

DMZ Example

This lab was developed for the Labtainer framework by the Naval Postgraduate School, Center for Cybersecurity and Cyber Operations under National Science Foundation Award No. 1438893. This work is in the public domain, and cannot be copyrighted.

1 Overview

This lab illustrates a simple DMZ. It is intended as an example network topology definition for Labtainer exercises.

2 Lab Environment

This lab runs in the Labtainer framework, available at <http://my.nps.edu/web/c3o/labtainers>. That site includes links to a pre-built virtual machine that has Labtainers installed, however Labtainers can be run on any Linux host that supports Docker containers.

From your labtainer-student directory start the lab using:

```
labtainer dmz-example
```

A link to this lab manual will be displayed.

3 Network Configuration

This lab includes several networked computers as shown in Figure 1. Note however that your instance of the lab will have different IP addresses for some of the components. When the lab starts, you will get several virtual terminals, one connected to each component.

The DMZ is created using an inner gateway and an outer gateway. The former uses NAT to hide internal network addresses.

The outer gateway and the remote gateway each reach the Internet via an ISP with address 198.18.0.1. The local site has a network address of 198.18.1.0/24. The remote site has a network address of 203.0.113.0/24.

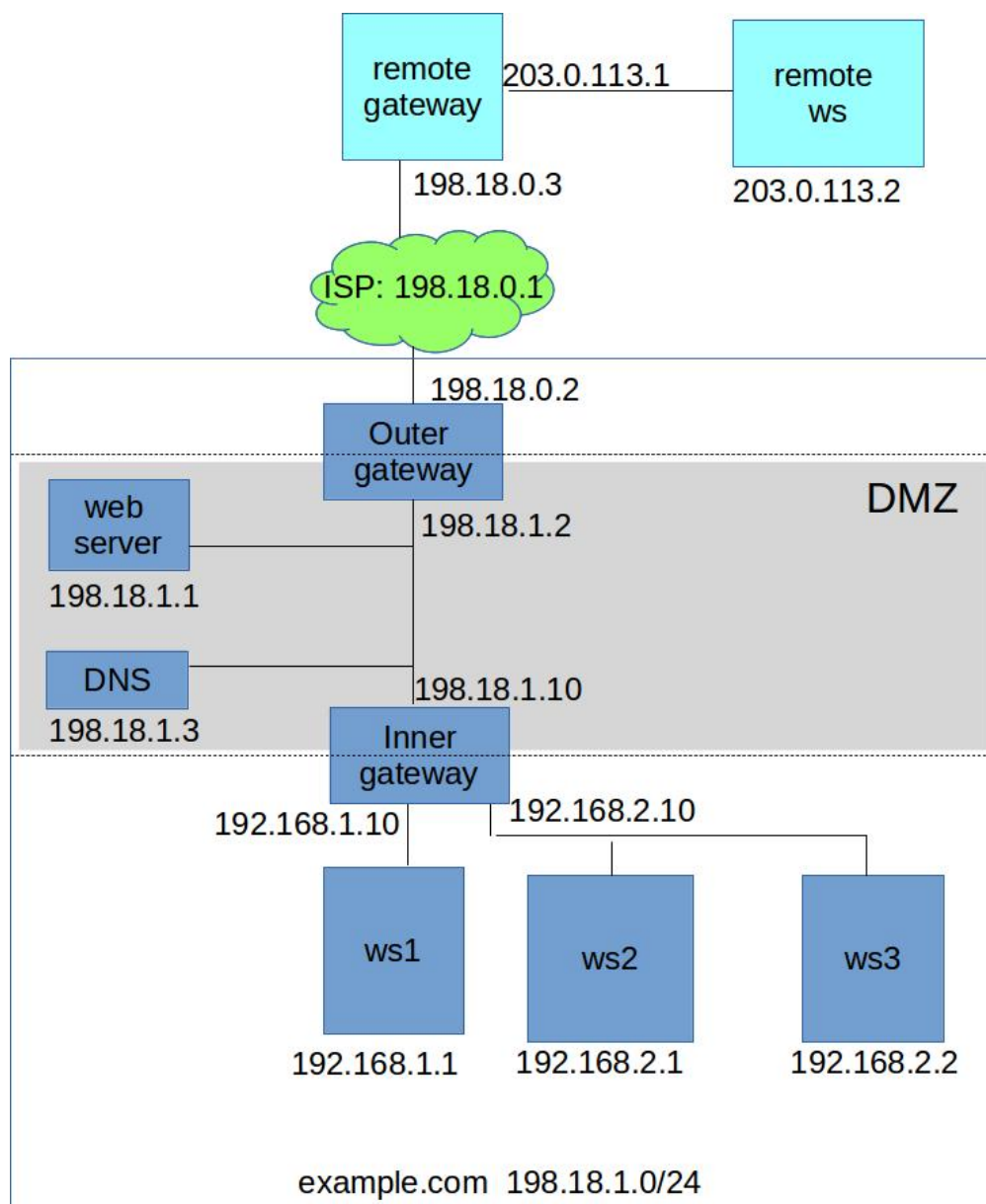


Figure 1: Network topology for dmz-example lab

4 Lab Tasks

Use nmap on various components within the lab to determine which services are visible from different locations within the network topology. Review the iptables configurations as defined in the `/etc/rc.local` scripts on the inner and outer gateways.

5 Submission

After finishing the lab, go to the terminal on your Linux system that was used to start the lab and type:

```
stoplab dmz-example
```

When you stop the lab, the system will display a path to the zipped lab results on your Linux system. Provide that file to your instructor, e.g., via the Sakai site.