Cybersecurity

Module 8 Challenge Submission File

Networking Fundamentals: Rocking your Network

Make a copy of this document to work in, and then for each phase, add the solution below the prompt. Save and submit this completed file as your Challenge deliverable.

Phase 1: *"I'd like to Teach the World to `ping`"*

1. Command(s) used to run `fping` against the IP ranges:

```
Fping -g (range) (Ip address)
```

2. Summarize the results of the `fping` command(s):

```
All ip address were unreachable except 12.205.151.1 and 161.35.96.20
```

3. List of IPs responding to echo requests:

12.205.151.1
161.35.96.20

4. Explain which OSI layer(s) your findings involve:

```
Layer 3 Networking
```

5. Mitigation recommendations (if needed):

```
List of servers needs to be updated
```

Phase 2: *“Some SYN for Nothin`”*

1. Which ports are open on the RockStar Corp server?

```
Port 22
```

2. Which OSI layer do SYN scans run on?
    a. OSI Layer:

```
Layer 4 (transport)
```

    b. Explain how you determined which layer:

```
SYN scans shows the transfer of data and ports status
```

3. Mitigation suggestions (if needed):

```
Add the open port to filter
```

Phase 3: *"I Feel a DNS Change Comin' On"*

1. Summarize your findings about why access to rollingstone.com is not working as expected from the RockStar Corp Hollywood office:

```
The Ip address in host file is incorrect
```

2. Command used to query Domain Name System records:

```
Nslookup 98.137.246.8
```

3. Domain name findings:

```
unknown.yahoo.com
```

4. Explain what OSI layer DNS runs on:

```
Layer 7
```

5. Mitigation suggestions (if needed):

```
Change ip address in etc hosts location
```

Phase 4: *"ShARP Dressed Man"*

1. Name of file containing packets:

```
packetcaptureinfo.txt
```

2. ARP findings identifying the hacker's MAC address:

```
00:0c:29:1d:b3:b1
```

3. HTTP findings, including the message from the hacker:

```
“Hi Got The Blues Corp! This is a hacker that works at Rock Star Corp. Rock Star has left port 22, SSH open if you want to hack in. For 1 million Dollars I will provide…”
```

4. Explain the OSI layers for HTTP and ARP.
    a. Layer used for HTTP:

```
Layer 7 Application
```

    b. Layer used for ARP:

```
Layer 3 Network
```

5. Mitigation suggestions (if needed):

```
Close the open port
```

© 2022 Trilogy Education Services, a 2U, Inc. brand. All Rights Reserved.