

---

**IT NE 2006**  
**Implementing Firewall Technologies**  
**LAB 8**  
**WEEK - 11**

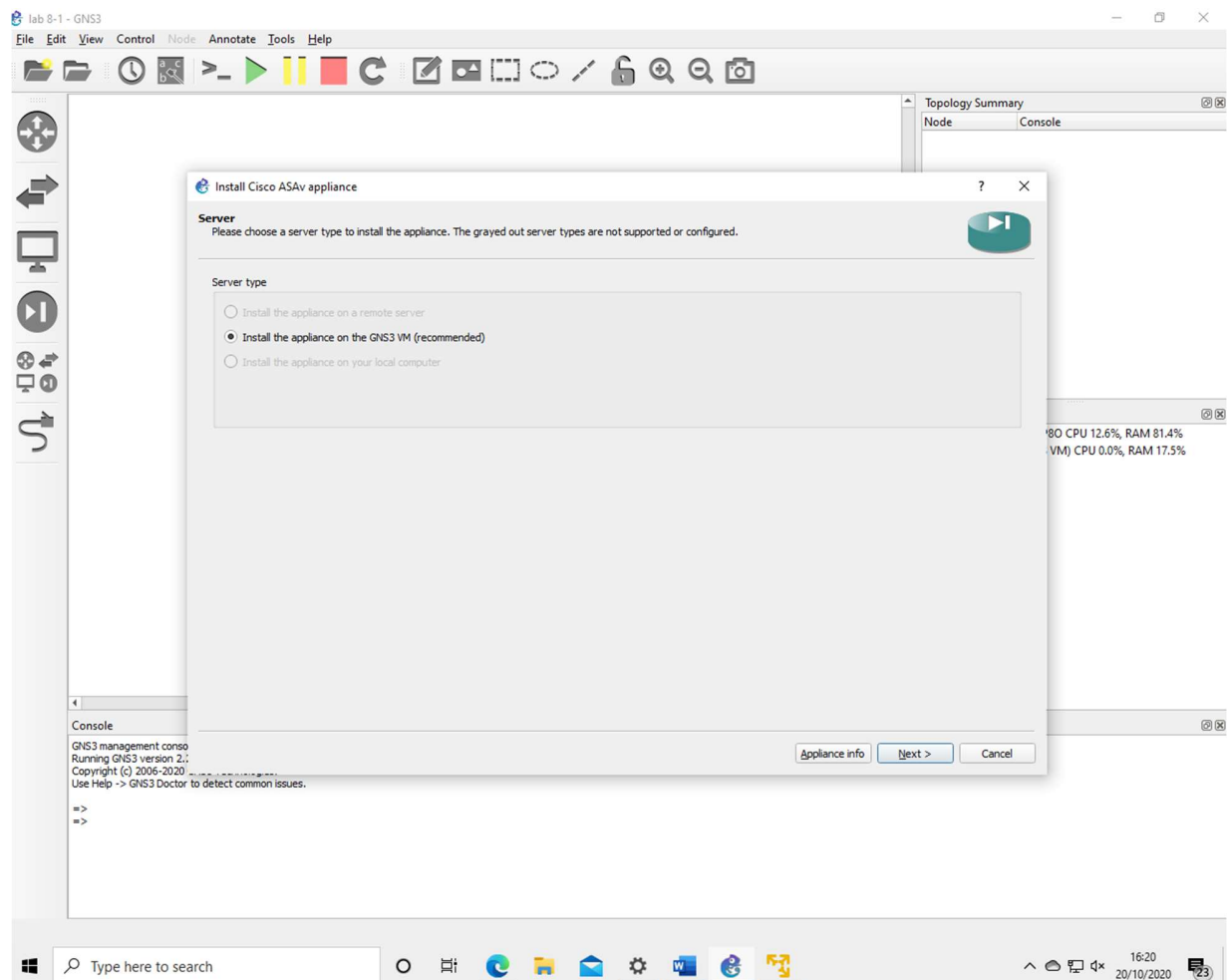
---

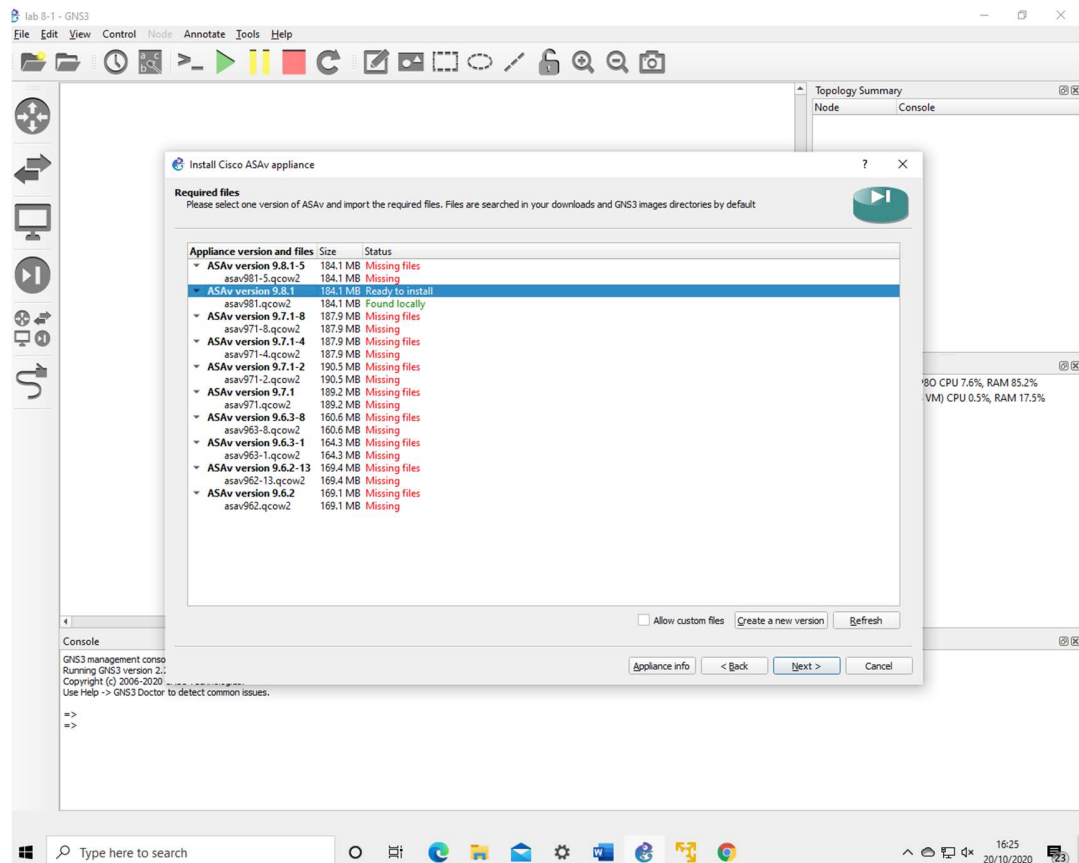
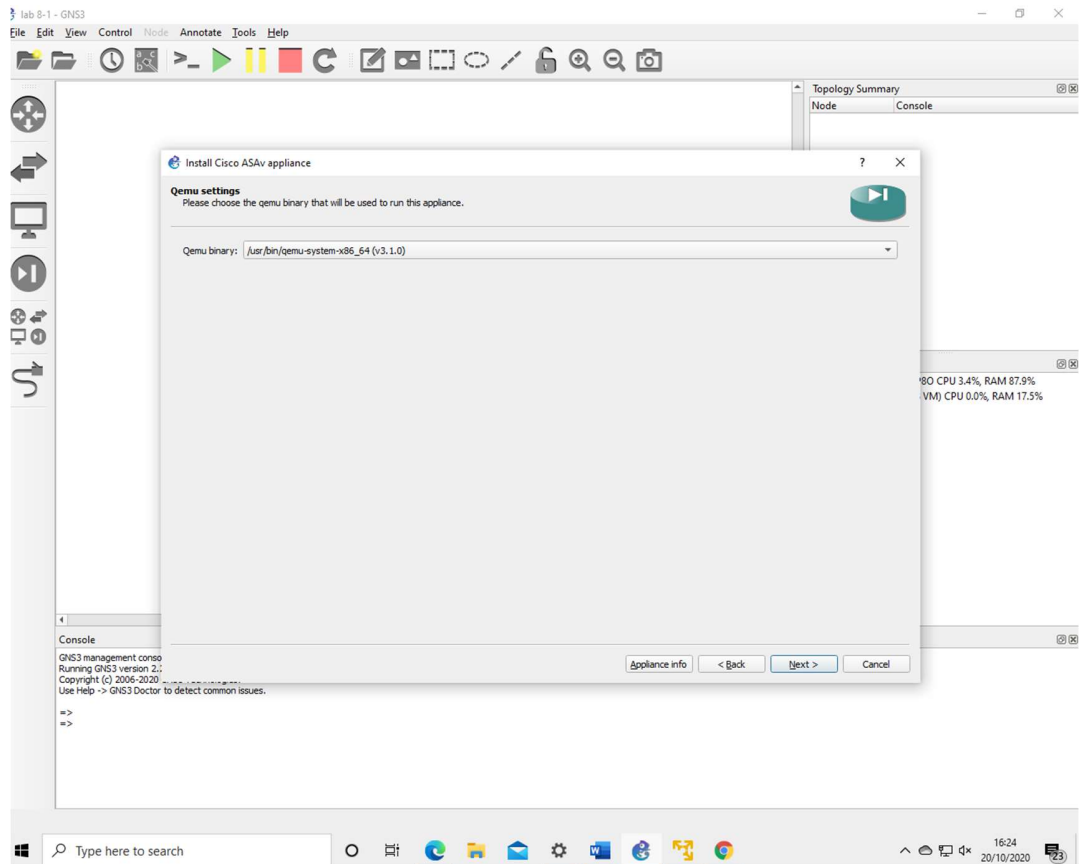
**CONTENTS**

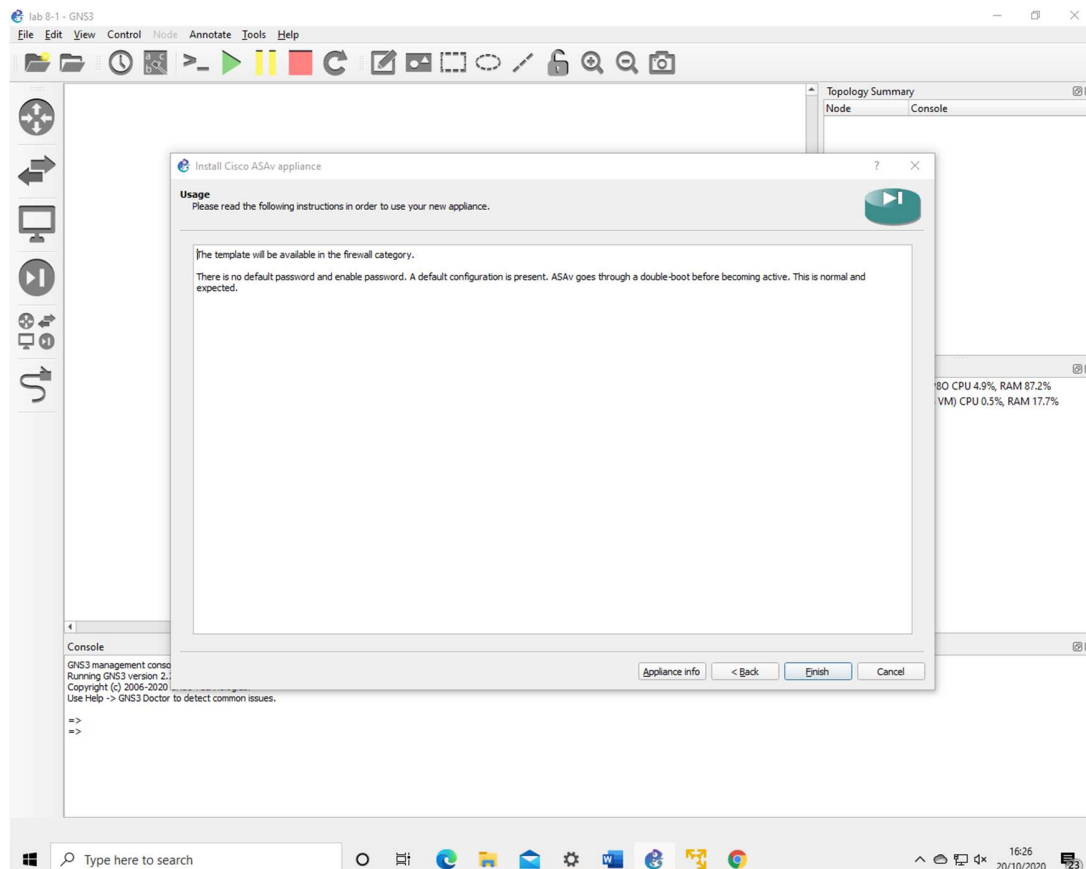
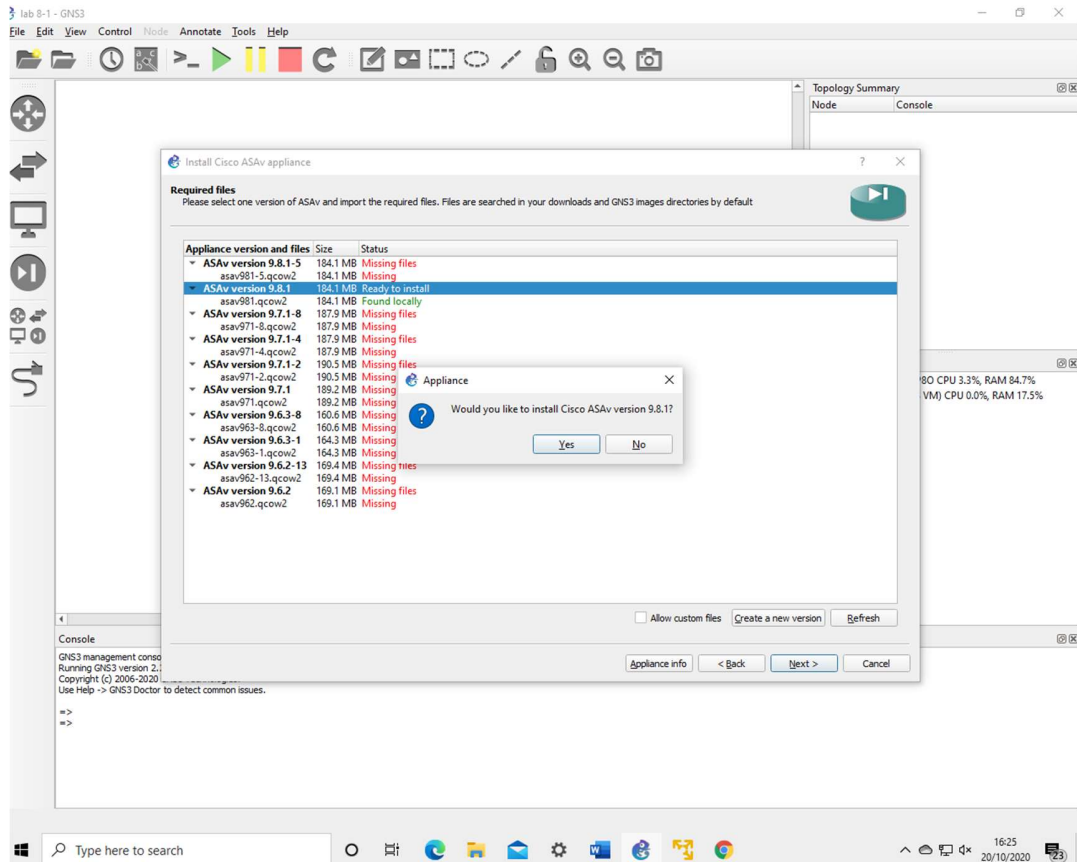
## Week 6 Implementing ASA

Objective: Import and configure Cisco ASAv with GNS3

Deploy and configure Cisco ASAv with GNS3 by following instructions in [https://youtu.be/GM\\_VmmkCEag?t=1m47s](https://youtu.be/GM_VmmkCEag?t=1m47s) video.

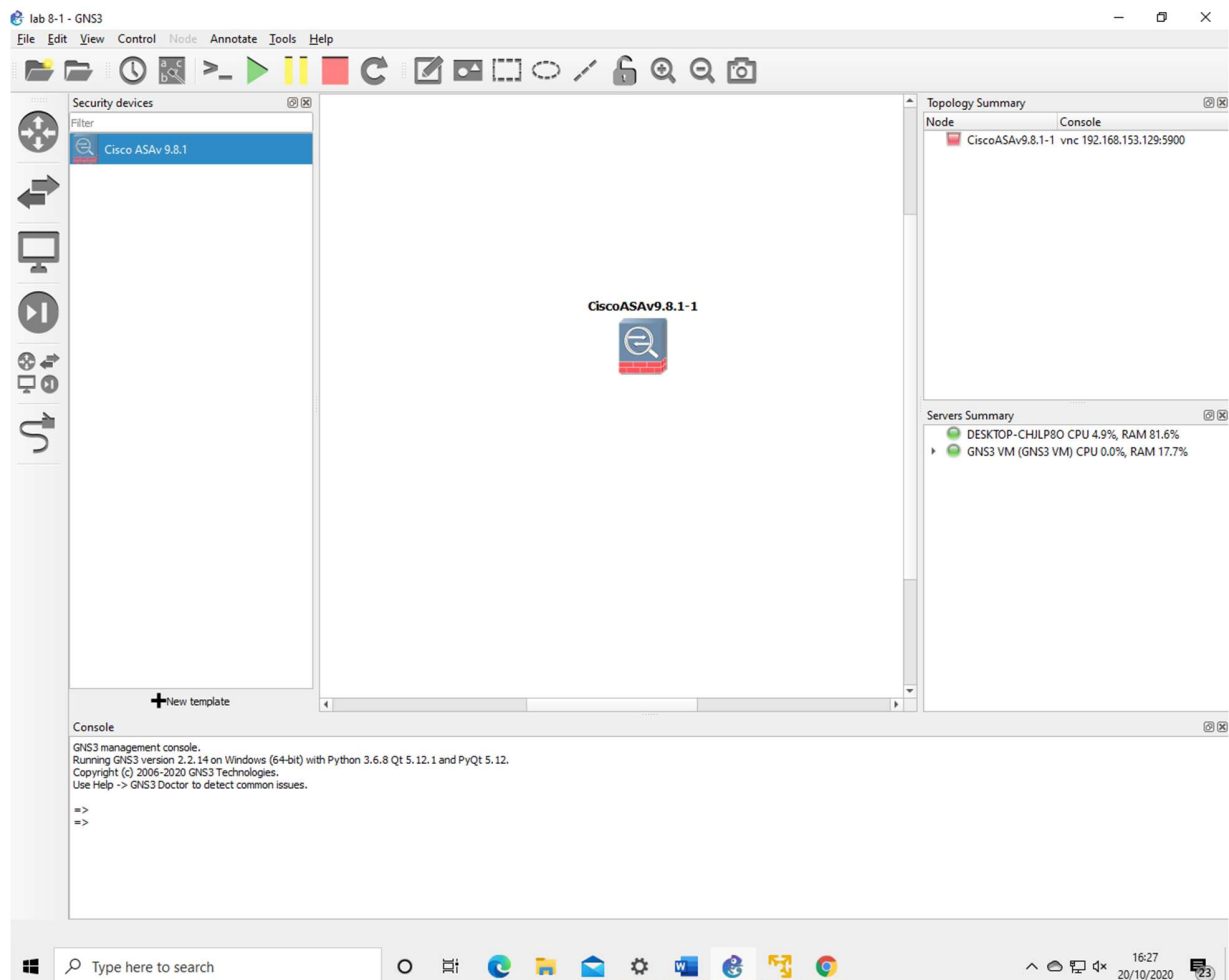




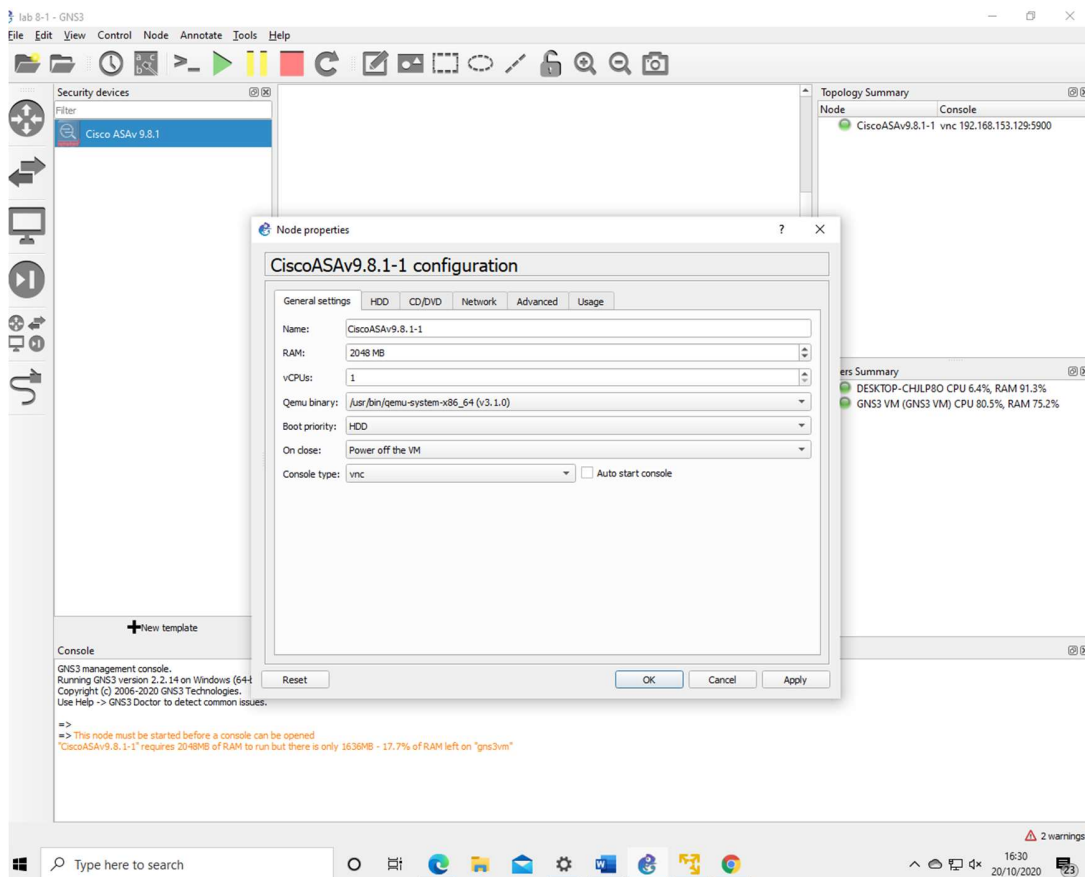
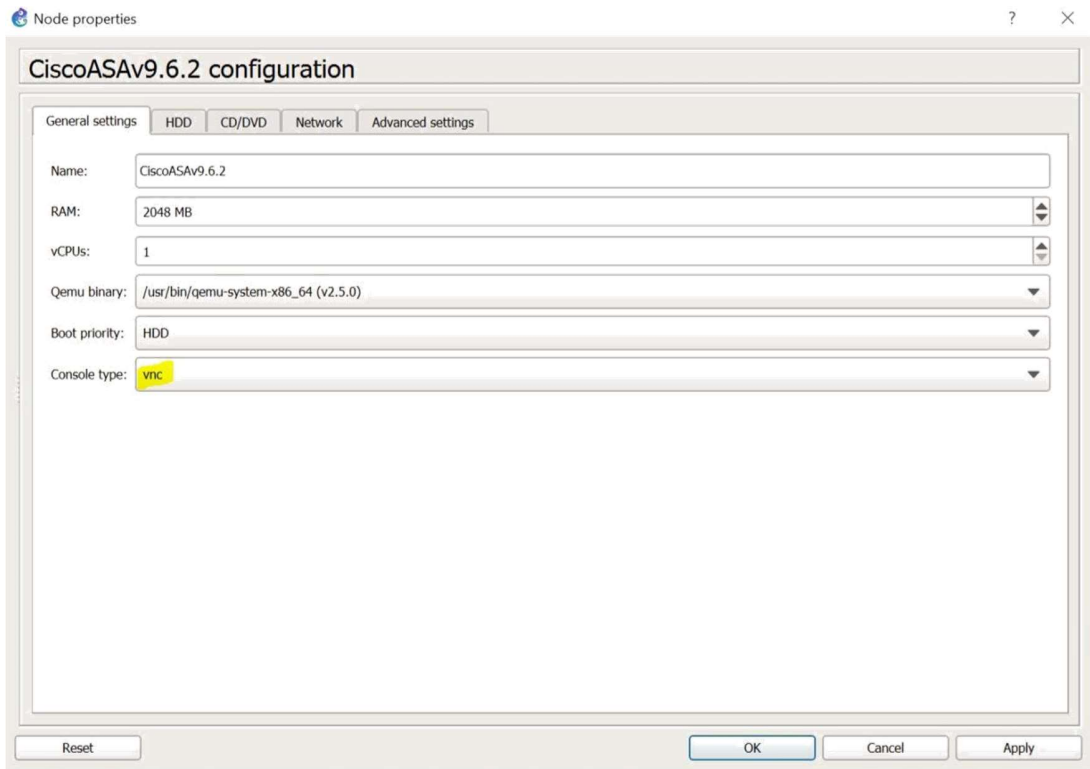


In this case, we will use GNS3 ASA Template and **Cisco ASA v9.6.2 IOS image \\10.20.10.2\student\$ GNS3**.

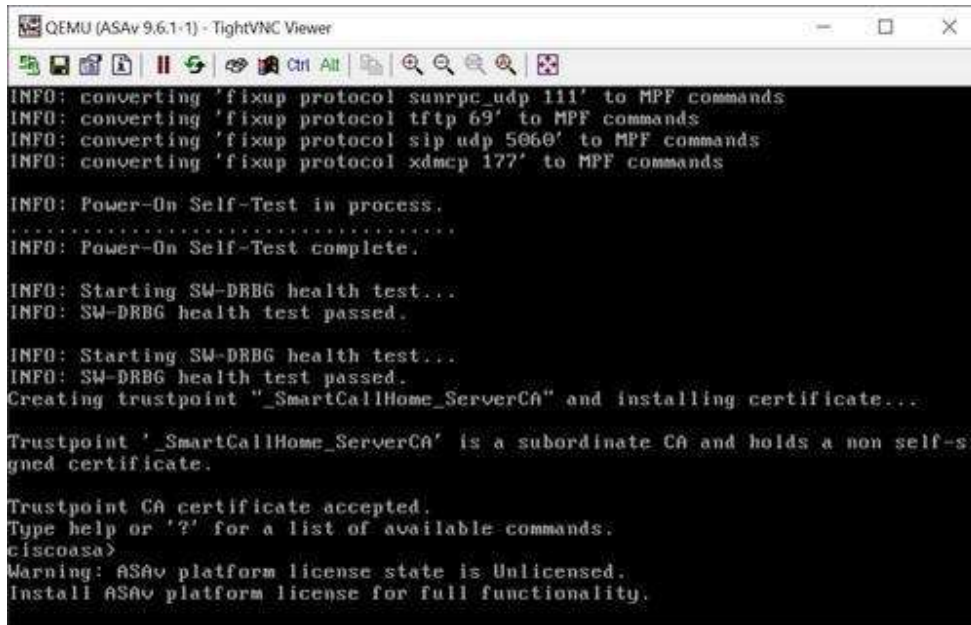
Additional Notes (before starting router configuration, perform following steps for ASA configuration) Initial configuration after ASA import.



## Configure the ASAv for telnet access delicate:



After creating new Lab project based on above video, Power ASA on and double click it to open the TightVNC viewer. The ASAv will automatically reboot once during the initial power-up after "determining the device platform". After the second boot, it will stop at the ciscoasa> prompt. Once you get that you are ready to move to the next step.



```
QEMU (ASAv 9.6.1-1) - TightVNC Viewer
INFO: converting 'fixup protocol sunrpc udp 111' to MPF commands
INFO: converting 'fixup protocol tftp 69' to MPF commands
INFO: converting 'fixup protocol sip udp 5060' to MPF commands
INFO: converting 'fixup protocol xdmcp 177' to MPF commands

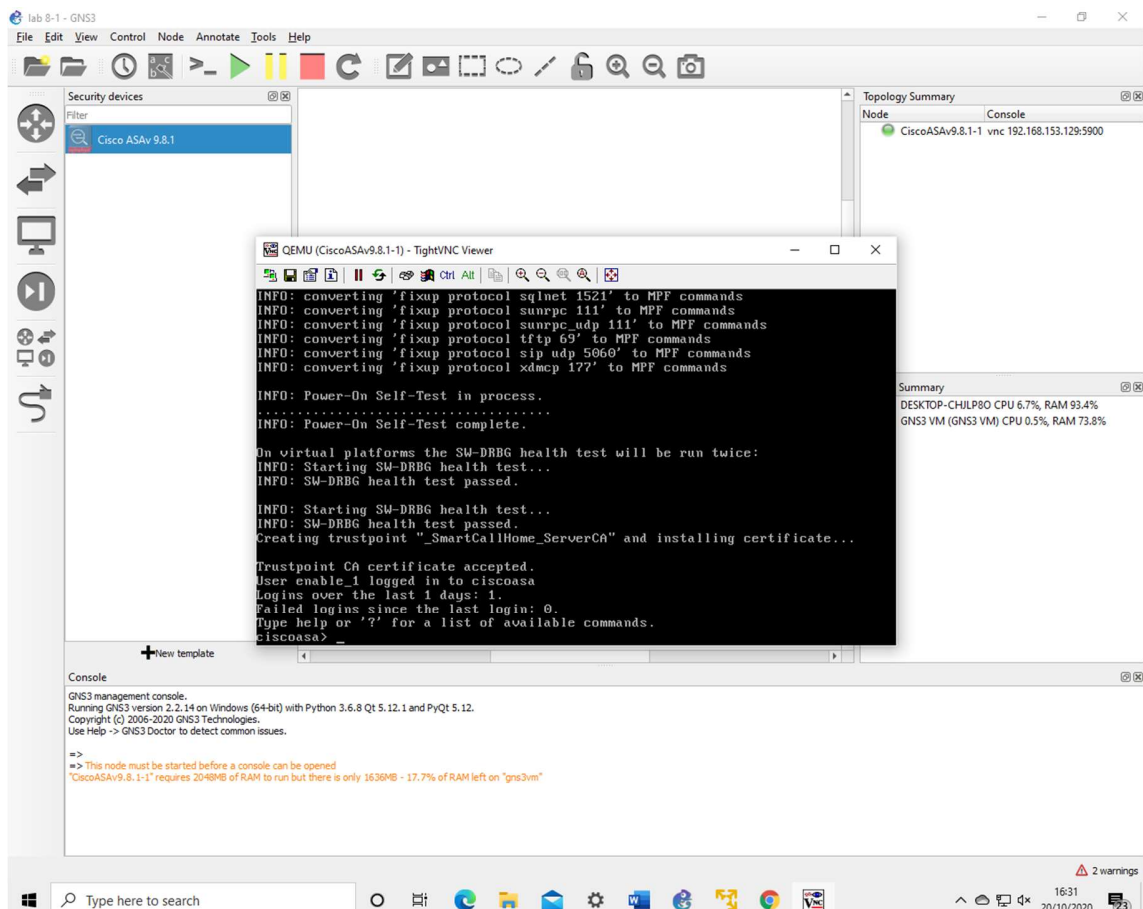
INFO: Power-On Self-Test in process.
.....
INFO: Power-On Self-Test complete.

INFO: Starting SW-DRBG health test...
INFO: SW-DRBG health test passed.

INFO: Starting SW-DRBG health test...
INFO: SW-DRBG health test passed.
Creating trustpoint "_SmartCallHome_ServerCA" and installing certificate...

Trustpoint '_SmartCallHome_ServerCA' is a subordinate CA and holds a non self-signed certificate.

Trustpoint CA certificate accepted.
Type help or '?' for a list of available commands.
ciscoasa>
Warning: ASAv platform license state is Unlicensed.
Install ASAv platform license for full functionality.
```



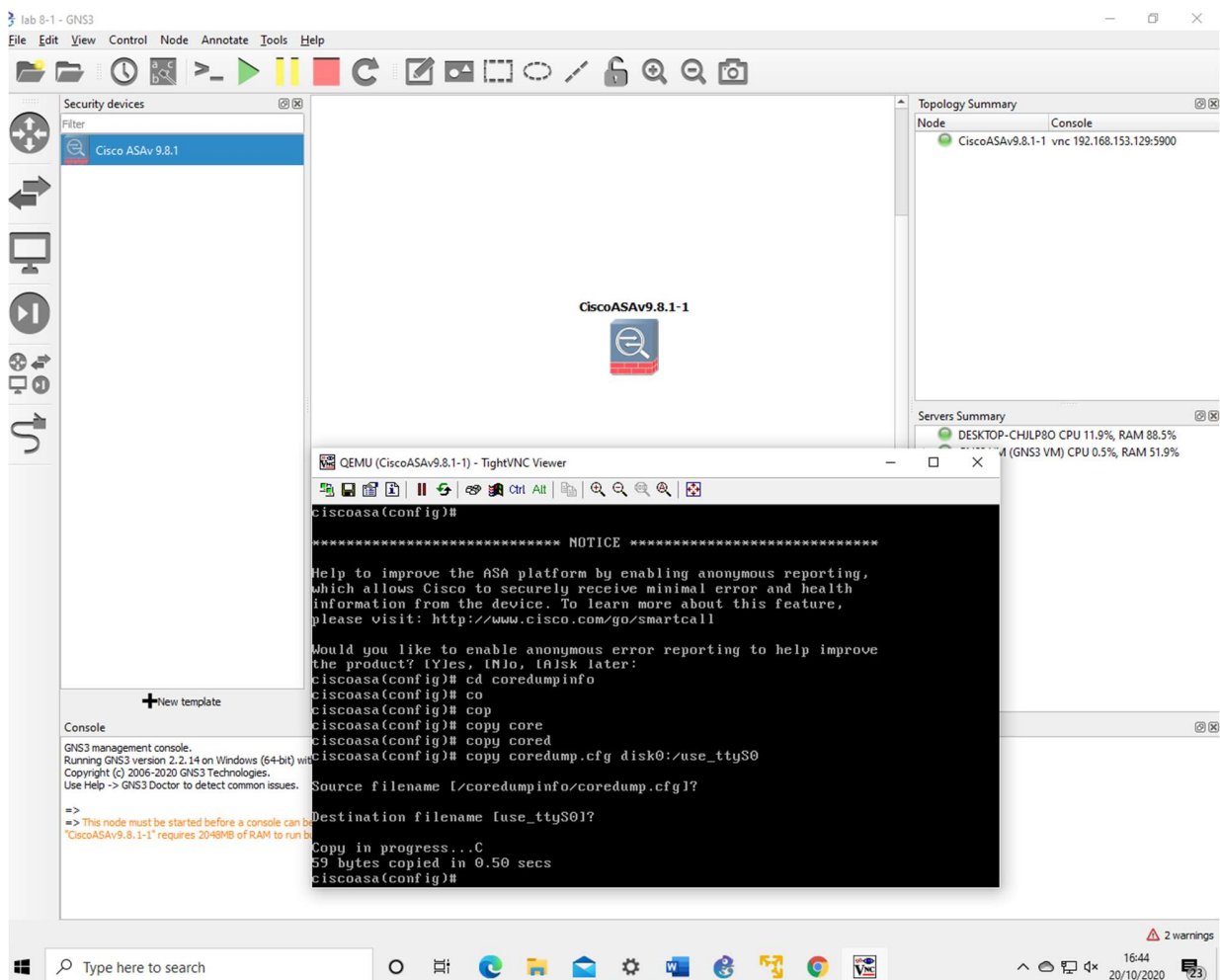
The ASAv serial port is disabled by default. The software seems to require a file on the root of Disk0: called use\_ttyS0 to enable the serial interface. The easiest way to add this is to clone the existing \coredumpinfo\coredump.cfg file and rename it. Use these commands to clone it:

```
ciscoasa#conf t
```

```
ciscoasa(config)# cd coredumpinfo
```

```
ciscoasa(config)# copy coredump.cfg disk0:/use_ttyS0 (that's S zero not S and the letter O)
```

Verify the file exists with the command dir disk0:/





```
QEMU (ASAv 9.6.1-1) - TightVNC Viewer
60      drwx  4096      18:26:44 May 23 2016  coredumpinfo
8571076608 bytes total (8559845376 bytes free)

ciscoasa(config)# cd coredumpinfo
ciscoasa(config)# copy coredump.cfg disk0:/use_ttyS0

Source filename [/coredumpinfo/coredump.cfg]?

Destination filename [use_ttyS0]?

Copy in progress...C
59 bytes copied in 0.80 secs
ciscoasa(config)# dir disk0:/

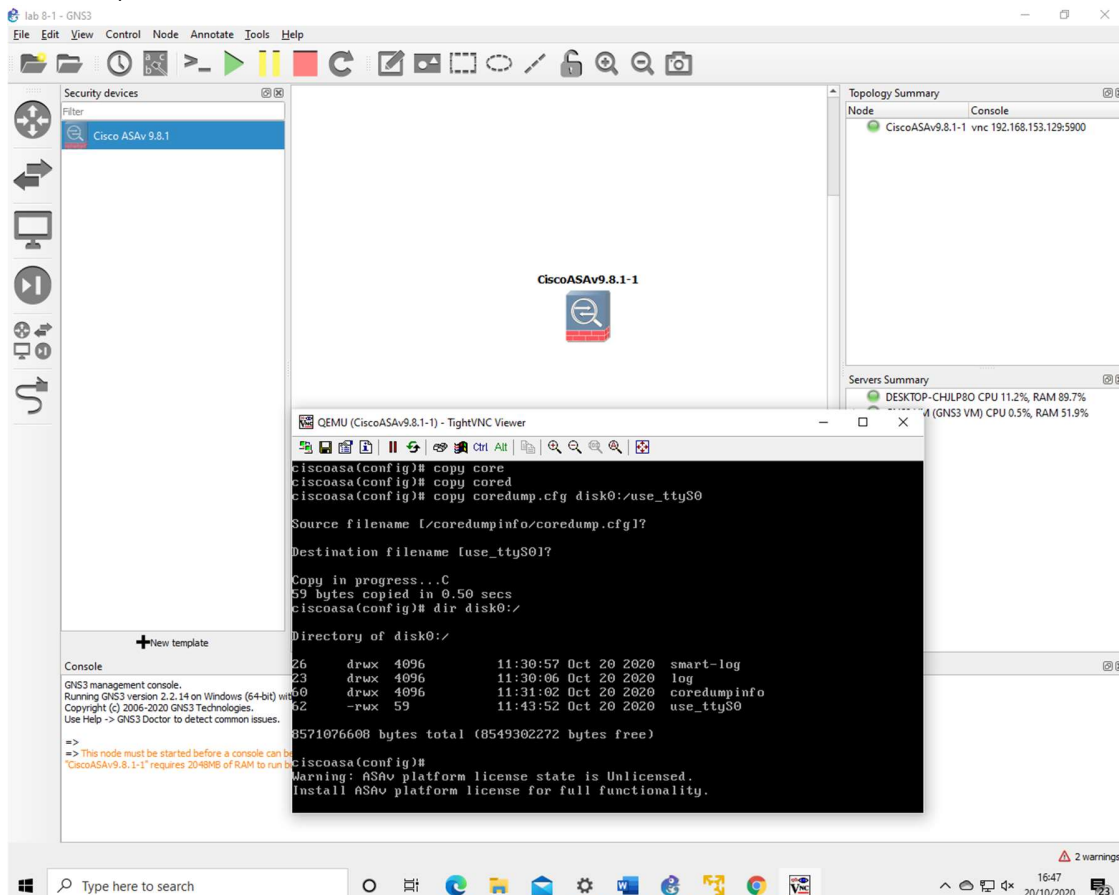
Directory of disk0:/

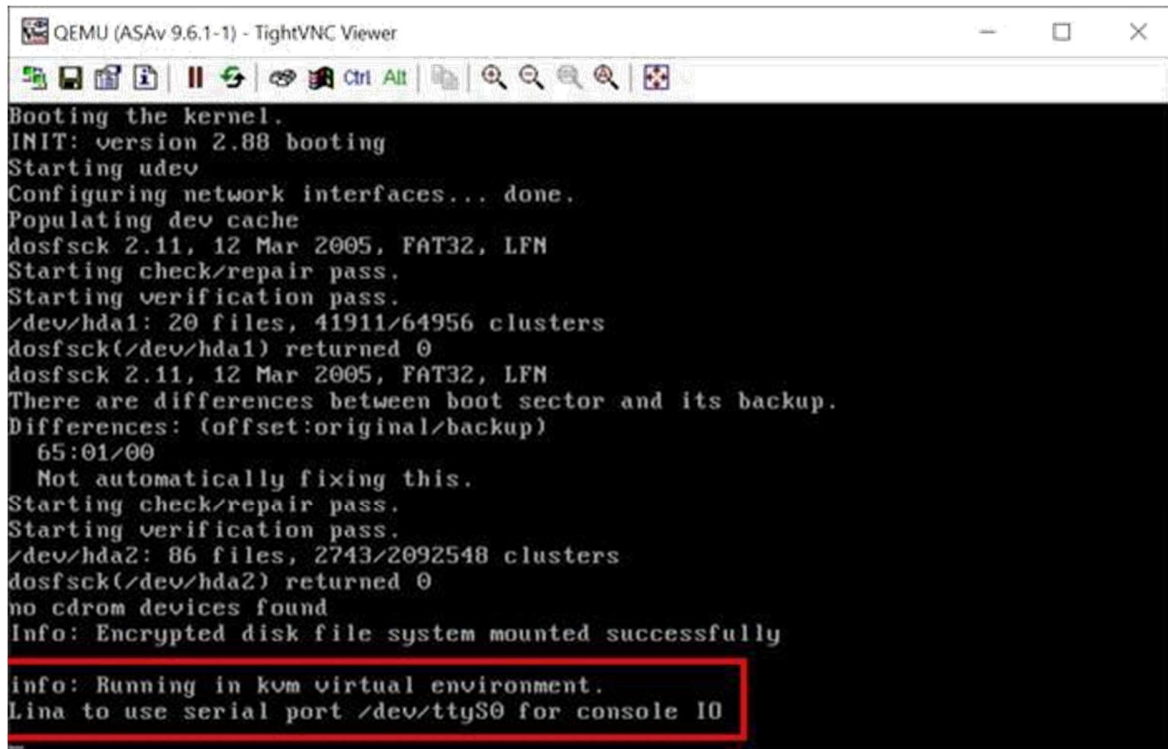
26      drwx  4096      18:26:38 May 23 2016  smart-log
23      drwx  4096      18:25:18 May 23 2016  log
60      drwx  4096      18:26:44 May 23 2016  coredumpinfo
62      -rwx   59      18:37:30 May 23 2016  use_ttyS0

8571076608 bytes total (8559841280 bytes free)

ciscoasa(config)#
```

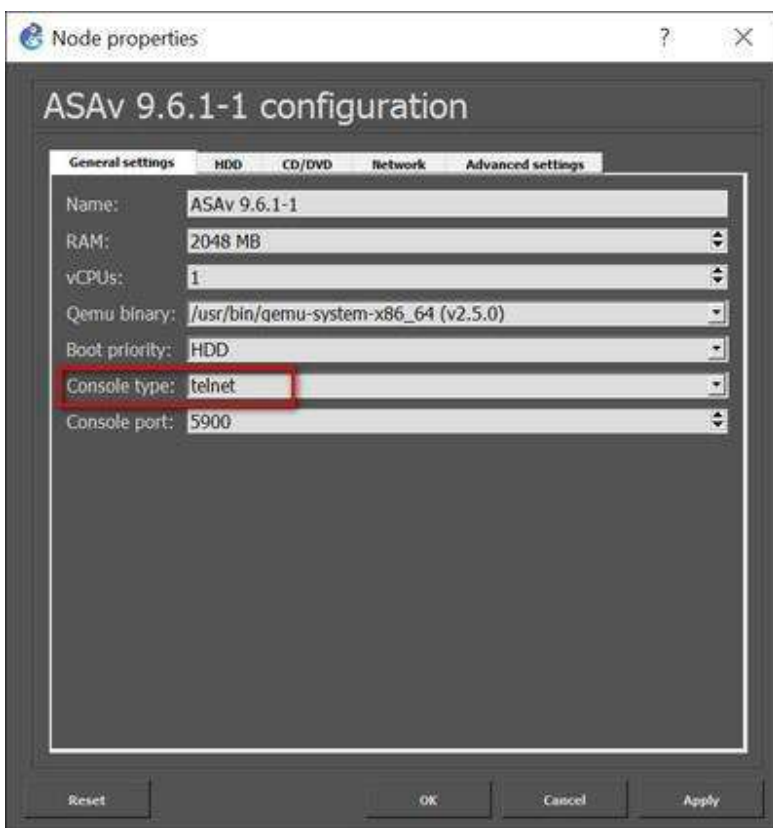
Once it is there, reload the ASA. There is no need to save the config at this point. We just want the ASA to reload with that file in place. It should show the GRUB boot loader, and boot, but the interaction will stop with the message "Lina to use serial port /dev/ttyS0 for console IO". At this point, it has transferred the interactive control to the serial port.

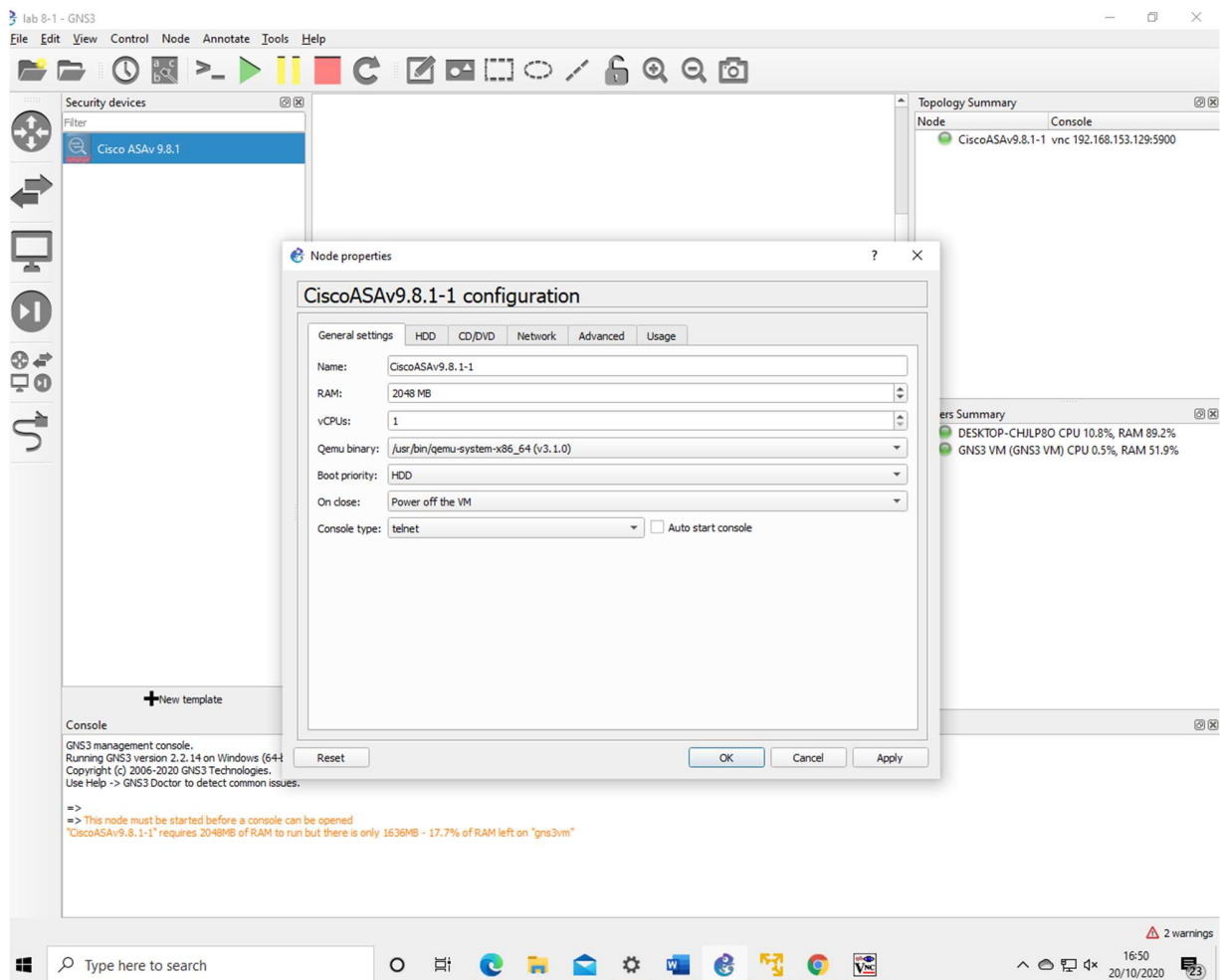




```
QEMU (ASAv 9.6.1-1) - TightVNC Viewer
Booting the kernel.
INIT: version 2.88 booting
Starting udev
Configuring network interfaces... done.
Populating dev cache
dosfsck 2.11, 12 Mar 2005, FAT32, LFN
Starting check/repair pass.
Starting verification pass.
/dev/hda1: 20 files, 41911/64956 clusters
dosfsck(/dev/hda1) returned 0
dosfsck 2.11, 12 Mar 2005, FAT32, LFN
There are differences between boot sector and its backup.
Differences: (offset:original/backup)
65:01/00
Not automatically fixing this.
Starting check/repair pass.
Starting verification pass.
/dev/hda2: 86 files, 2743/2092548 clusters
dosfsck(/dev/hda2) returned 0
no cdrom devices found
Info: Encrypted disk file system mounted successfully
Info: Running in kvm virtual environment.
Lina to use serial port /dev/ttyS0 for console IO
```

Power the ASAv off. Right click it, and select configure. Change the console type from vnc to telnet. You must power the ASAv off to do this. You can change it with the device powered on, but it will throw the error "No connection could be made because the target machine actively refused it" if you try to launch the console and will not connect. Click Apply > OK to save.





Power the ASAv back on and double click to open the console. It will take 30-45 seconds before any output will appear. The GRUB boot screen and boot process won't show in the serial port output. The serial port isn't active until the ASA software loads. My Surface pro takes 30 seconds to show output.

lab 8-1 - GNS3

File Edit View Control Node Annotate Tools Help

Security devices

Filter

Cisco ASAv 9.8.1

Topology Summary

Node

CiscoASAv9.8.1-1 telnet 192.168.153.129:5001

80 CPU 25.2%, RAM 92.3%

3 VM) CPU 100.0%, RAM 75.1%

INFO: converting 'fixup protocol dns maximum-length 512' to MPF commands  
ERROR: Inspect configuration of this type exists, first remove that configuration and then add the new configuration  
INFO: converting 'fixup protocol ftp 21' to MPF commands  
INFO: converting 'fixup protocol h323\_h225 1720' to MPF commands  
INFO: converting 'fixup protocol h323\_ras 1718-1719' to MPF commands  
INFO: converting 'fixup protocol ip-options 1' to MPF commands  
INFO: converting 'fixup protocol netbios 137-138' to MPF commands  
INFO: converting 'fixup protocol rsh 514' to MPF commands  
INFO: converting 'fixup protocol rtsp 554' to MPF commands  
INFO: converting 'fixup protocol sip 5060' to MPF commands  
INFO: converting 'fixup protocol skinny 2000' to MPF commands  
INFO: converting 'fixup protocol smtp 25' to MPF commands  
INFO: converting 'fixup protocol sqlnet 1521' to MPF commands  
INFO: converting 'fixup protocol sunrpc 111' to MPF commands  
INFO: converting 'fixup protocol sunrpc\_udp 111' to MPF commands  
INFO: converting 'fixup protocol tftp 69' to MPF commands  
INFO: converting 'fixup protocol sip\_udp 5060' to MPF commands  
INFO: converting 'fixup protocol xdmcp 177' to MPF commands

INFO: Power-On Self-Test in process.  
.....  
INFO: Power-On Self-Test complete.

In virtual platforms the SW-DRBG health test will be run twice:  
INFO: Starting SW-DRBG health test...  
INFO: SW-DRBG health test passed.

INFO: Starting SW-DRBG health test...  
INFO: SW-DRBG health test passed.

Creating trustpoint "\_SmartCallHome\_ServerCA" and installing certificate...

Trustpoint CA certificate accepted.  
User enable\_1 logged in to ciscoasa  
Logins over the last 1 days: 1.  
Failed logins since the last login: 0.  
Type help or '?' for a list of available commands.  
ciscoasa>

Console

GNS3 management console  
Running GNS3 version 2.0  
Copyright (c) 2006-2020 GNS3  
Use Help -> GNS3 Doctor

solarwinds | Solar-PuTTY free tool

© 2019 SolarWinds Worldwide, LLC. All rights reserved.

2 errors 3 warnings

16:52  
20/10/2020

ASAv 9.6.1-1

INFO: converting 'fixup protocol smtp 25' to MPF commands  
INFO: converting 'fixup protocol sqlnet 1521' to MPF commands  
INFO: converting 'fixup protocol sunrpc 111' to MPF commands  
INFO: converting 'fixup protocol sunrpc\_udp 111' to MPF commands  
INFO: converting 'fixup protocol tftp 69' to MPF commands  
INFO: converting 'fixup protocol sip\_udp 5060' to MPF commands  
INFO: converting 'fixup protocol xdmcp 177' to MPF commands

INFO: Power-On Self-Test in process.  
.....  
INFO: Power-On Self-Test complete.

INFO: Starting SW-DRBG health test...  
INFO: SW-DRBG health test passed.

INFO: Starting SW-DRBG health test...  
INFO: SW-DRBG health test passed.

Creating trustpoint "\_SmartCallHome\_ServerCA" and installing certificate...

Trustpoint '\_SmartCallHome\_ServerCA' is a subordinate CA and holds a non self-signed certificate.

Trustpoint CA certificate accepted.  
Type help or '?' for a list of available commands.  
ciscoasa>