Lab Environment Overview

Lab Contents

This document purpose is to acquaint you with the environment used by the lab sessions.

Lab Writer and Trainer

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Overview of the Lab Environment

Objectives

To describe the setup of the lab environment, including the network, the deployment server, infrastructure services, and details about the student systems.

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Lab network overview

Network setup

The lab network uses HPE Moonshot cartridges, located in the HPE Customer Innovation Center in Grenoble, France and reached through a dedicated VPN.

Each student group should receive a Lab number (X) from the instructor or find it written on the table.

All student servers named cX (where X is the previously mentioned number) receive their fixed-assigned addresses using a DHCP server. In order to connect to them, a VPN is provided. You need to activate that VPN by launching on Linux the following commands:

```
$ mkdir -p ~/lab

$ cd ~/lab

$ wget ftp://ftp.hpintelco.net/pub/openvpn/ca.crt

$ wget ftp://ftp.hpintelco.net/pub/openvpn/labX.key

$ wget ftp://ftp.hpintelco.net/pub/openvpn/labX.crt

$ wget ftp://ftp.hpintelco.net/pub/openvpn/vpnlabX.conf

$ sudo openvpn --config vpnlabX.conf
```

For those of you unlucky using a Windows desktop system, then install first `wget` from http://labossi.hpintelco.net/win/wget.exe or http://labossi.hpintelco.net/win/wget64.exe and then `openvpn` in case you don't have it from http://openvpn.net/index.php/open-source/downloads.html (internal mirror at http://labossi.hpintelco.net/win/)

You need to launch a cmd command as **Administrator** on your system (use the Start/windows button, type `cmd` and right click on the icon appearing to select Run as Administrator) and then you have to run in it

```
C:\WINDOWS\SYSTEM32> md C:\openvpn

C:\WINDOWS\SYSTEM32> cd C:\openvpn
```

Download the 4 files previously mentioned in the `wget` command under `C:\openvpn`. Then issue:

```
C:\openvpn> openvpn --config vpnlabX.conf
```

From now on, you should be able to connect using `ssh` to your system named **cX.labossi.hpintelco.org**. If you're making this lab from within the HP Network, you'll need to edit the vpnlabX.conf file to enable the appropriate proxy.

For those of you still unlucky using a Windows desktop system, then install putty in case you don't have it from http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html Then launch `putty` in the run command interface and log on your target system.

For those of you unlucky using a MacOS desktop system, then install a compatible openvpn tool in case you don't have it already from https://code.google.com/p/tunnelblick/. Then launch TunnelBlick using that conf file.

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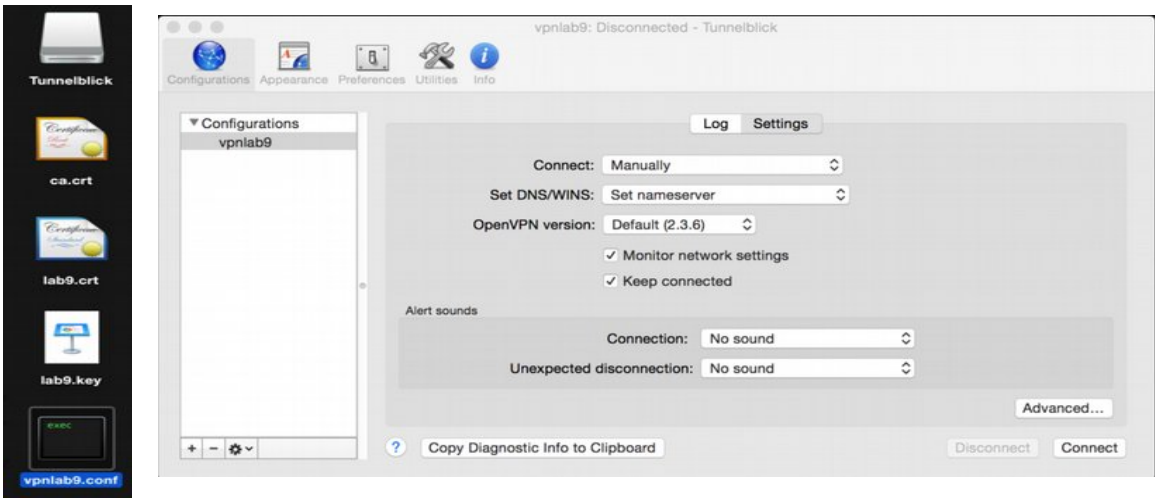

Operating system setup

All systems have been deployed before the Lab with an CentOS 7 Linux distribution.

Root access is available using the **linux1** password.

In case you need additional tools on the system, you can search for a package (`yum search pattern`) and then install it from the deployment server (`yum install package`).

In case you encounter issues with name resolution (typically with a Windows client) then here is the mapping of names and IP addresses:

Name	IP
c31	10.11.51.161
c32	10.11.51.162
c33	10.11.51.163
c34	10.11.51.164
c35	10.11.51.165
c36	10.11.51.166
c37	10.11.51.167
c38	10.11.51.168
c39	10.11.51.169
c40	10.11.51.170
c41	10.11.51.171
c42	10.11.51.172
c43	10.11.51.173
c44	10.11.51.174

These servers are equipped with an Atom CPU 8 Cores, 32 GB RAM, 1TB HDD.

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