IT NE 2006
Configuring GNS3 VM

LAB 5

WEEK - 6

CONTENTS

Week 6 Implementing GSN3 VM

Objective: Import and configure Cisco ASAv with GNS3

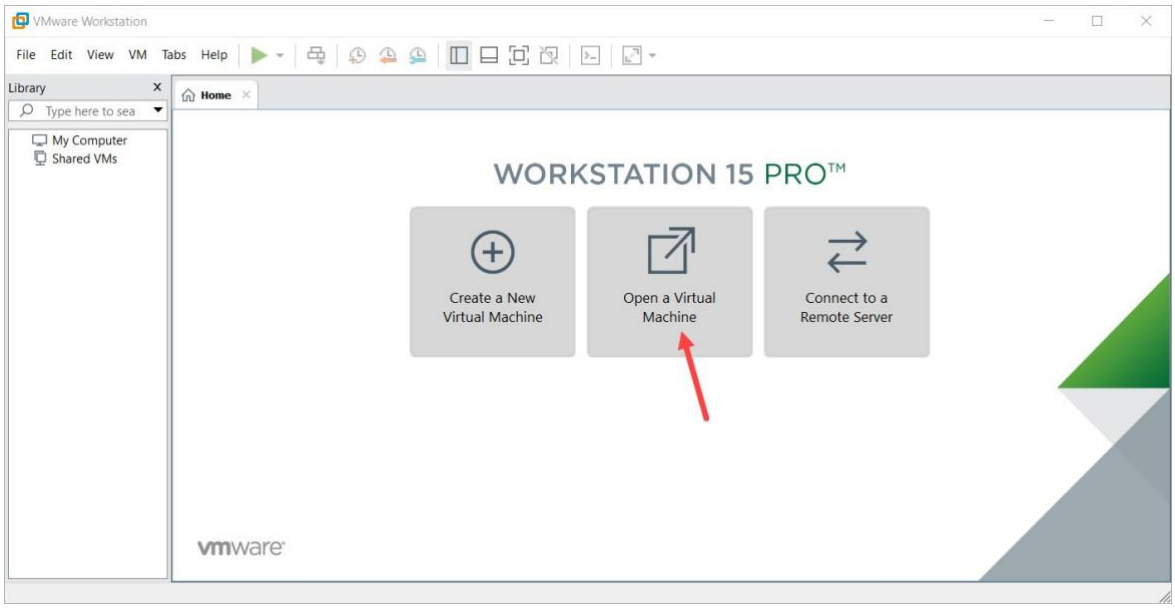
Deploy and configure Cisco ASAv with GNS3 by following instructions in https://youtu.be/GM_VmmkCEag?t=1m47s video.

In this case, we will use GNS3 ASA Template and **Cisco ASA v9.6.2 IOS image \\10.1.2.78\student$ GNS3.**

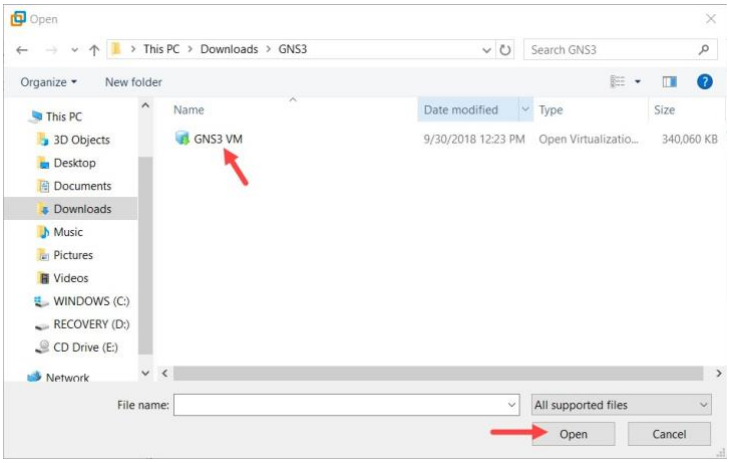
Import GNS3 VM into VMware Workstation

In this section, you will how to import the GNS3 VM into VMware Workstation on your local Windows PC.

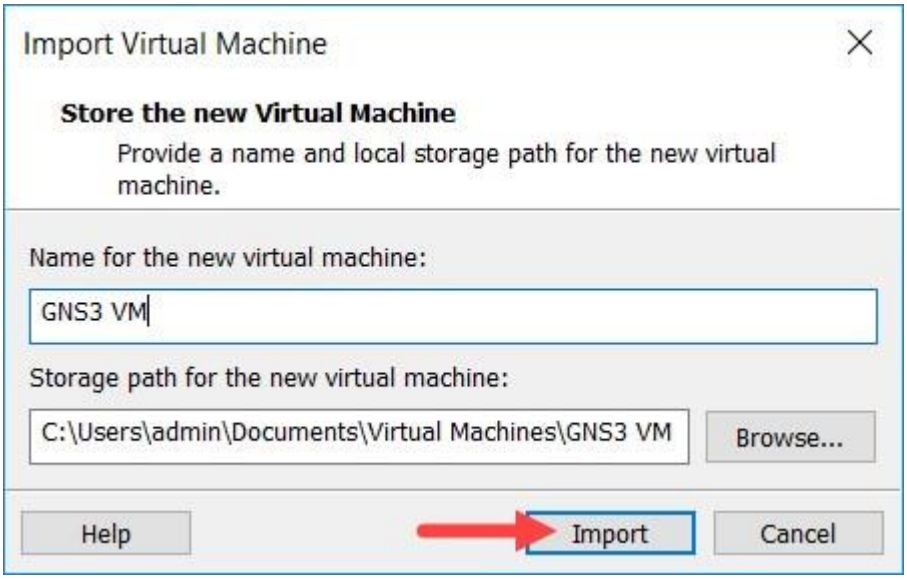
In VMware Workstation, click **Open a Virtual Machine**



Navigate to the directory \\10.20.10.2\student$\GNS3 V2.1.21\ where **GNS3 VM** is located and click **Open** to open the OVA:

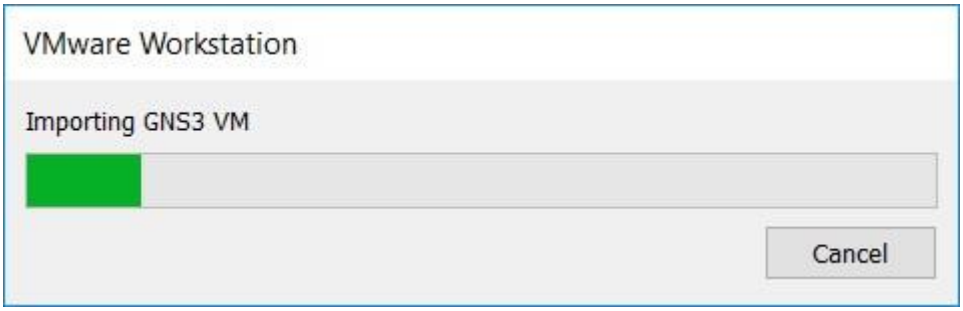


Leave the virtual machine name as GNS3 VM and click Import:

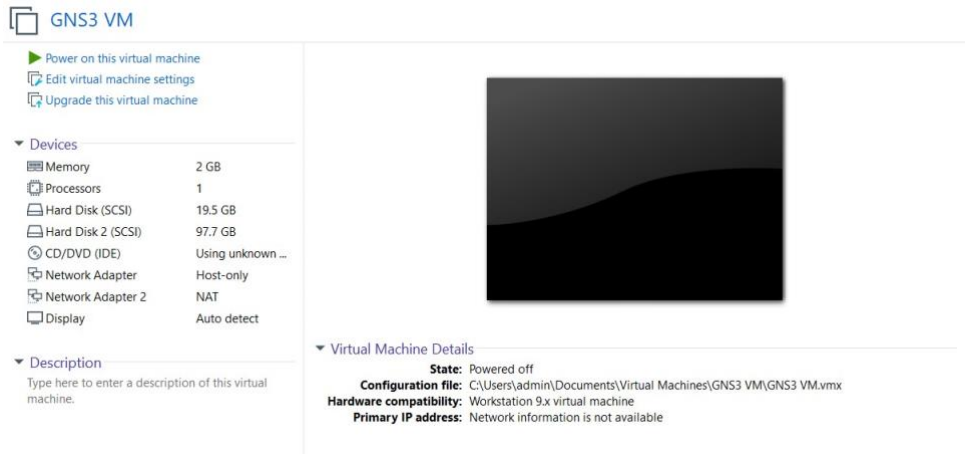


WARNINGWith VMware Player it's recommended to keep the default location. GNS3 will try to detect VMs outside, but unlike Workstation VMware Player doesn't offer a central database with all VMs location.

VMware Workstation will import the GNS3 VM:



The GNS3 VM will show as available in VMware Workstation. Leave all settings at their defaults:

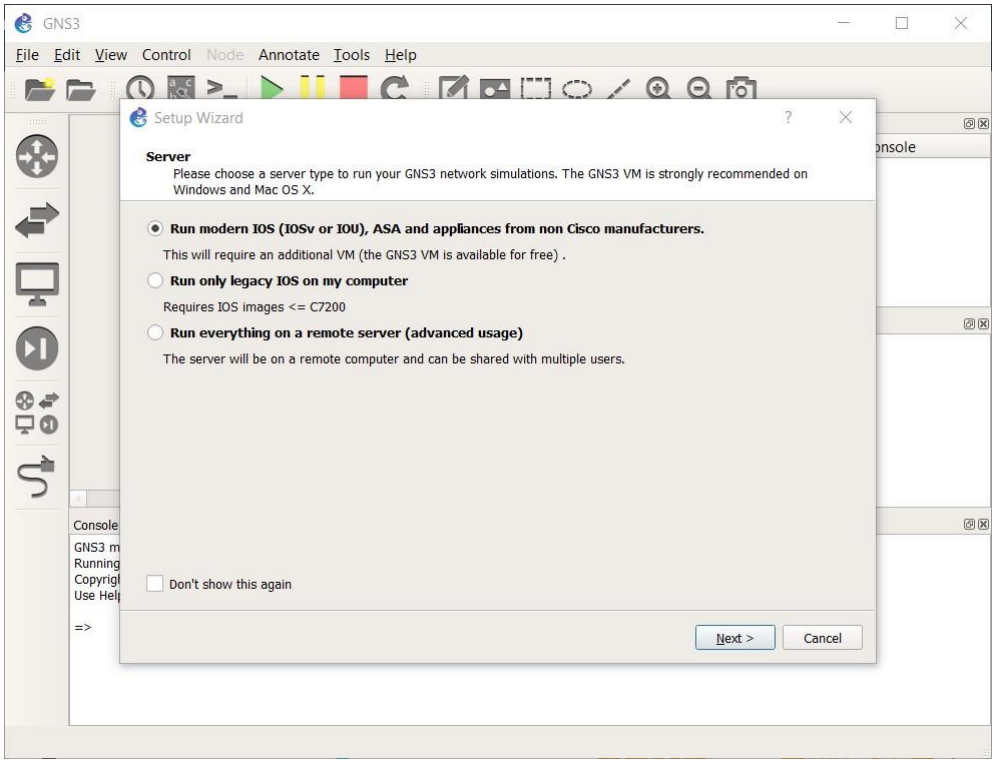


Congratulations! You have successfully imported the GNS3 VM. In the next section, you will integrate GNS3 with the GNS3 VM.

Close GNS3 and Open it again

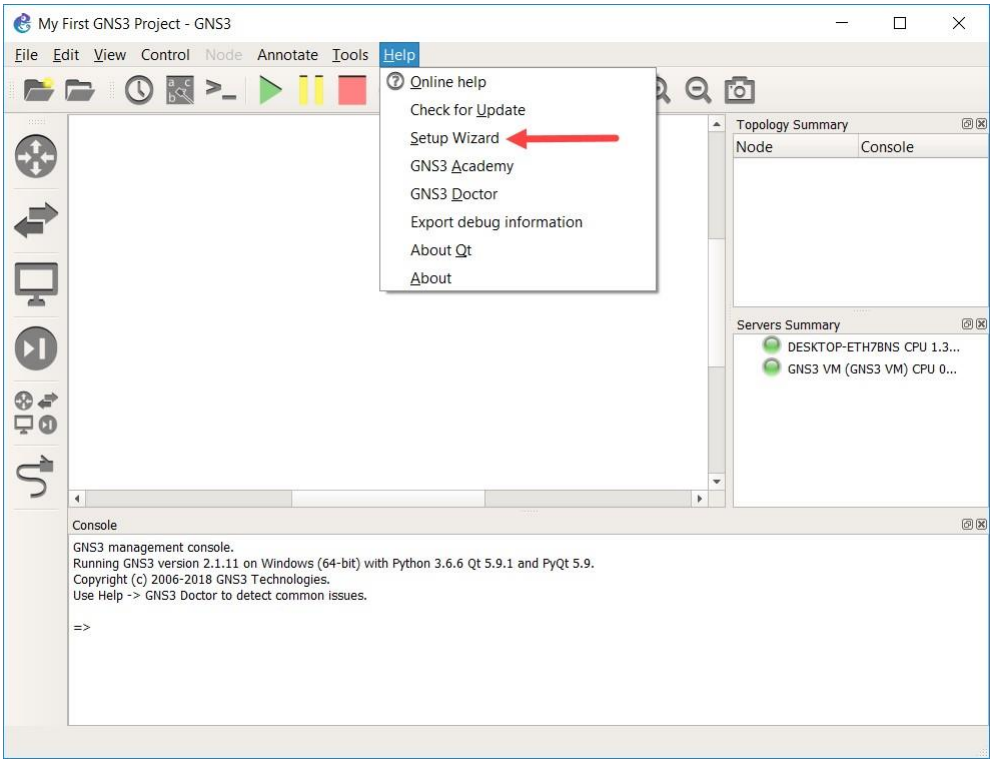
Local GNS3 VM Setup Wizard

The GNS3 Setup Wizard is displayed when GNS3 starts up for the first time. This provides an easy way to initially configure GNS3 options:



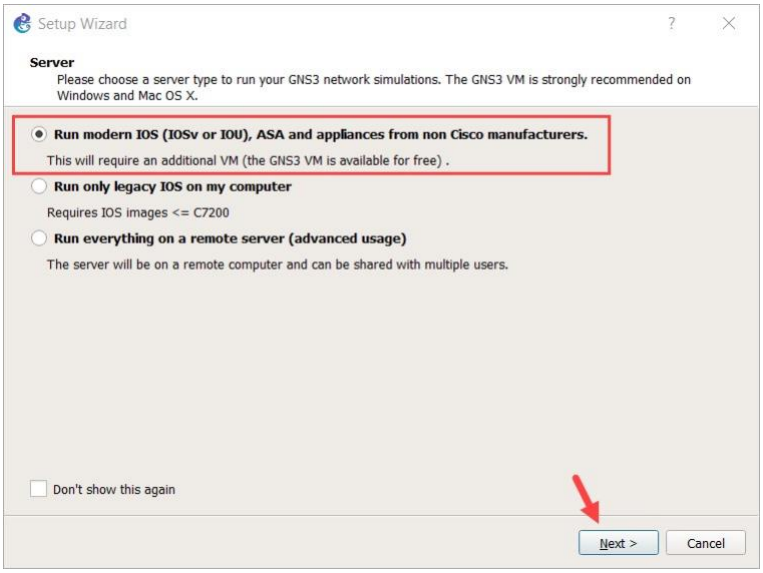
Manually_starting_the_Setup_Wizard

You can also manually start the Setup Wizard at any time by clicking Help->Setup Wizard in the GNS3 software:



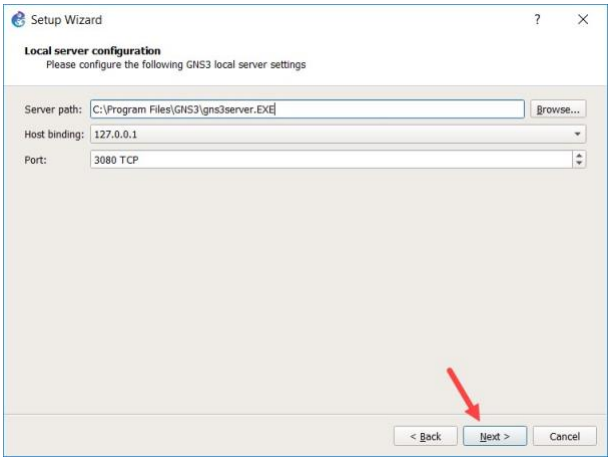
Using the GNS3 Setup Wizard

Select Run Modern IOS (IOSv or IOU), ASA, and appliances from non-Cisco manufacturers in the Wizard and click next >:



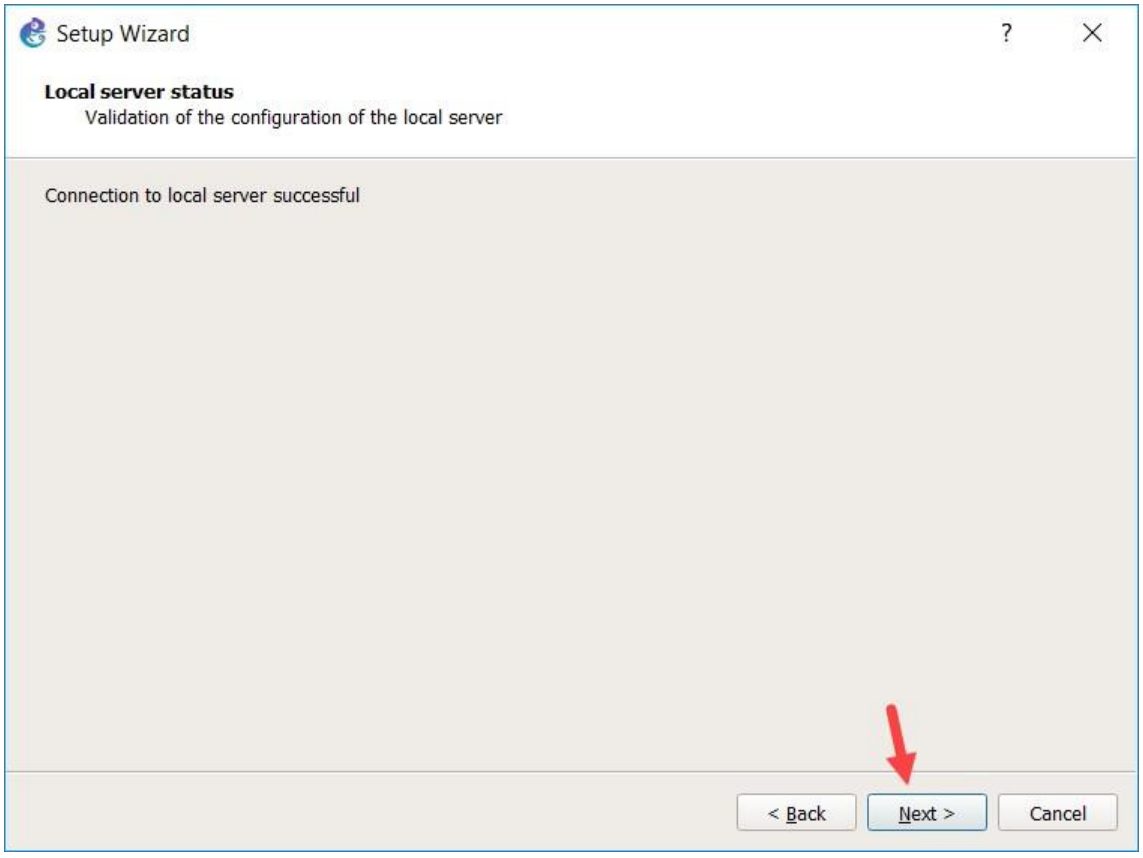
IMPORTANTThis guide explains the Local GNS3 VM server configuration.

Even though you'll be using the GNS3-VM to perform the "heavy lifting" of running your VMs/images/containers, it's still necessary to configure the local server settings in GNS3 before proceeding with the remaining process of configuring the GNS3-VM.



Ensure that the path to the gns3server executable is correct (typically C:\Program Files\GNS3" in a default installation), and select a Host binding and Port. Selecting the 127.0.0.1 local loopback address tends to be the most trouble-free option to use as a host binding, but the dropdown menu does contain additional options. Click Next.

A connection validation screen will appear to next:



If successful, click Next. If this connection attempt was unsuccessful for any reason, there possible remedies are to:

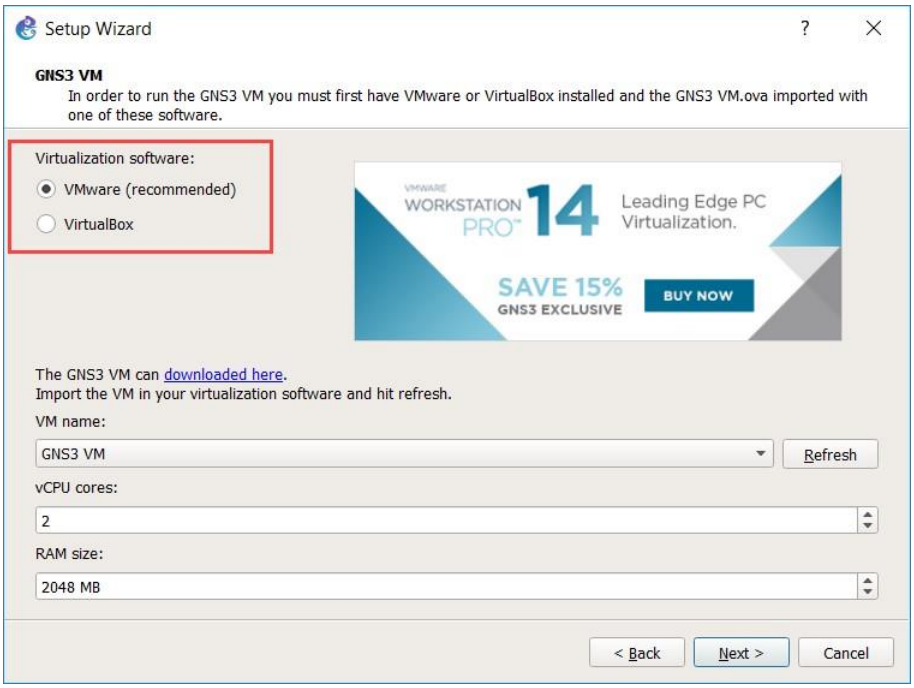
Confirm the path to the gns3server.exe file is correct, and try a different address/port for the host binding

Create exception/whitelist entries in your antivirus suite for the gns3server, ubridge, and dynamips executables (or just the entire GNS3 installation directory, if possible). You'll need to refer to the relevant documentation of the antivirus suite you run, in order to perform this step.

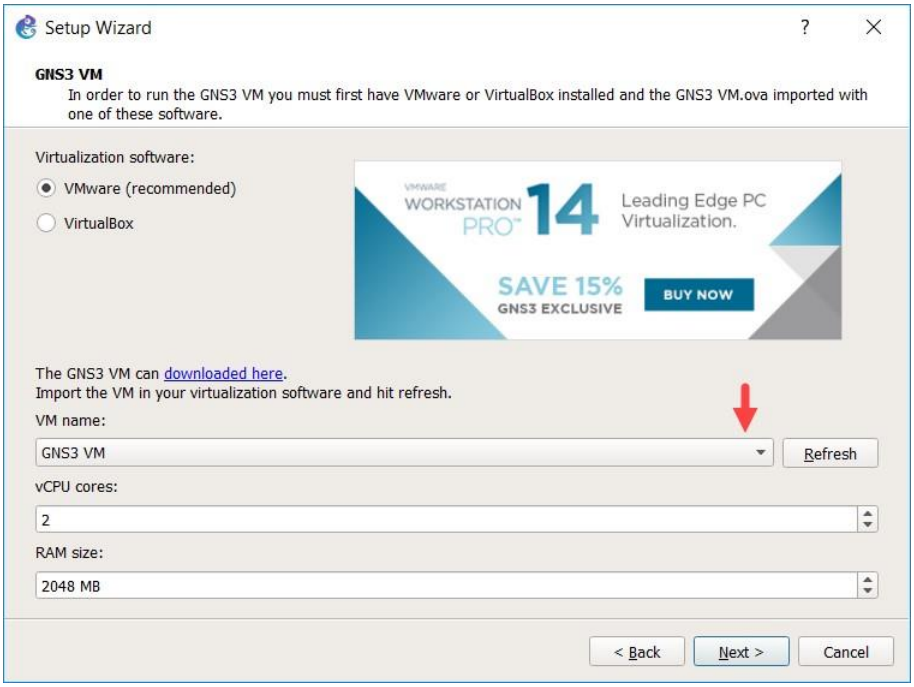
NOTE:

An additional step that may be necessary is to allow the gns3server, ubridge, and dynamips executables through the private side of the Windows Firewall. The default behavior is for these to already be allowed through, but it's well worth double-checking.

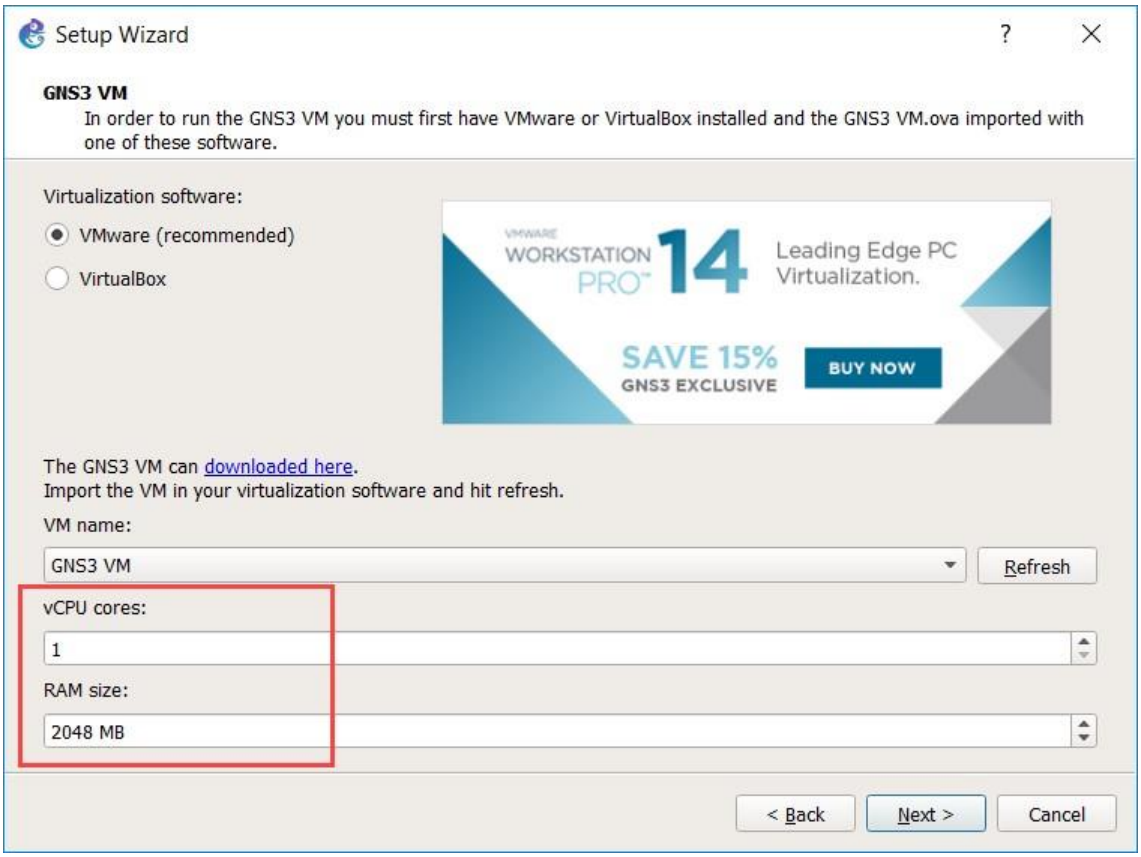
The Virtualization software you are going to use needs to be selected. In this example, VMware (recommended) is selected:



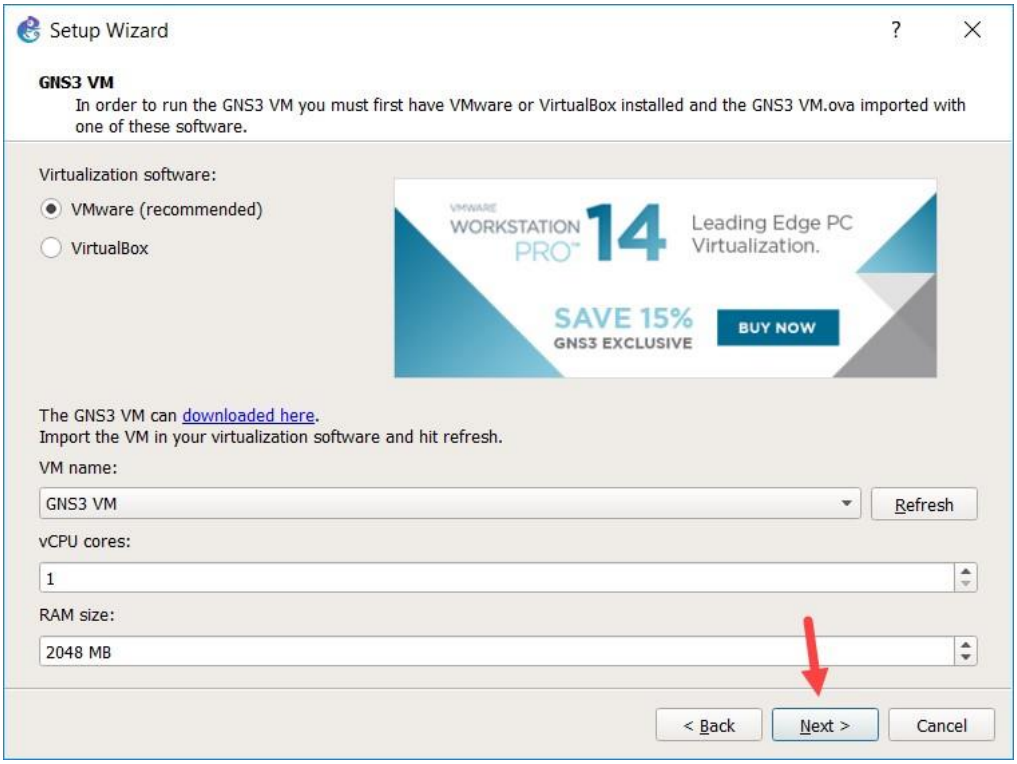
The Setup Wizard will detect the presence of the GNS3 VM in VMware Workstation. If the GNS3 VM is not displayed, click the Refresh button and ensure that the VM was imported correctly into VMware Workstation:



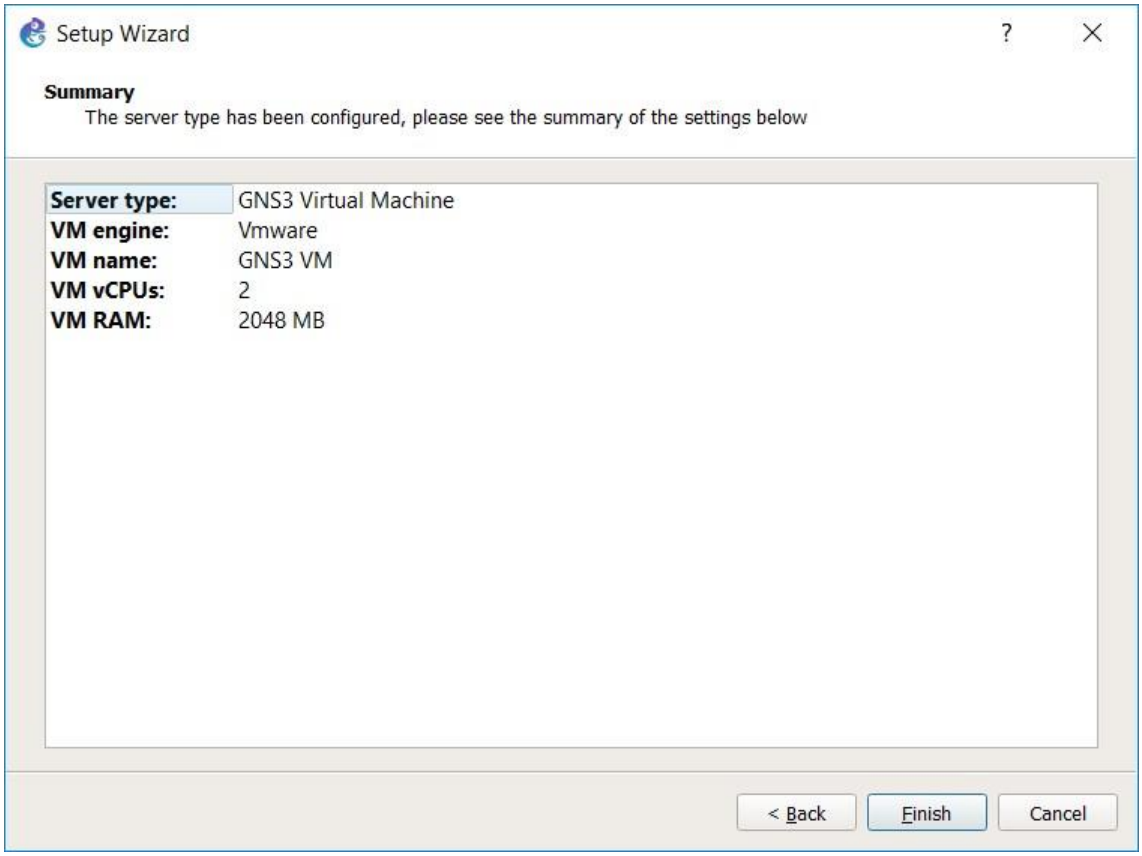
Change the CPU to 2 and RAM values to 4096 MB and then click Next > :



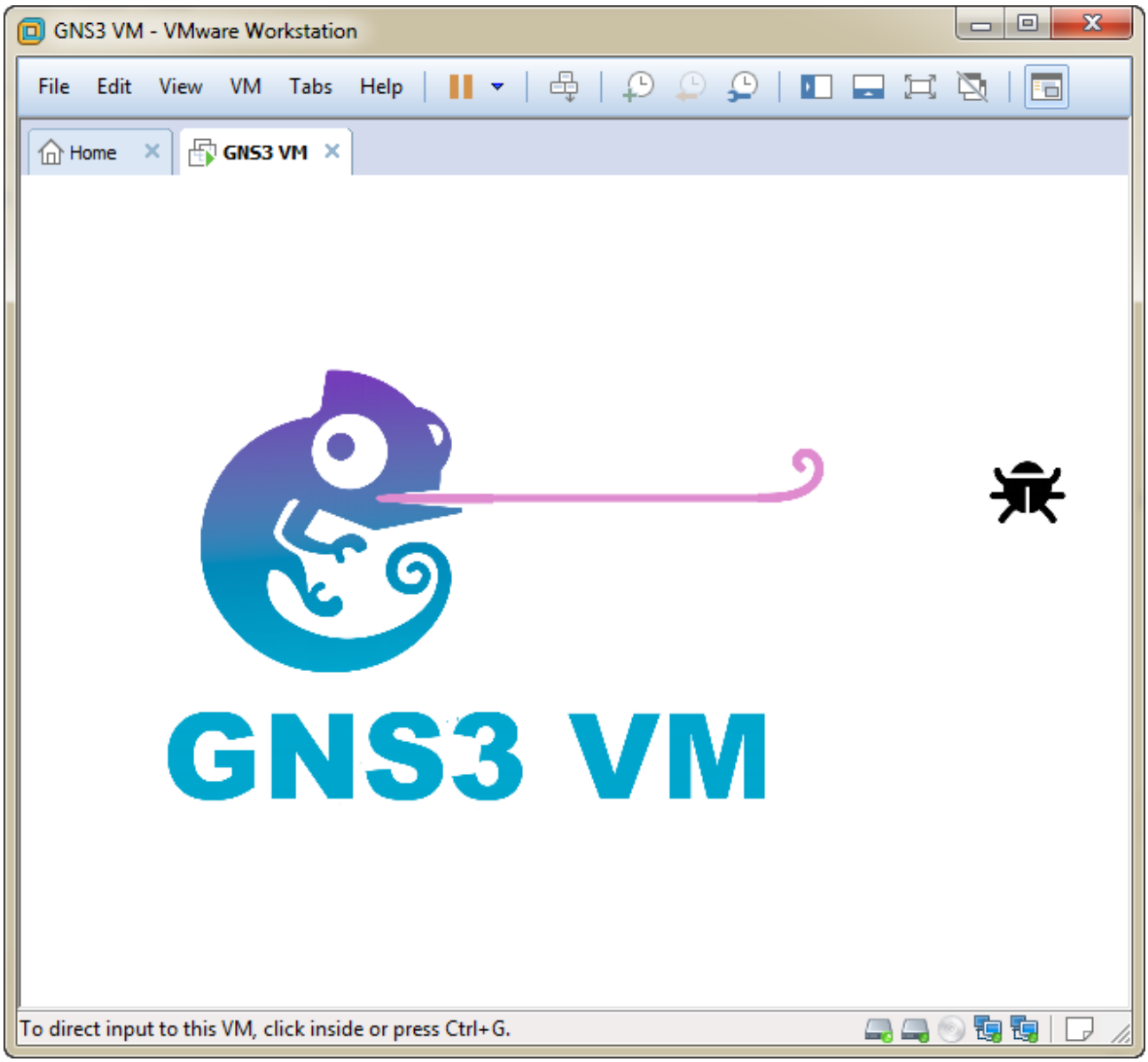
After making your allocation choices, click Next > :



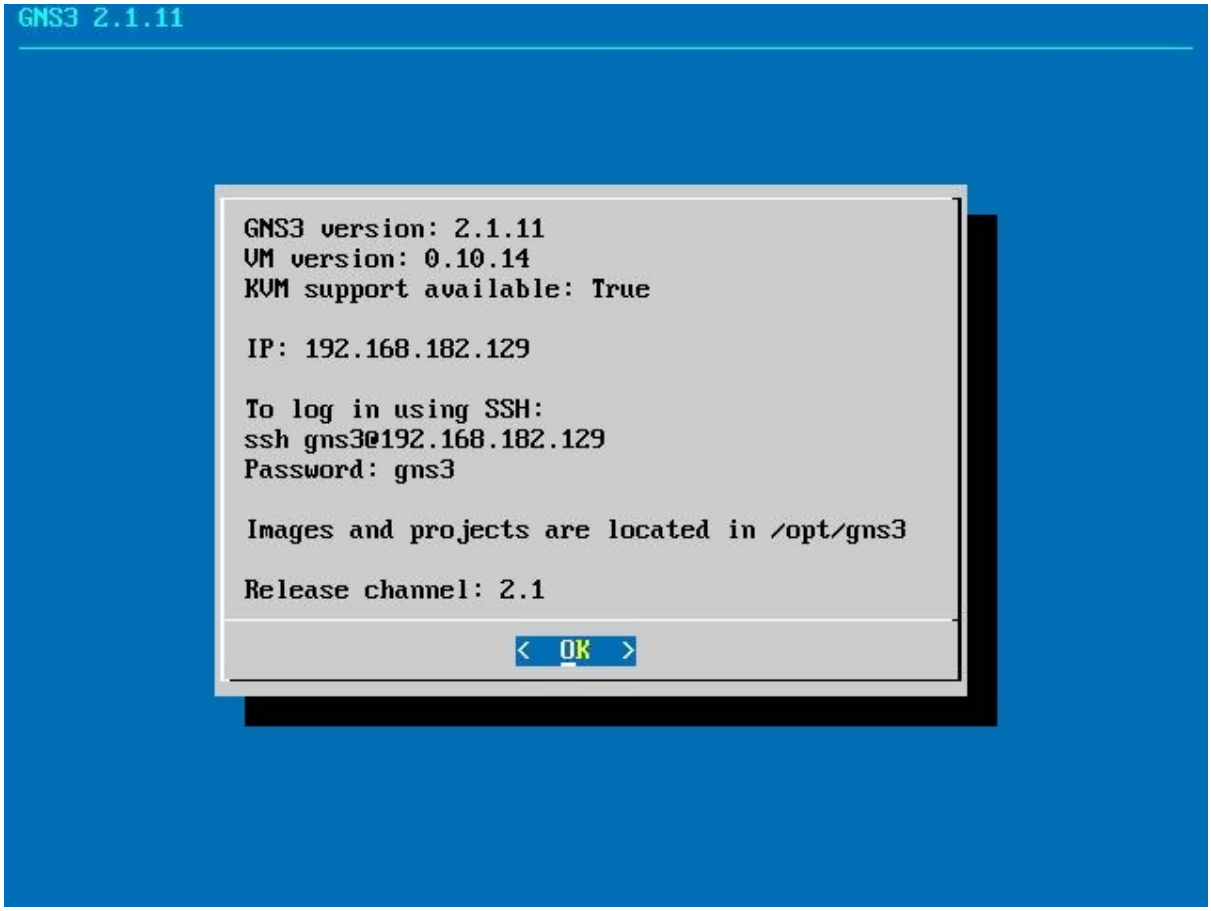
The next page will show a summary of the settings you chose for the GNS3 VM. You may see a pop up saying "Please Wait". That's perfectly normal, as it's due to GNS3 starting the GNS3 VM up:



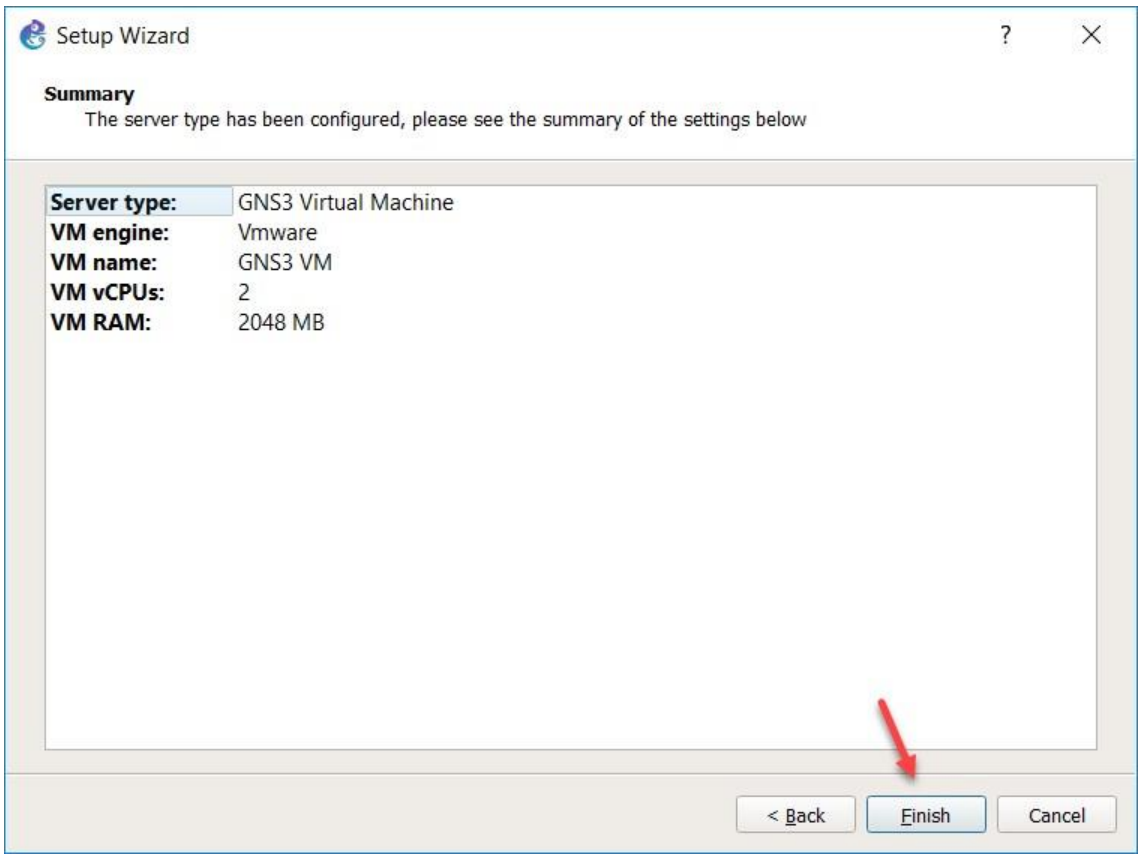
VMware view of GNS3 VM starting up:



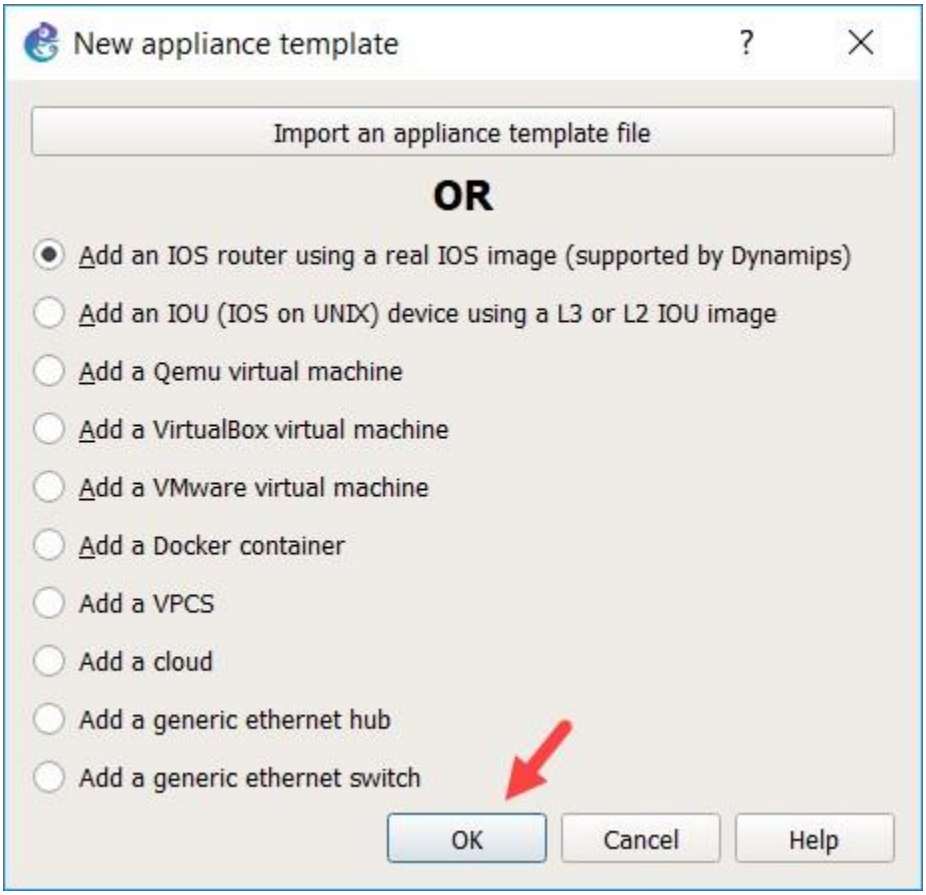
Once booted successfully, the IP address of the GNS3 VM will be displayed:



Once the GNS3-VM has been loaded, you can click Finish on the summary page in the GNS3 Setup Wizard to continue:

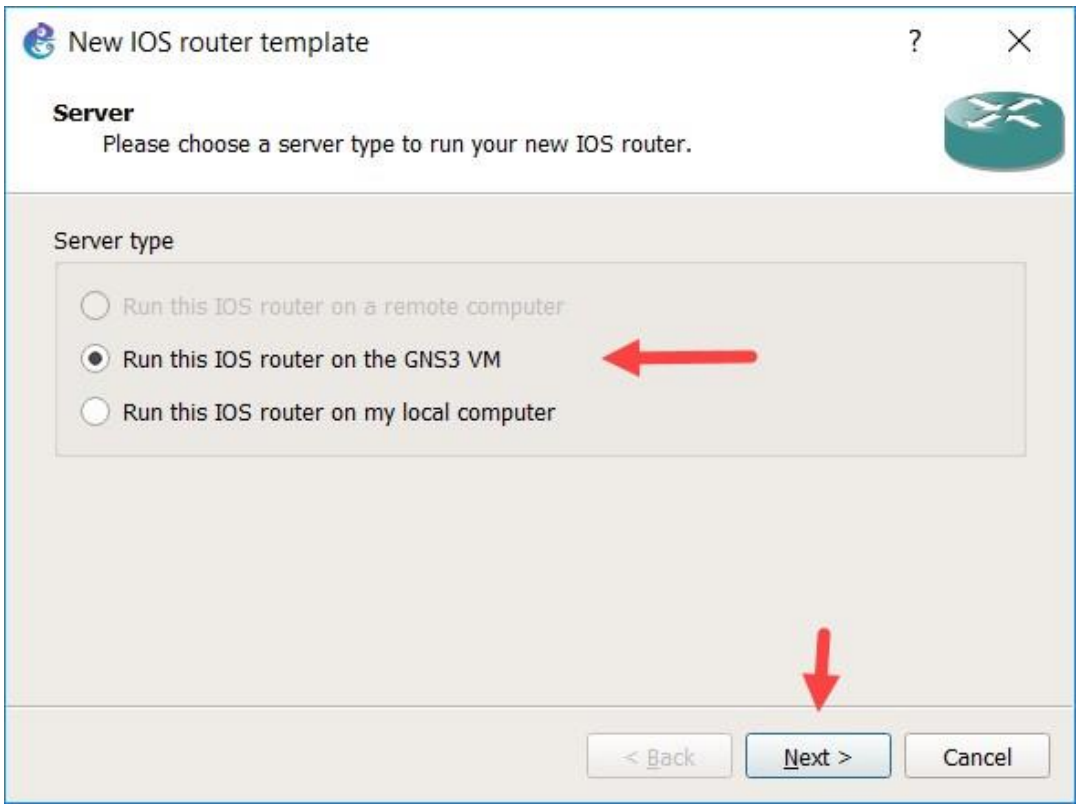


GNS3 will now display the following **New Appliance Template** window, which lists the various virtual device types you can use. None of them are selected by default, but this guide will use the "**Add an IOS router using a real IOS image (supported by Dynamips)**" option. For all other options, see other guides on the GNS3 website.

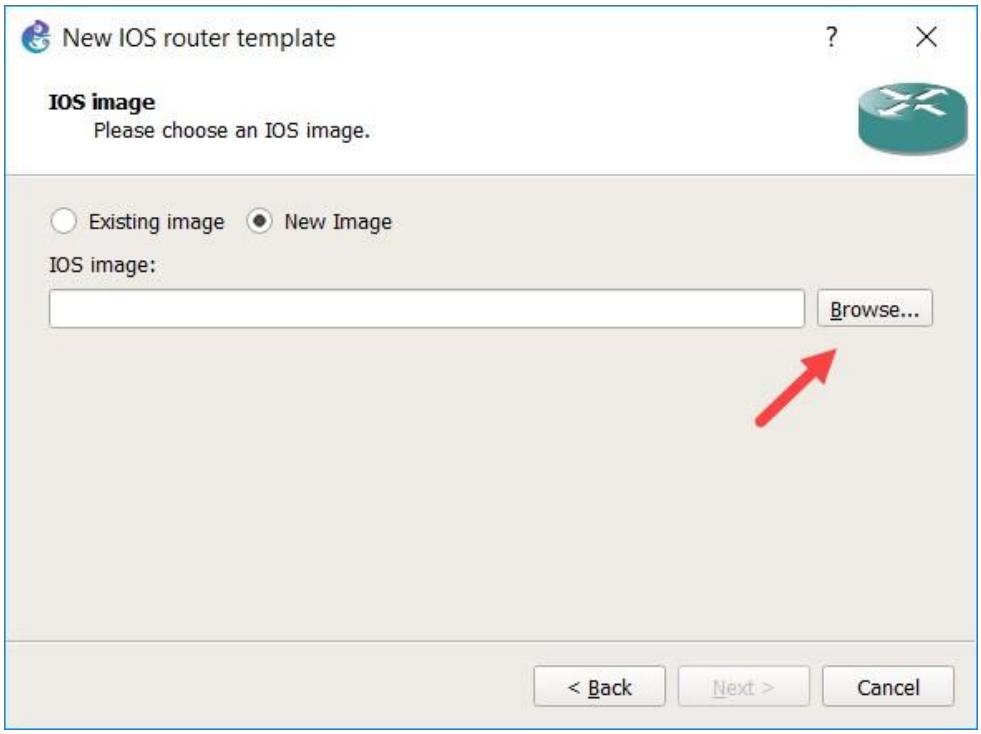


Click **OK**.

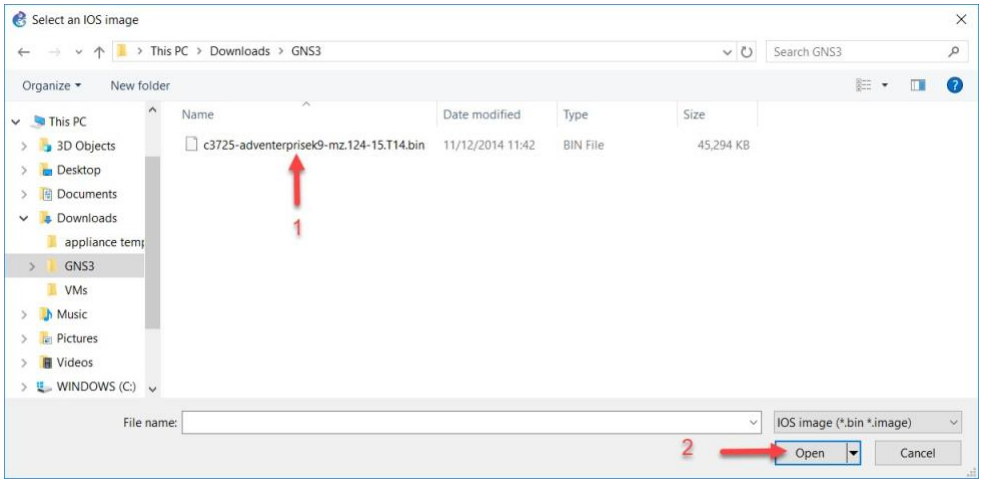
In the **New IOS router template** window, select **Run the IOS router on the GNS3 VM** and click **Next >** :



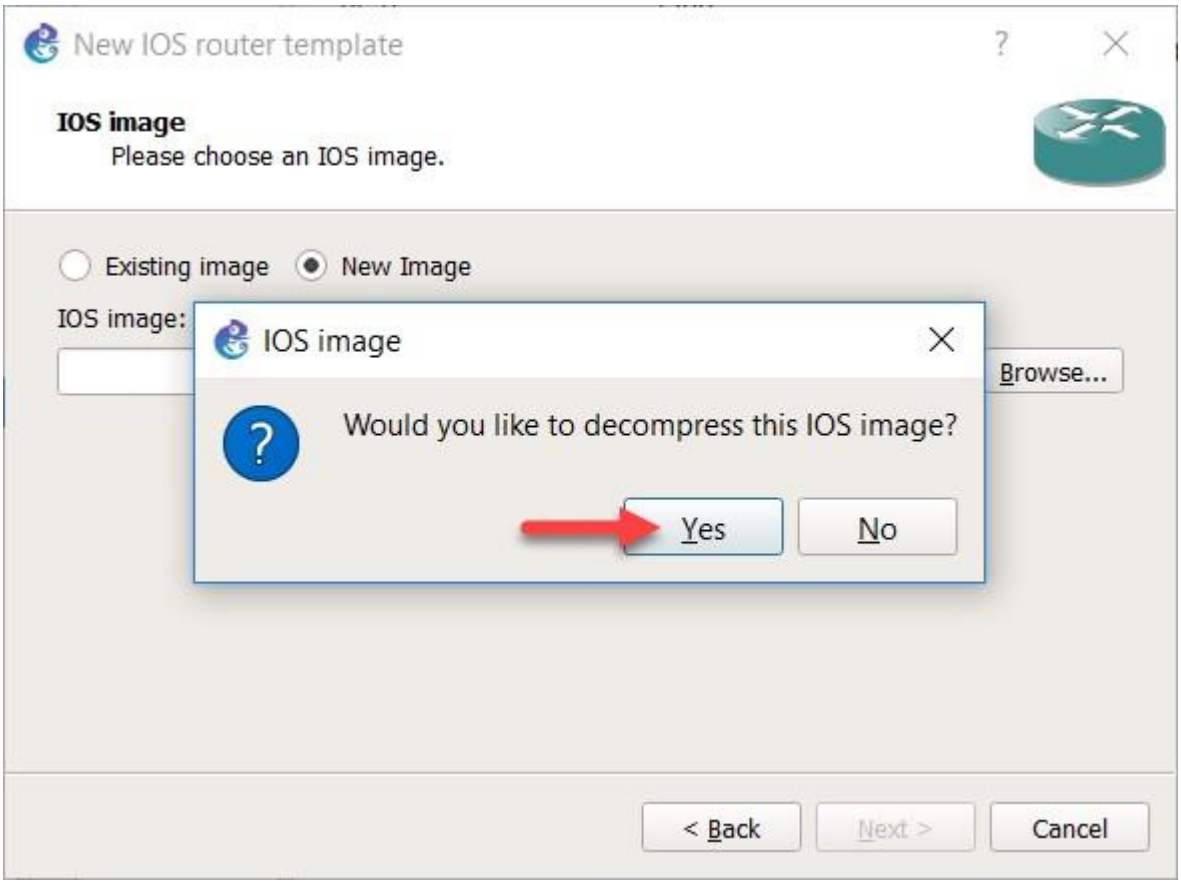
The **New IOS router template** window displays. Click **Browse...** to find a local IOS image on your computer:



Browse to the folder \\10.20.10.2\student$\GNS3\GNS3 IOS Images\ Cisco IOS images, select **c3725adventerprisek9-mz124-15** image and click **Open**:

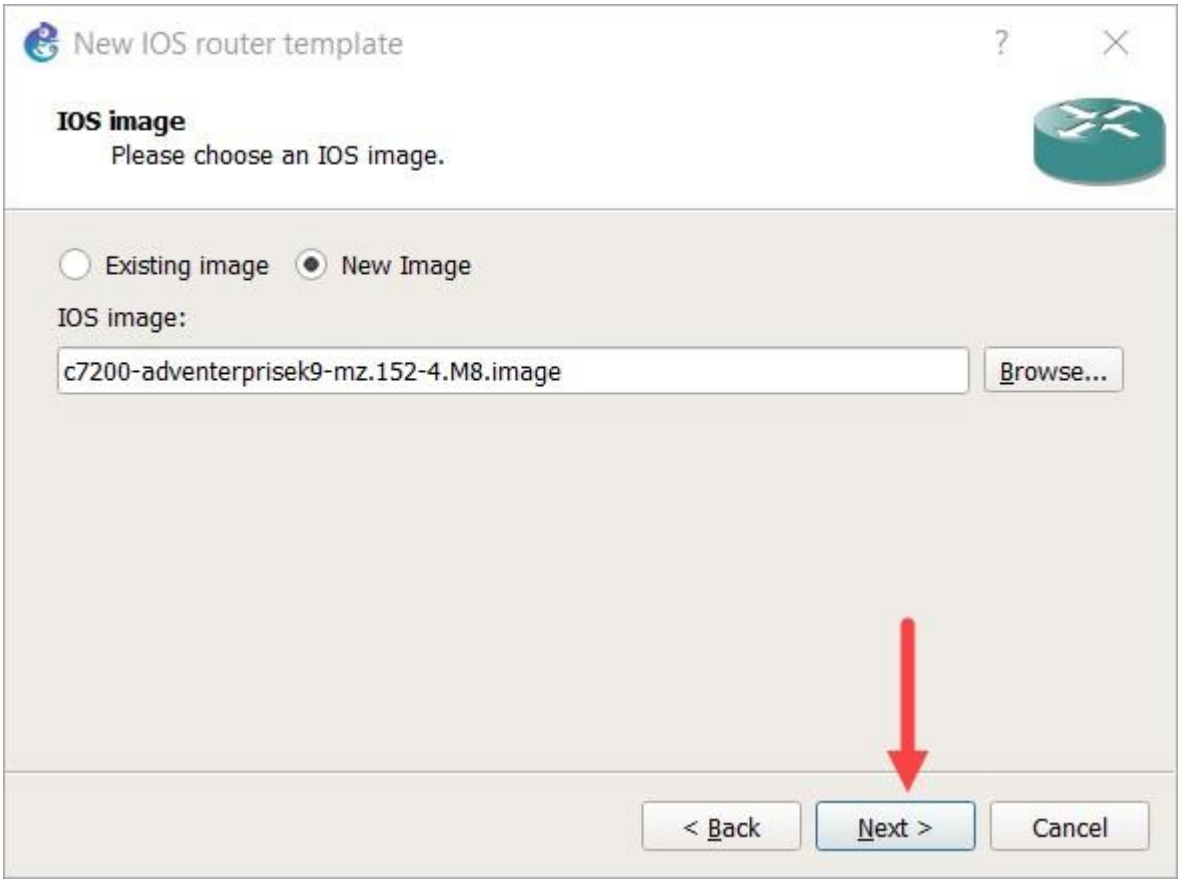


GNS3 can decompress IOS images to allow for quicker booting of routers in your GNS3 topologies. This is recommended for a better user experience. Click **Yes** to uncompress the image:

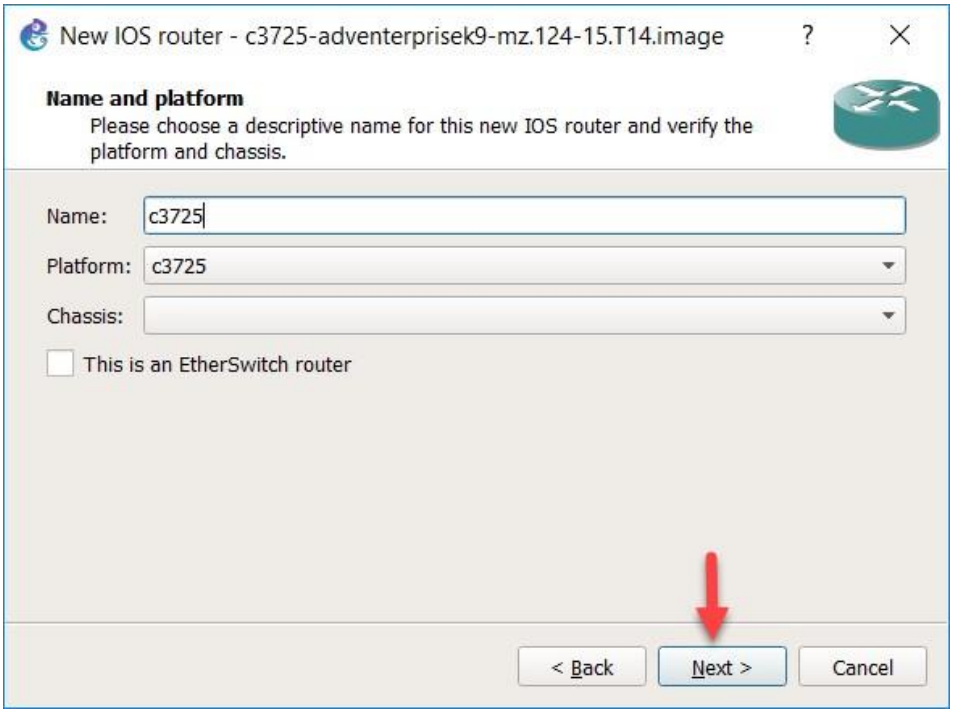


The image is automatically uploaded to the GNS3 VM (this may take a few moments, depending on the speed of your PC, and the size of the image/VM).

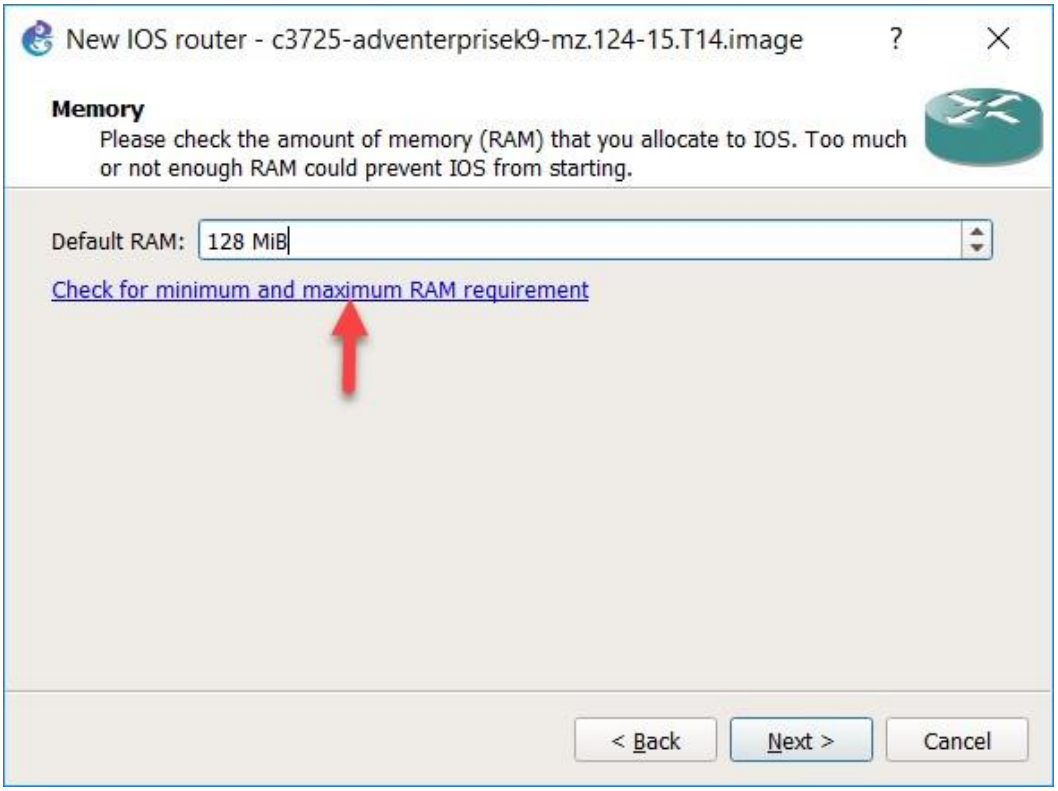
The uploaded image is shown. Click **Next >** to continue the setup:



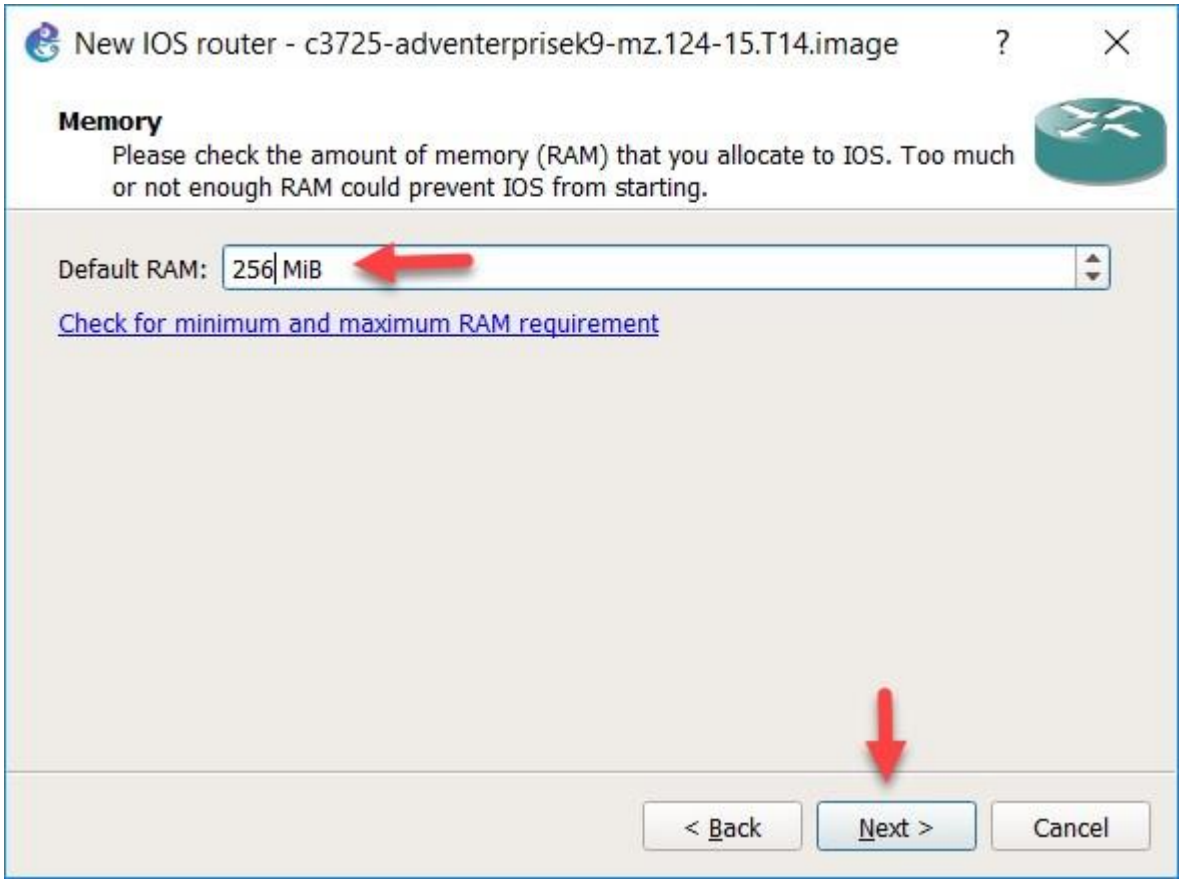
The Name and platform window displays. Confirm the **Platform** selection, and configure the router **Name** as **c3725-S000-VM** and click **Next >** :



A Default RAM setting is displayed. It is **important** that you check your Router's minimum memory requirements using the Cisco website. Click the **Check for minimum and maximum RAM requirement** option:

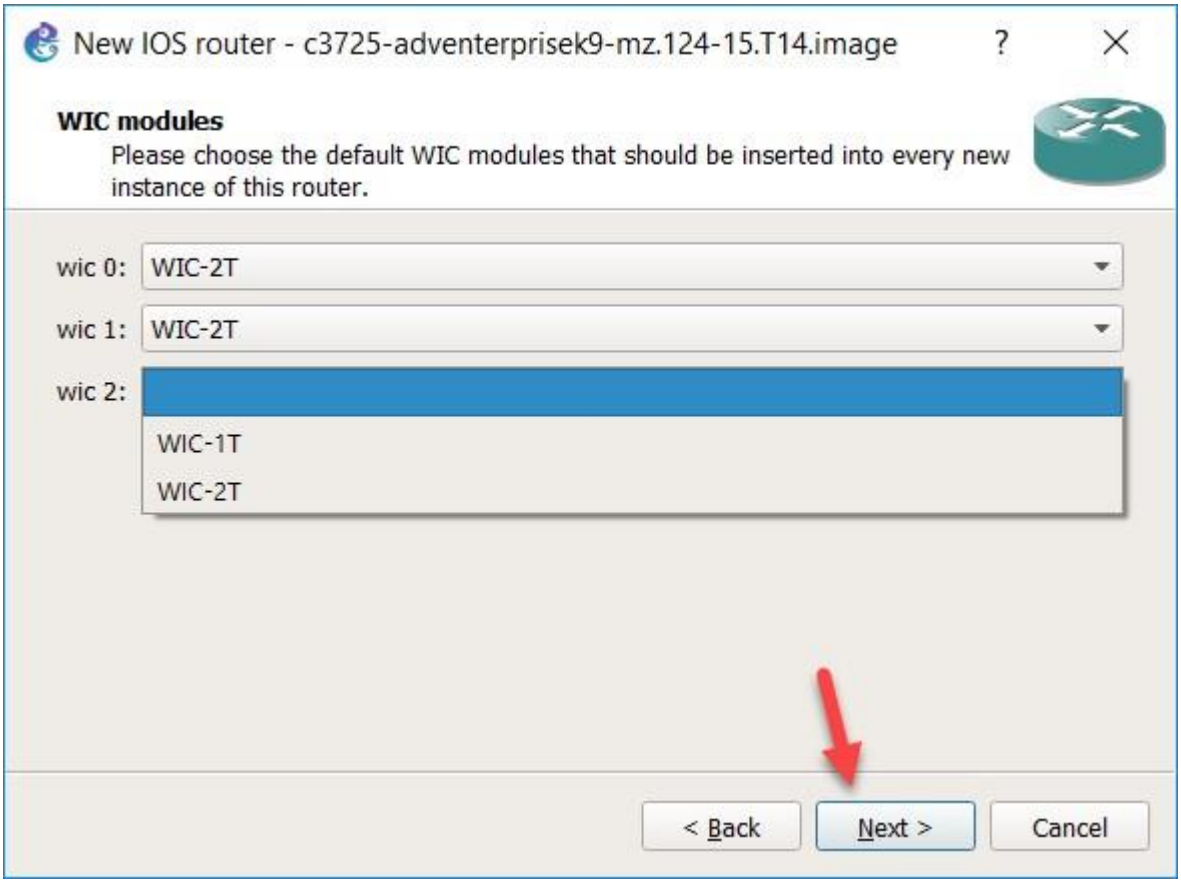


Set the Default RAM value to the value recommended by the Cisco Feature Navigator (yours may be different to the screenshot) and click **Next >** :

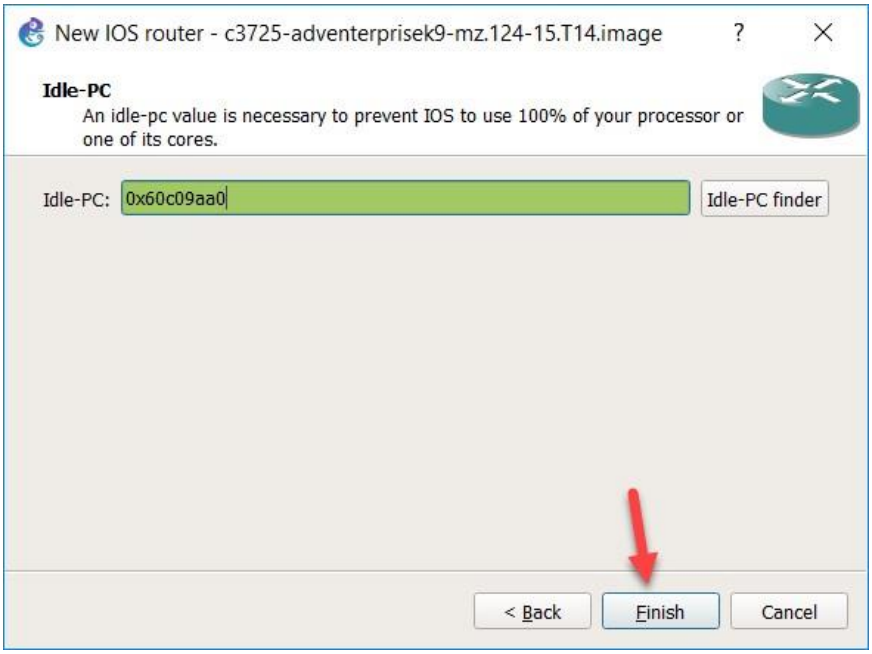


Select your preferred Network adapters. This is device dependant. With this c3725 image, Leave as defualt Click **Next >** :

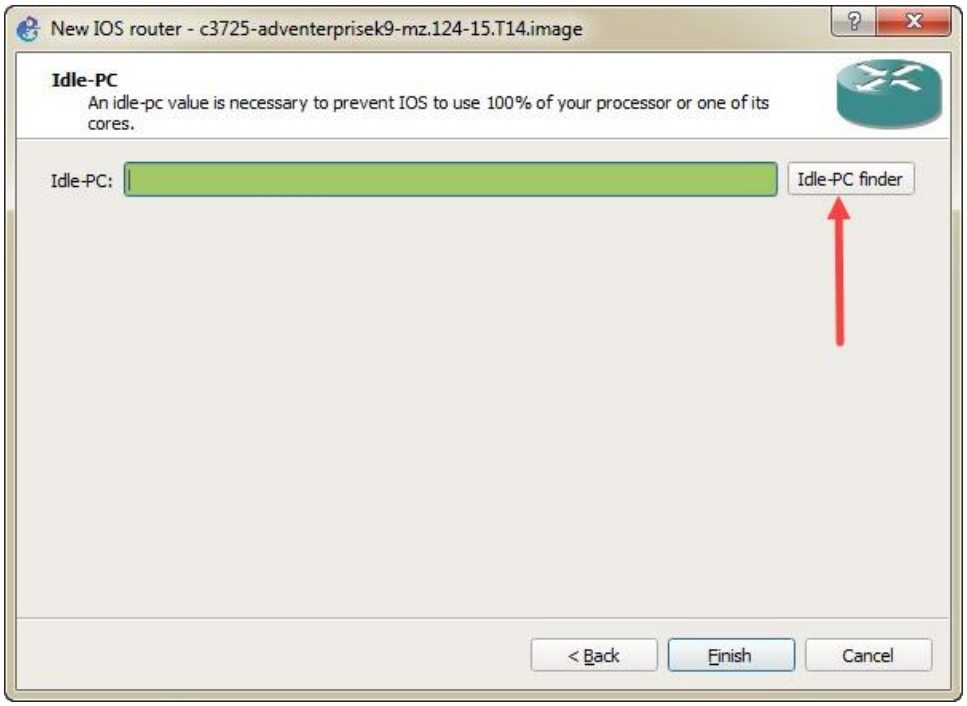
WIC modules can now be added. Again, it's device dependent on whether WIC slots are available, select only 1 WIC-2T in slot 2. Once completed, click **Next >** :



It is important for optimum GNS3 performance that an **Idle-PC** value be selected. If a green Idle-PC value is NOT shown then click the **Idle-PC finder** button to find an Idle-PC value. This c3725 happens to already have an optimum idle-pc value predefined, so it's OK to click Finish:

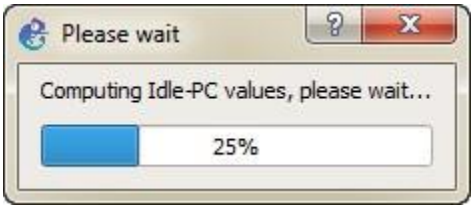


If your device does NOT have an idle-pc value predefined, click the Idle-pc finder button in the upper right to initiate that process:



It is important for optimum GNS3 performance that an **Idle-PC** value be selected. If a green Idle-PC value is NOT shown then click the **Idle-PC finder** button to find an Idle-PC value:

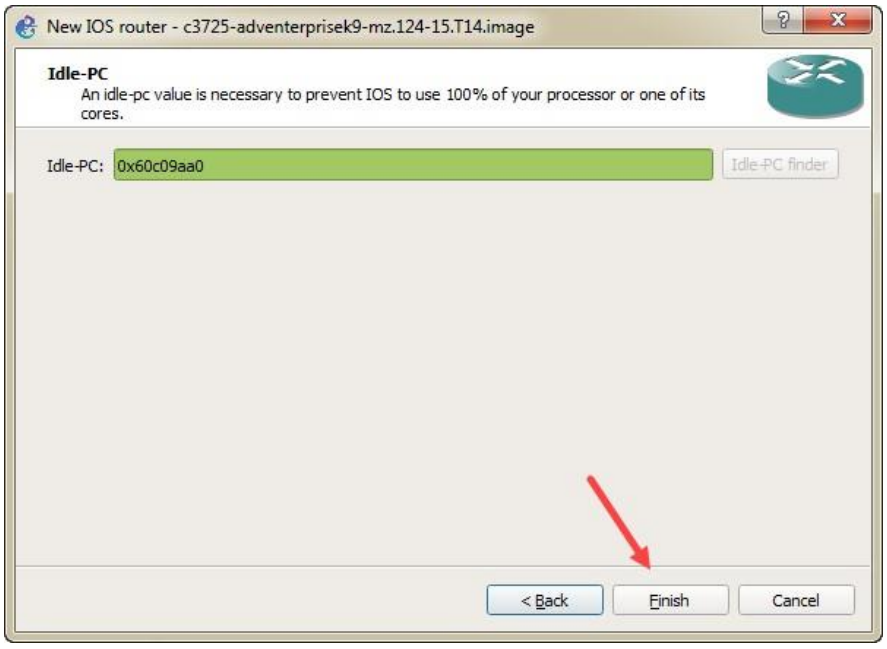
If you selected the Idle-PC finder button (only necessary if no value was detected automatically), GNS3 will calculate a value:



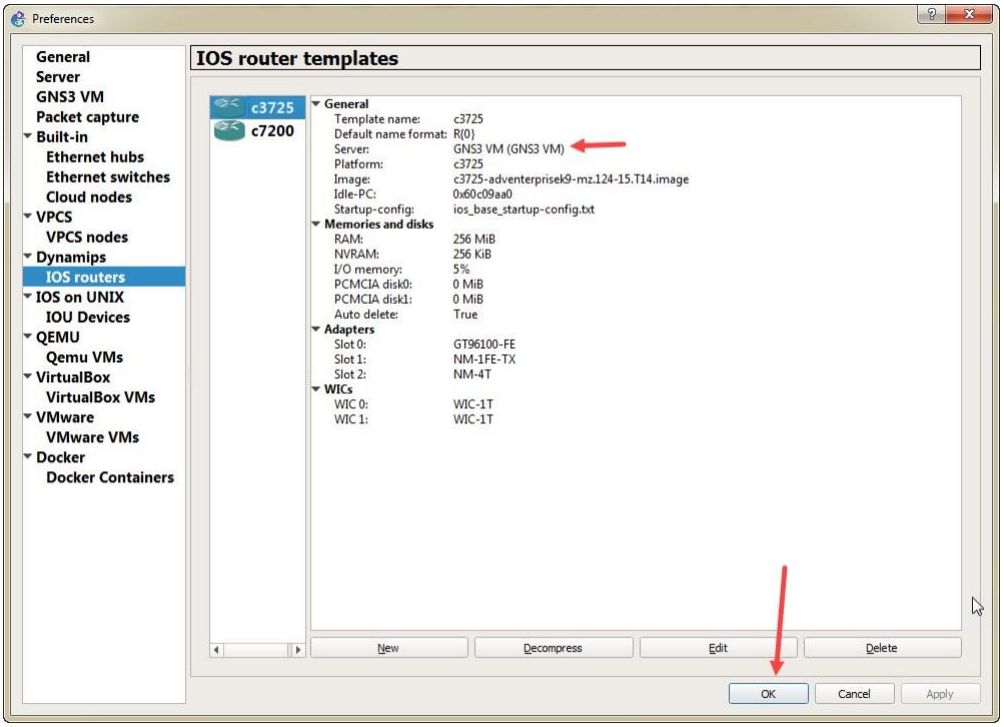
An Idle-PC value is displayed. Click OK to complete:

IMPORTANT
If no Idle-PC value is displayed, try clicking the Idle-PC finder button again. You may also need to reboot your computer and try again is no value is found.

Click **Finish** to complete the GNS3 Setup Wizard:



The **Preferences** window displays showing the settings you have configured through the Setup Wizard. Click **OK** to complete the process:



Add a switch device using same procedure, first import template [\\10.20.10.2\student$\GNS3\cisco-iosvl2.gns3a](\\10.20.10.2\student$\GNS3\cisco-iosvl2.gns3a) , import switch image \\10.20.10.2\student$\GNS3\vios_l2-adventerprisek9-m.vmdk.SSA.152-4.0.55.E