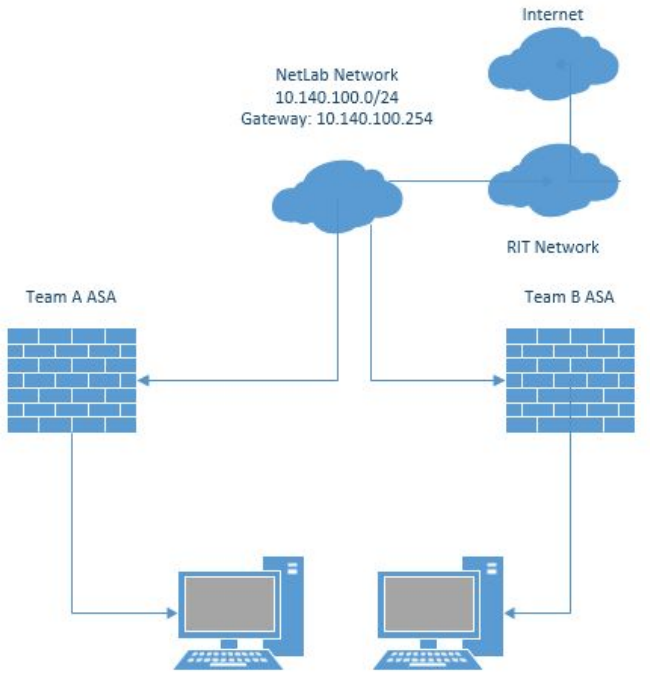
Intro to VPNs with Cisco ASAs

Topology



Before you Begin

1. Establish what IP addresses you and your co-team will be using and fill them in this chart. The External interface will get an IP from DHCP, so fill that in later.

	Team A (Your Team)	Team B (Co-Team)
External (NetLab Subnet)	10.140.100.____	10.140.100.____
Internal	192.168.___.0/24	192.168.___.0/24

Welcome to the ASA

The ASA operating system software is similar to Cisco's IOS but there are some differences so we'll walk you through the initial setup.

1. Ensure you have your console cable in and PuTTY open for COM1 then power on your ASA.
2. Say no when it asks you if you want to pre-configure the ASA. If you accidentally get in you can press Ctrl-Z which is the Cisco escape sequence.
3. Enter privilged mode by typing `enable`
    a. There is no password, just press enter to continue
4. Run `show version`
    a. What software version is this ASA running? _____
5. Run `dir flash:`
    a. This shows you the contents of the internal flash storage
    b. Can you find the ASA operating system file? _____
    c. What version of ASDM do you have? _____
        i. This *needs* to be 7 or higher, find us if it's not.
6. We will now tell the ASA where this ASDM file is
    a. Run `config terminal` and enter no when asked about reporting
    b. Run `asdm image flash:`<IMAGE FILE HERE>
        i. Be sure to put in the file name you found in step 5
7. Next, we need to give the ASA an IP address
    a. Interface Ethernet0/0 (on VLAN2) will be our external interface and Ethernet0/1 (on VLAN1) will be our internal interface
    b. Enter the following commands to setup your interfaces. For vlan 1 be sure to substitute X for what you established in the table above. It is important that you name the interfaces with the nameif command as well.

```
interface vlan 1
     nameif inside
     ip address 192.168.X.254 255.255.255.0

interface eth0/1
     no shutdown

interface vlan 2
     nameif outside
     ip address dhcp
```

```
interface eth0/0
     switchport access vlan 2
     no shutdown
```

c. Why don't we need to specify the vlan for eth0/1?_____
d. What does the "ip address dhcp" command do?_____

8. Let's set a static route so our ASA knows how to get out to the lab network & beyond to the internet

```
route outside 0.0.0.0 0.0.0.0 10.140.100.254
```

9. Next, we must enable NAT so our PCs can get out to the internet. Don't worry about this command too much, it makes no sense.

```
nat (inside,outside) after-auto source dynamic any interface
```

10. Finally, we must make sure it is accessible by turning on the internal HTTP server by running the following commands (Make sure you substitute the X again)

```
http server enable
http 192.168.X.0 255.255.255.0 inside
username admin password p@ssw0rd
```

11. Cable up your ASA's two interfaces and be sure to give your PC an IP on the 192.168.X.0/24 network
12. You should now be able to navigate to https://192.168.X.254 in your browser and Install the ASDM launcher.
13. Launch ASDM and enter 192.168.X.254 as the device with the username and password you set in step 9.
    a. Don't be intimidated when you login, there's a lot of stuff here!
14. Feel free to poke around and try to find stuff in the GUI. Note the three main sections at the top: Home, Configuration & Monitoring. If your computer isn't able to get out to the internet, you may need to add a rule to the firewall settings to allow this. See if you can find it.
15. When you are ready to continue, go to Wizards > VPN Wizards > Site to Site
    a. Try to fill out the required information on your own based on what you and your co-team have already configured. Ask us for help if you get stuck!
    b. Coordinate with your co-team and try to get this working
    c. You can see if it's up by going to Monitoring > VPN > Sessions
    d. Try and wireshark between your ASAs and you can see the encrypted traffic
16. After you have your site to site VPN working, try and build a remote access VPN and use the anyconnect client to login from projects or syslab.