GNS3 INSTALLATION GUIDE

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First Download the VMware workstation from https://www.gns3.com/



Extract the downloaded .zip archive:

Name		Date modified	Туре	Size
🚷 GNS3-2.1.11-all-in-one-regula	r	10/11/2018 11:28	Application	56,101 KB
GNS3.VM.VMware.Workst	Open Open in	new window		41 KB
	Extract A 7-Zip CRC SHA Pin to St	All A art		> >
	Extract fi Extract Fi Extract to Edit with Scan with Share	iles Iere o GNS3.VM.VMware.W n Notepad++ h Windows Defender	forkstation.2.1.11\	
	Open wi	th		>

This extracts the "GNS3 VM.ova" file stored within the compressed archive, in order to import it into VMware Workstation.

In VMware Workstation, click 'Open a Virtual Machine':

OWWare Workstation					- 🗆 X
File Edit View VM 1	Tabs Help 🕨 🔻 🛱 🖓 🚇		- E ⁷ -		
Library ×	☆ Home ×				
My Computer Shared VMs		WORK	STATION 15	PRO™	
		+		$\stackrel{\rightarrow}{\leftarrow}$	
		Create a New Virtual Machine	Open a Virtual Machine	Connect to a Remote Server	
			١		
	vm ware [.]				

Navigate to the directory where the extracted **GNS3 VM.ova** is located, and click '**Open**' to open the OVA:

🔁 Open			×
← → × ↑ 🖡 > T	his PC > Downloads > GNS3	✓ Č Search GNS3	Q
Organize 🔻 New fold	der	8==- ▼	· 🔳 🕜
S This PC	Name	Date modified 🛛 🗠 Type	Size
 3D Objects Desktop Documents Downloads Music Pictures Videos WINDOWS (C:) RECOVERY (D:) CD Drive (E:) 	GNS3 VM	9/30/2018 12:23 PM Open Virtualizatio	340,060 KB
🥩 Network 🗸 🗸	< <		>
File na	ame:	All supported files Open	Cancel

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

Import Virtual Machine	×
Store the new Virtual Machine Provide a name and local storage path for the new virtual machine.	
Name for the new virtual machine:	
Storage path for the new virtual machine:	
C:\Users\admin\Documents\Virtual Machines\GNS3 VM Browse	
Help Import Cance	el

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:

VMware Workstation	
Importing GNS3 VM	
	Cancel

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



Enable this feature in VMware to make KVM feature active in the GNS3.

🎒 GNS3 VM		
 Start up this guest operatin Edit virtual machine setting Upgrade this virtual machine Devices Memo Proce Hard 	g system js ne ons	Virtual Machine Settings
 Hard I CD/DV Netwo Displa Device Memory Processors Hard Disk CD/DVD (II Network A Network A Network A Display 	Summary 2 GB 5 1 (SCSI) 19.5 GB 2 (SCSI) 97.7 GB DE) Auto detect dapter Host-only dapter 2 NAT Auto detect	Number of processors: 1 \$ Number of cores per processor: 1 \$ Total processor cores: 1 Virtualization Engine Preferred mode: Automatic Disable acceleration for binary translation Image: Virtualize Intel VT-x/EPT or AMD-V/RVI Image: Virtualize CPU performance counters

NOTE: If you encounter a message in the GNS3-VM where it states that KVM support is not available, even if you have a CPU capable of hardware virtualization (modern Intel and AMD CPUs all support this), please confirm

that it has been enabled in your system BIOS/UEFI (consult the documentation supplied by your motherboard manufacturer or PC vendor, to learn how to access this)



Start your machine in VMware Workstation

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

GNS3 2.1.11		
	GNS3 version: 2.1.11	
	KVM support available: True	
	IP: 192.168.182.129	
	To log in using SSH: ssh gns30192.168.182.129 Password: gns3	
	Images and projects are located in /opt/gns3	
	Release channel: 2.1	
	<u>< 0</u> K >	

HEALTH CHECK FOR VMWARE

1- Click on the Edit > Preferences...

👶 GN	S3		
<u>F</u> ile	<u>Edit</u> <u>V</u> iew Control Noc	de Annotate <u>T</u> ools	<u>H</u> elp
	Select <u>a</u> ll	Ctrl+A	
	Select <u>n</u> one	Ctrl+Shift+A	
	🔇 Manage snapshots		
O	Preferences	Ctrl+Shift+P	
Ļ		\sim	
⊗.			
_	-		
5			
	-		
			Please create a project

- 2- Select GNS3 VM. Here, two items should be checked:
 - a. You should mark "Enable the GNS3 VM"
 - b. Virtualization Engine should be set to "VM workstation player"

😵 Preferences		?	×
General	GNS3 VM preferences		
Server GNS3 VM	✓ Enable the GNS3 VM		
Packet capture ▼ Built-in	Virtualization engine		_
Ethernet hubs	VMware Workstation / Player	•	
Ethernet switches Cloud nodes	The GNS3 VM can be <u>downloaded here</u> .		
 VPCS VPCS nodes 	Settings		
• Dynamips	VM name: GNS3 VM Run the VM in headless made	resh	
IOS routers IOS on UNIX	RAM: 2048 MB	\$	
IOU Devices • QEMU	vCPUs: 1	*	
Qemu VMs	Action when closing GNS3: keep the GNS3 VM running		
VirtualBox VMs	○ suspend the GNS3 VM		
▼ VMware VMware VMs	Stop the GNS3 VM		
 Docker Docker Containers 			
Docker Containers			
			•
	OK Cancel	Ap	ply

INSTALLING KALI LINUX IN GNS3

From the template, drag the Kali linux icon on the desktop.



enetration testing	experience.			
Product: Vendor: Status: Maintainer: Architecture: KVM:	Kali Linux Kali Linux stable GNS3 Team x86_64 require			
	(<u>N</u> ext >)	ancel
Add appliance		<u>N</u> ext >	?	Cancel
Add appliance ver Please choose a se	erver type to run your new Appliance.	<u>N</u> ext >	?	Cancel
Add appliance ver Please choose a se Server type	erver type to run your new Appliance.	<u>N</u> ext >	?	Cancel
Add appliance ver Please choose a se Server type The grayed serv Run the and	erver type to run your new Appliance. ver types are not supported or configured.	Next >	?	Cancel
Add appliance rver Please choose a se Server type The grayed serv Run the app Run the app Run the app	erver type to run your new Appliance. ver types are not supported or configured. Diance on a remote server Diance on the GNS3 VM (recommended)	Next >	?	Cancel

Add appliance				? >
quired files The following versions are	available for Kali Linux. Check the	status of	files required to install.	
Click on a version to see the GNS3 is looking for files in y	e required files and import the file your downloads directory and in th	from you e GNS3 ir	r computer. nages directory.	
Version	Filename	Size	Status	Fi 🍝
 Kali Linux 2018.4 		2.9 GB	Missing files	;
	kali-linux-2018.4-amd64.iso	2.9 GB	Missing	2
🔻 Kali Linux 2018.3a		3.0 GB	Missing files	;
	kali-linux-2018.3a-amd64.iso	3.0 GB	Missing	21
 Kali Linux 2018.1 		2.8 GB	Missing files	;
	kali-linux-2018.1-amd64.iso	2.8 GB	Missing	2(
 Kali Linux 2017.3 		2.7 GB	Missing files	;
	kali-linux-2017.3-amd64.iso	2.7 GB	Missing	21
 Kali Limov 2047 2 		20.00	Missing files	• • •
Import Download			Create a new version	Refresh
			< <u>B</u> ack <u>N</u> ext >	Cancel

e	Add appliance					?	\times
Re	equired files The following versions are	available for Kali Linux. Check the	status of	files require	d to install.		
_	Click on a version to see the GNS3 is looking for files in y	e required files and import the file your downloads directory and in th	from you e GNS3 ir	r computer. mages directo	ory.		
	Version	Filename	Size		Status	F	i 📥
	▼ Kali Linux 2019.1a		3.2 GB		Ready to ins	tall	
		kali-linux-2019.1a-amd64.iso	3.2 GB		Found	ć	2
_	Kali Linux 2018.4		2.9 GB		Missing files		
		kali-linux-2018.4-amd64.iso	2.9 GB		Missing	2	20
	 Kali Linux 2018.3a 		3.0 GB		Missing files		
		kali-linux-2018.3a-amd64.iso	3.0 GB		Missing	2	20
	 Kali Linux 2018.1 		2.8 GB		Missing files		
		kalı-linux-2018.1-amd64.iso	2.8 GB		Missing	4	-
	4		1770			Þ	
	Import Download			Create a ne	w version	Refres	h
				< <u>B</u> ack	<u>N</u> ext >	Car	ncel

🛞 Add appliance	?	\times
Qemu settings Please choose the qemu binary that we will use for running this appliance.		
Qemu binary: /usr/bin/qemu-system-x86_64 (v2.5.0) < gack Next >	Car	The large state of the large stat

👶 Add appliance				?	\times
Summary The following setti	ngs are going to be used.				
Adapter type: Adapters: Arch: Console type: Kvm: Ram:	e1000 8 x86_64 vnc require 1024		out	Canc	
		< <u>B</u> ack N	ext >	Canc	el

😢 Add appliance	?	×
Usage Please read the following instructions in order to use your new appliance.		
The appliance is available in the guest category.		
Default password is toor		
< <u>B</u> ack <u>F</u> inish	Ca	ncel

INSTALLING CISCO SWITCH IOSV



🛞 New QEMU VM template	?	×
Server Please choose a server type to run your new QEMU VM.		
Server type		
O Run this Qemu VM on a remote computer		
Run this Qemu VM on the GNS3 VM		
O Run this Qemu VM on my local computer		
< Back Next >		Cancel

🛞 New QEMU VM template	?	×
QEMU VM name Please choose a descriptive name for your new QEMU virtual machine.		
Name: cisco IOV		
This is a legacy ASA VM		
< <u>B</u> ack <u>N</u> ext >		Cancel

🛞 New QEMU	VM template	?	×	C
QEMU binary Please che memory t	and memory eck the Qemu binary is correctly set and the virtual machine has enough o work.			
Qemu binary:	/usr/bin/qemu-system-x86_64 (v2.5.0)		Ŧ	
RAM:	256 MB		\$	
	< <u>B</u> ack <u>N</u> ext >		Cancel	

🛞 New QEMU VM template	?	\times
Console type Please choose the console type. Telnet will connect to the serial console of the machine. VNC will connect to graphical output of the machine.		
telnet		•
Note: You don't need to install anything on the VM itself.		
< <u>B</u> ack <u>N</u> ext >		Cancel

👶 New QEMU VM 1	template			?	×
Disk image Please choose a	ı base disk image fi	or your virtual ma	chine.		
Existing image	New Image				
Disk image (hda):				Browse	<u>C</u> reate
			< <u>B</u> ack	Einish	Cancel

Select a QEMU disk image				
\leftarrow \rightarrow \checkmark \uparrow 📜 \ll ios v	switch > ios v switch	× گ	Search ios v switch	م
Organize New folder			u== u== v==	
3D Objects ^	Name	Date modified	Туре	Size
E. Desktop	hda.qcow2	9/2/2019 6:55 AM	QCOW2 File	94,592
Documents	vios_I2-adventerprisek9-m.vmdk.SSA.152	9/2/2019 6:55 AM	VMDK File	94,592
🖶 Downloads				
Music				
Pictures				
🔡 Videos				
🐛 Local Disk (C:)				
New Volume (E:)				
🧼 New Volume (F:)				
S DELLEMC-ESXI-6				
🖉 DELLEMC-ESXI-6.7 🗸 🗸				>
File name	: hda.qcow2	~	All Files	~
			Open	Cancel

🛞 New QEMU VM template	?	×
Disk image Please choose a base disk image for your virtual machine.		
Existing image New Image		
Disk image (hda): hda.qcow2	Browse	<u>C</u> reate
< <u>B</u> ack	<u>F</u> inish	Cancel

The **New Project** Window displays. Give your new Project a **Name** and click '**OK**':

🛞 Project	?	×
New project Projects library		
New project		
Name: My First GNS3 Project		
Location: Disers\admin\GNS3\projects\My First GNS3 F	Project Brows	e
Open project		
Open a project from disk Recent projects		
Settings	ок с	Cancel

The GNS3 workspace displays:

🚷 My First G	KS3 Project - GNS3	- a x
Eile Edit		
		Topology Summary (2018 Node Console Servers Summary (2018 DESCROE ETU7085 CPU 4.0 C DESCROE ETU7085 CPU 4.0 C DESCROE ETU7085 CPU 4.0
< Con:		•
GNS Run Cop Use =>	i munogenerat console. mg/GGIS version J. Tila Withdows (64-brl) with Pythen 3.6.6.Qt 5.8.1 and PyQt 5.9. mg/t (6.2086-2018 GKIST Technologies. mg/t ~ GKIST Declar to detect common issues.	

Congratulations! You are now ready to create your first GNS3 topologies.