



Network+™ Certified i-Net+™ Certified A+® Certified



Systems Engineer-



Internet





Vernon L. Brooks Jr

<u>K4BL@counterconspiracy.org</u> (personal) <u>vbrooks@pdnx.com</u> (business)

702-256-5800 (Office)

K4BL (Ham Extra) WRKN965 (GMRS)



Scan this QR code with your phone to chat with me on Signal.

### Background

Started in the IT industry in 1995

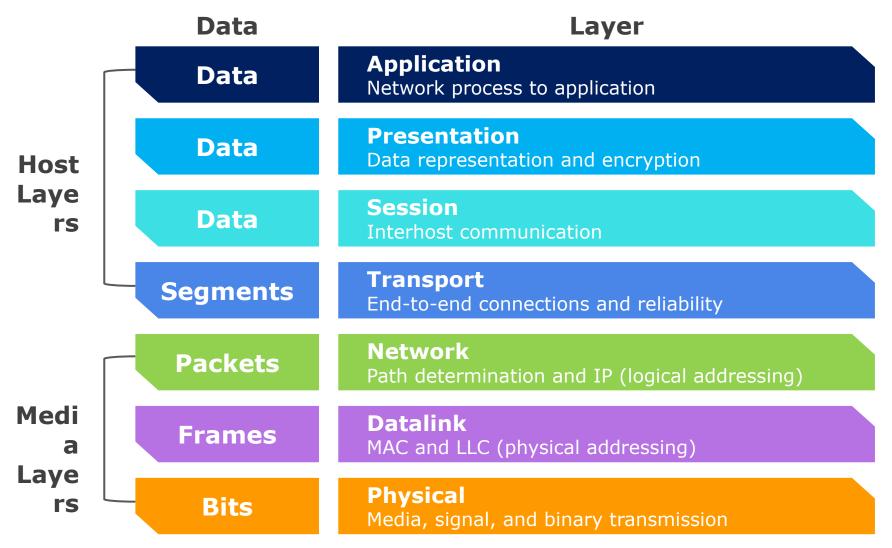
- Retail Computer City (95-96)
- Dialup ISP Helpdesk / Tech Support (96-97)
- Dialup/DSL ISP, Web Host, Systems and Network Administrator (97-00)
- Adjunct instructor CSN (98ish 08ish)
- Systems and Network Administrator, Web Hosting company (00-current)
- Started my own Managed Services Provider Pacific Digital LLC (01-current)

If you know of a small office that needs someone to manage their IT, but they can't justify a full-time staff position, please have them reach out to me. This is what we do. Our motto is:

### 'Making the Net Work'

# ease

### **OSI Model**



## **OSI Model**

7 Layers of the OSI Model

 End user layer **Applicatio** • HTTP, FTP, IRC, SSH, Syntax layer **Presentati** • SSL, SSH, IMAP, FTP, MPEG, Sync & send to port Session API's, Sockets, WinSock • TCP, UDP **Transport**  End-to-end connections Packets **Network** • IP, ICMP, IPSec, IGMP Frames **Data Link** • Ethernet, PPP, switch, Physical structure **Physical** • Coax, fiber, wireless, hubs, repeaters

# **OSI Model**

The Advantages of the OSI Model

It is a generic model and acts as a guidance tool to develop any network model.

Changes at one layer do not affect other layers, provided that the interfaces between the layers do not change drastically.

It is a layered model.

It distinctly separates services, interfaces, and protocols. Hence, it is flexible in nature. Protocols in each layer can be replaced very conveniently depending upon the nature of the network.

It supports both connection-oriented services and connectionless services.

01

02

03

04



**Application** Presentation Session **Transport** Network Datalink **Physical** 

Thank you!

If I didn't bloviate too long, I am happy to take questions!

Filler Material:

Why you should ditch your ISPs integrated router device (reasons might not be obvious)

What I like for network gear, home vs SMB, and why

Do I need that VPN service my favorite YouTuber is always hawking? (most likely NO)

Roll-your-own subscription-free VPN (free as in beer)

What is a VLAN, and how it can protect you from the CCP (maybe).

goto 10





Network+™ Certified i-Net+™ Certified A+® Certified



Systems Engineer-



Internet





Vernon L. Brooks Jr

<u>K4BL@counterconspiracy.org</u> (personal) <u>vbrooks@pdnx.com</u> (business)

702-256-5800 (Office)

K4BL (Ham Extra) WRKN965 (GMRS)



Scan this QR code with your phone to chat with me on Signal.