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TRANSMISSION TALK TUESDAY

Episode #60

IT Month

Networking Intro

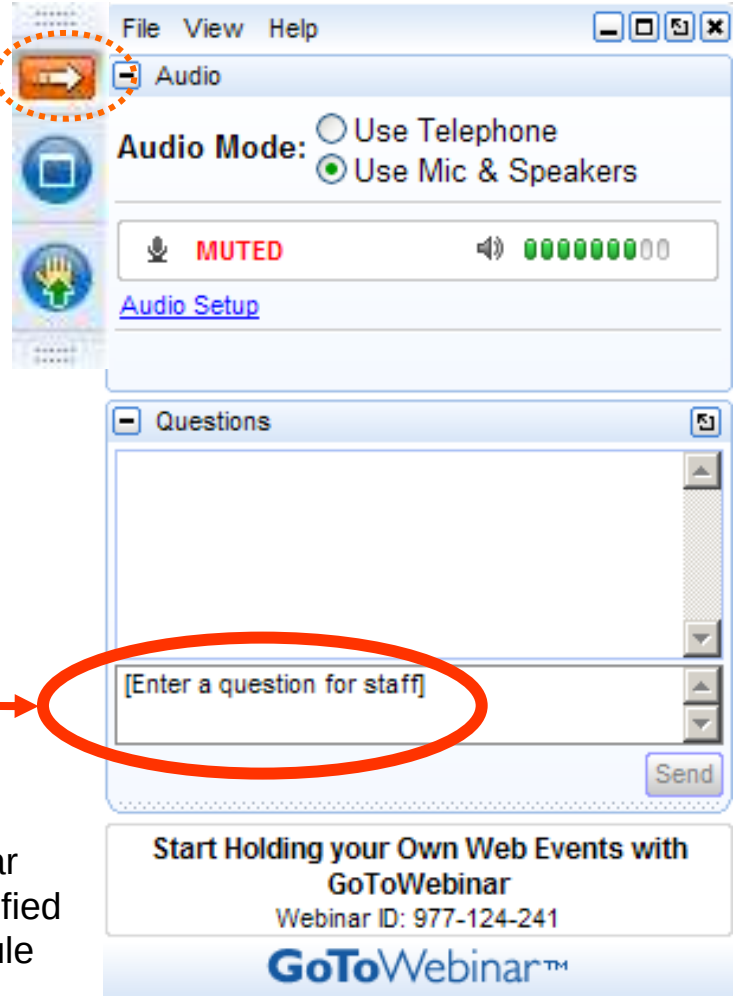
(For Non-IT Types)

nautel
AM/FM Radio Transmitters

Your questions please?

(if you don't see the control panel, click on the orange arrow icon to expand it)

Please enter your questions in the text box of the webinar control panel (remember to press send)



Remember: The completion of a Nautel webinar qualifies for ½ SBE re-certification credit, identified under Category I of the Re-certification Schedule for SBE Certifications.

Ideas for things to cover

- Partitioning – subnets, multiple domains, public IP or private network?
- Router, switch, hub – what are the differences and why does it matter?
- Security
  - Firewalls
  - VPNs
  - Port Forwarding (what is it and why?)
  - Education
- Other items
  - Online courses/resources?

Submit a question now and we'll do our best to answer it in the session. If you have a relevant story to share please tell us now and we'll contact you for more information.

Can the port forwarding option be changed rather than using the default 80?

Can you discuss firewalls and safe ways to put equipment on a WAN?

Since putting Win10 online, netbios is messed up on other pcs, how to subnet and allow access to resources?

What are best practices for using more than one router on the same local network?

routers switches hubs

How about a suggestion for an online course (EdX, Udemy, etc) for a basic understanding of networking / Net+?

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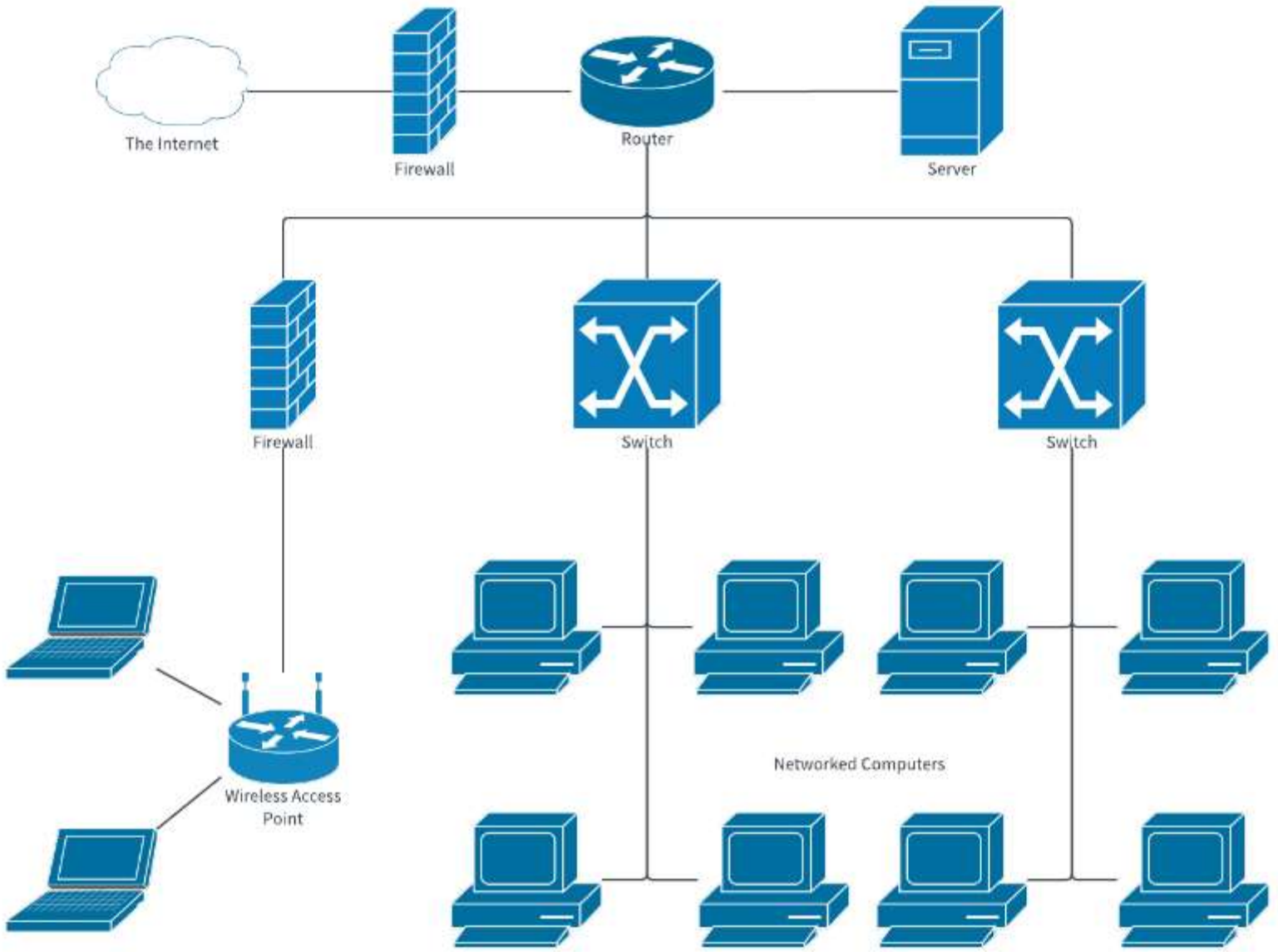
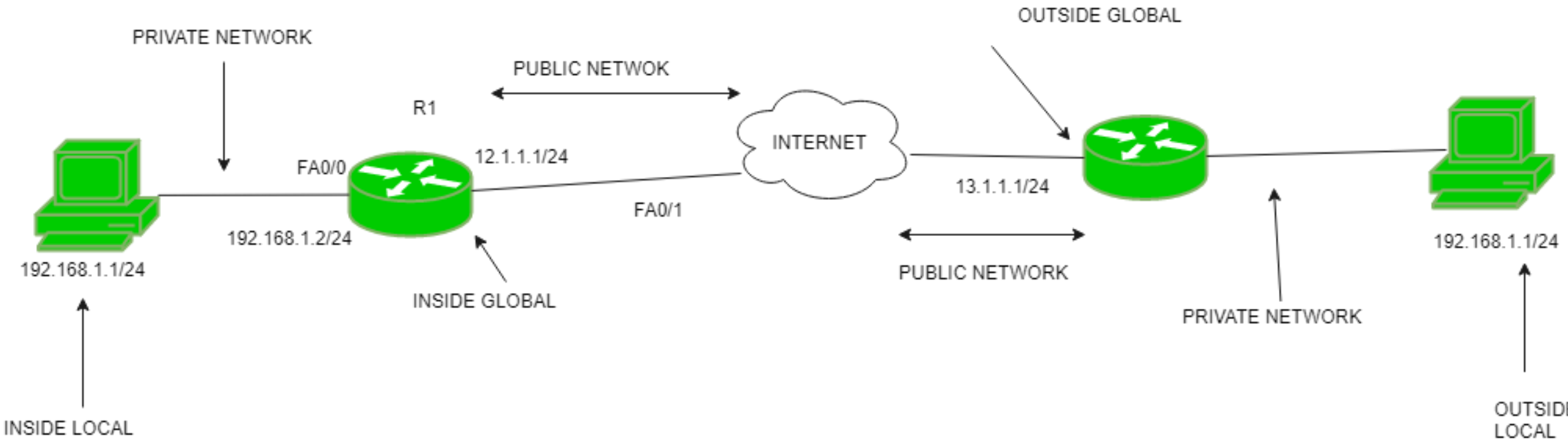
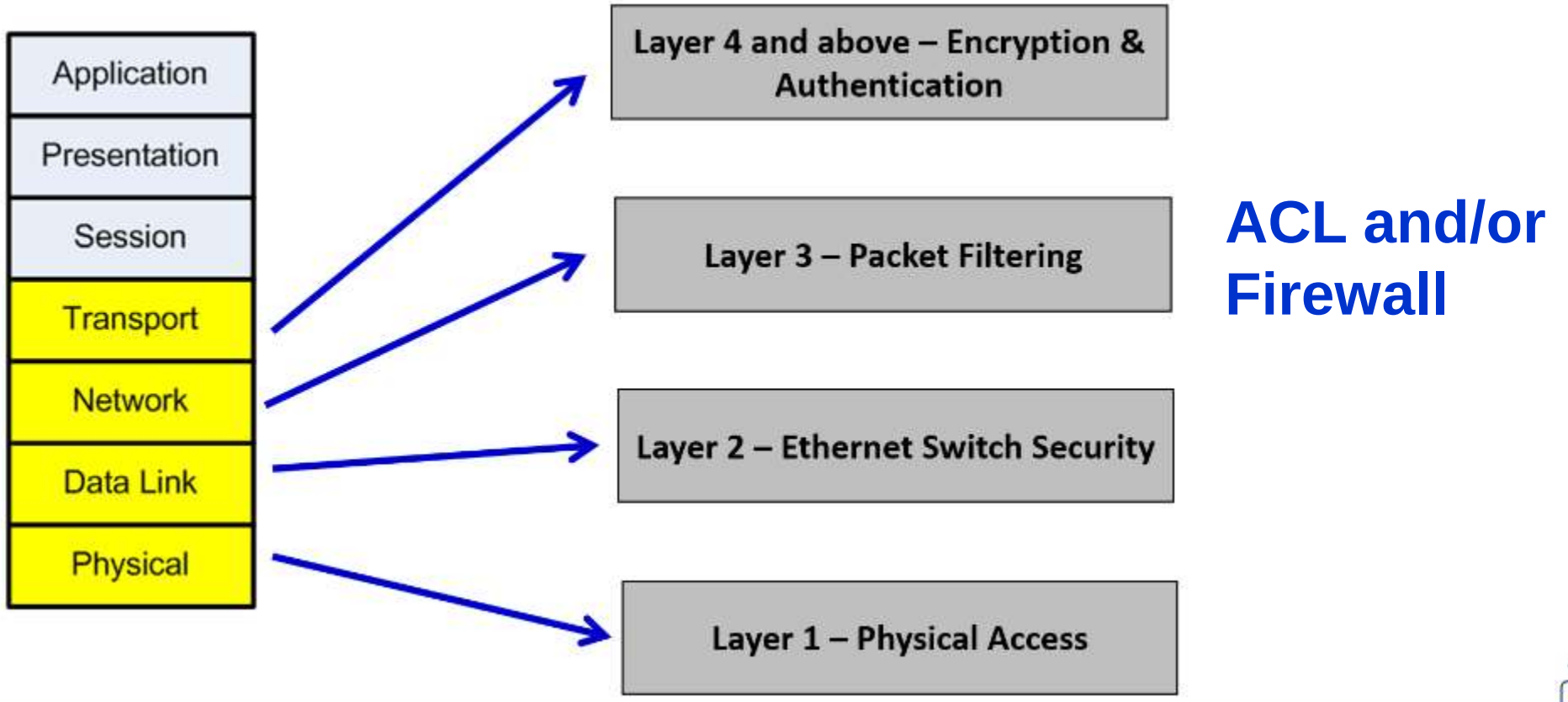

The Internet
Firewall
Router
Server
Firewall
Switch
Switch
Networked Computers
Wireless Access Point


PRIVATE NETWORK
PUBLIC NETWOK
OUTSIDE GLOBAL
R1
INTERNET
FA0/0
12.1.1.1/24
13.1.1.1/24
FA0/1
192.168.1.2/24
192.168.1.1/24
192.168.1.1/24
INSIDE GLOBAL
PUBLIC NETWORK
PRIVATE NETWORK
INSIDE LOCAL
OUTSIDE
LOCAL

Structured Implementation Plan

OSI Model



ACL and/or Firewall

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Do These 10 Things

Essential

- Change default logins
- Use strong passwords (paraphrases)
- Separate Admin & User accounts on hosts (WIN)
- Segment your network (VLAN) – create multi-layer security zones
- Use packet filtering to control host access (ACL and/or firewall)
- Disable un-used services – close ports not used
- Monitor your network – know what is normal
- Use secure access (SSH not telnet)
- Use VPN for off-site access
- Don’t be a social engineering victim – educate users

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HOME | LOCATION | CONFIGURATION | DEFAULTS | UPDATE | REBOOT

Studio Transmitter Link

Site Type: Studio Encoder
Stream Mode: Never
Keep-Alive: Passive

Connection Status: Established FROM [redacted]
Incoming Stream Status: OFF
Outgoing Stream Status: OFF

Audio Input: Line Stereo
Audio Format: PCM 16bit mono big endian 24 kHz

Input Audio Level (L): -14 dBFS
Input Audio Level (R): -13 dBFS
Output Audio Level (L): -93 dBFS
Output Audio Level (R): -93 dBFS

Relay 1: always OFF
Relay 2: always OFF
Relay 3: always OFF
Relay 4: always OFF

Remote Inputs:
Local Inputs:
Local Relays:

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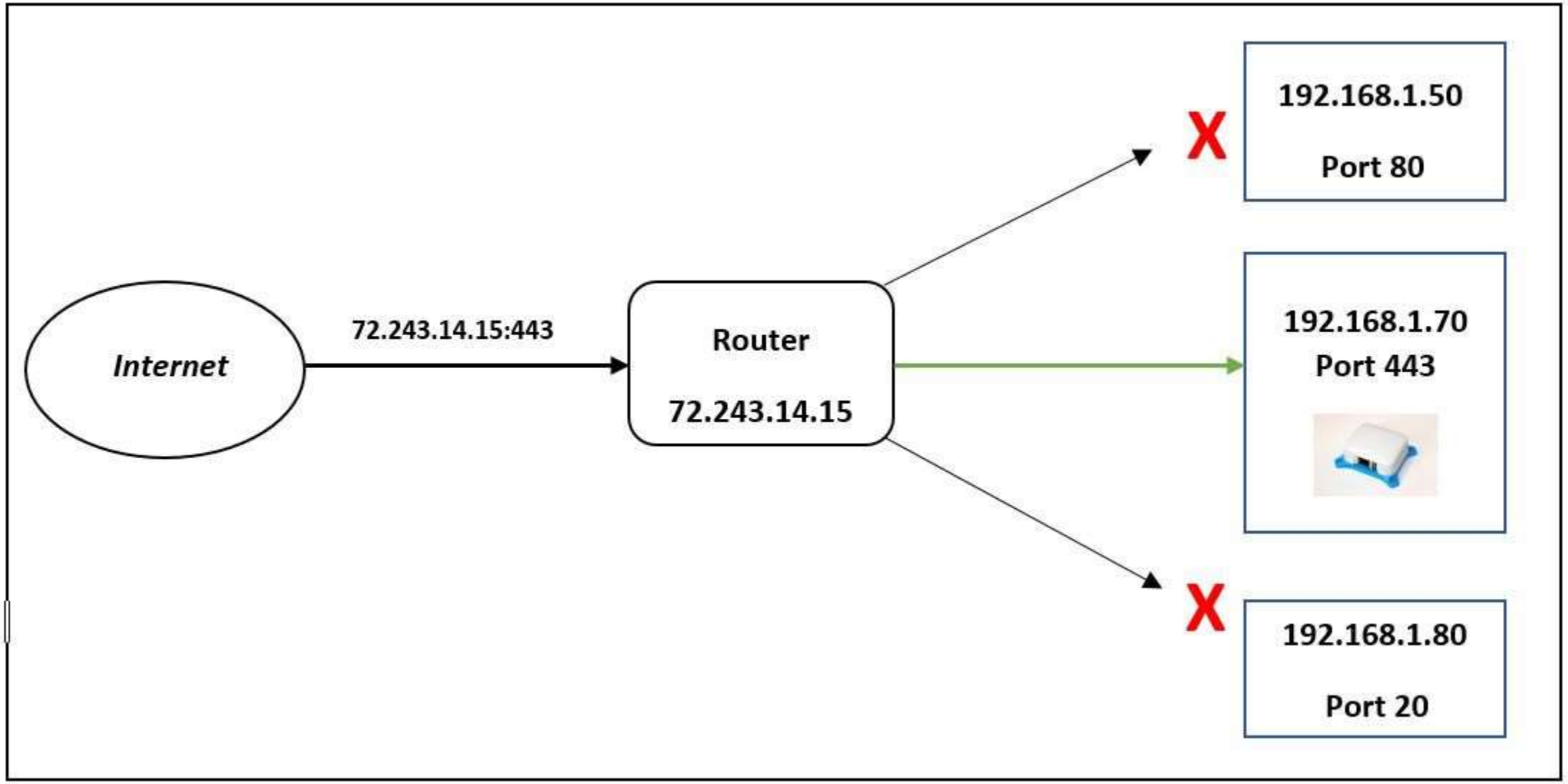
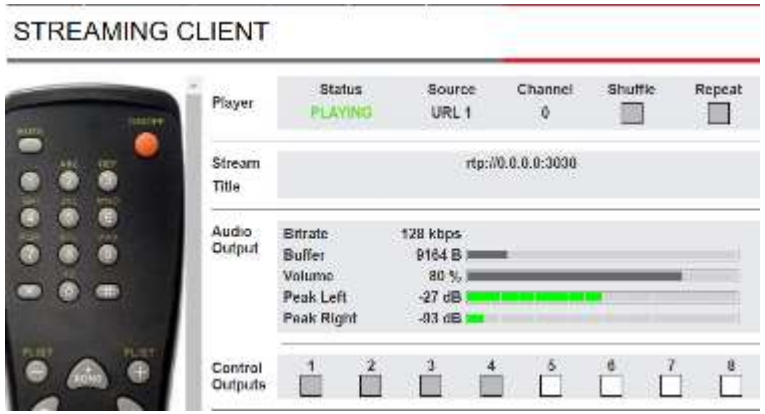
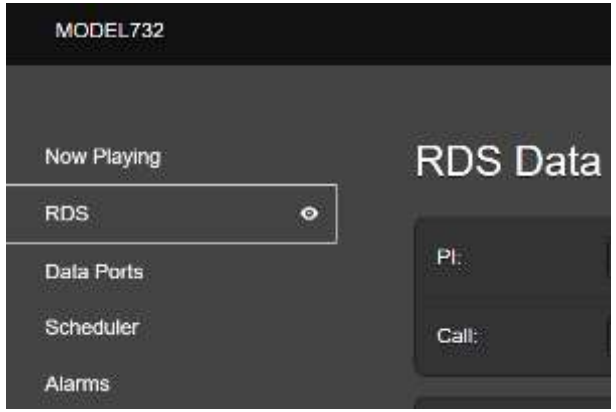

Internet
72.243.14.15:443
Router
72.243.14.15
X
192.168.1.50
Port 80
192.168.1.70
Port 443
X
192.168.1.80
Port 20





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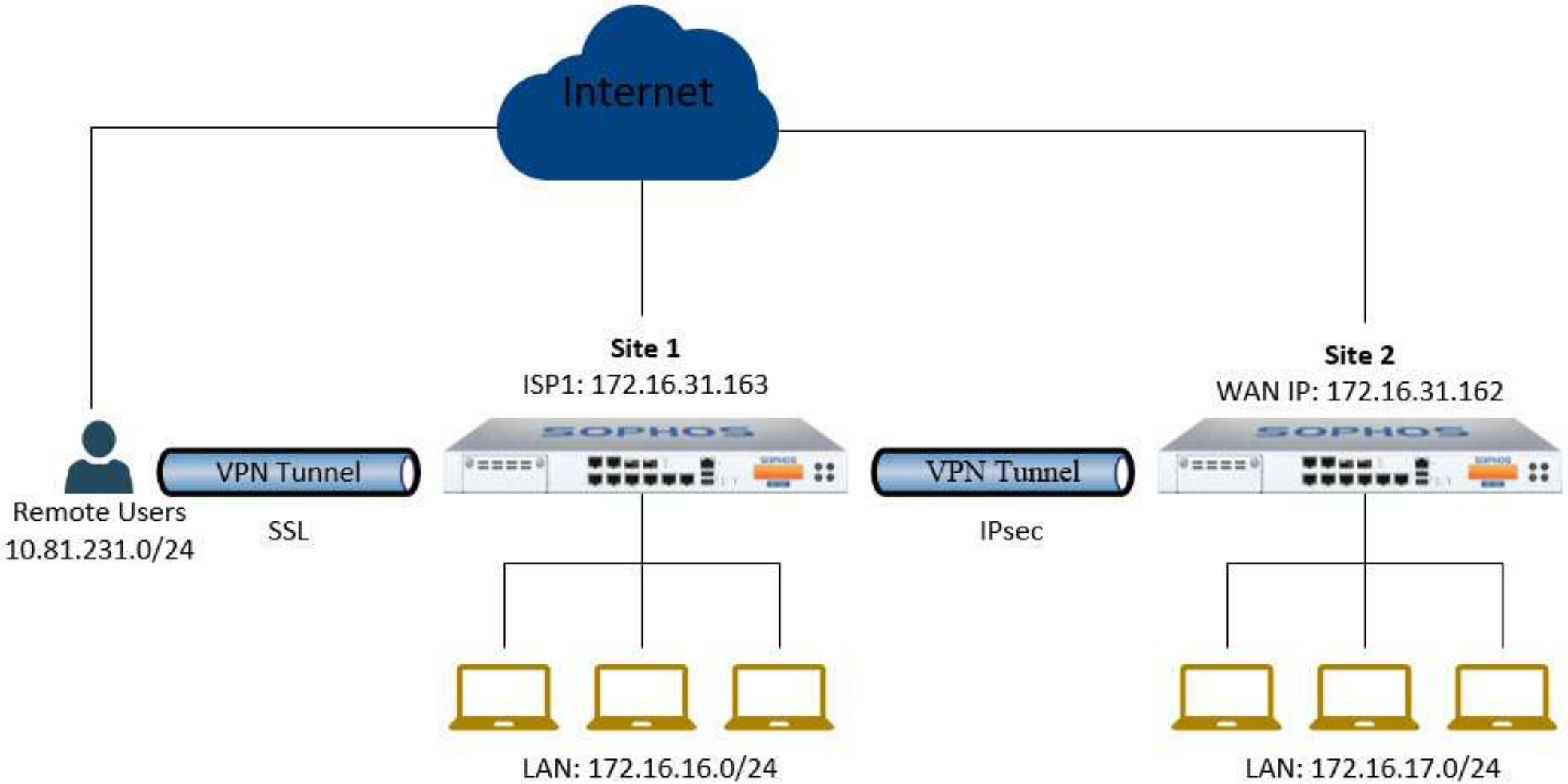

Internet
Site 1
ISP1: 172.16.31.163
Site 2
WAN IP: 172.16.31.162
VPN Tunnel
VPN Tunnel
Remote Users
10.81.231.0/24
SSL
IPsec
LAN: 172.16.16.0/24
LAN: 172.16.17.0/24

Hardware

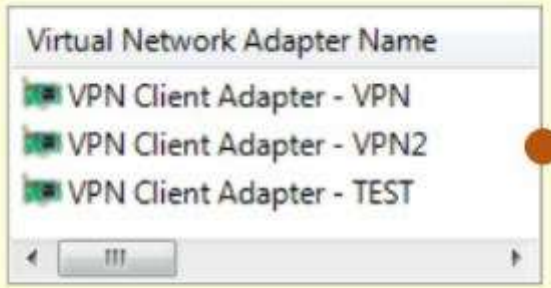
Ethernet Adapter

Ethernet Cable

Ethernet Switch

Virtualization with SoftEther VPN

Software



VPN Tunnel

Virtual Hub Name	Status	Sessions	MAC Tables	IP Tables
BEIJING_SEGMENT	Online	0	0	0
CHINATEST	Online	2	0	0
moosta	Online	3	3	5
Okkota	Online	0	0	0
SoftEther Network	Online	20	474	430
TEST1	Online	0	0	0
UT	Online	0	0	0
VLAN	Online	3	514	2

Virtual Ethernet Adapter

VPN Session over TCP / UDP

Virtual Ethernet Switch (Virtual Hub)

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Points to Ponder

Intrusion detection and prevention, active/stateful packet inspection, deep packet inspection

Don’t poke holes in the firewall!

Multiple entry points

Easy, cheap, reliable – pick any two

Backup, backup, backup!!!

https://www.cbtnuggets.com/

Online Information

Webinars
https://www.nautel.com/resources/webinars/

Nautel Waves Newsletter
https://www.nautel.com/newsletters/

YouTube
http://www.youtube.com/user/NautelLtd

Online Info, such as the Broadcasters' Desktop Resource
https://www.thebdr.net/

THANK YOU!

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