Networking

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Agenda

- Manage network connections
- 'ifconfig' command
- Proxy settings
- GUI applications
- ssh daemon and ssh client
- vncserver and vncviewer

Manage Network Connections

- In Gnome available network connections can be accessed by System → Preferences → Network connections
- Wired and wireless connections
- IPv4 settings
  - Automatic (DHCP)
  - Manual
  - Address
  - Netmask
  - Gateway
- The network can be restarted by invoking command '/etc/init.d/networking restart'

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'ifconfig' command

- **ifconfig [interface]**

  e.g. ifconfig eth0

- **ifconfig *interface* [up | down]**

  - e.g. ifconfig eth0 down

- **ifconfig *addr* [netmask *addr*]**

  - e.g. ifconfig 192.168.1.100 netmask 255.255.255.0

- Shortcuts

  - **ifup** – bring a network interface up

  - **ifdown** – take a network interface down

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Proxy settings

- In Gnome the proxy settings can be configured by System → Preferences → Network Proxy (or by invoking 'gnome-network-properties' command)
- **export http_proxy='http://ip_address:port'**
- Configuration files are in
  - **$HOME/.gconf/system/http_proxy/%gconf.xml** and **$HOME/.gconf/system/proxy/%gconf.xml**
  - **gconftool -R /system/http_proxy**
  - **gconftool --set /system/proxy/mode --type string manual**
  - **gconftool --set /system/http_proxy/use_http_proxy --type bool true**
  - **gconftool --set /system/http_proxy/host --type string 192.168.1.1**

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Network GUI applications

- System → Administration → Network Tools or gnome-nettool
  - Devices
  - Ping
  - Netstat
  - Traceroute
  - Port Scan
  - Lookup
  - Finger
  - Whois
- System → Preferences → Remote Desktop

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ssh daemon and ssh client

- **/usr/sbin/sshd** - OpenSSH SSH daemon
- **/usr/bin/ssh** - OpenSSH SSH client

  ssh [-XC] [user@]hostname (e.g. ssh student@192.168.1.100)
- Configuration files
  - /etc/hostname
  - /etc/hosts
  - /etc/hosts.allow
  - /etc/hosts.deny
  - ~/.ssh/known_hosts
- Other commands
- sshpass [-XC] -p *password* [user@]hostname
  - scp *file* [user@]hostname:*path*

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vncserver and vncviewer

- vncserver
  - vncserver [:display#] [-geometry WxH] [-depth 8|15|16|24]
  - vncserver -kill :display#
- vncviewer [-shared] [-bgr233] [user@]hostname:display#
  - e.g. vncviewer -bgr233 192.168.1.100:2