



Linksys WRT54G / WRT54GS

*Magical transformations to a useful piece of equipment
or a Brick*



OR



By:

Sysmin – ISSAP, CISSP, NSA-IAM

and

Quigon – ISSAP, CISSP, NSA-IAM

The Hacker Pimps
www.hackerpimps.com

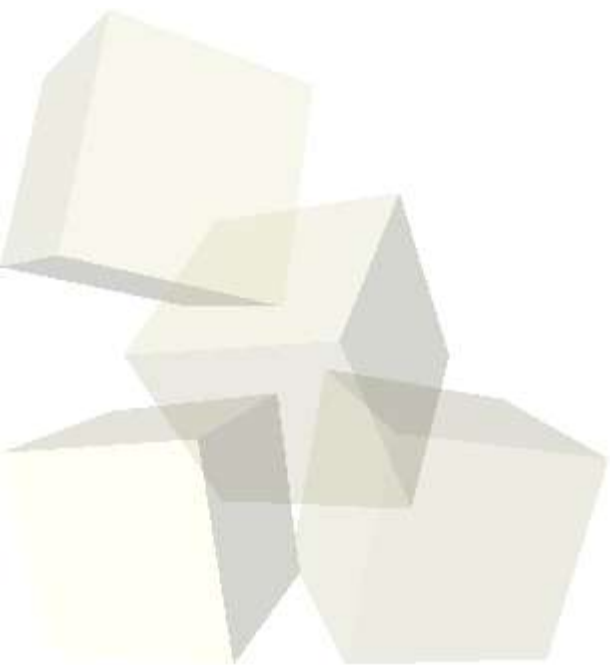


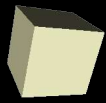
About This Document

- This document is not complete or current. Please visit our site for the most current version.

www.hackerpimps.com/docs.html

Thank You,
The Hacker Pimps

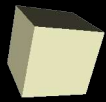




WARNING!! WARNING!! WARNING!!

- Modifying your firmware will void your warranty.
- It's not like you would have done anything with it anyway.
- There is a possibility that you may brick your WRT.
- Isn't that half of the fun?
- Idea? Hmm... Buying the buyer protection plan from Best Buy might work. Don't think they even check them.





WRT54G / WRT54GS At A Glance



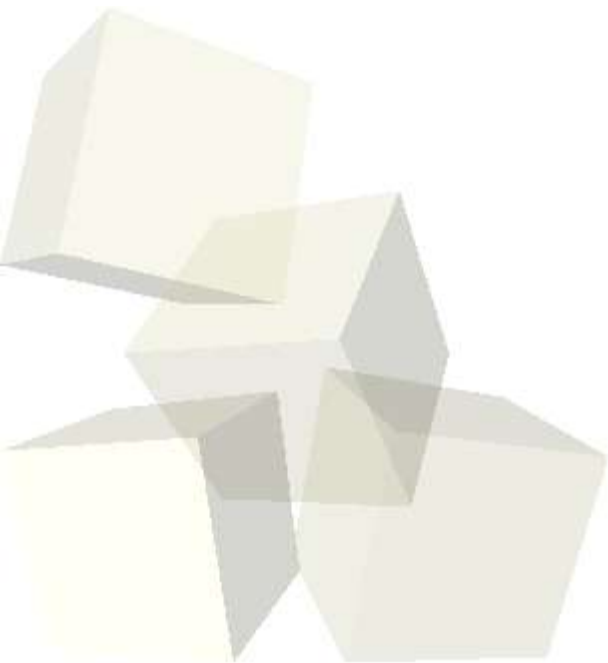
WRT54G

- 200Mhz MIPS processor
- 4MB of flash memory
- 16MB of RAM



WRT54GS

- 200Mhz MIPS Processor
- 8MB of flash memory
- 32MB of RAM
- Default has speed booster crap



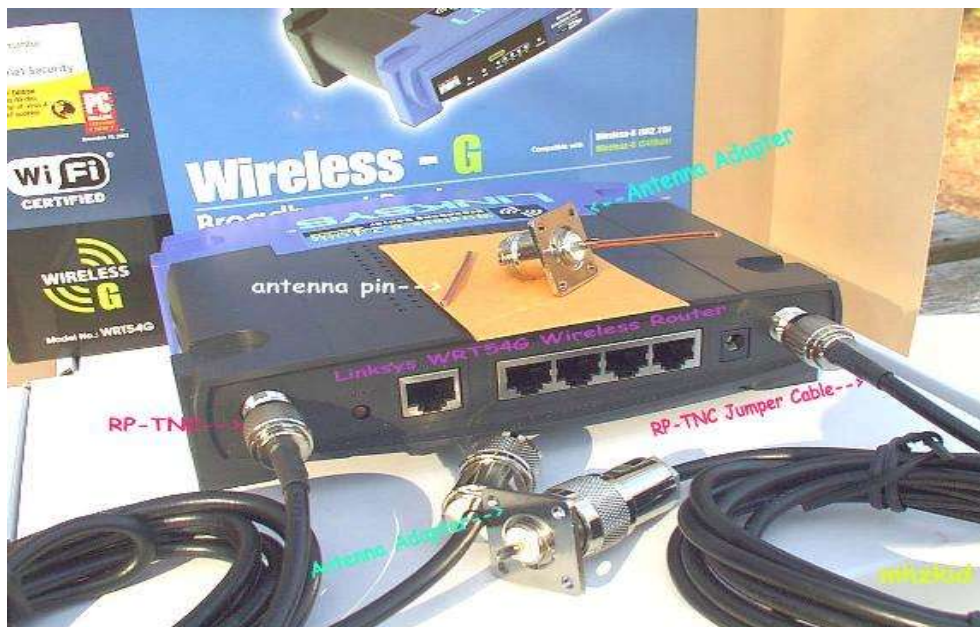


Custom Antenna Options

■ Directional or Omni-directional



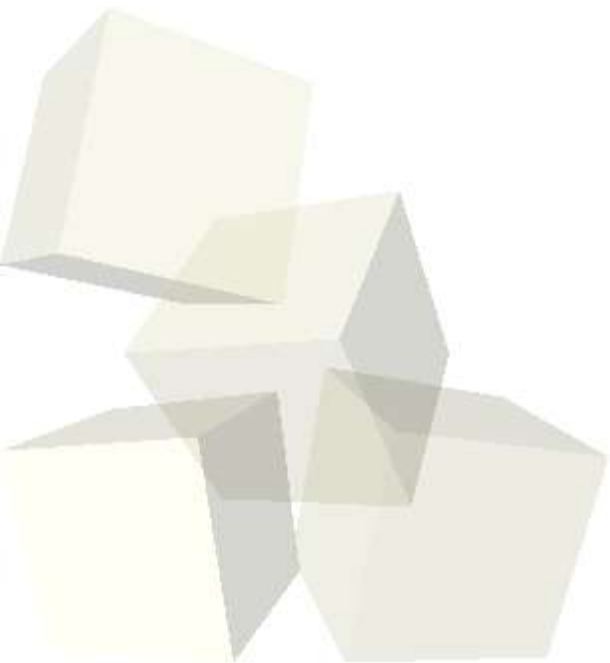
■ RP-TNC connectors

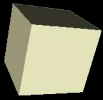




Custom Antenna Options

- Coax Cable – What length? Type? Hmm... Just check out <http://www.ocarc.ca/coax.htm>
- Now you and your neighbors can share bandwidth.

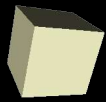




Exterior Equipment

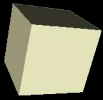
- Some of this stuff may seem like a no-brainer but...
 - Make sure all devices that use electricity are protected in a weatherproof enclosure.
 - Use weatherproof fittings when available.
 - Provide some sort of lighting protection.
 - Use drip loops for connectors and building penetrations.





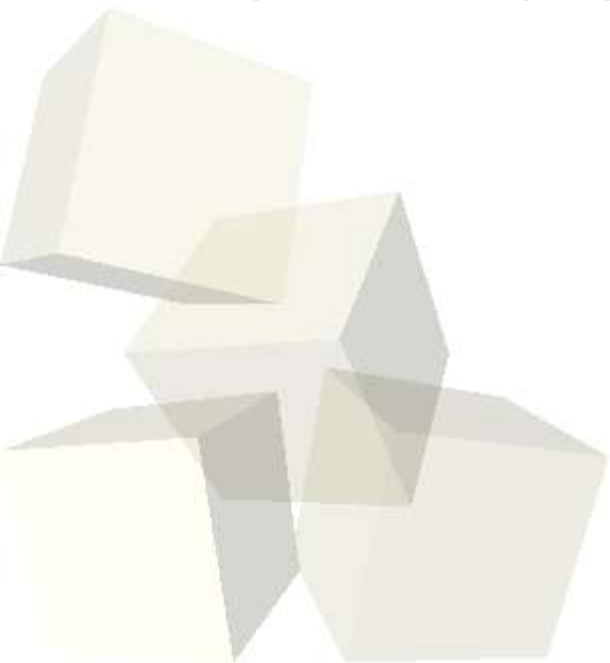
A Few Firmware Options

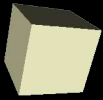
- Original Linksys Firmware
- www.linksys.com
- OpenWRT
- www.openwrt.org
- Sveasoft
- www.sveasoft.com
- Batbox
- www.batbox.org
- WiFiBox
- www.sourceforge.net/projects/wifi-box
- Google for more.



Our Two Favorites

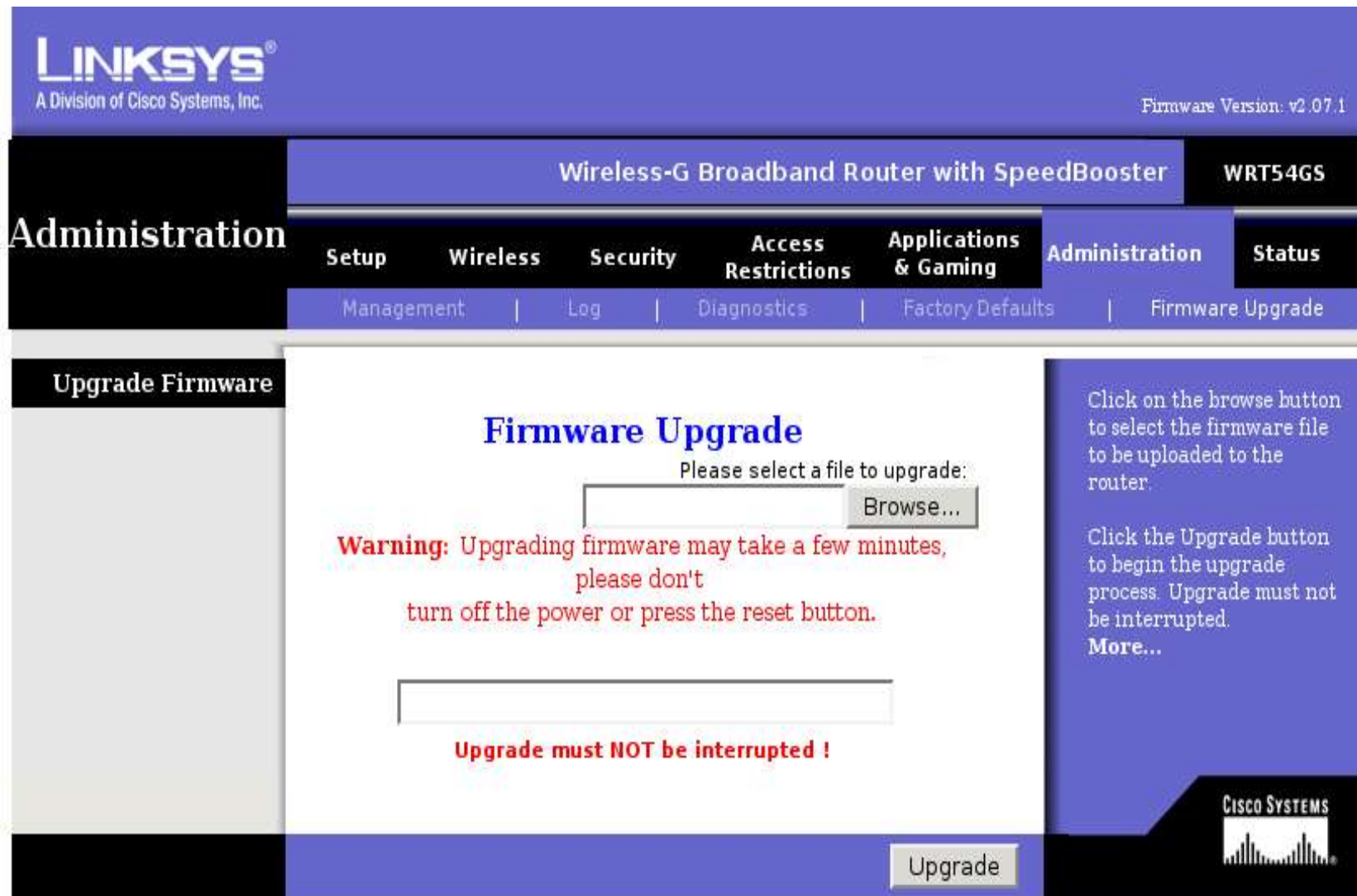
- OpenWRT and Sveasoft
- Why?
 - **Sveasoft** is extremely easy to use and offers instant results.
 - **OpenWRT** has software packages and allows for much flexibility.
- The rest of the presentation will focus on these two firmware options.





Installing New Firmware

- The easiest way to upgrade firmware on Linksys and Sveasoft.



The screenshot shows the Linksys WRT54GS administration interface. The top header is blue with the Linksys logo and 'A Division of Cisco Systems, Inc.' on the left, and 'Firmware Version: v2.07.1' on the right. Below this is a black navigation bar with 'Administration' on the left and 'Wireless-G Broadband Router with SpeedBooster' and 'WRT54GS' on the right. A secondary navigation bar contains tabs for 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications & Gaming', 'Administration', and 'Status'. Under the 'Administration' tab, there are links for 'Management', 'Log', 'Diagnostics', 'Factory Defaults', and 'Firmware Upgrade'. The 'Firmware Upgrade' page has a left sidebar with 'Upgrade Firmware'. The main content area is titled 'Firmware Upgrade' and contains a text box with a 'Browse...' button. A red warning message states: 'Warning: Upgrading firmware may take a few minutes, please don't turn off the power or press the reset button.' Below this is another empty text box and a red instruction: 'Upgrade must NOT be interrupted !'. At the bottom right is an 'Upgrade' button. On the far right, a blue sidebar contains instructions: 'Click on the browse button to select the firmware file to be uploaded to the router.' and 'Click the Upgrade button to begin the upgrade process. Upgrade must not be interrupted. More...'. The Cisco Systems logo is at the bottom right of the page.

LINKSYS®
A Division of Cisco Systems, Inc.

Firmware Version: v2.07.1

Wireless-G Broadband Router with SpeedBooster WRT54GS

Administration

Setup Wireless Security Access Restrictions Applications & Gaming Administration Status

Management | Log | Diagnostics | Factory Defaults | Firmware Upgrade

Upgrade Firmware

Firmware Upgrade

Please select a file to upgrade:

Browse...

Warning: Upgrading firmware may take a few minutes, please don't turn off the power or press the reset button.

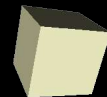
Upgrade must NOT be interrupted !

Upgrade

Click on the browse button to select the firmware file to be uploaded to the router.

Click the Upgrade button to begin the upgrade process. Upgrade must not be interrupted. More...

CISCO SYSTEMS



Setting OpenWRT NVRAM Variables

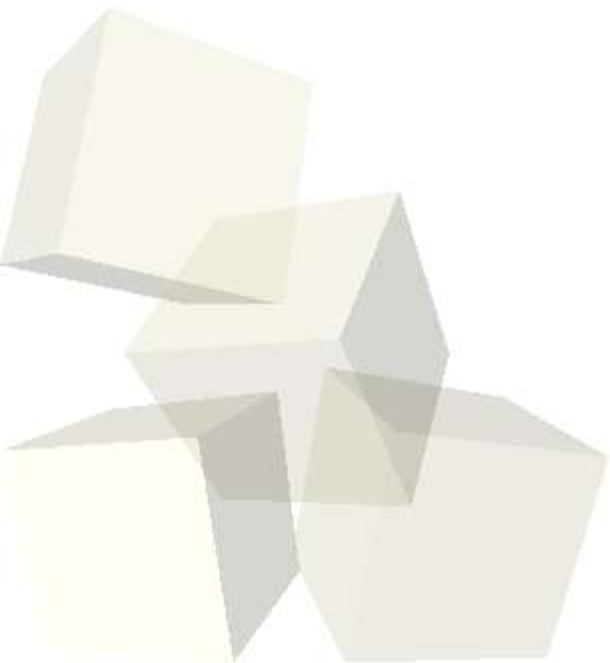
- Showing NVRAM Values
`nvram show`
- Searching NVRAM Values
`nvram show | grep <string>`
- Setting NVRAM Values
`nvram set <variable>=<value>`
- Don't forget to commit
`nvram commit`
- Sometimes after committing a reboot is necessary





OpenWRT and Ipkg

- Works similar to Apt
- Repositories are set up in [/etc/ipkg.conf](#)
- **ipkg update** #Updates package list
- **ipkg install <pkgname>** #Install certain package
- **ipkg remove <pkgname>** #Removes package





Funky Time Issue

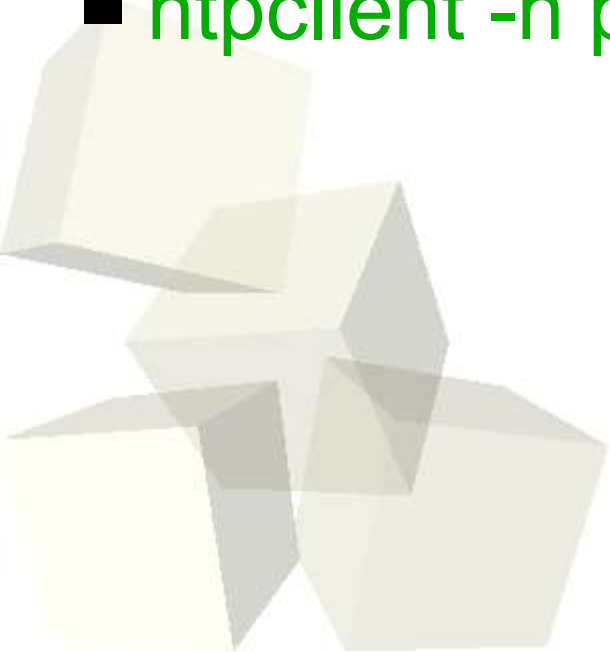
- OpenWRT Ain't Got The Time!
- Discovered after some frustration
- The output of the **date** command displays the year as Jan 1st 2000 every time the access point is power cycled
- This causes problems for anything that is dependent on date and time. Your digital certificates may not be valid for another 5 years or so.
- This can cause problems with OpenVPN w/Digital certificates and 802.1x



Funky Time Issue Fix

- Use the date command:
- `date <mmddhhmmccyy>`
- example: `date 121813452004`

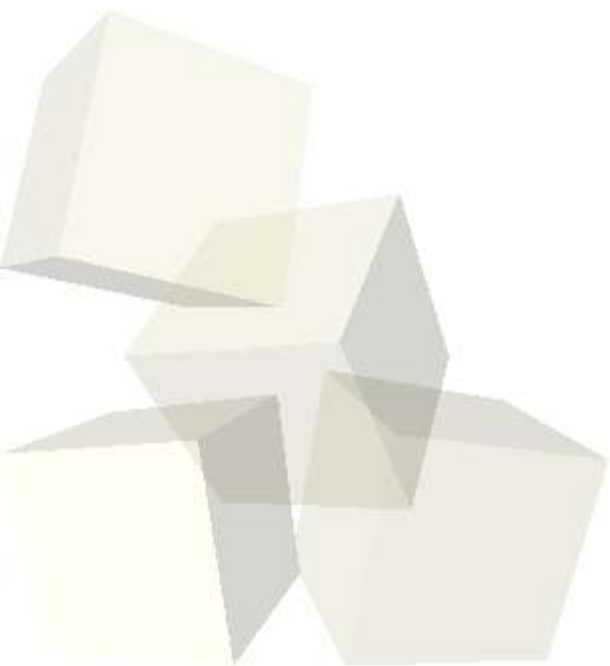
- More of a permanent fix by using ntpclient on boot.
- install `ntpclient` via `ipkg`
- Add the following to your `rcS`:
- `ntpclient -h pool.ntp.org -l -s &`





Editing the IPTables Firewall

- Rename the link in the `/etc/init.d` directory so it doesn't start and so you can import the file from ROM
- Then copy the file from ROM
- `cp /rom/etc/init.d/S45firewall /etc/init.d/S45firewall`
- Edit the `S45firewall` file until your heart is content
- `vi S45firewall`



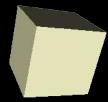


Certificate Warning!!!!

Franks and Beans!!!!

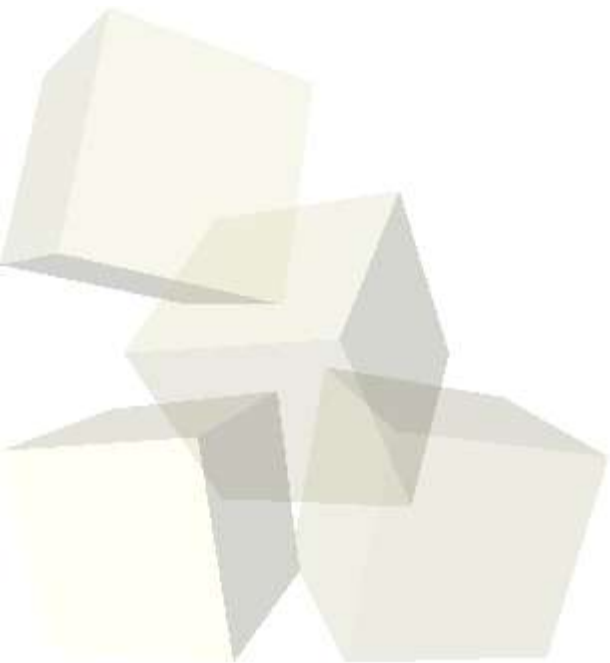


- **Warren Says:** Never use default certificates that come with anything. Create your own CA.



Setting up a Certificate Authority

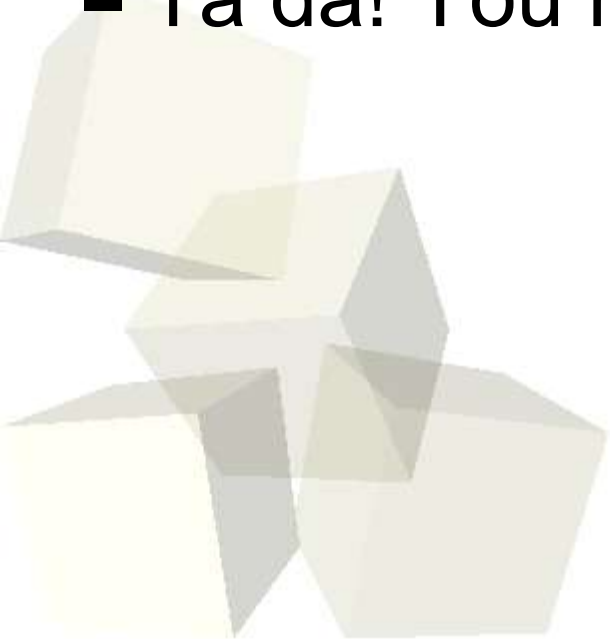
- Creating your own CA can be fun!
- OpenSSL
www.openssl.org
- Compile or install using your favorite package manager.
- This is important because many of the auth types and VPNs require Digital Certificates.





Creating a Self Signed CA

- Using the Perl Script `CA.pl` to create the CA.
`perl CA.pl -newca`
- Sometimes it chokes and you need to finish the job by creating the “serial” file yourself in the directory that houses the CA information.
`echo '01' >serial`
`touch index.txt`
- Ta da! You have a new CA.





Create and Sign Request

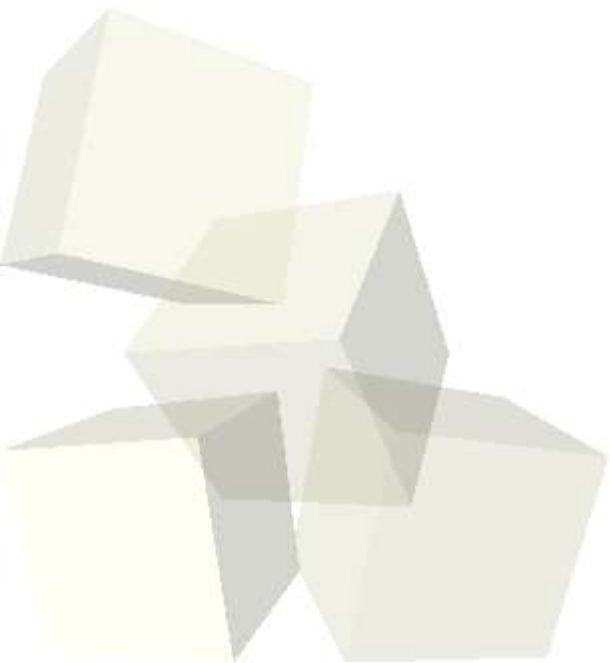
- Create a new certificate request
`perl CA.pl -newreq`
- Sign a req
`perl CA.pl -sign`
- To revoke a cert
`openssl -revoke <newcert.pem>`
- Create Diffie Hellman Parameters
`openssl dhparam -out dh1024.pem 1024`

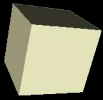




VPNs and Tunneling

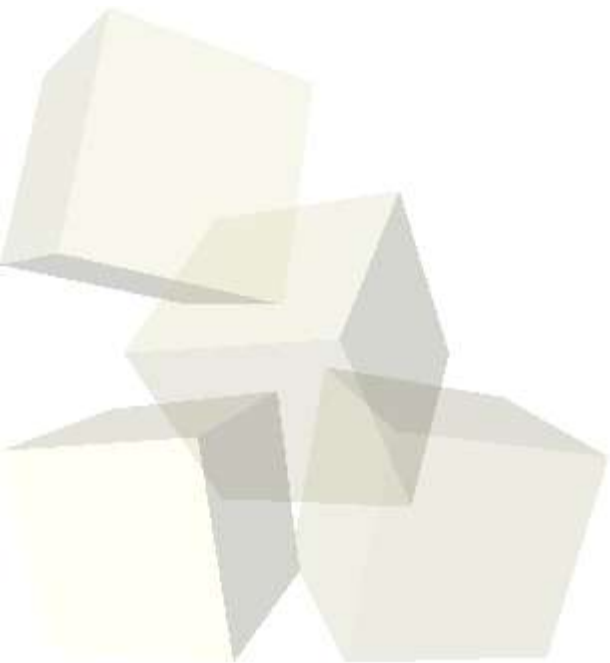
- OpenVPN
 - <http://openvpn.sourceforge.net>
- Openswan
 - <http://www.openswan.org>
- SSH tunneling

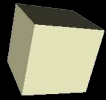




OpenVPN

- <http://openvpn.sourceforge.net>
- Uses UDP
- Good for NAT'ed hosts
- Uses SSL
- Fairly easy to configure
- Using an OpenVPN server can also help protect your Internet connection when away from home





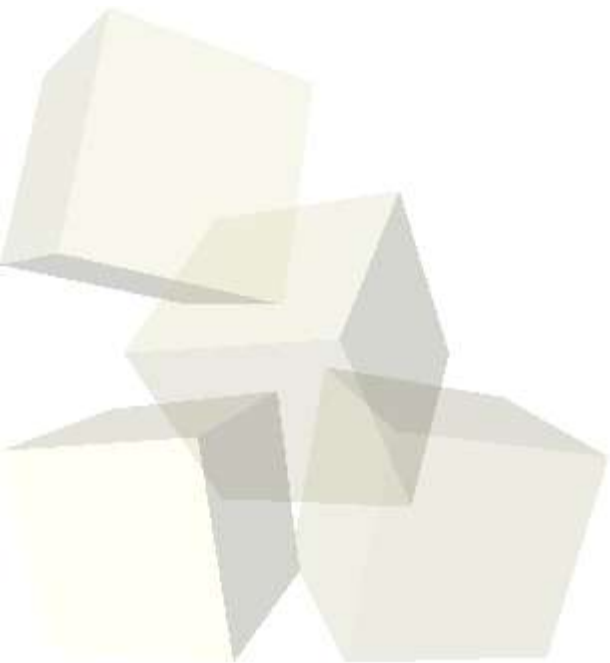
OpenVPN Server Configuration

- port specifies the port the server will run on
port 5000
- dev tun or dev tap specifies the type of interface
dev tun
- TLS Parameters for use of digital certificates
 - ca /path/to/cert #Root CA Cert
 - cert /path/to/cert #Cert for OpenVPN
 - key /path/to/key #Key for OpenVPN
 - dh /path/to/dh1024.pem #Diffie Hellman params
- Guess what this option does.
mode server



OpenVPN Server Configuration

- **push** #Pushes options to clients,
it is usually used to push routing options.
- **cipher** #The cipher used
- **redirect gateway local** #Sets VPN as Default GW
- **verb** #Sets the verbosity level





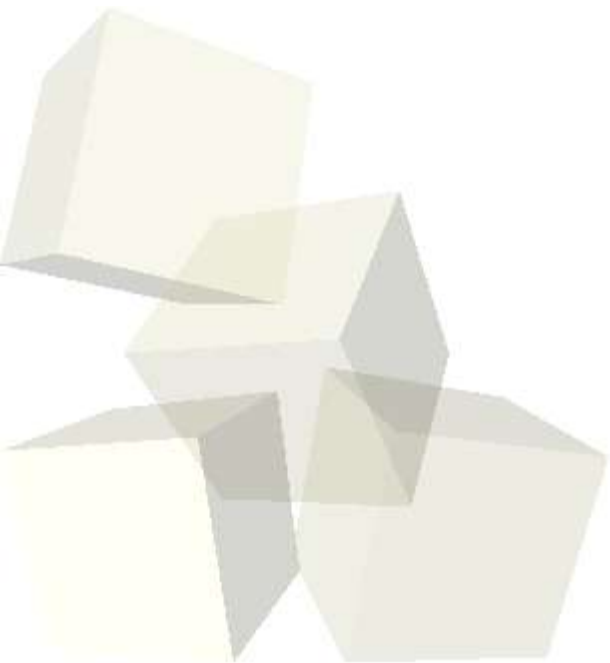
OpenVPN Client Configuration

- dev tun or dev tap specifies the type of interface
dev tun
- remote specifies the server and port
remote 192.168.1.1 5000
tls-client #specifies machine as client
- TLS parameters
ca /path/to/cert #Root CA Cert
cert /path/to/cert #Cert for OpenVPN
key /path/to/key #Key for OpenVPN
- verb #sets the verbosity level



OpenVPN Client Configuration

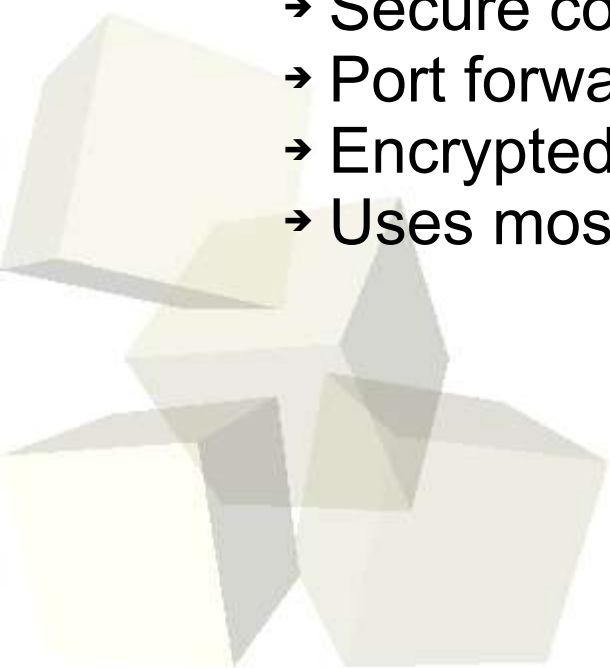
- Cipher determines the cipher
cipher AES-128-CBC
- redirect-gateway local #redirects traffic
- pull #pulls settings from the server

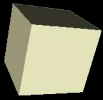




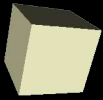
■ What's Required:

- `ipkg install dropbear`
- Dropbear is a stripped down version of OpenSSH originally written to run on a 386 laptop with 4MB.
- Provides most OpenSSH capabilities
 - Client and server
 - Secure copy (SCP)
 - Port forwarding
 - Encrypted traffic
 - Uses most of the same syntax as OpenSSH



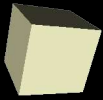


- What you can do with it:
 - Say you have a Squid server doing caching on your internal network.
 - You're on a public (possibly hostile) network.
 - `ssh root@wrtexternal.net -C -L 3128:ipofsquidbox:3128`
 - Now set your web browser's proxy settings to `127.0.0.1 port 3389`.
 - Your traffic will now be fully encrypted (and compressed) until it gets to a “safe zone” (your home network).

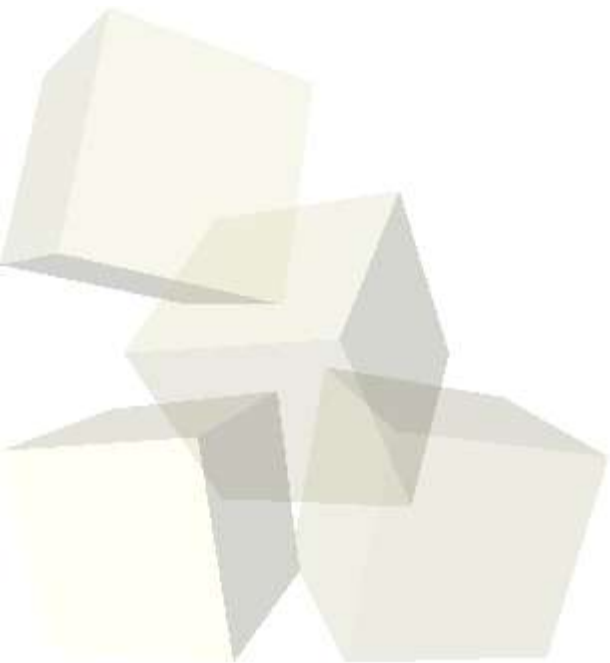


- What you can do with it:
 - SSH tunnelling can be done seamlessly with almost any TCP based connection.
 - Dropbear does NOT have IPv6 capability (yet).
 - Connections aren't limited to your internal network.
 - Things get a bit hairy using Windows XP as a client for Terminal Services via SSH (but still can be done).



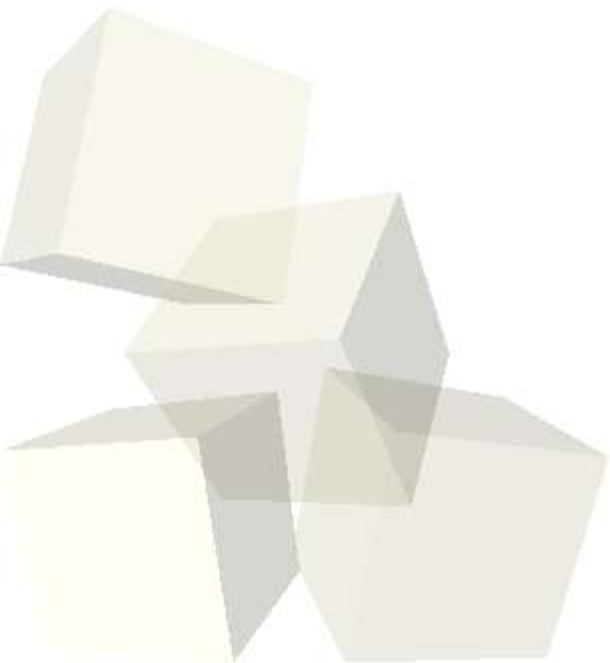


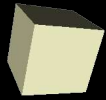
- Better than standard WEP.
- Can use your new Digital Certificates.
- Can do dynamic key rotation.
- Stronger authentication.
- Can still use usernames / passwords if you want (yuck!). Only this time with more security.





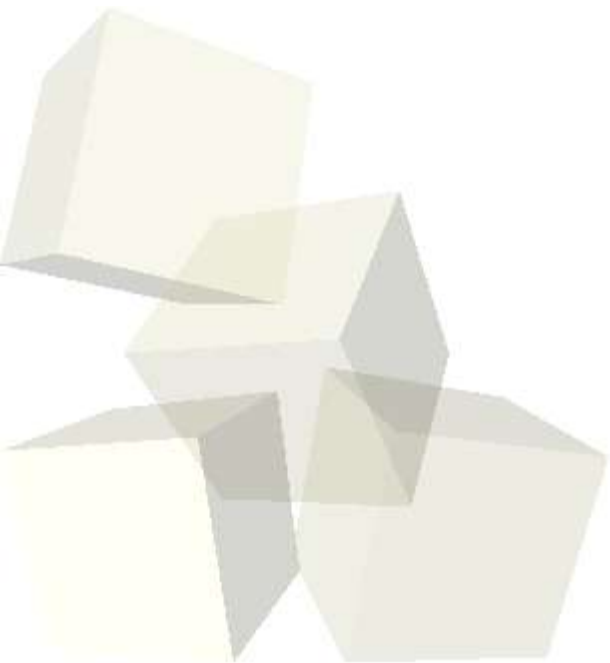
- www.open1x.org
- Has extensive configuration options
- Configurations are done through configuration files
- Supports multiple authentication types including EAP-TLS, PEAP, and LEAP





802.1x Windows Client

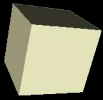
- Later versions of Windows have built-in support.
- XP with SP2 has best support.
- XP with SP1 has limited support.
- 2k has a a download with limited support.





802.1x with TinyPEAP

- The easiest way to do 802.1x with the WRT.
- Works with Linksys and Sveasoft firmware.
- Nice web interface for adding users and setting preferences.
- Set security mode to: Radius
- Set the radius server address to the address of the AP.
- Radius port should be 1812
- Shared key should be: password
- set an initial WEP key
- Add users though the GUI



LINKSYS
A Division of Cisco Systems, Inc.

Firmware Version: Saton-4.0 v2.07.1.7sv

Wireless

Wireless-G Broadband RouterWRT54G2

Setup

Wireless

Security

Access Restrictions

Applications & Gaming

Administration

Status

Basic Wireless Settings

Wireless Security

Wireless MAC Filter

Advanced Wireless Settings

Peap Settings

WDS

Peap User Management

Add User

Username

Password

Create User

Remove User

Current Users

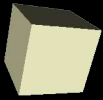
sysmin

Delete User

View Users

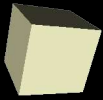
0. sysmin

CISCO SYSTEMS



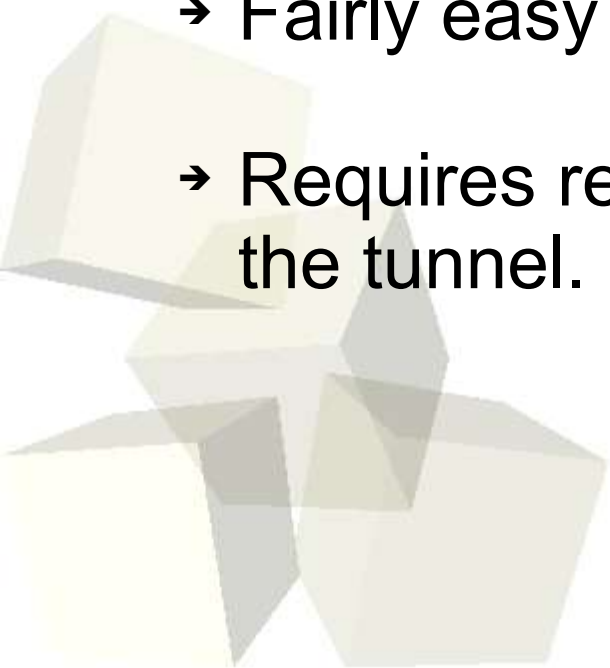
■ What's Required:

- `ipkg install iproute2`
- `ipkg install radvd`
- `ipkg install kmod-ipv6`
- IPRoute2 allows for easier configuration of IPv6 over IPv4 tunnels.
- RADVD (Route Advertiser Daemon) broadcasts an IPv6 prefix to the rest of your network
- kmod-ipv6 is the IPv6 kernel modules for connectivity and firewalling.



■ Getting connected:

- We used Hurricane Electric as an IPv6 Tunnel Broker.
 - <http://www.tunnelbroker.net>
- Allows for a static IPv6 over IPv4 tunnel and a /64 for your internal network.
- Fairly easy to get it all working.
- Requires registration and a few hours for HE to set up the tunnel.





■ Getting connected:

- Once HE establishes the tunnel, set up your end:
 - `ip tunnel add he.net mode sit remote 64.71.128.83 \ local 12.34.56.78 ttl 255`
 - `ip link set he.net up`
 - `ip addr add 2001:470:1F01:F00D::2F1/127 dev he.net`
 - `ip route add ::/0 dev he.net`
 - `ip -f inet6 addr`
- You can also add these commands to [/etc/init.d/rcS](#) to make them more permanent.
- `ping6 www.kame.net` to make sure you have connectivity.



- For the rest of your network:
 - Set up your router advertiser:
 - `vi /etc/radvd.conf`
 - `interface br0`
 - `{`
 - `AdvSendAdvert on;`
 - `MinRtrAdvInterval 3;`
 - `MaxRtrAdvInterval 10;`
 - `AdvHomeAgentFlag off;`
 - `prefix 2001:470:1F01:CAFE::/64`
 - `{`
 - `AdvOnLink on;`
 - `AdvAutonomous on;`
 - `AdvRouterAddr on;`
 - `};};`



■ For the rest of your network:

- Assign one of the /64 IPv6 IPs to the br0 interface
 - `ip -6 addr add 2001:470:1F01:CAFE::1/64 dev br0`
- Ensure IPv6 forwarding is enabled
 - `echo 1 > /proc/sys/net/ipv6/conf/all/forwarding`
- Start RADVD
 - `radvd -m logfile -l /var/log/radvd.log`
- These can also be added to [/etc/init.d/rcS](#).
- You should now be able to `ping6 www.kame.net` from IPv6 enabled clients.



Community Networking

- Using the WRT as a wireless client.
- Using WDS (Wireless Distribution System).
- Creating a Phat network in your neighborhood because sharing your Internet connection is fun for everyone.
- Do some prior planning and have an objective for your community network.
- Doesn't matter if you want to share Internet access or files, planning goes a long way.
- Know what type of antennas you need to use.

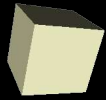




Community Networking

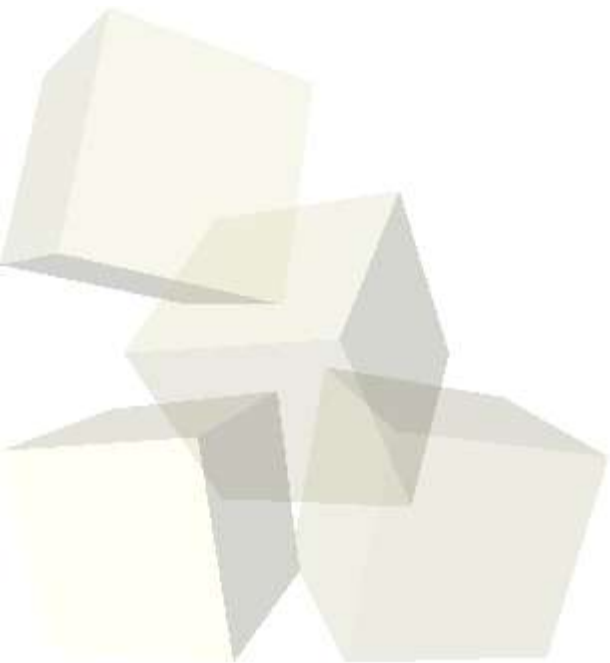
- Be mindful of obstructions in the fresnel zone.
- Metal can be a very bad thing.

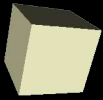




WRT as a Wireless Client

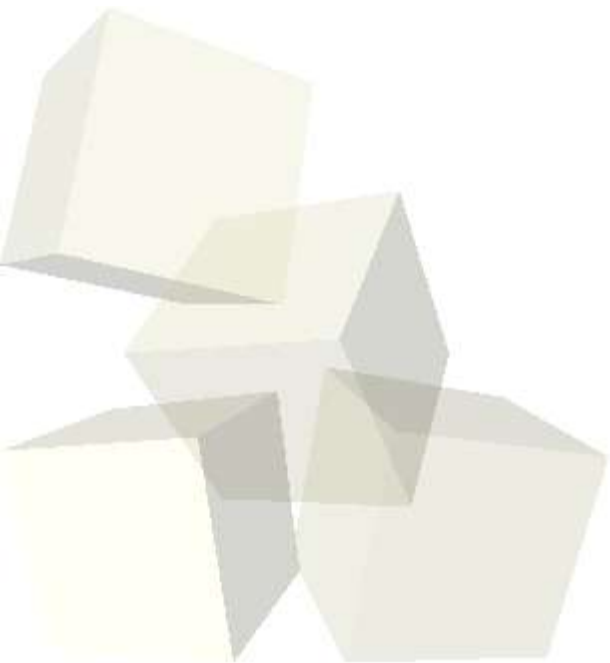
- Allows you to connect to another access point using wireless.
- No need to configure main access point.
- Must be configured with the same SSID.
- Must be configured with on the same channel.

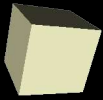




Using WDS in Sveasoft

- Setup through the GUI
- Easy to configure
- Can still use the wireless interface even though it is meshing.
- Enter MAC addresses of other AP's wireless interfaces into the WDS config page





WDS and Sveasoft

Wireless

Wireless-G Broadband RouterWRT54G2

SetupWirelessSecurityAccess RestrictionsApplications & GamingAdministrationStatus

Basic SettingsSecurityMAC FilterAdvanced SettingsPeap SettingsWDS

Wireless WDS

LAN00:12:17:AD:A2:73

LAN00:12:17:AB:21:32

LAN00:12:17:BD:31:AC

Disable00:00:00:00:00:00

Disable00:00:00:00:00:00

Disable00:00:00:00:00:00

Disable00:00:00:00:00:00

Disable00:00:00:00:00:00

Disable00:00:00:00:00:00

Disable00:00:00:00:00:00

Lazy WDS:Enable (Default: Disable)

WDS SubnetEnableDisable

NATDisable

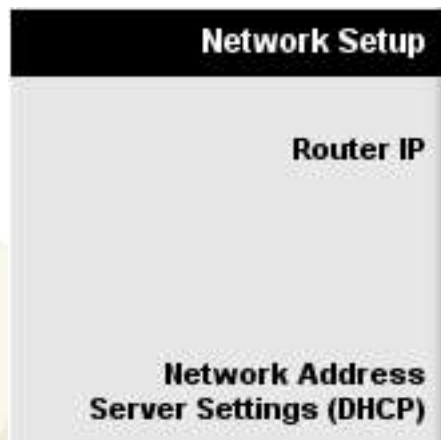
IP Address:0.0.0.0

Subnet Mask:0.0.0.0

More...



- Set the scope, hand out DHCP, and be the gateway on one AP.
- Set up this AP as the gateway on other APs.
- Turn off DHCP on other APs.

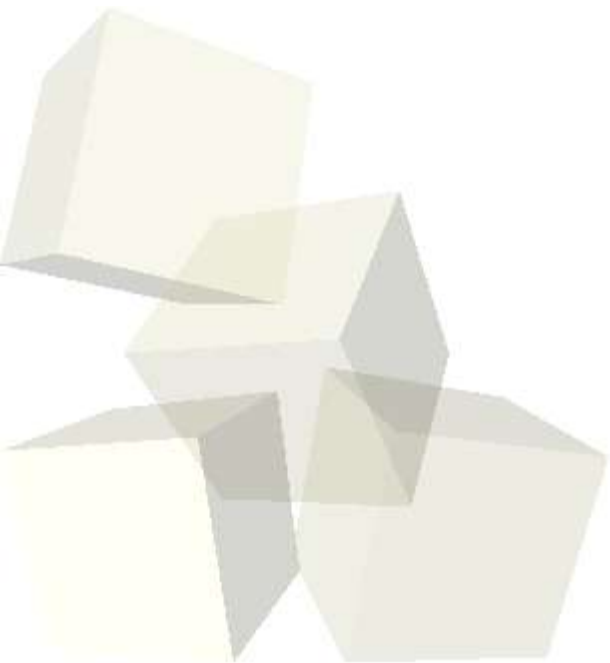


Local IP Address:	192 . 168 . 3 . 2
Subnet Mask:	255 . 255 . 255 . 0
Gateway:	192 . 168 . 3 . 1
DHCP Server:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable



Hotspots and Authentication

- NoCat
 - <http://nocat.net>
- Chillispot
 - <http://www.chillispot.org>





Cross Compiling Applications

- Easy way to get a cross compiler up and running:
 - Requires a Debian based distro
 - From <http://skaya.enix.org/wiki/ToolChain>
 - `apt-get install toolchain-source toolchain-source-gdb toolchain-source-newlib`
 - `tpkg-make mipsel-linux`
 - `cd binutils-mips-linux-*/ ; debuild -us -uc`
 - `su -`
 - `debi`
 - `TPKG_SERVER=ftp://ftp.us.debian.org tpkg-install-libc mipsel-linux`
 - go to the `gcc-mips-linux-*` dir
 - `debuild -us -uc`
 - `debi`
 - A lot easier than it sounds



Cross Compiling Applications

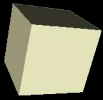
- Not so easy ways
 - Compile from source (good luck!!!)
 - Use CrossTool
 - Cross compiler build scripts from <http://www.kegel.com/crosstool/>
 - Has issues with BASH 3.xx
 - I've never gotten a compiler up and running these ways
 - To make an app from source (from ToolChain slide):
 - `CC=mipsel-linux-gcc CFLAGS="-s --static" ./configure \ --host=mipsel`
 - `make`



Cross Compiling Applications

■ Issues with compiling

- AKA -- My limited knowledge with embedded development and cross compilers
- Linux uses GLibC for C Libraries
- OpenWRT uses uCLibC
 - much more stripped down and compact C Library
- Binaries compiled with GLibC must be statically compiled (hence the --static)
- They end up being huge (even after the symbols get stripped...-s)
- We're working on it
 - Trying to use the Tool Chain that actually builds OpenWRT



Customizing OpenWRT

- 2 Config scripts to know about (for now)
 - `/buildroot/sources/openwrt/busybox/busybox.config`
 - Busybox is a command line interface used in embedded systems (many POSIX tools in an >200kb package if configured properly).
 - There are some tools you might want that aren't compiled in by default (e.g. `mkswap`, `swapon`, `swapoff`).
 - `/buildroot/sources/openwrt/kernel/linux.config`
 - Standard `.config` file from the 2.4.20 kernel
 - for more flexibility, enabling and disabling modules you need/don't need.
 - **BE VERY CAREFUL DOING THIS.** You could end up with a firmware that bricks your WRT.
 - Don't say we didn't warn you.



Mod The #@&\$ Out Of It!

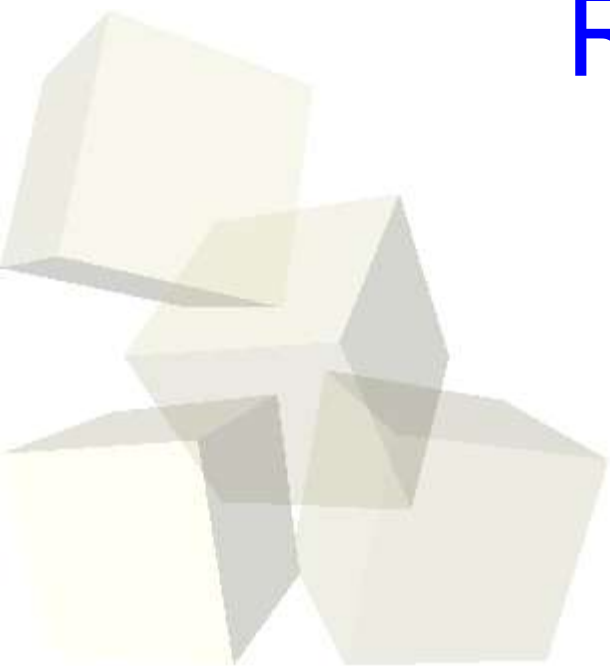
WrtZilla



Yes, this is a functional WRT



Stage II: Recon and Attacks





Drive-by Upload

- Remember why it is so important to change your defaults?

The screenshot shows the Linksys WRT54GS web interface. The top header is blue with the Linksys logo and 'A Division of Cisco Systems, Inc.' on the left, and 'Firmware Version: v2.07.1' on the right. Below this is a black navigation bar with 'Administration' on the left and 'Wireless-G Broadband Router with SpeedBooster' and 'WRT54GS' on the right. A secondary blue navigation bar contains links: 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications & Gaming', 'Administration', and 'Status'. Below this is a white bar with sub-links: 'Management', 'Log', 'Diagnostics', 'Factory Defaults', and 'Firmware Upgrade'. The main content area has a black sidebar on the left with 'Upgrade Firmware'. The central white area is titled 'Firmware Upgrade' in blue. It contains a text box for file selection with a 'Browse...' button, a red warning message, a large empty text box, and a red instruction 'Upgrade must NOT be interrupted !'. At the bottom right is an 'Upgrade' button. On the far right, a blue sidebar contains instructions: 'Click on the browse button to select the firmware file to be uploaded to the router.' and 'Click the Upgrade button to begin the upgrade process. Upgrade must not be interrupted. More...'. The bottom right corner features the Cisco Systems logo.

LINKSYS®
A Division of Cisco Systems, Inc.

Firmware Version: v2.07.1

Wireless-G Broadband Router with SpeedBooster WRT54GS

Administration

Setup Wireless Security Access Restrictions Applications & Gaming Administration Status

Management | Log | Diagnostics | Factory Defaults | Firmware Upgrade

Upgrade Firmware

Firmware Upgrade

Please select a file to upgrade:

Browse...

Warning: Upgrading firmware may take a few minutes, please don't turn off the power or press the reset button.

Upgrade must NOT be interrupted !

Upgrade

Click on the browse button to select the firmware file to be uploaded to the router.

Click the Upgrade button to begin the upgrade process. Upgrade must not be interrupted. More...

CISCO SYSTEMS



FuxorWRT by THP

```
sysmin@mybox: /home/sysmin
File Edit View Terminal Tabs Help
sysmin@mybox:~$ ssh -l root 192.168.1.1
root@192.168.1.1's password:

BusyBox v1.00-rc2 (2004.09.12-02:19+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

FUXOR
WRT

By: The Hacker Pimps!

"Don't enter us, We'll enter you!"
root@PimpWrt:~#
```

“Don't Enter us, We'll enter you!”



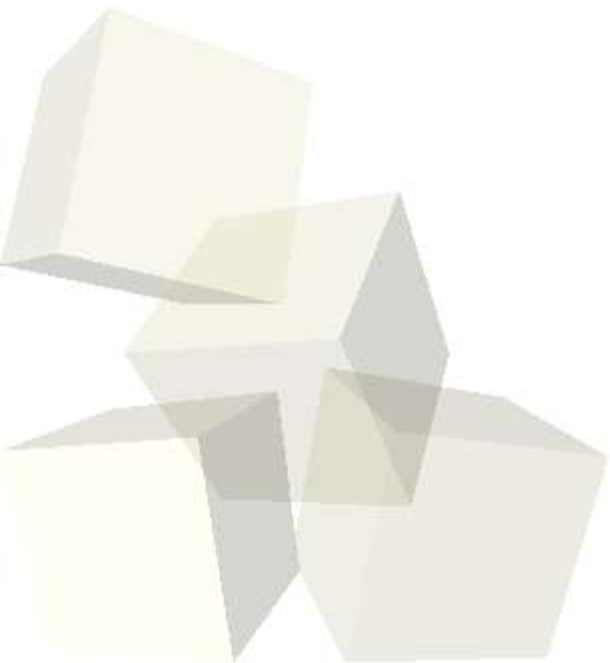
■ FuxorWRT

- Hacker Pimps' Customized OpenWRT firmware
- Includes (out of the box):
 - most kernel modules embedded into the firmware
 - smbmount & smbclient
 - nbtscan
 - aircrack
 - NFS client/NFS Swap
 - IPv6 stack (with Router Advertiser)
 - THC-Hydra
 - Lutz (tiny port scanner similar to NMAP)
 - hping2
 - stunnel
 - Misc. exploits for computers behind the WRT54G(S)
 - Suggestions?



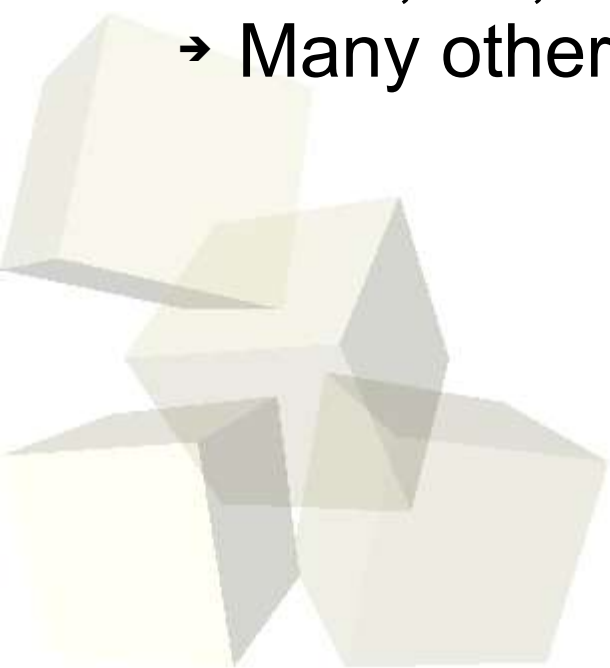
■ FuxorWRT Build

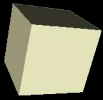
- Customized linux.config
- Customized busybox.config
- Several cross compiled tools and apps
 - copied into /opt/build_mipsel/root
- Re-running “make” in your buildroot dir adds new programs and Kernel/BusyBox mods
- Custom /opt/build_mipsel/root/etc/banner



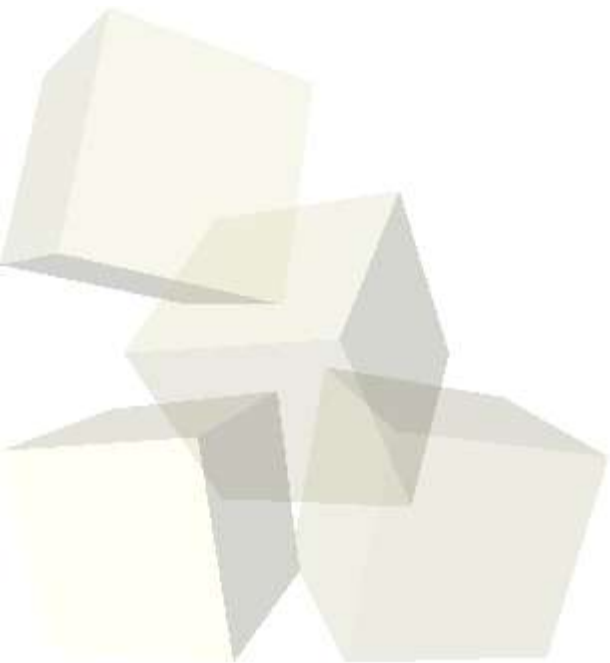


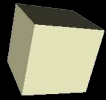
- Using netcat as a port scanner.
 - `nc -v -z <host> <port range>`
- Using netcat to connect to ports and banner grab.
 - `nc <host> <port>`
- Using Lutz
 - `-sC` Connect() Scan. Default for nonroot users
 - * `-sS` SYN-Stealth Scan. Default for root
 - * `-sF,-sX,-sN` FIN,Xmas,NULL-Scan instead of SYN
 - Many other options





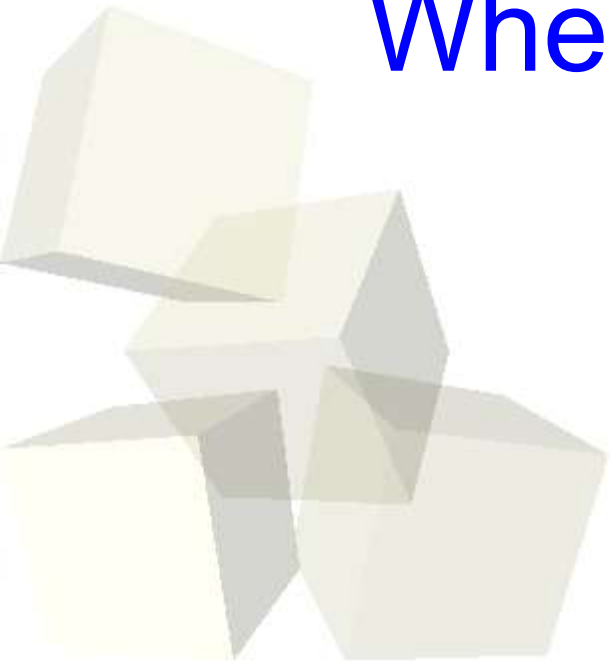
- What can be done with **FuxorWRT**?
 - Discover hosts
 - Port scan
 - Scan for shares
 - Transfer data
 - Mount shares
 - Crack WEP
 - Exploit

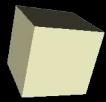




When Firmware Goes Bad

Stage III: When Firmware Goes Bad





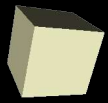
When Firmware Goes Bad

- To avoid certain problems make sure that you turn boot wait on.

`nvrn set boot_wait=on`

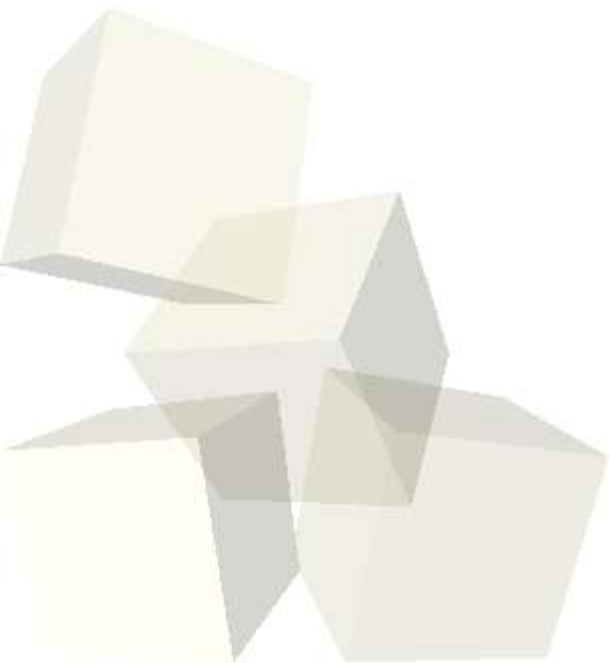
- Something else to try

- Set the computer up to ping 192.168.1.1
- Remove cover and short out pins 15 and 16 on the nvrn chip
- Apply power
- Once the ping is working tftp the image to the wrt
- `tftp 192.168.1.1`
- `tftp> binary`
- `tftp> rexmt 1`
- `tftp> trace`
- `tftp> put <imagefile>`



When Firmware Goes Bad

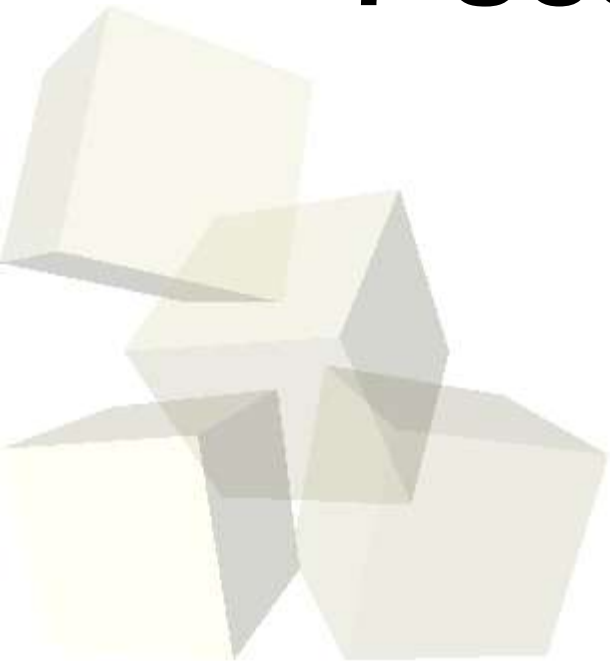
- Hold in the reset button
- Pray to the gods of firmware and offer up a sacrifice. Maybe an old telephone or something?





Uses For Brick

7 Uses for a Bricked WRT

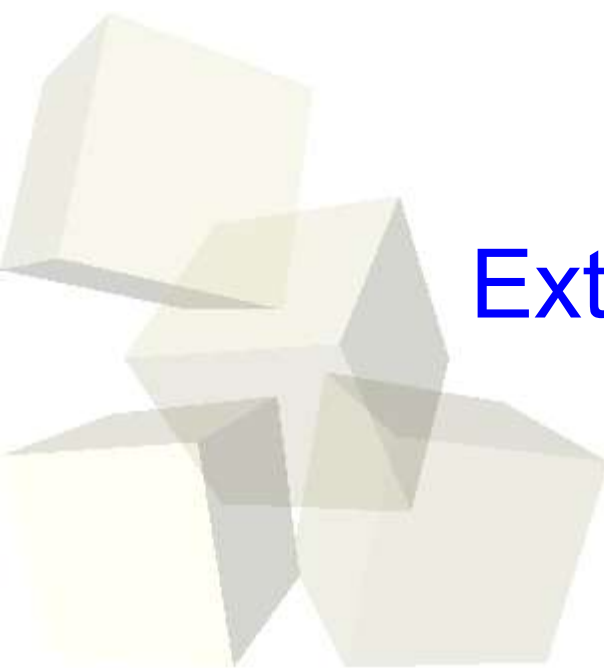




The WRT Purse

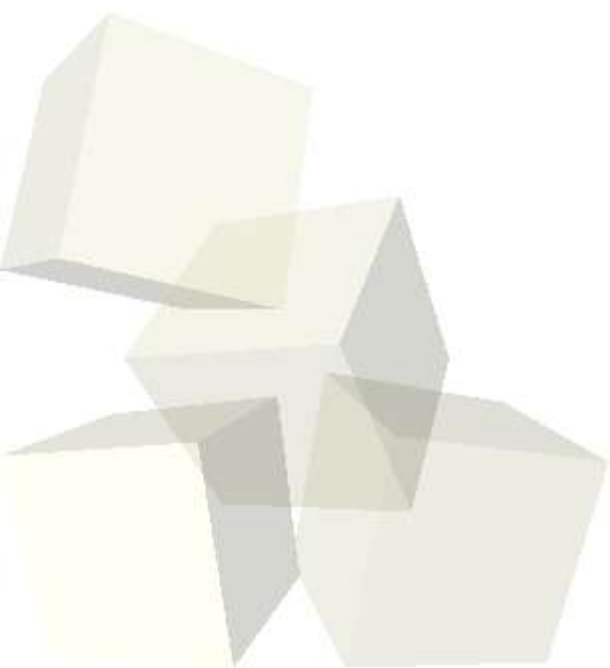
See Demo

Extras Needed: 1 short piece of Cat5
1 long piece of Cat5





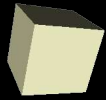
The WRT Soccer Ball



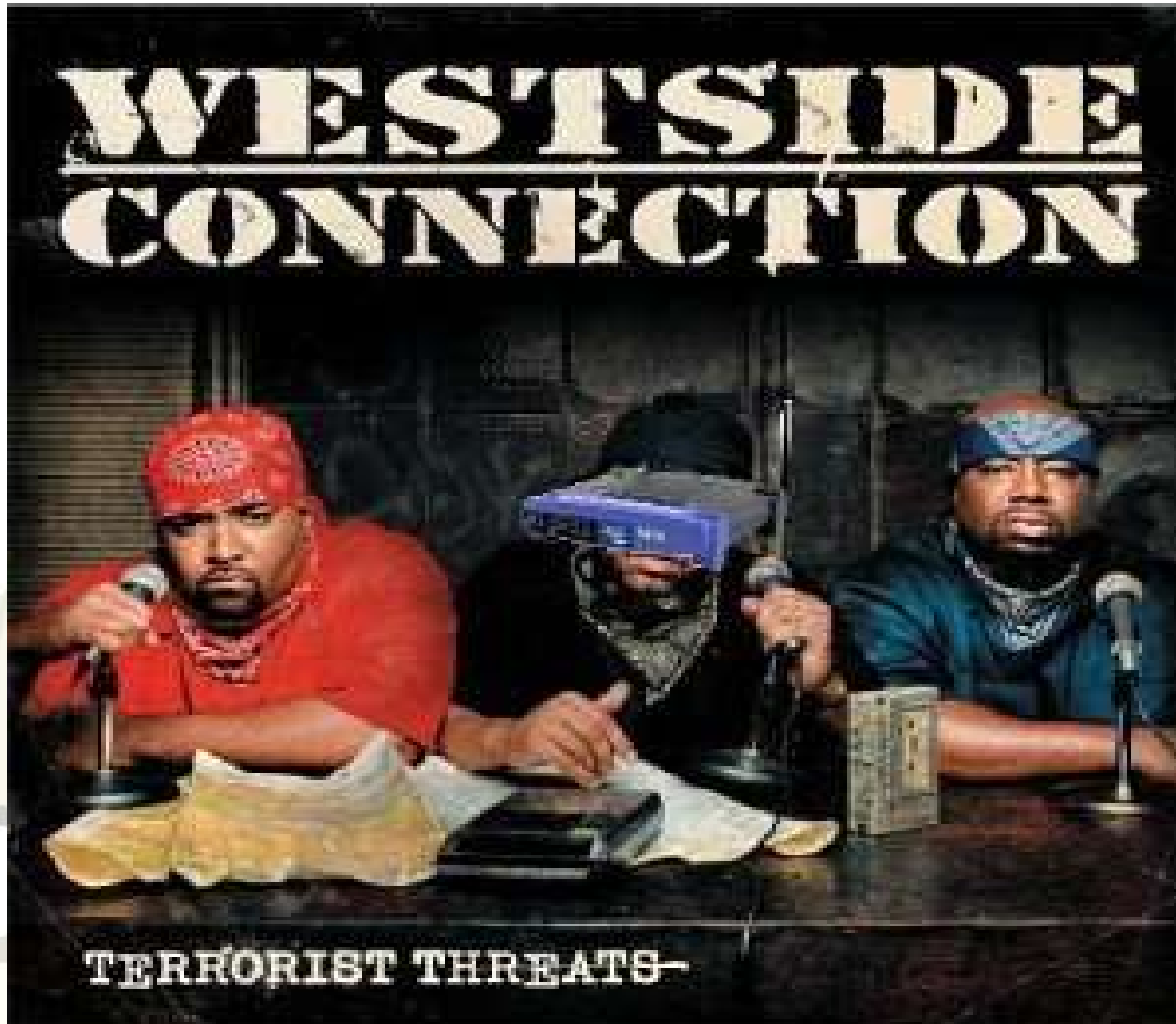
The WRT Plastic Surgeon



Who could possibly
know more about
plastic surgery?



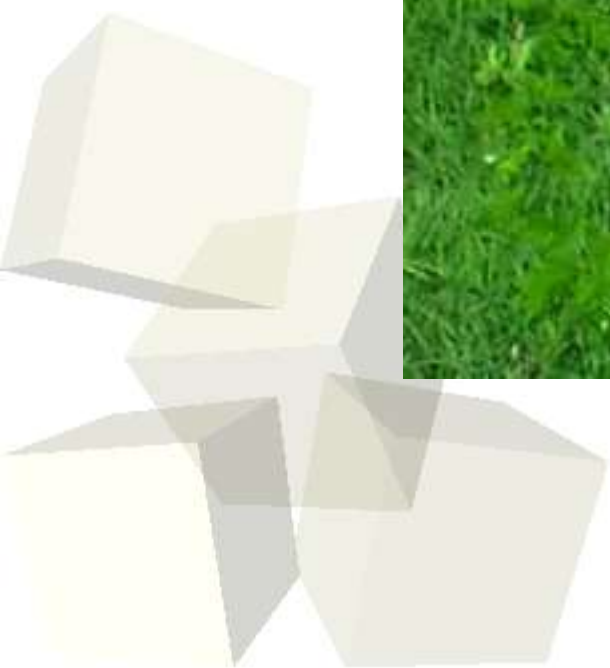
The WRT Rap Star



Fo Shizzle

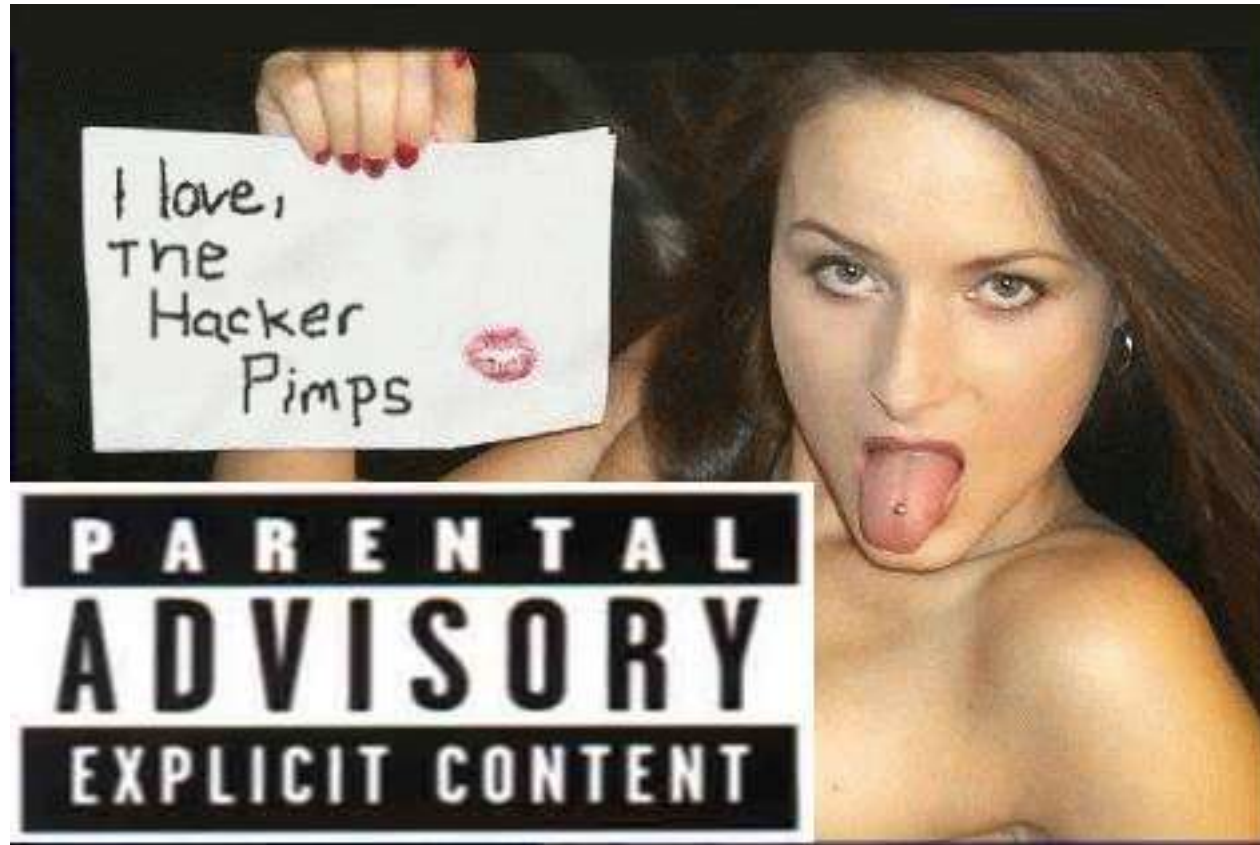


The WRT Lawn Sprinkler

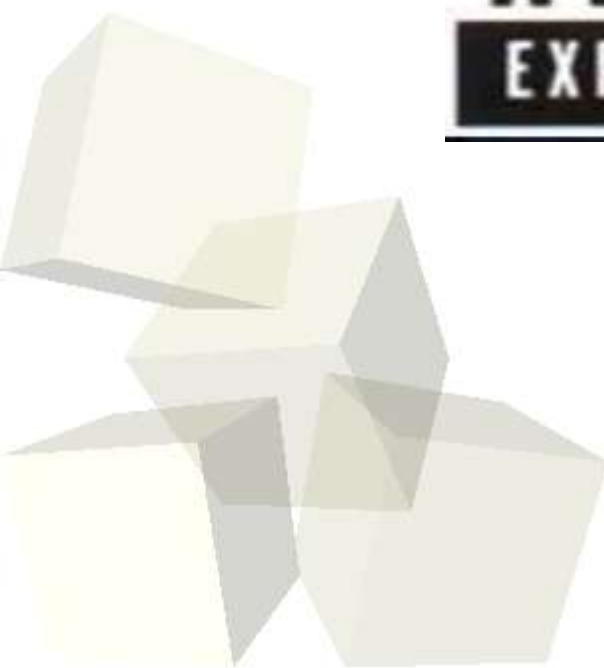




The WRT Pleasure Device



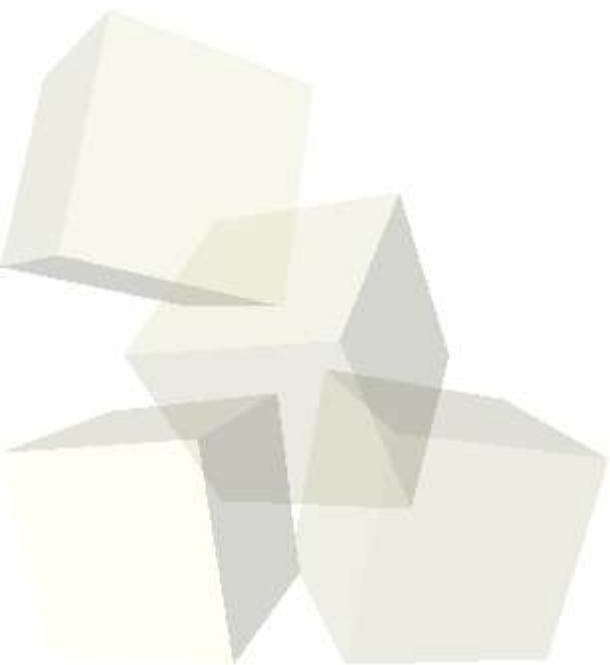
Extras Needed: 1 Midget
1 Kazoo

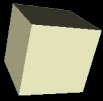




Thank You

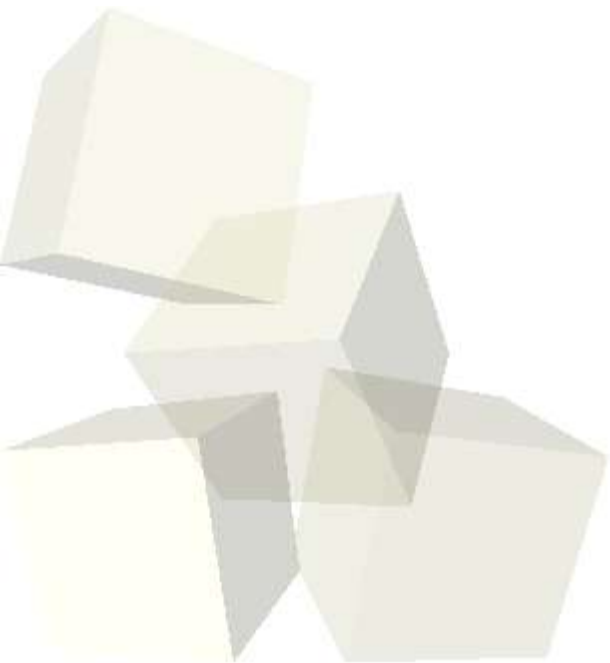
- We would like to thank the developers of the various projects and communities that make them great. Your work is greatly appreciated.





Useful Links

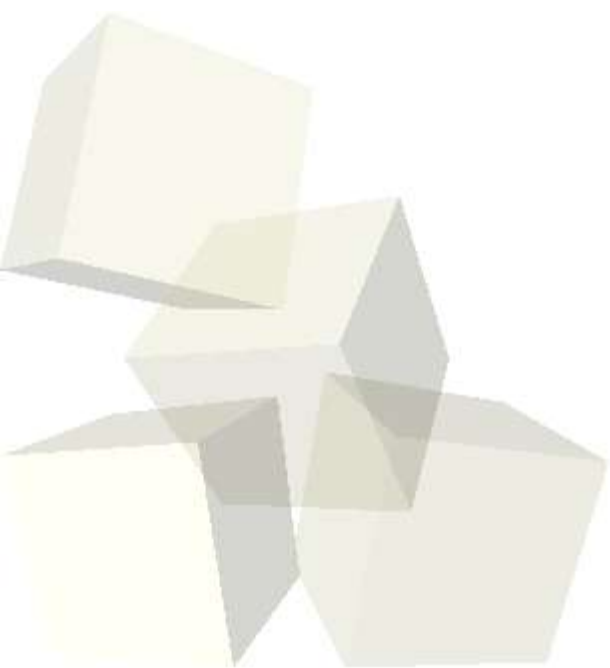
- www.openwrt.org
- www.sveasoft.com
- <http://openvpn.sourceforge.net>
- <http://www.openswan.org>
- http://voidmain.is-a-geek.net:81/redhat/wrt54g_revival.html
- www.openssl.org
- <http://www.neonbox.org/nanobox>





Any Questions?

- Sysmin Sys73m47ic
Nathan Hamiel – ISSAP, CISSP, NSA-IAM
sysmin@neohaxor.org
- Quigon
Gene Cronk – ISSAP, CISSP, NSA-IAM
gene@hacktek.com



The Hacker Pimps
www.hackerpimps.com