ЛАБОРАТОРНАЯ РАБОТА №4

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Группа: НФИбд-02-23

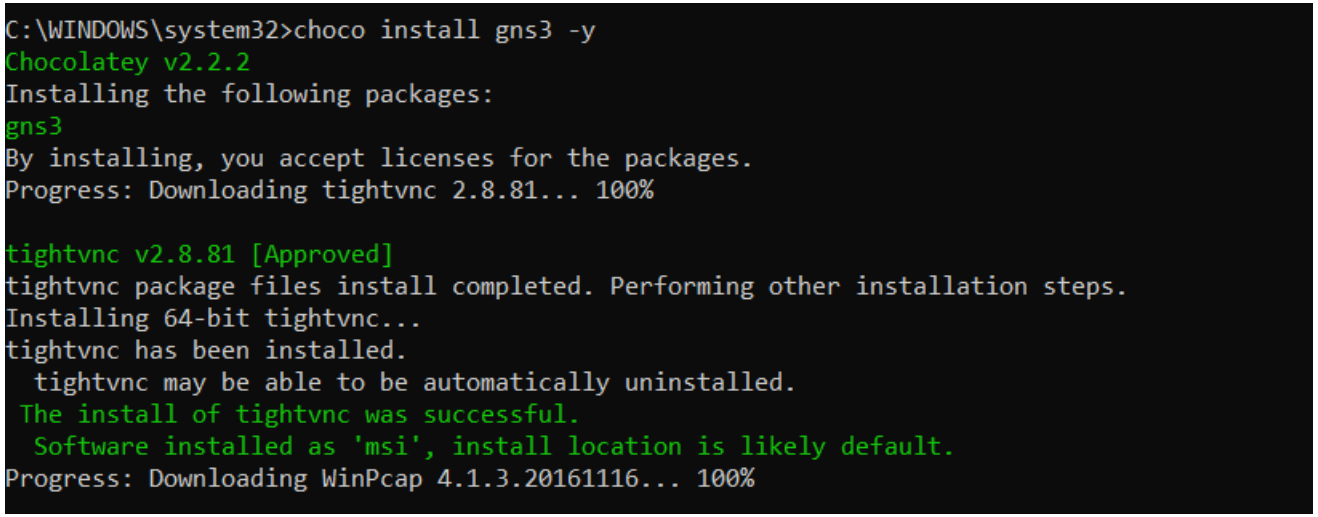
ЦЕЛЬ РАБОТЫ

Установить и настроить GNS3 и сопутствующее программное обеспечение.

ЗАДАНИЕ

- Установить GNS3-all-in-one, GNS3 VM, проверить корректность запуска;

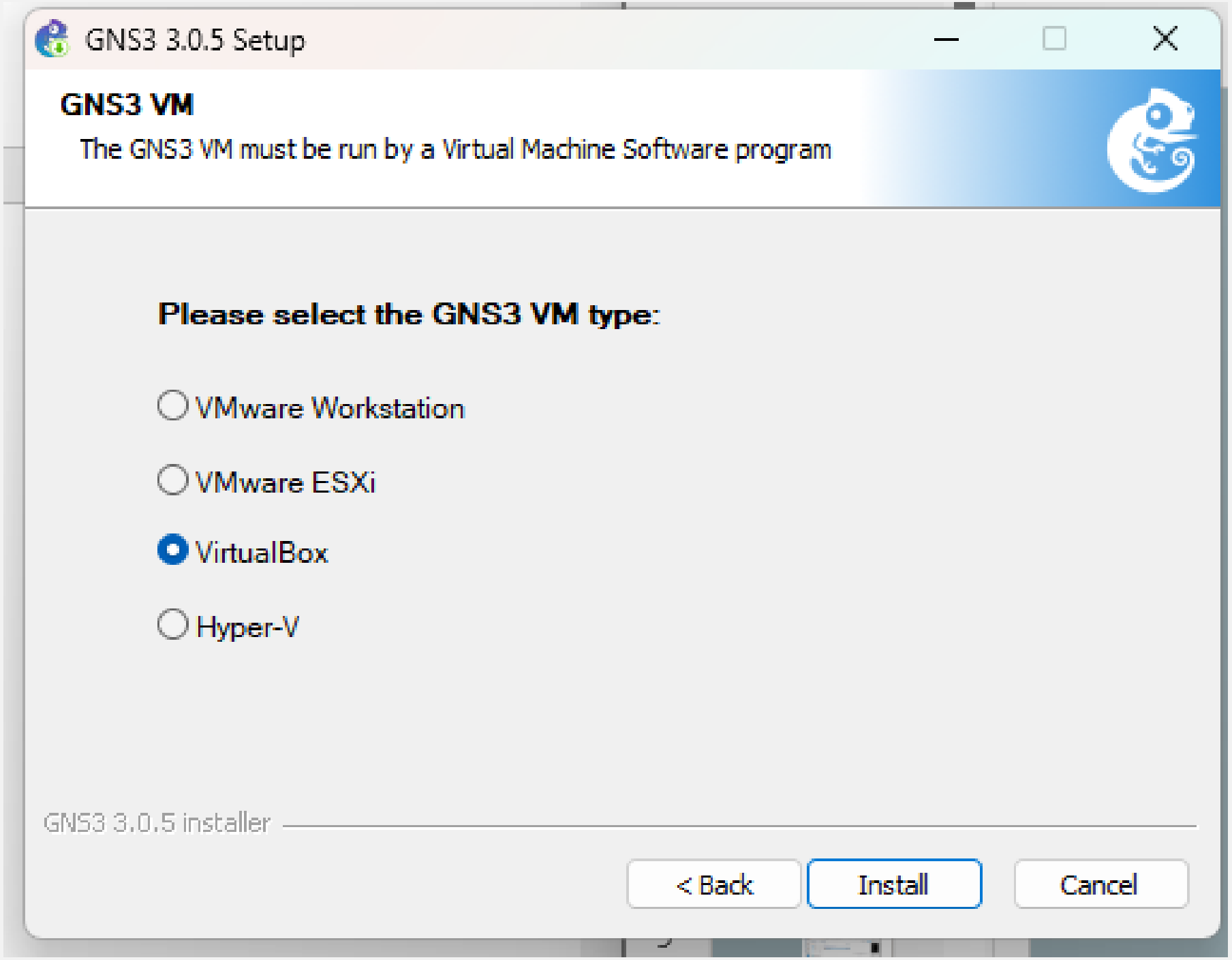
ВЫПОЛНЕНИЕ ЛАБОРАТОРНОЙ РАБОТЫ



Установка GNS3 через терминал с помощью команды choco **install** gns3 –y

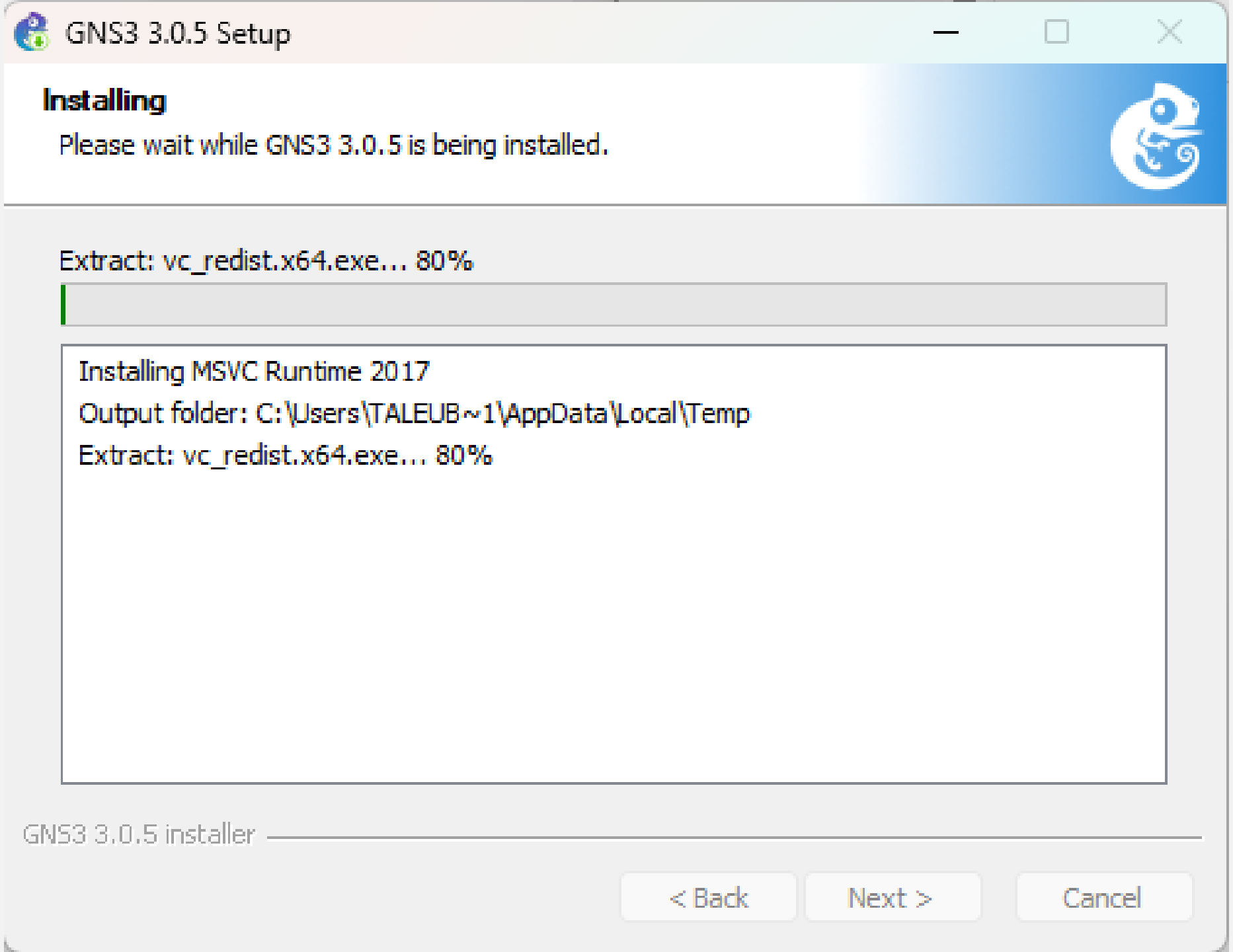
Я заменил версию и переустановил

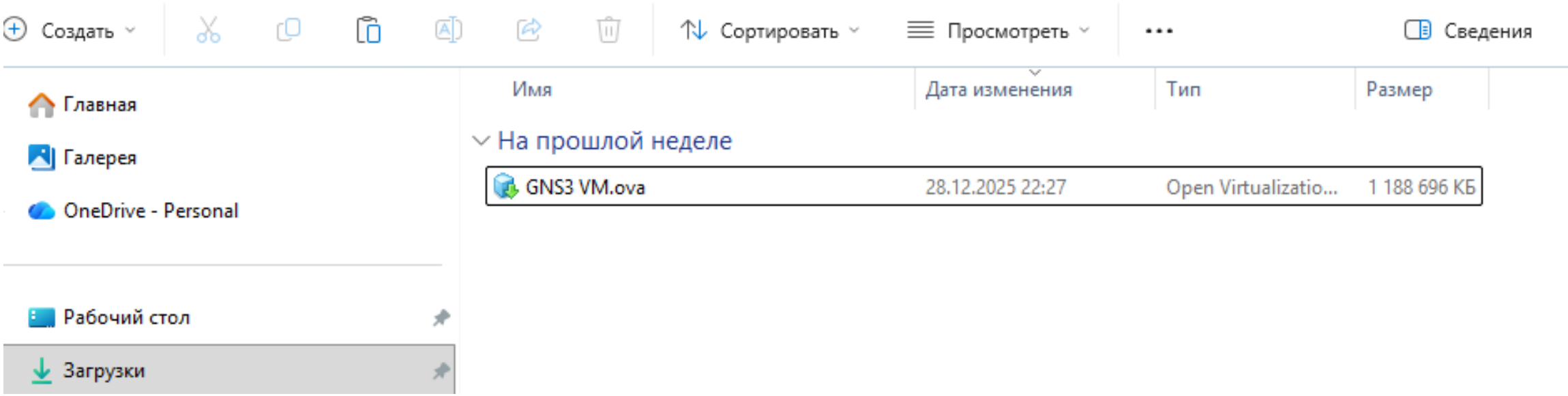
Рисунок 2. Графическое окно GNS3 Setup


GNS3 3.0.5 Setup
GNS3 VM
The GNS3 VM must be run by a Virtual Machine Software program
Please select the GNS3 VM type:
VMware Workstation
VMware ESXi
VirtualBox
Hyper-V
GNS3 3.0.5 installer
< Back
Install
Cancel

Загрузка GNS3 VM для VMWare

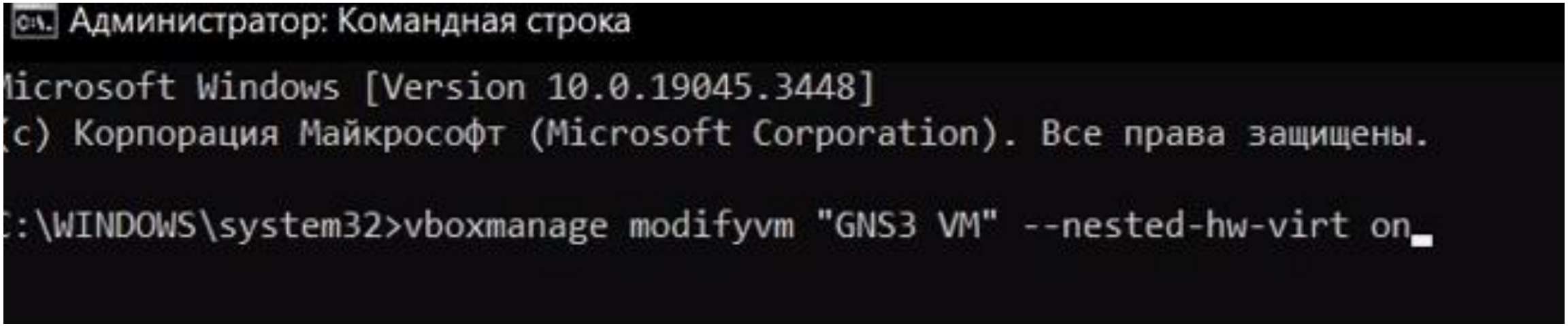
Я заменил версию 2.2.43 на 3.0.5 и переустановил

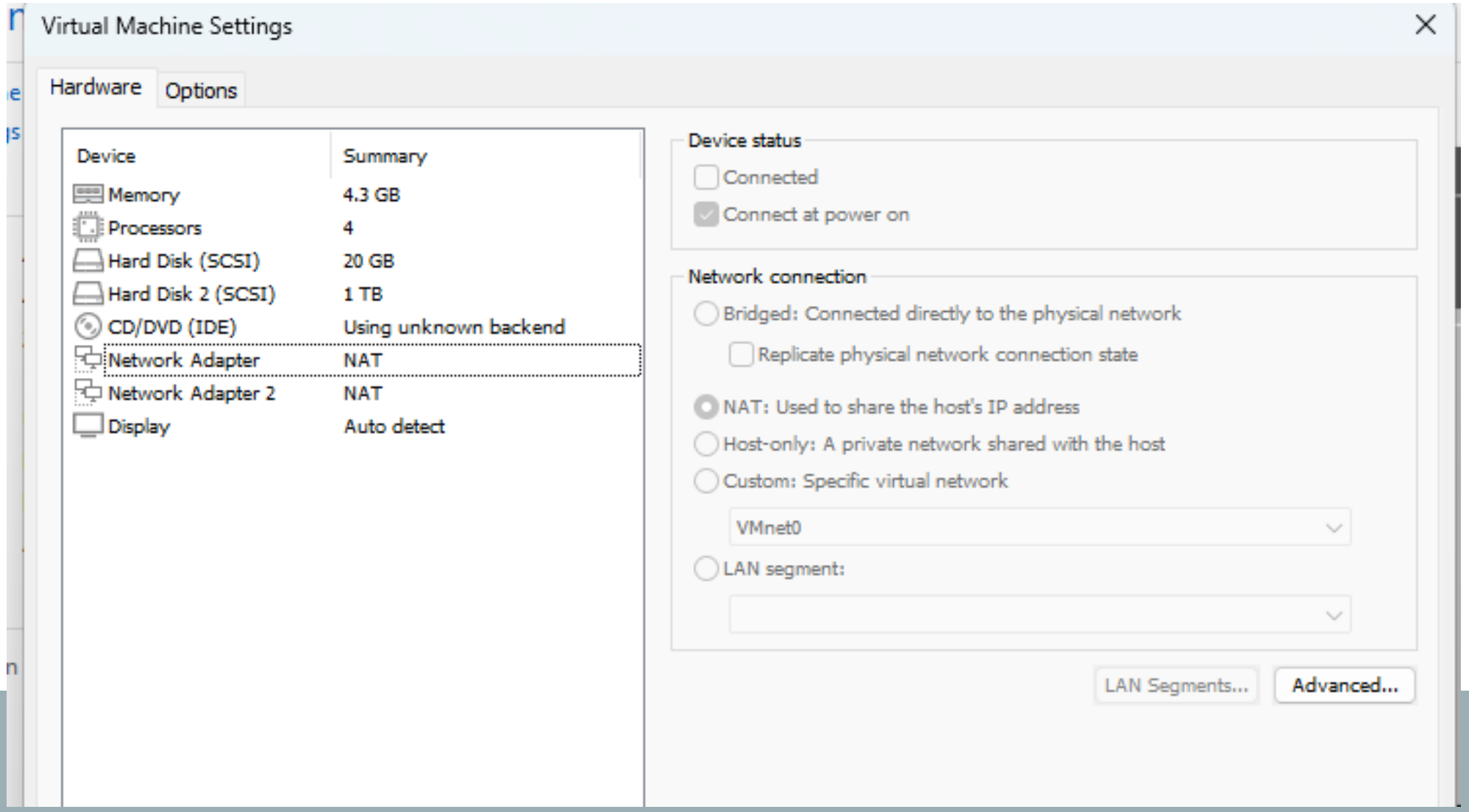

GNS3 3.0.5 Setup
Installing
Please wait while GNS3 3.0.5 is being installed.
Extract: vc_redist.x64.exe... 80%
Installing MSVC Runtime 2017
Output folder: C:\Users\TALEUB~1\AppData\Local\Temp
Extract: vc_redist.x64.exe... 80%
GNS3 3.0.5 installer
< Back
Next >
Cancel

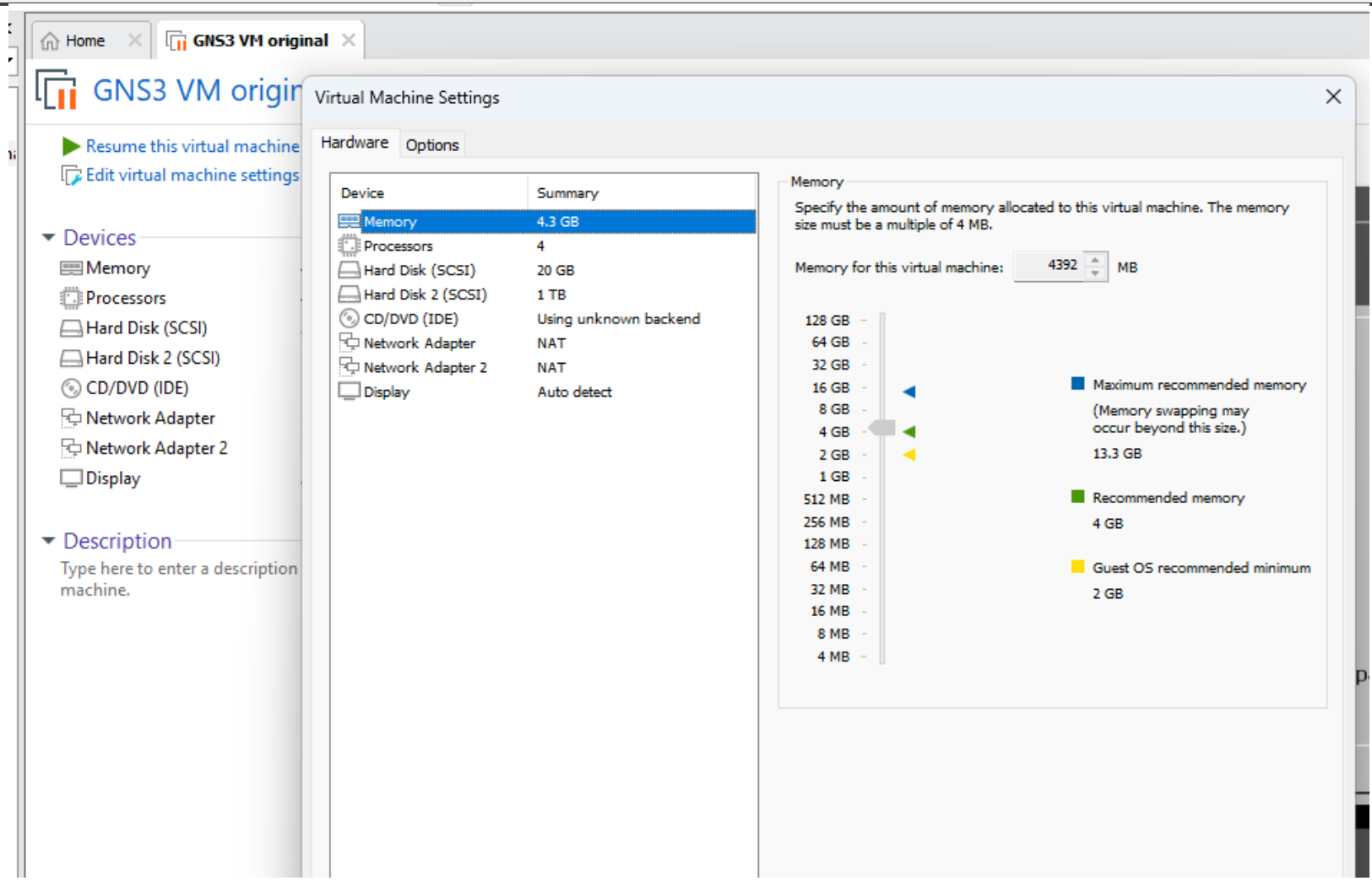


ВЫПОЛНЕНИЕ ЛАБОРАТОРНОЙ РАБОТЫ

Импорт конфигураций


Администратор: Командная строка
Microsoft Windows [Version 10.0.19045.3448]
(c) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.
C:\WINDOWS\system32>vboxmanage modifyvm "GNS3 VM" --nested-hw-virt on


Virtual Machine Settings
Hardware
Options
Device
Summary
Memory
4.3 GB
Processors
4
Hard Disk (SCSI)
20 GB
Hard Disk 2 (SCSI)
1 TB
CD/DVD (IDE)
Using unknown backend
Network Adapter
NAT
Network Adapter 2
NAT
Display
Auto detect
Device status
Connected
Connect at power on
Network connection
Bridged: Connected directly to the physical network
Replicate physical network connection state
NAT: Used to share the host's IP address
Host-only: A private network shared with the host
Custom: Specific virtual network
VMnet0
LAN segment:
LAN Segments...
Advanced...


Home
GNS3 VM original
GNS3 VM origin
Resume this virtual machine
Edit virtual machine settings
Devices
Memory
Processors
Hard Disk (SCSI)
Hard Disk 2 (SCSI)
CD/DVD (IDE)
Network Adapter
Network Adapter 2
Display
Description
Type here to enter a description
machine.
Virtual Machine Settings
Hardware
Options
Device
Summary
Memory 4.3 GB
Processors 4
Hard Disk (SCSI) 20 GB
Hard Disk 2 (SCSI) 1 TB
CD/DVD (IDE) Using unknown backend
Network Adapter NAT
Network Adapter 2 NAT
Display Auto detect
Memory
Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.
Memory for this virtual machine: 4392 MB
128 GB
64 GB
32 GB
16 GB
8 GB
4 GB
2 GB
1 GB
512 MB
256 MB
128 MB
64 MB
32 MB
16 MB
8 MB
4 MB
Maximum recommended memory
(Memory swapping may occur beyond this size.)
13.3 GB
Recommended memory
4 GB
Guest OS recommended minimum
2 GB

GNS3 VM original

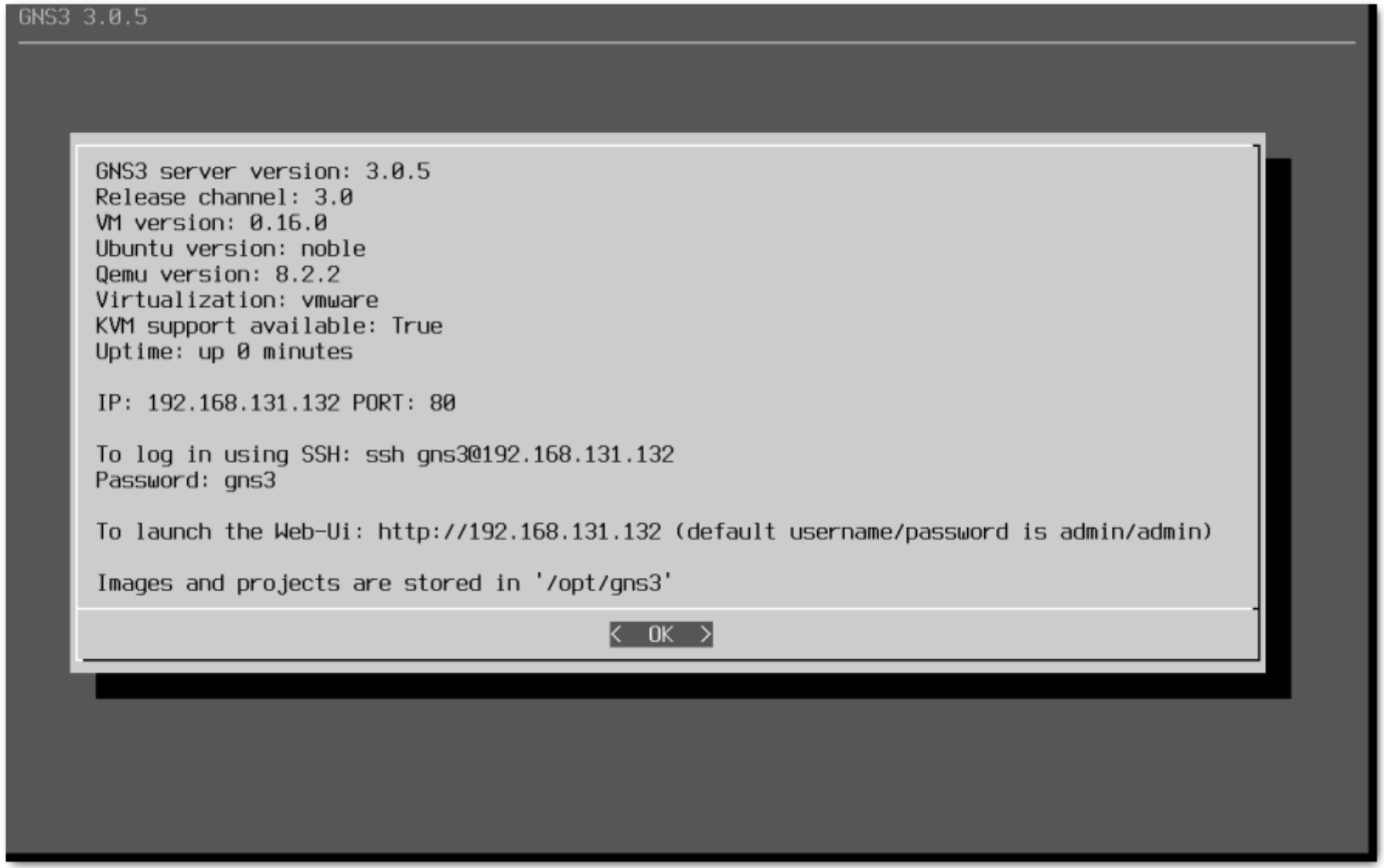
Resume this virtual machine
Edit virtual machine settings

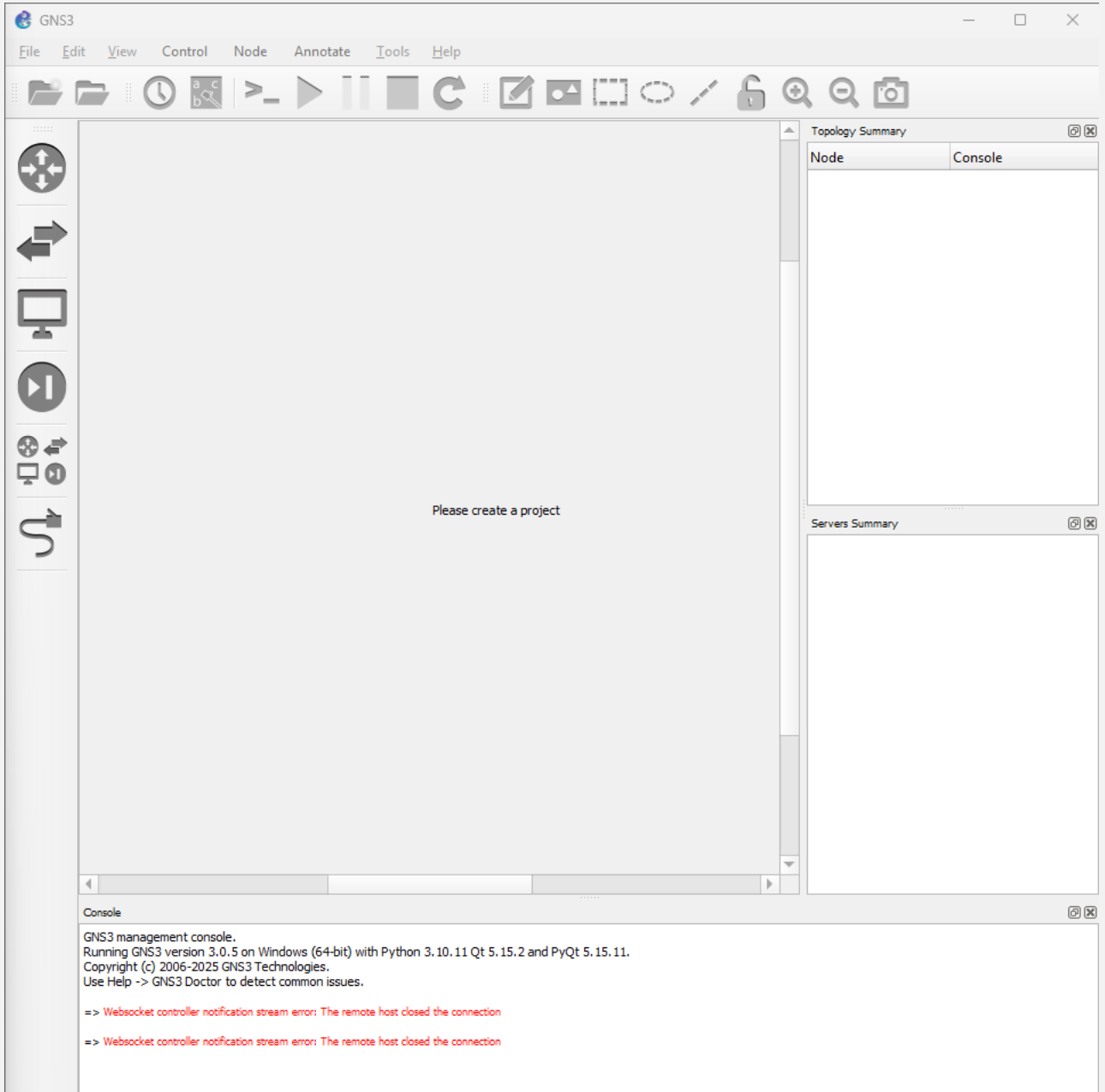
Devices

Memory	4.3 GB
Processors	4
Hard Disk (SCSI)	20 GB
Hard Disk 2 (SCSI)	1 TB
CD/DVD (IDE)	Using unknown ...
Network Adapter	NAT
Network Adapter 2	NAT
Display	Auto detect

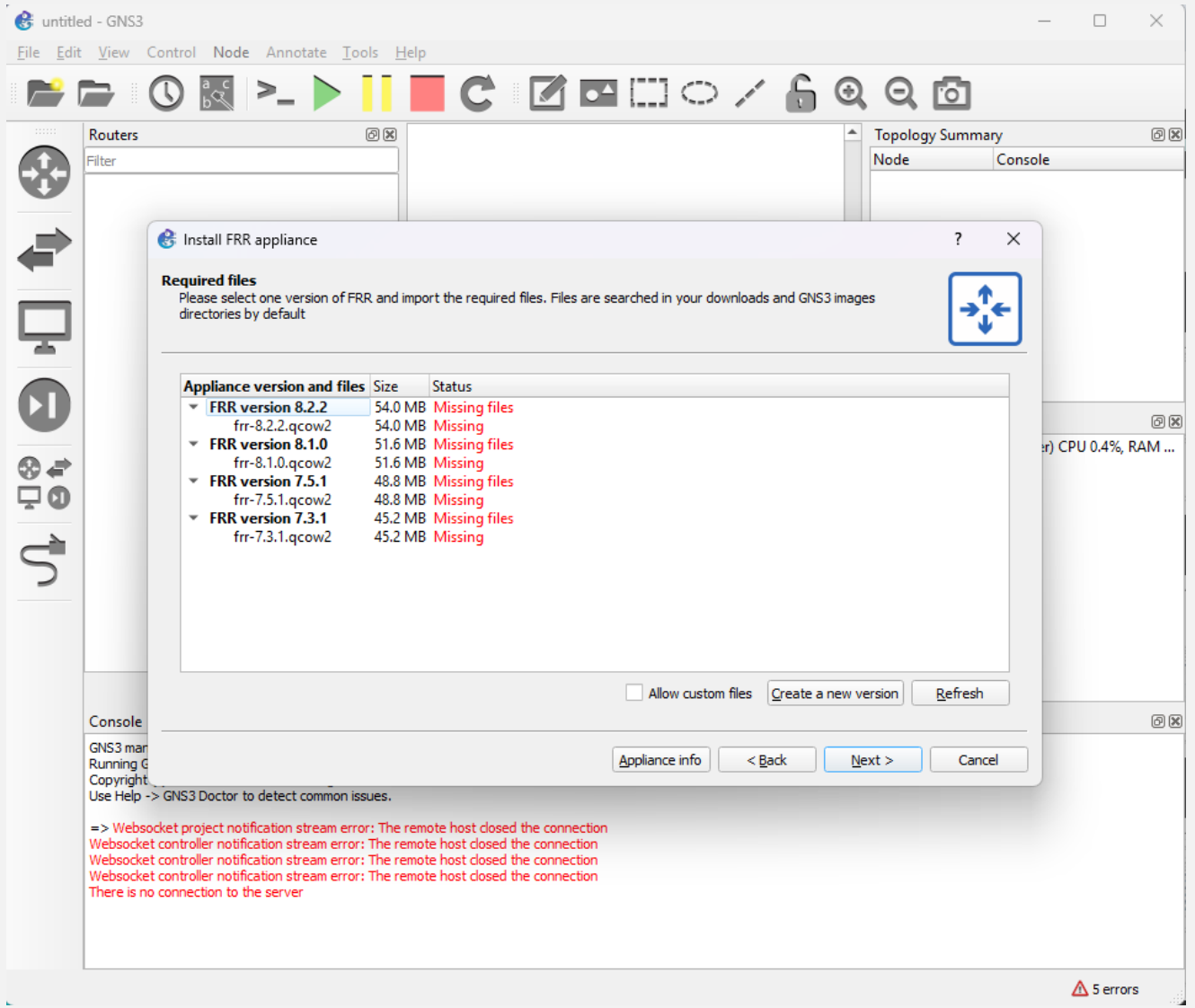
Description

Type here to enter a description of this virtual machine.




GNS3
File
Edit
View
Control
Node
Annotate
Tools
Help
Please create a project
Topology Summary
Node
Console
Servers Summary
Console
GNS3 management console.
Running GNS3 version 3.0.5 on Windows (64-bit) with Python 3.10.11 Qt 5.15.2 and PyQt 5.15.11.
Copyright (c) 2006-2025 GNS3 Technologies.
Use Help -> GNS3 Doctor to detect common issues.
=> Websocket controller notification stream error: The remote host closed the connection
=> Websocket controller notification stream error: The remote host closed the connection

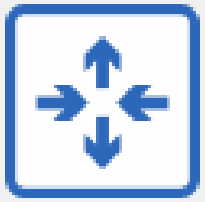
- Добавление образа маршрутизатора FRRouting



Install FRR appliance

Usage

Please read the following instructions in order to use your new appliance.



The template will be available in the router category.

Usage: Credentials: root / root
If you exit from the router CLI, you can get back by typing 'vtysh' to the console.

Appliance info | < Back | Finish | Cancel

FRR

General settings | HDD | CD/DVD | Network | Advanced | Usage

HDA (Disk 0)

Disk image: frr-8.2.2.qcow2 Browse...

Disk interface: ide

HDB (Disk 1)

Disk image: Browse...

Disk interface: none

HDC (Disk 2)

Disk image: Browse...

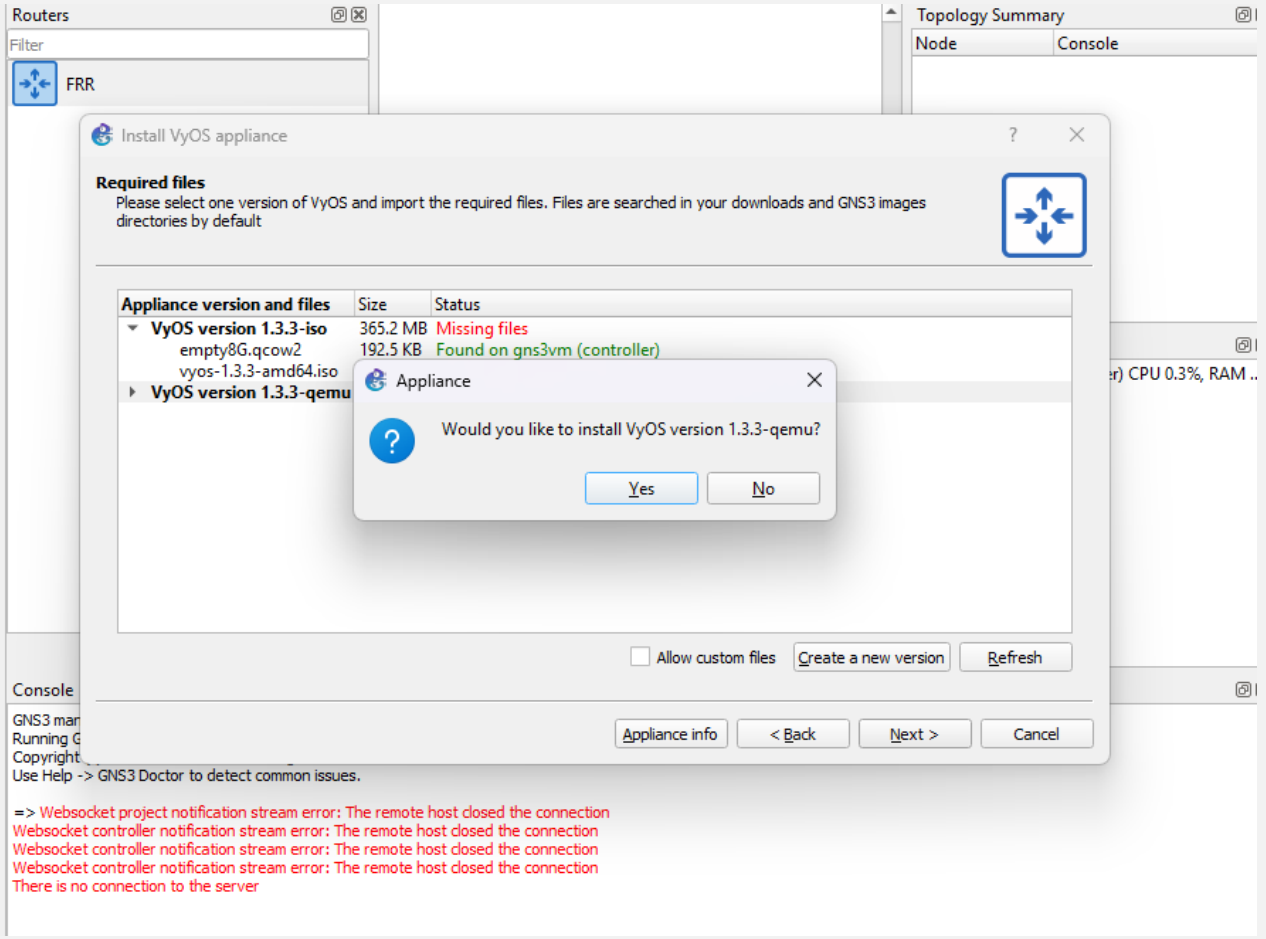
Disk interface: none

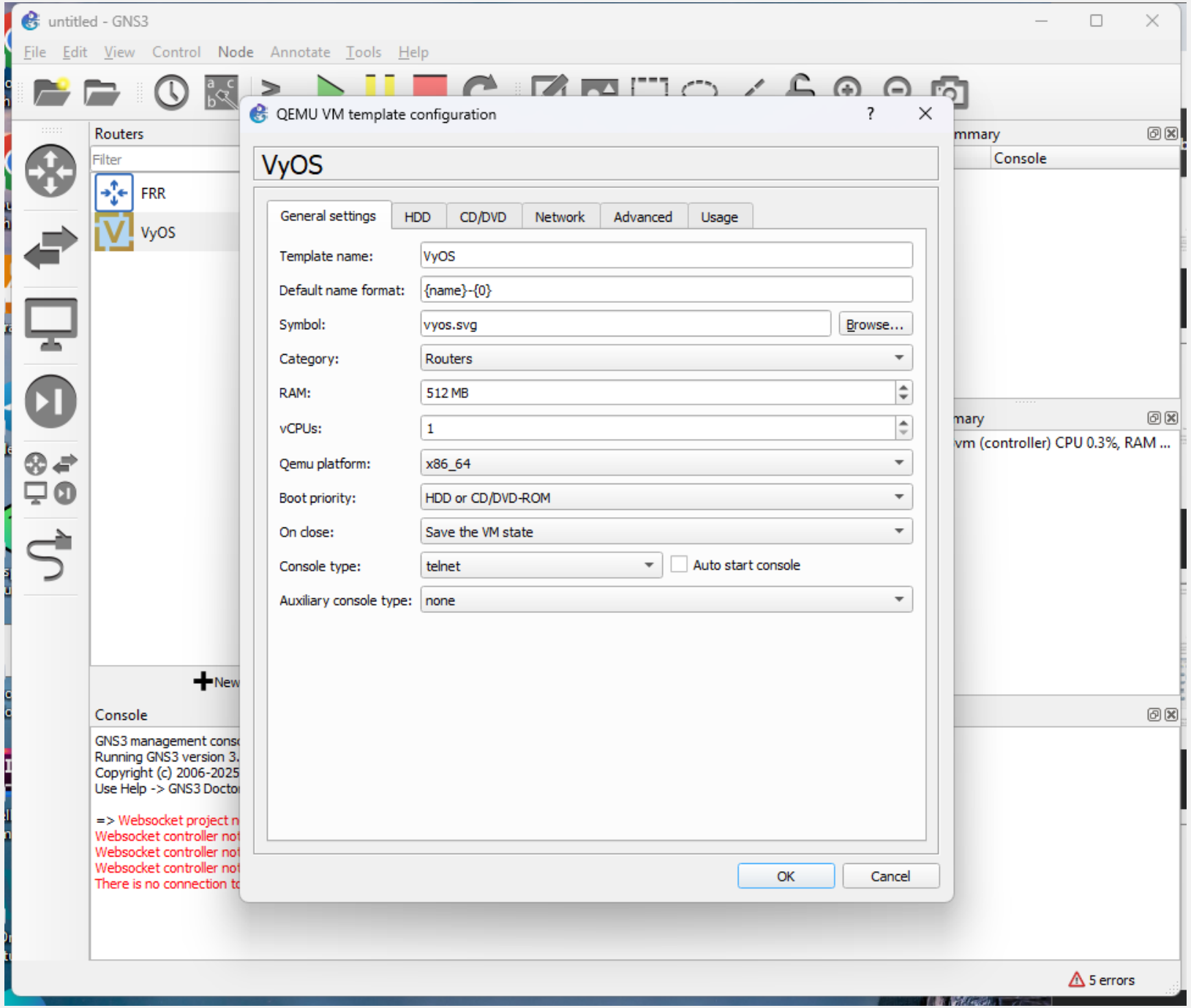
HDD (Disk 3)

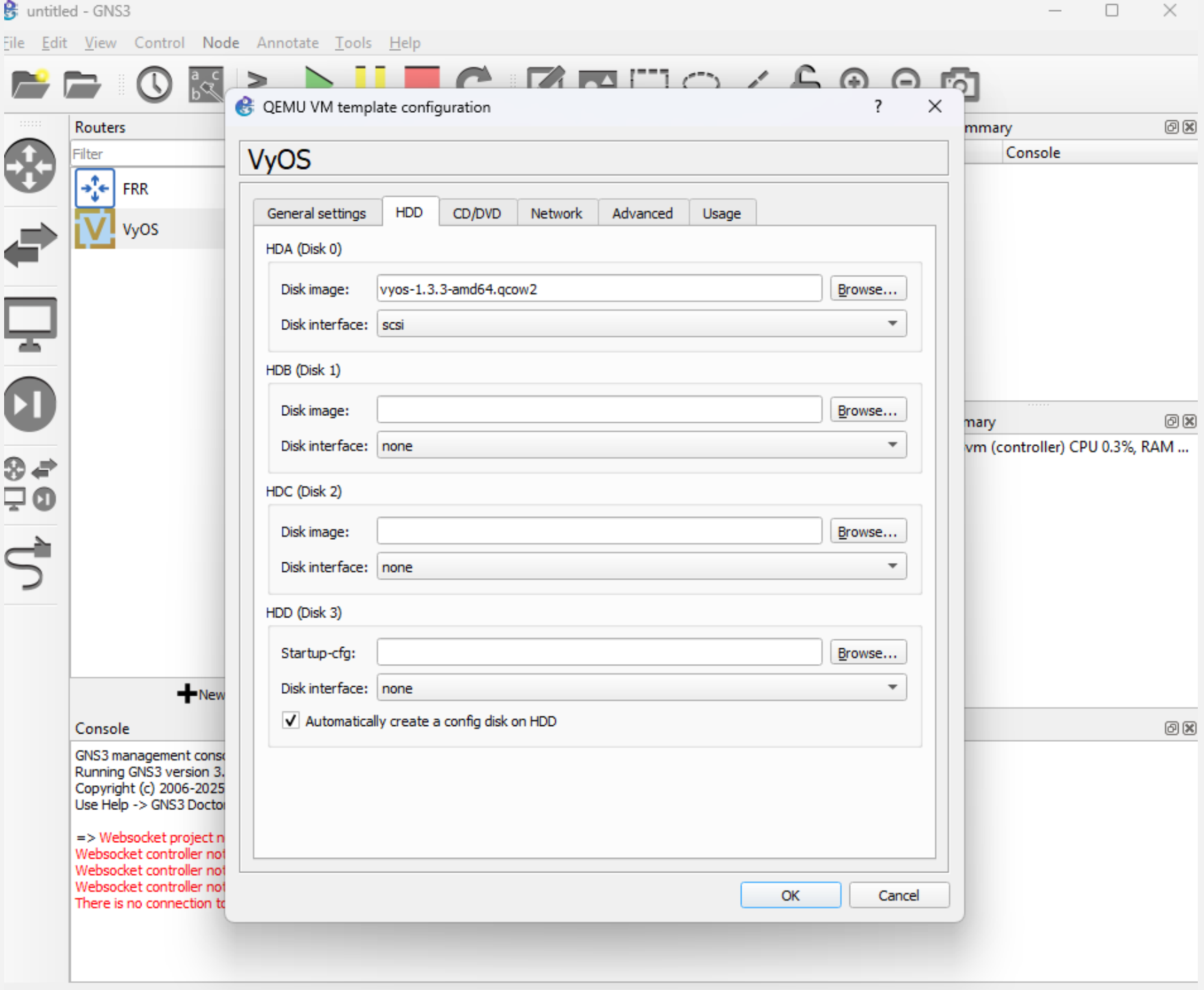
Startup-cfg: Browse...

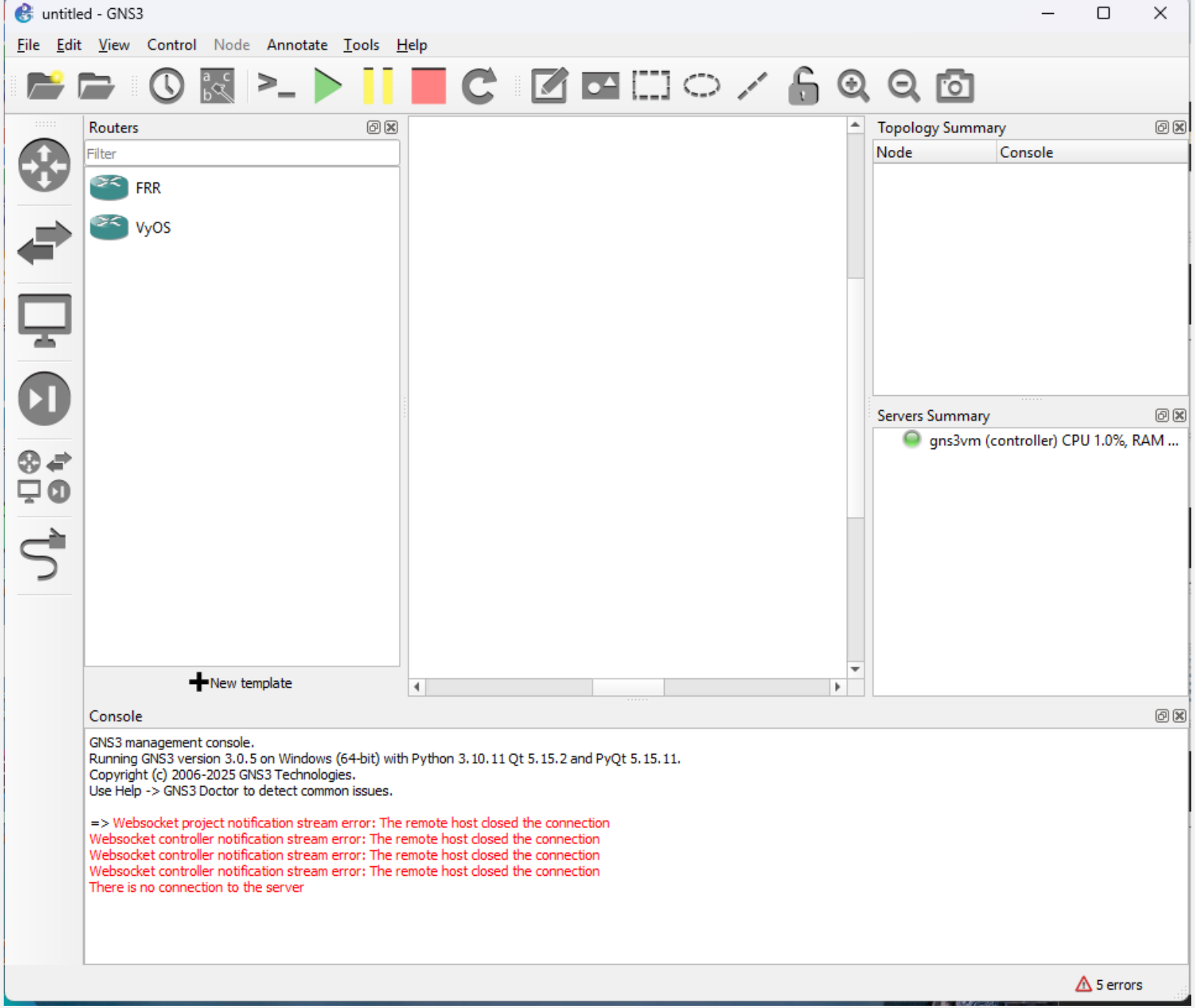
Disk interface: none

☑ Automatically create a config disk on HDD


Routers
Filter
FRR
Topology Summary
Node
Console
Install VyOS appliance
Required files
Please select one version of VyOS and import the required files. Files are searched in your downloads and GNS3 images directories by default
Appliance version and files
Size
Status
VyOS version 1.3.3-iso
365.2 MB
Missing files
empty8G.qcow2
192.5 KB
Found on gns3vm (controller)
vyos-1.3.3-amd64.iso
VyOS version 1.3.3-qemu
Appliance
Would you like to install VyOS version 1.3.3-qemu?
Yes
No
Allow custom files
Create a new version
Refresh
Appliance info
< Back
Next >
Cancel
Console
Use Help -> GNS3 Doctor to detect common issues.
=> Websocket project notification stream error: The remote host closed the connection
Websocket controller notification stream error: The remote host closed the connection
Websocket controller notification stream error: The remote host closed the connection
Websocket controller notification stream error: The remote host closed the connection
There is no connection to the server


untitled - GNS3
File Edit View Control Node Annotate Tools Help
Routers
Filter
FRR
VyOS
New
Console
QEMU VM template configuration
VyOS
General settings
HDD
CD/DVD
Network
Advanced
Usage
Template name: VyOS
Default name format: {name}-{0}
Symbol: vyos.svg
Browse...
Category: Routers
RAM: 512 MB
vCPUs: 1
Qemu platform: x86_64
Boot priority: HDD or CD/DVD-ROM
On close: Save the VM state
Console type: telnet
Auto start console
Auxiliary console type: none
OK
Cancel
Console
Summary
vm (controller) CPU 0.3%, RAM ...
5 errors


untitled - GNS3
File Edit View Control Node Annotate Tools Help
Routers
Filter
FRR
VyOS
New
Console
GNS3 management cons
Running GNS3 version 3.
Copyright (c) 2006-2025
Use Help -> GNS3 Docto
=> Websocket project n
Websocket controller no
Websocket controller no
Websocket controller no
There is no connection to
mmary
Console
mary
vm (controller) CPU 0.3%, RAM ...
QEMU VM template configuration
VyOS
General settings
HDD
CD/DVD
Network
Advanced
Usage
HDA (Disk 0)
Disk image:
vyos-1.3.3-amd64.qcow2
Browse...
Disk interface:
scsi
HDB (Disk 1)
Disk image:
Browse...
Disk interface:
none
HDC (Disk 2)
Disk image:
Browse...
Disk interface:
none
HDD (Disk 3)
Startup-cfg:
Browse...
Disk interface:
none
Automatically create a config disk on HDD
OK
Cancel


untitled - GNS3
File Edit View Control Node Annotate Tools Help
Routers
Filter
FRR
VyOS
New template
Topology Summary
Node Console
Servers Summary
gns3vm (controller) CPU 1.0%, RAM ...
Console
GNS3 management console.
Running GNS3 version 3.0.5 on Windows (64-bit) with Python 3.10.11 Qt 5.15.2 and PyQt 5.15.11.
Copyright (c) 2006-2025 GNS3 Technologies.
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Websocket controller notification stream error: The remote host closed the connection
Websocket controller notification stream error: The remote host closed the connection
Websocket controller notification stream error: The remote host closed the connection
There is no connection to the server
5 errors

ВЫВОДЫ

В процессе выполнения данной лабораторной работы я установил и настроил GNS3