Chapter 22

Internet and SOHO Networking

Episode 22.01

Episode title: **Beyond the LAN**

Objective: 2.7 Compare and contrast internet connection types, network types, and their characteristics.

- Network types
  - LAN
  - Wide area network (WAN)
  - Personal area network (PAN)
  - Metropolitan area network (MAN)
  - Storage area network (SAN)
  - Wireless local area network (WLAN)

L3s

- 0:26 - Objective term - Local Area Network (LAN)
- 1:02 - Objective term - Wide Area Network (WAN)
- 1:25 - Objective term - Metropolitan Area Network (MAN)
- 1:42 - The Internet
- 2:19 - Objective term - Personal Area Network (PAN)

Storage Area Network (SAN)

A network that interconnects multiple servers with a central pool of data storage devices

- Implementation
  - Fibre Channel
  - Internet Small Computer Systems Interface (iSCSI)
  - Fibre Channel over Ethernet(FCoE)

Wireless Local Area Network (W-LAN)

A wireless network confined within a single space, typically sharing one or more wireless access points.

Episode 22.03

Episode title: **Broadband Connections**

Objective:

2.5 Compare and contrast common networking hardware devices.

- Optical network terminal (ONT)

2.7 Compare and contrast internet connection types, network types, and their characteristics.

- Fiber
- Wireless internet service provider (WISP)

L3s

- 0:14 - Broadband connection
- 0:42 - Objective term - Digital Subscriber Line (DSL)
- 1:34 - Modem
- 1:52 - Objective term - DSL/cable modem
- 2:10 - Asymmetric DSL (ADSL)
- 2:16 - Symmetric DSL (SDSL)
- 2:24 - Speeds: 768 Kbps - 3 Mbps upload, 1.5 - 7+ Mbps download

L3s

- 3:17 - Point-to-Point Protocol over Ethernet (PPPoE)
- 4:41 - Objective term - Cable
- 4:58 - Data Over Cable Service Interface Specification (DOCSIS)
- 5:17 - Speeds: Older 1.5 Mbps up/10 Mbps down, Today: 50 Mbps up/100+ Mbps down
- 6:29 - Objective term - Cable modem (usually includes router, WAP, switch, firewall)

L3s

- 7:38 - Objective term - Satellite
- 7:56 - Speeds: 3 Mbps upload/25+ Mbps download
- 8:17 - Objective term - Latency
- 8:45 - Objective term - 802.11
- 9:51 - Objective term - Wireless Internet Service Providers (WISPs)
- 10:14 - Objective term - Optical network terminal (ONT)

Episode 22.06

Episode title: **Remote Desktop Connections**

Objective:

2.1 Compare and contrast Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) ports, protocols, and their purposes.

- 3389 – Remote Desktop Protocol (RDP)

4.9 Given a scenario, use remote access technologies.

- Methods/tools
  - RDP
  - Virtual network computer (VNC)

L3s

- 0:41 - Objective term - Remote Desktop Protocol (RDP) (port 3389)
- 1:20 - Objective term - Microsoft Remote Assistance (MSRA)
- 1:30 - Objective term - Remote Desktop Protocol (RDP)
- 5:48 - Objective term - Virtual Network Computing (VNC)
- 6:06 - Tight VNC

Episode 22.08

Episode title: **File Transfer Protocol - ftp**

Objective:

Lower 3rds

OBJ - Ports and protocols

OBJ - 20-21 File Transfer Protocol (FTP)

Episode 22.10

Episode title: **Remote Desktop Connections**

Objective: 2.3 Summarize services provided by networked hosts.

- Internet appliances
  - Load balancers

L3s

- 0:38 - michaelm@totalsem.com
- 1:26 - Objective term - Simple Mail Transfer Protocol (SMTP) - port 25
- 1:26 - Objective term - Post Office Protocol 3 (POP3) - port 110
- 1:26 - Objective term - Internet Message Access Protocol (IMAP) - port 143
- 2:48 - POP3, IMAP4
- 4:36 - Objective term - The outgoing mail server will always be SMTP

Load Balancer

Load Balancer Function

- Distributes incoming messages to multiple servers to prevents any individual servers from being overwhelmed

Proxy Server Similarities

- Works to improve the performance of the network
- Control access
- Filter content
- Apply security

Episode 22.14

Episode title: **Browser Security**

Objective: 2.11 Given a scenario, configure relevant security settings in a browser.

L3s

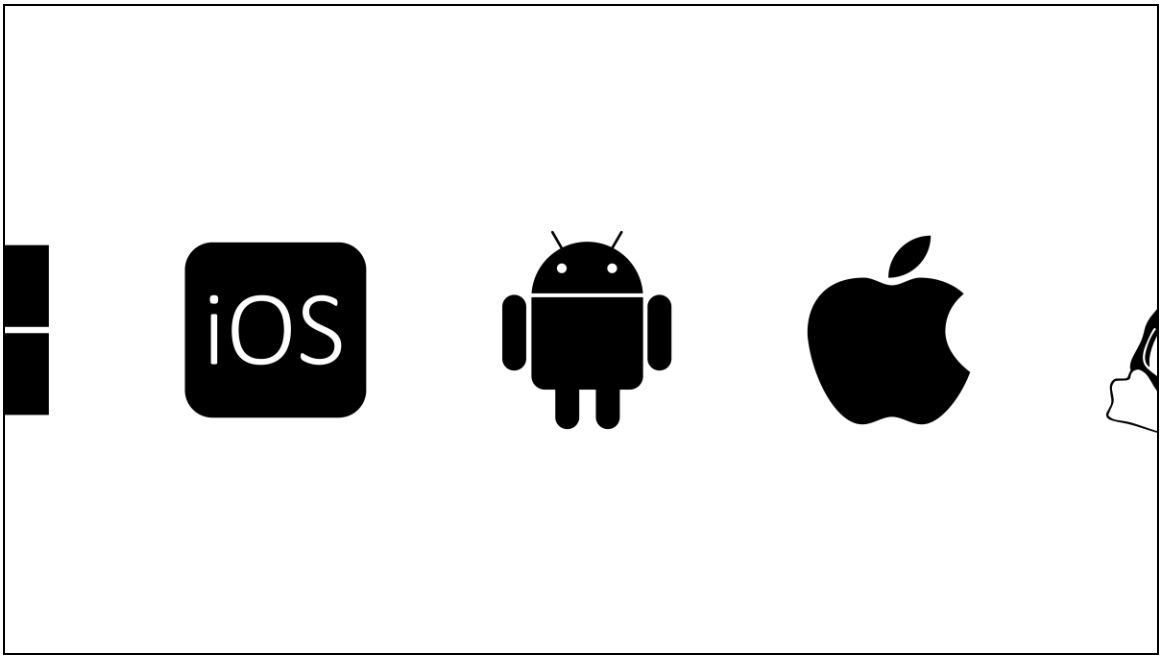
- 0:36 - Objective term - Be sure to download browsers, as well as extensions and plugins, from a trusted source
- 4:03 - Objective term - LastPass is a password manager
- 4:42 - Objective term - Good password managers won't save your password in cleartext, they will hash the password for more security
- 4:58 - Objective term - Ad/pop-up blocker

L3s

- 6:38 - Objective term - Clear browsing data and cache
- 6:24 - Objective term - Browser settings
- 7:18 - Objective term - Some browsers enable signing in to sync data and profile information
- 7:53 - Objective term - Private browsing mode

L3s

- Hash check
- Browsing data
- Browsing cache
- Browsing proxy
- Secure DNS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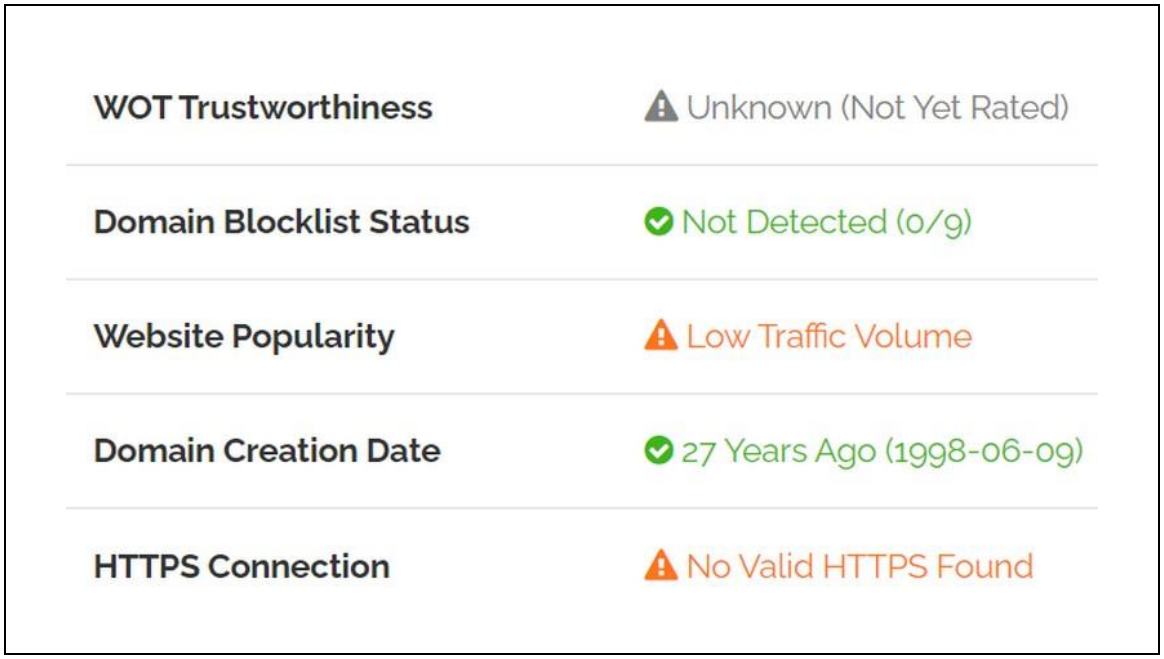
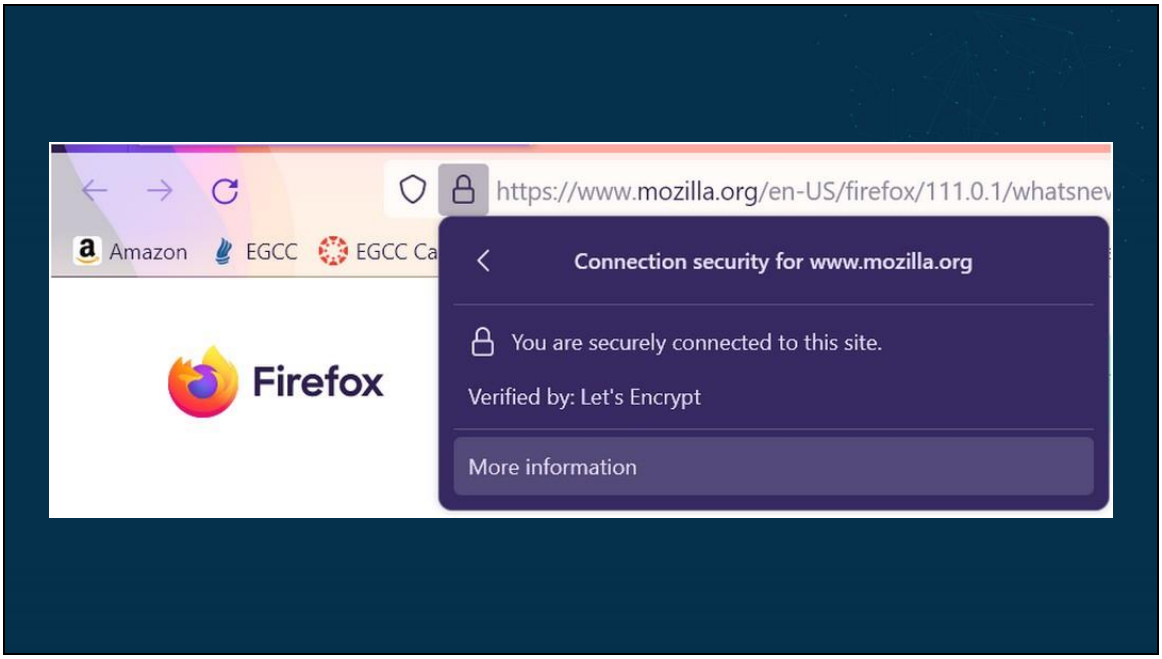

WOT Trustworthiness
Unknown (Not Yet Rated)
Domain Blocklist Status
Not Detected (0/9)
Website Popularity
Low Traffic Volume
Domain Creation Date
27 Years Ago (1998-06-09)
HTTPS Connection
No Valid HTTPS Found


https://www.mozilla.org/en-US/firefox/111.0.1/whatsnev
Amazon
EGCC
EGCC Ca
Connection security for www.mozilla.org
You are securely connected to this site.
Verified by: Let's Encrypt
More information
Firefox

Browsing data

- History
- Cookies
- Browsing activity

Browsing cache

- Stores images
- Stores scripts
- Stores site data to improve future browsing visits

Private mode

- Incognito

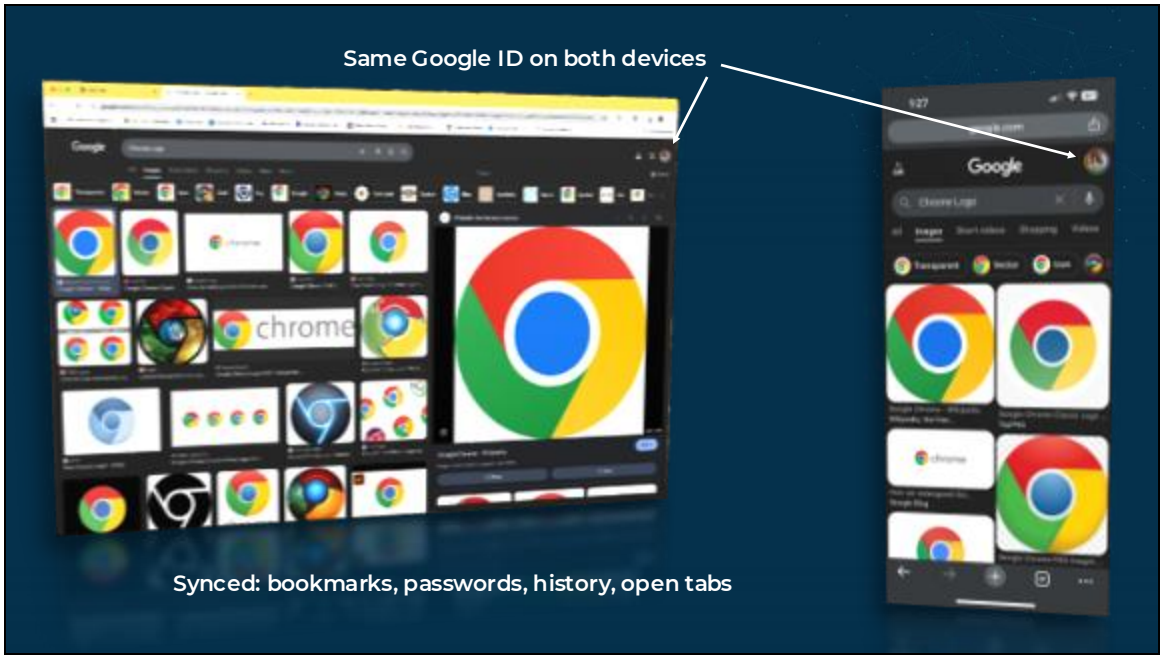
- Private Browsing

- InPrivate

- Fire Window

Proxy server

- Middleman between device and the internet
- Hides your IP address and user ID
- Anonymous browsing experience


Same Google ID on both devices
chrome
Google
Synced: bookmarks, passwords, history, open tabs

Secure DNS

- DNS-over-HTTPS
- Encrypted browser experience
- Not typically enabled by default