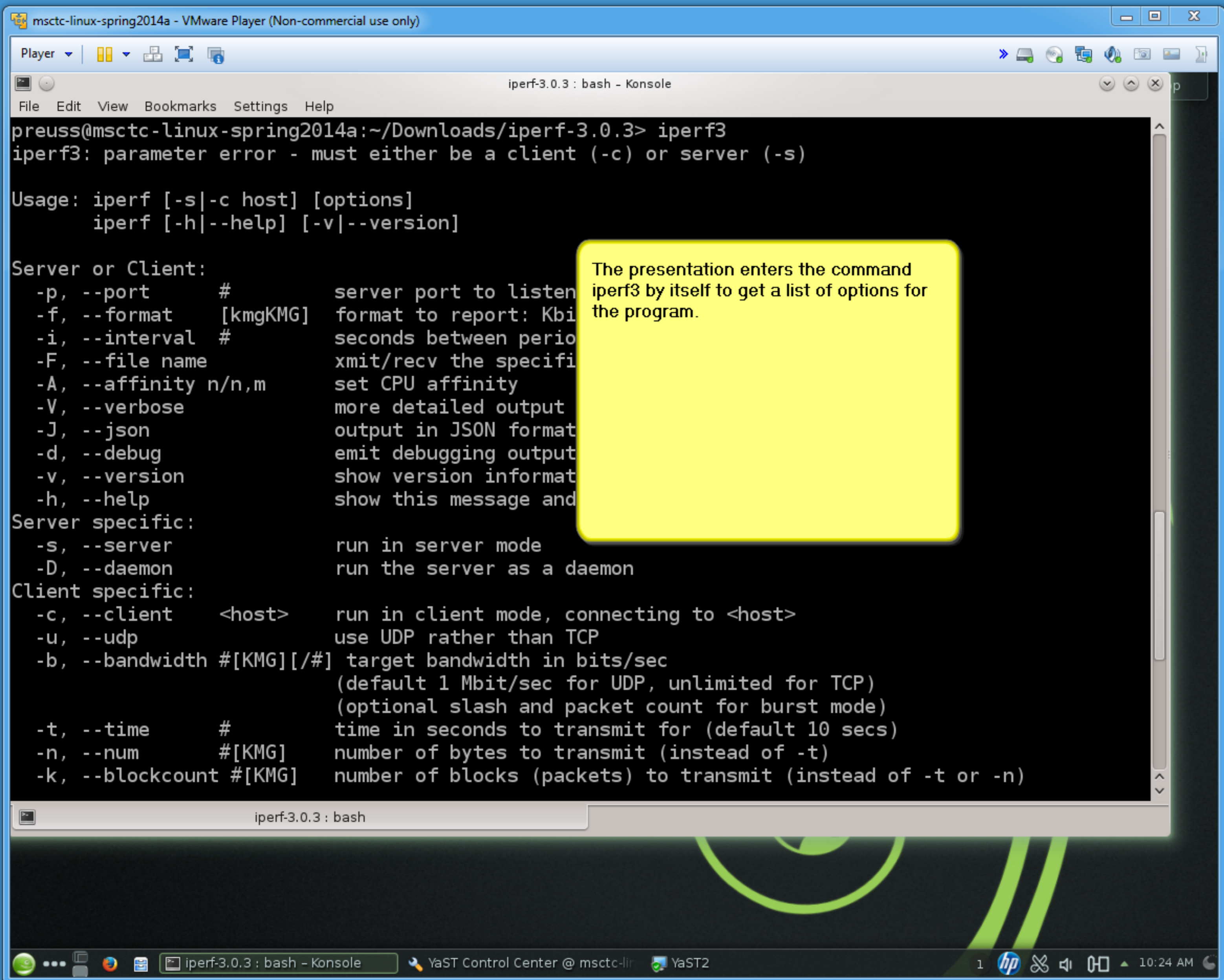
[ID]	Interval		Transfer	Bandwidth
[4]	0.00-1.02	sec	10.9 MBytes	89.6 Mbits/sec
[4]	1.02-2.02	sec	11.8 MBytes	98.5 Mbits/sec
[4]	2.02-3.02	sec	12.1 MBytes	102 Mbits/sec
[4]	3.02-4.02	sec	12.0 MBytes	101 Mbits/sec
[4]	4.02-5.02	sec	12.6 MBytes	106 Mbits/sec
[4]	5.02-6.02	sec	12.8 MBytes	107 Mbits/sec
[4]	6.02-7.02	sec	13.2 MBytes	111 Mbits/sec
[4]	7.02-8.02	sec	13.2 MBytes	111 Mbits/sec
[4]	8.02-9.02	sec	13.8 MBytes	115 Mbits/sec
[4]	9.02-10.02	sec	13.2 MBytes	111 Mbits/sec

The presentation now has results for IPv6. The presentation enters the command to test the network by IPv4.

[ID]	Interval		Transfer	Bandwidth	Retr	
[4]	0.00-10.02	sec	126 MBytes	105 Mbits/sec	43	sender
[4]	0.00-10.02	sec	126 MBytes	105 Mbits/sec		receiver

iperf Done.

preuss@msctc-linux-spring2014a:~/Downloads/iperf-3.0.3> iperf3 -c 192.168.24.72



The presentation enters the command iperf3 by itself to get a list of options for the program.

```
preuss@msctc-linux-spring2014a:~/Downloads/iperf-3.0.3> iperf3
iperf3: parameter error - must either be a client (-c) or server (-s)

Usage: iperf [-s|-c host] [options]
       iperf [-h|--help] [-v|--version]

Server or Client:
  -p, --port #          server port to listen
  -f, --format [kmgKMG] format to report: Kbi
  -i, --interval #     seconds between perio
  -F, --file name      xmit/recv the specifi
  -A, --affinity n/n,m set CPU affinity
  -V, --verbose        more detailed output
  -J, --json           output in JSON format
  -d, --debug         emit debugging output
  -v, --version        show version informat
  -h, --help          show this message and

Server specific:
  -s, --server        run in server mode
  -D, --daemon        run the server as a daemon

Client specific:
  -c, --client <host> run in client mode, connecting to <host>
  -u, --udp           use UDP rather than TCP
  -b, --bandwidth #[KMG][/#] target bandwidth in bits/sec
                        (default 1 Mbit/sec for UDP, unlimited for TCP)
                        (optional slash and packet count for burst mode)
  -t, --time #       time in seconds to transmit for (default 10 secs)
  -n, --num #[KMG]  number of bytes to transmit (instead of -t)
  -k, --blockcount #[KMG] number of blocks (packets) to transmit (instead of -t or -n)
```

iperf-3.0.3 : bash