Troubleshooting Cloud Networking Issues

6.3 Given a scenario, troubleshoot network issues

Description

- In this episode, we will delve into common cloud networking issues and look into tools and techniques that are useful when troubleshooting these types of issues.

Resources

- https://datatracker.ietf.org/doc/html/rfc7231#section-6.5
- https://www.nist.gov/news-events/news/2022/12/nist-retires-sha-1-cryptographic-algorithm
- https://datatracker.ietf.org/doc/rfc8996/

Learning Objectives

- List and describe common cloud networking issues
- List and describe common tools and techniques for troubleshooting cloud network issues

Notes

- Network Service Unavailablity

    - DHCP
    - DNS
    - NTP
    - NAT
    - HTTP

        - Status Codes

            - Client Errors: 400 - 499
            - Server Errors: 500 - 599

                - RFC 7231 HTTP (https://datatracker.ietf.org/doc/html/rfc7231#section-6.5)

- Protocol Incompatibilty
- Protocol Deprecations

    - SSL/TLS

        - IETF Advisory (https://datatracker.ietf.org/doc/rfc8996/)

    - SSH

        - SHA1

            - NIST Advisory (https://www.nist.gov/news-events/news/2022/12/nist-retires-sha-1-cryptographic-algorithm)

    - FTP

- IP Addressing Issues

    - Scope Exhaustion
    - Network Overlap

        - Review IP assignment
        - Check routing/switch configs that may allow for overlap
        - Use network sniffer to see where overlap may be occuring

- Routing Issues

    - Missing Routes
    - Misconfigured Routes

- Switching Issues

    - VLAN Issues

- Dead port
- Misconfigured tags
- Routing between VLANs
  - Access vs. Trunk ports