

Seminar Session 3: TCP/IP v ISO/OSI

Outline

- WIKI reminder
- Peer Reviews
- Group progress
- E-Portfolios

E-portfolio should be mentioned as a personal approach

Reflections are a central part of the portfolio. Personal contributions, Group work, learning progresses, teamwork, dynamics, improvements, action plan, communication, improvements, exercises, challenges, solution

- Word limit is 1000 words for the reflection
- Creating an action plan
- Recommendation: comparing assessment 1 and 2 (unit 6 and 11)

Practical Activity – Scanning Exercise

Group 3: (Hong Kong)

Tracert:

- timeouts/ no responding
- longest delays by crossing borders of countries (delay avg. 121)

nslookup / dig:

- ns1a.2hosting.com (-ns4...) → same result
- 0mail.customersrus.co.uk → mail server hosting is A2 Hosting (from ping)

whois:

- Registered contact (same result)

Webresearch (iplocation.net):

- Ann Arbor & Amsterdam are hosting locations

Issues and challenges:

- discrepancies in tracert results
- 2 IP location found
- Limited information on the domain registration
➔ Solution: using different tools

A2 Hosting, Inc. provided solutions to prevent attack and abuse:

- Google reCAPTCHA – bot detection (affect: testing the website with lower level)
- Temporally banned IP addresses (affect. unable to send too much request and the possibility to need to change IP if blocked)
- SSL (affect: packet or traffic capture may not able to get information)

Group 2: (US, Mexico, VPN)

Different results from the tests.

- ping
- tracert
- WIN MTR
- nslookup

Hops: 16, 18, 15

delay: 192 ms, 322 ms, 257

(same results as own and group 3)

not used tool: netstat (viewing tcp IP statistics, measures network statistics and shows all open ports and identifies applications that are in use) → troubleshooting command

TCP/IP v ISO/OSI 7 model

- “OSI is a beautyfull dream and TCP is living it”
- OSI is more difficult to use and need licenses to use (expensive for companies and user)
- Makes it harder to participate and contribute
- Hard to follow the standards for OSI because it is controlled by main organization which is structured like a government
- Performance issues could also be mentioned
- Costly development
- Department of Defense (DoD) invested in the development of TCP/IP (financial support for the TCP → military is always a huge factor for the development)

Q&A:

Collaborative Discussion 2 as a Group or individual? → Individual is recommended