UNIVERSITÀ DI TRENTO

Department of Information Engineering and Computer Science

NETWORK SECURITY
LABORATORY REPORT

LAB 10
HONEYPOT

Da Rold Giovanni

224291

Meschini Marcello

220222

Academic year 2020/2021

Contents

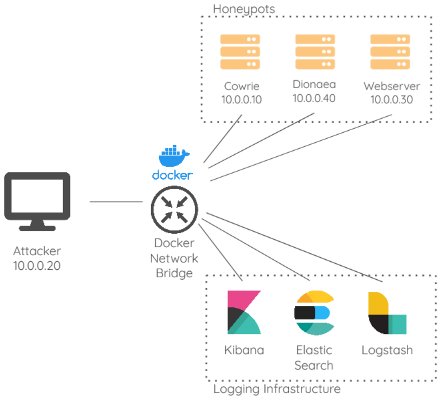
Info about the lab

Requirements

- Docker Engine version 17.05 or newer
- Docker Compose version 1.20.0 or newer
- 2 GB of RAM
- At least 20 GB of disk

Network Topology

To create a network for the laboratory we used Docker Compose and created the following topology:



The docker-compose.yaml file containing the definition for the containers can be found in the netsec-honeypot-lab folder on the desktop or in our Github public repository:
`https://github.com/Marcy-P/netsec-honeypot-lab`
The repository README also contains additional info for accessing the containers and the references to some Docker images we used.

Starting up the lab

To start the laboratory login into the VM with the credentials: username: *netsec* and password: *password*. Then open a terminal in the folder \netsec-honeypot-lab on the desktop and type the following command:

```
$ ./start.sh
```

Shutting down the lab

To shut down the docker-compose network type:

```
$ docker-compose down
```

To also clean the persistent data present in Elasticsearch type:

```
$ docker-compose down -v
```

1 What is a honeypot?

”A honeypot is a network-attached system set up as a decoy to lure cyber attackers and detect, deflect and study hacking attempts to gain unauthorized access to information systems”[1]. So it is a system that is unprotected and serves no business purpose but sits in the network waiting to be contacted. Every interaction with a honeypot is suspicious because no legitimate user should utilize it.

2 Characteristics of a honeypot

Honeypots have four main characteristics; they have to be:

1. Deceptive
2. Discoverable
3. Interactive
4. Monitored

2.1 Deception

2.2 Discoverability

2.3 Interactivity

2.4 Monitoring

Bibliography

[1] Dollimore J. e Kindberg T Coulouris G. F. *Distributed Systems: concepts and Design.* Addison-Wesley, second edition edition, 1994.