

# Practical Network Defense

First Assignment - University “La Sapienza”

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## 1 Scope of the assignment

### 1.1 Our network

The target network belongs to the fictitious **ACME co.**, which requires a series of tools and security checks to be implemented in the hosts of the network itself.

All the hosts can be reached through a **VPN**. Though the network is quite large and comprehends a number of more than ten hosts, in this paper we will focus only on a specific subnet, that is the one where the security measures are to be implemented according to the scope of this assignment.

Thus, from now on we will not refer to the topology of the whole network, but only on the topology of the **Clients network**.

### 1.2 Our scope

The aforementioned **Clients network** is pictured in **Figure 1**, and is assigned the corresponding IP address **100.100.2.0/24**.

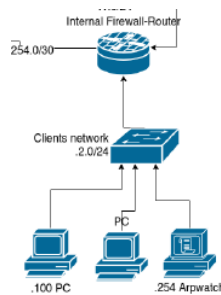


Figure 1: The **Clients network**, scope of the assignment.

The scope of the assignment is to enable the **DHCP service** on the *Internal Firewall-Router*, in order to provide the clients of the target network with dynamic IPv4 addresses. Furthermore, the clients should be protected against **link-local attacks** by implementing security measures and tools on the **Arpwatch** machine with IP address **100.100.2.254**.

### **1.3 Goals**

What do we want to achieve in this assignment? How do we plan to achieve it? General ideas.

## **2 DHCP Setup**

How we performed the DHCP setup for the clients network.

### **3 Arpwatch tool configuration**

How we performed the configuration of the Arpwatch tool on the Arpwatch machine.

## 4 Other tools configuration

Did we implement other tools to improve security? If yes, we describe them here.

## 5 Testing our security measurements

We did test x test y and test z and everything is cool.

## 6 Final remarks and possible improvements

blablabla

## References

- [1] *Just a placeholder.*