Getting Up to Speed with Networking in General

Tim Warner

AUTHOR EVANGELIST, PLURALSIGHT

@TechTrainerTim TechTrainerTim.com

Overview

Identify assumed networking knowledge that's in scope for AZ-104

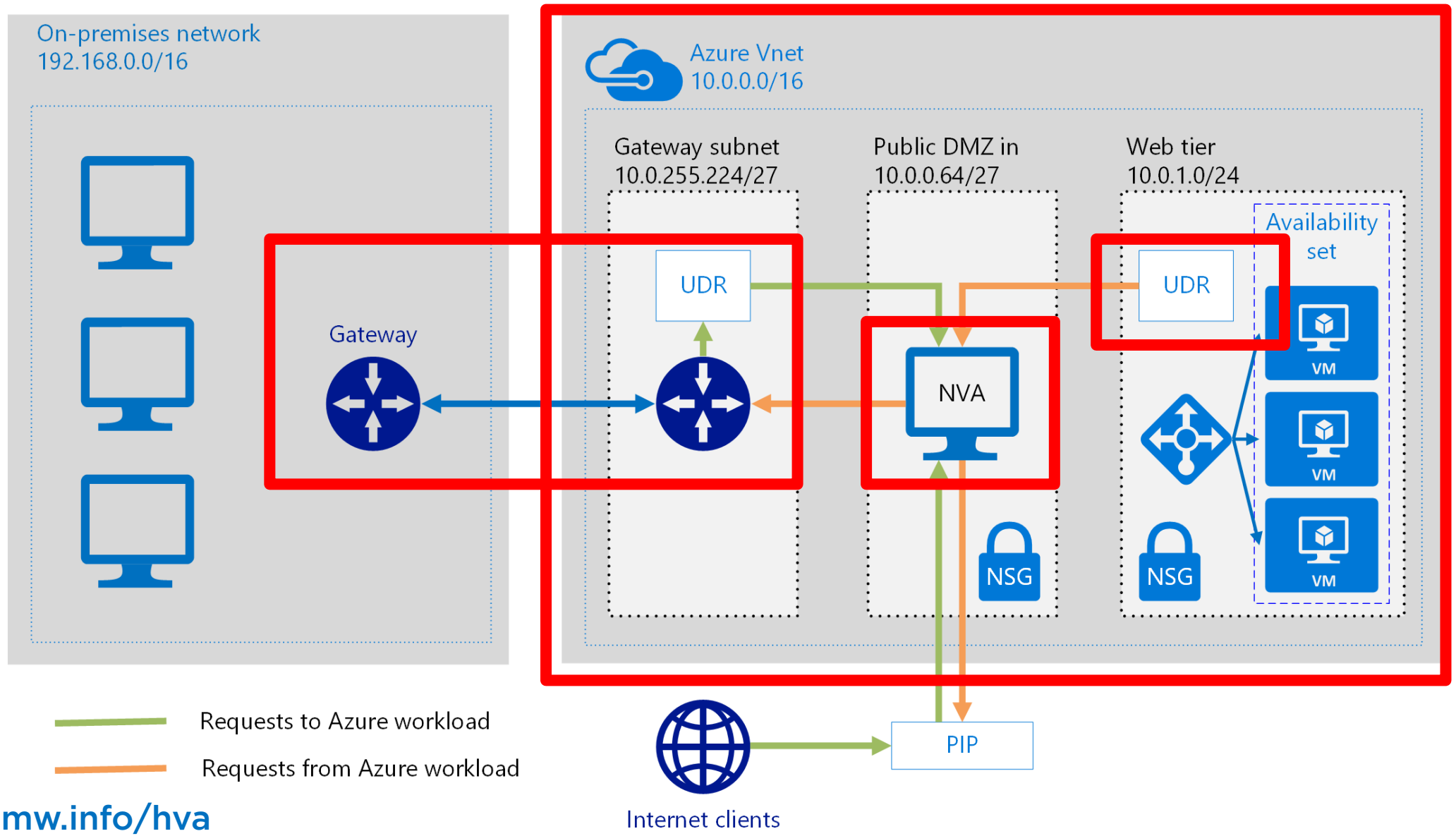
Relate those concepts to Azure to ease your learning curve

- Ethernet architecture and Azure
- TCP/IP networking and Azure

Suggest foundational networking certifications for remedial instruction

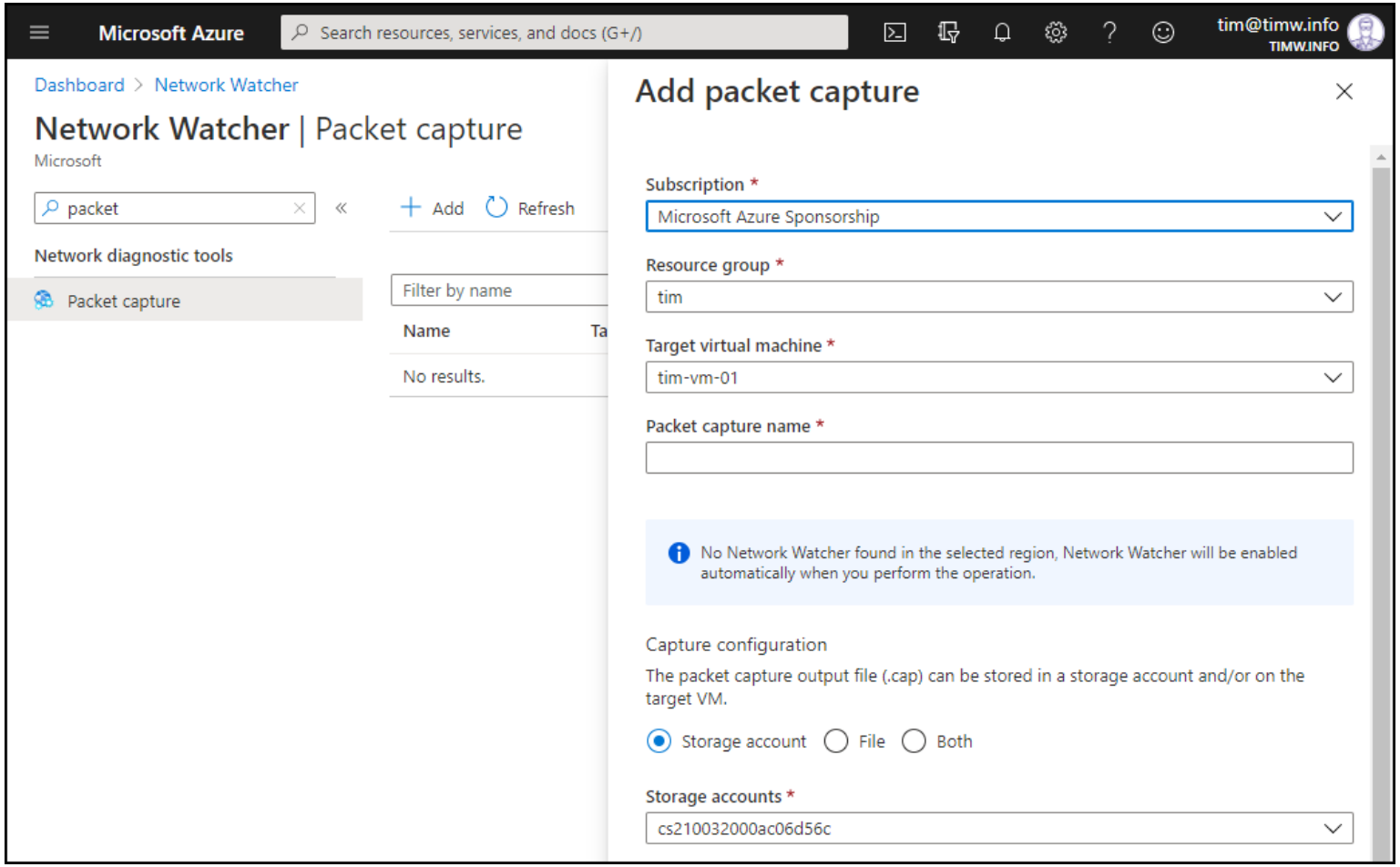
Ethernet and Azure

Routing and Switching



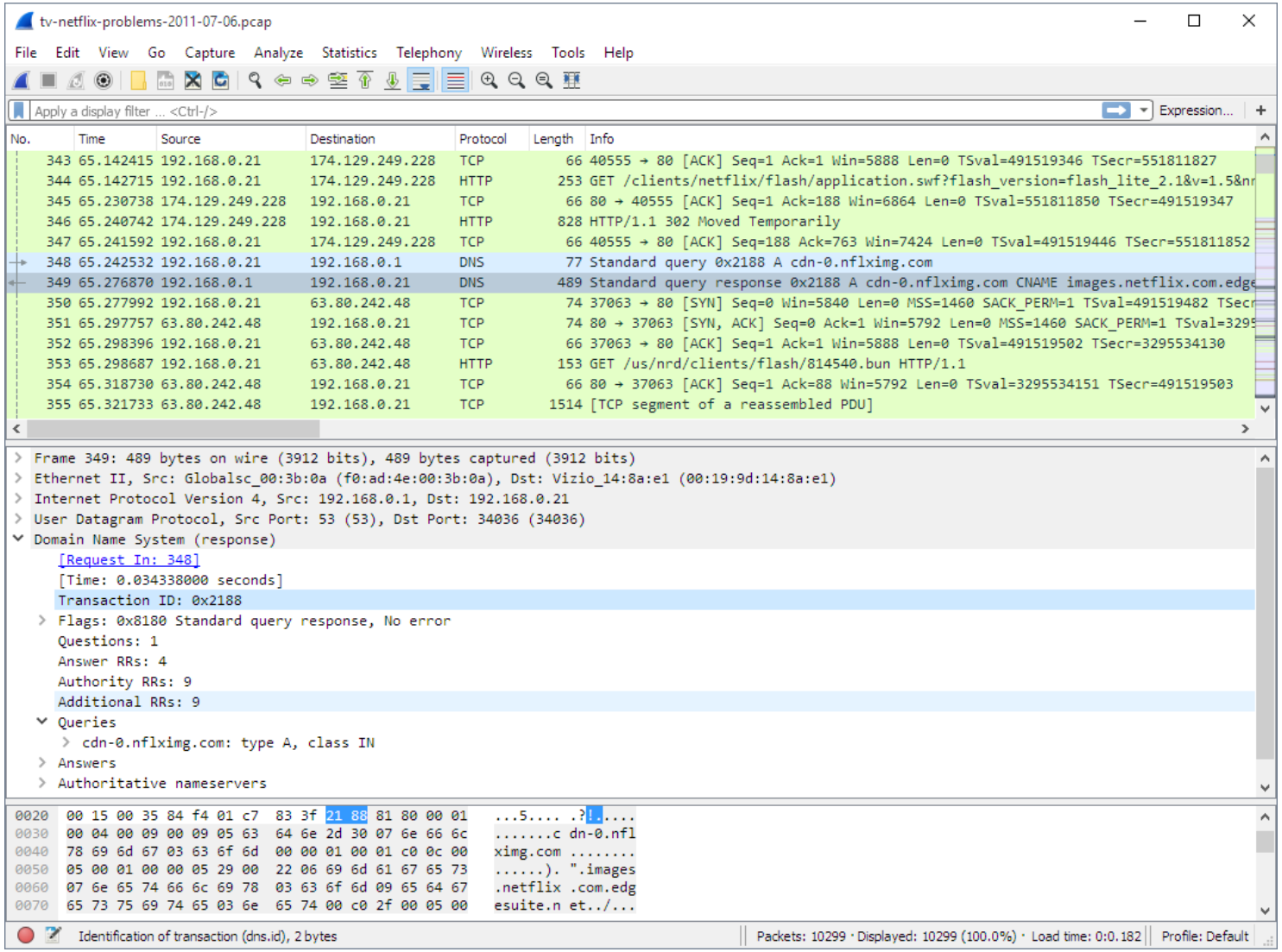
https://timw.info/hva

Packet Capture



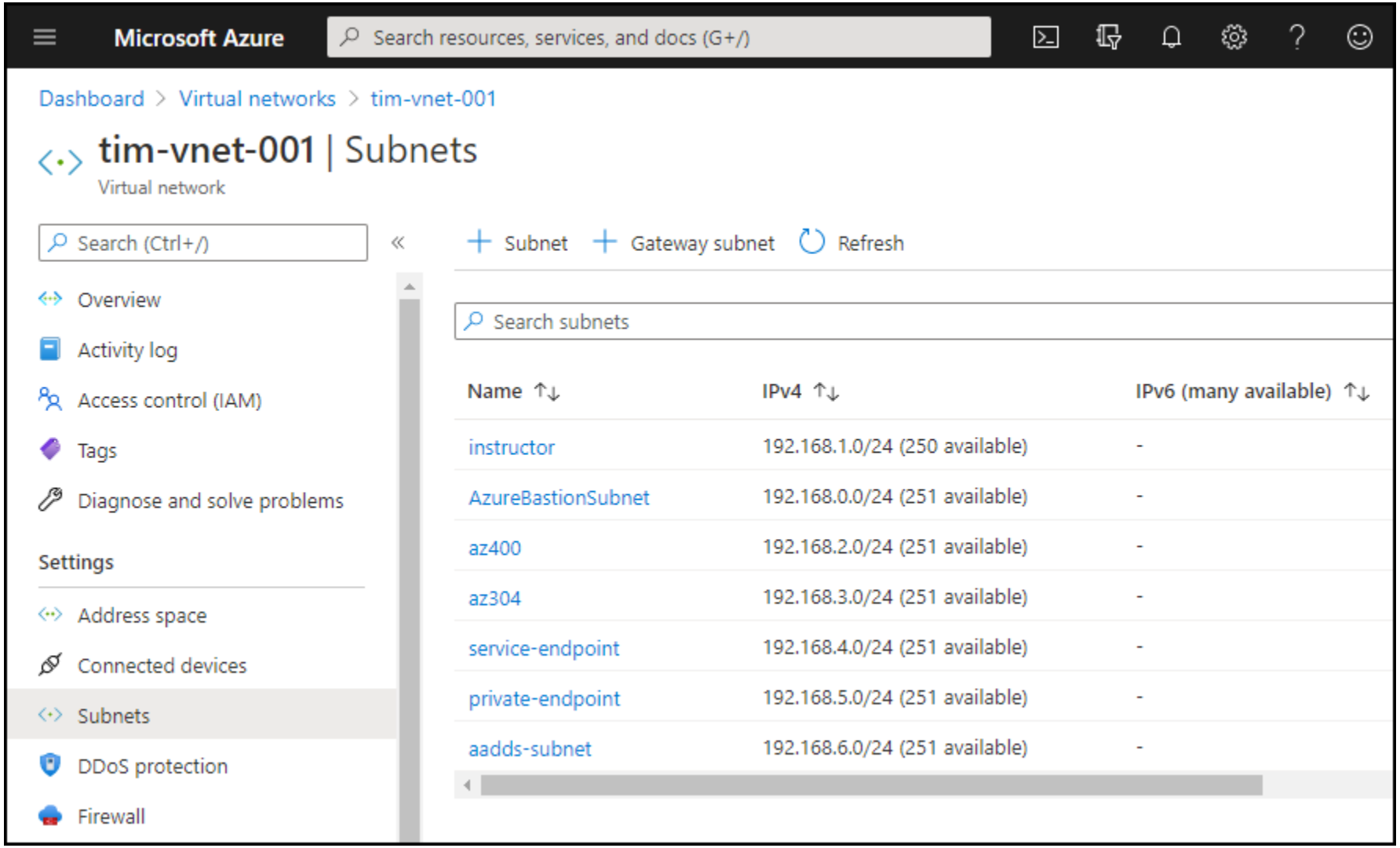
Packet Capture

Wireshark



TCP/IP and Azure

IPv4 Addressing and Subnetting



OSI Layers

OSI	Protocol / Data Format	Azure Products
1. Physical	Raw data (bits)	

OSI Layers

OSI	Protocol / Data Format	Azure Products
2. Data Link	Ethernet (frame)	
1. Physical	Raw data (bits)	

OSI Layers

OSI	Protocol / Data Format	Azure Products
3. Network	IP; ICMP; IPSec (packets)	Network interface
2. Data Link	Ethernet (frame)	
1. Physical	Raw data (bits)	

OSI Layers

OSI	Protocol / Data Format	Azure Products
4. Transport	TCP; UDP	Azure Load Balancer; Network Security Group
3. Network	IP; ICMP; IPSec (packets)	Network interface
2. Data Link	Ethernet (frame)	
1. Physical	Raw data (bits)	

OSI Layers

OSI	Protocol / Data Format	Azure Products
5. Session	Socket	
4. Transport	TCP; UDP	Azure Load Balancer; Network Security Group
3. Network	IP; ICMP; IPSec (packets)	Network interface
2. Data Link	Ethernet (frame)	
1. Physical	Raw data (bits)	

OSI Layers

OSI	Protocol / Data Format	Azure Products
6. Presentation	PNG; SSL/TLS	
5. Session	Socket	
4. Transport	TCP; UDP	Azure Load Balancer; Network Security Group
3. Network	IP; ICMP; IPSec (packets)	Network interface
2. Data Link	Ethernet (frame)	
1. Physical	Raw data (bits)	

OSI Layers

OSI	Protocol / Data Format	Azure Products
7. Application	HTTP(S); DNS	Traffic Manager; Application Gateway
6. Presentation	PNG; SSL/TLS	
5. Session	Socket	
4. Transport	TCP; UDP	Azure Load Balancer; Network Security Group
3. Network	IP; ICMP; IPSec (packets)	Network interface
2. Data Link	Ethernet (frame)	
1. Physical	Raw data (bits)	

Foundational Networking Certifications

"If you need to skill up on networking anyway, then why not add a certification?"

Tim's advice

Foundational Certifications

CompTIA Network+

"Gold standard"

CN301 TCP/IP

Consider Wireshark University as well

Cisco CCNA

Consolidates CCENT and original CCNA

Demo

1

Network Watcher

- IP Flow Verify
- Next Hop
- Packet capture w/ Wireshark

Summary

Networking assistance is the Azure support team's most common request

Ethernet and TCP/IP is a career unto itself, then to adapt it to Azure is a heavy lift

We need to be eternal students anyway

Thanks!

Courses: timw.info/ps

Twitter: @TechTrainerTim

Email: timothy-warner@pluralsight.com