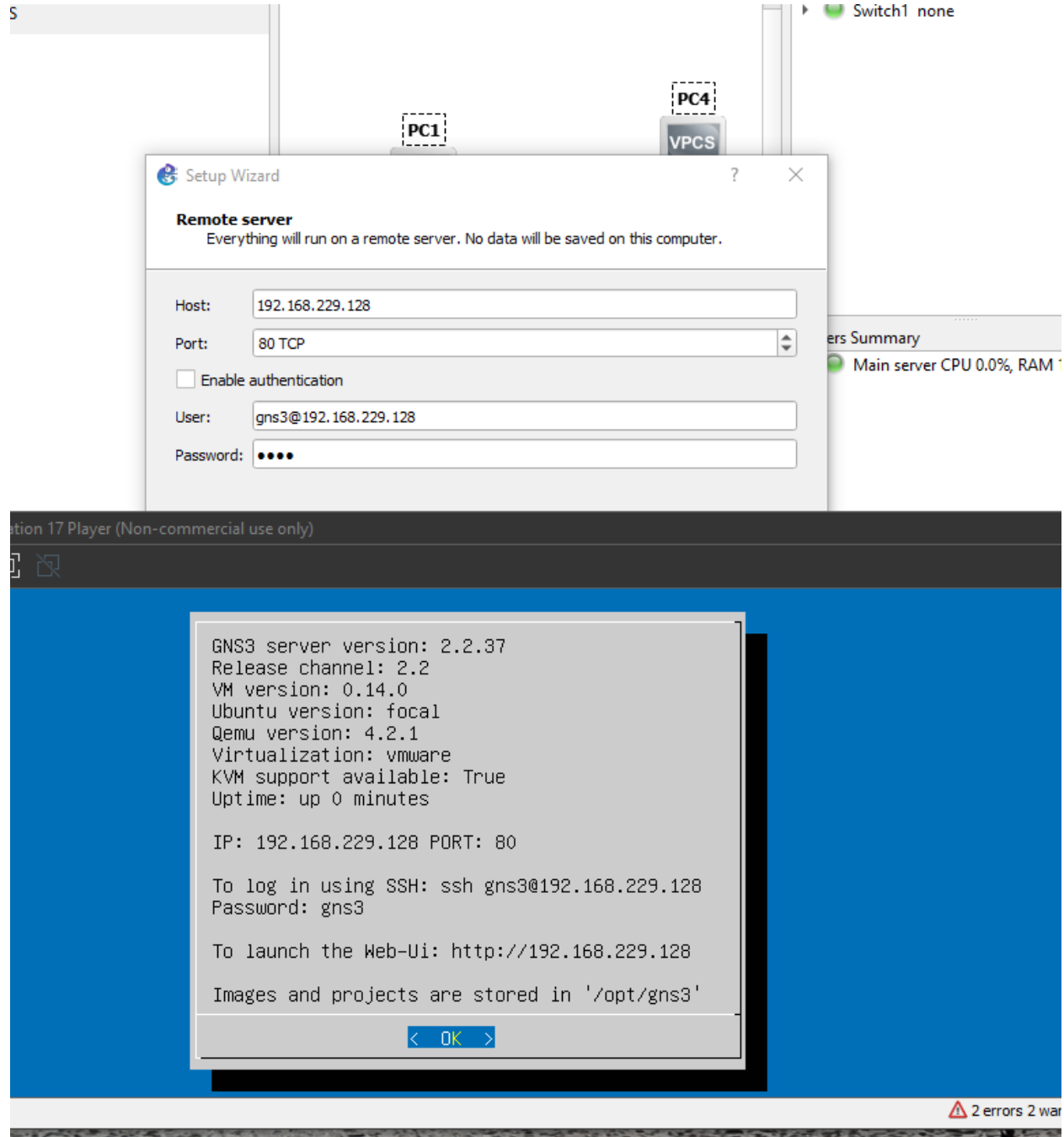
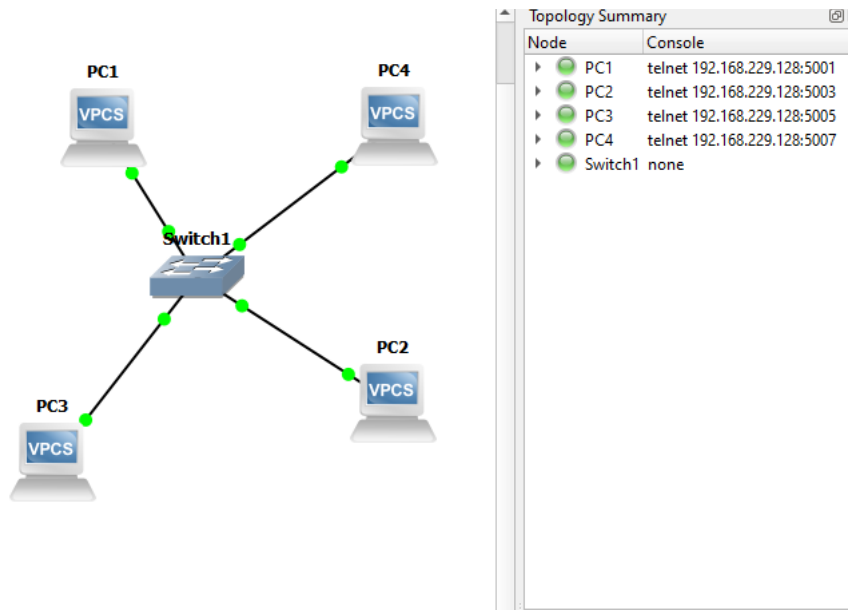


Εργαστήριο Δικτύων
ΑΓΓΕΛΟΣ ΝΙΚΟΛΑΟΣ ΠΟΤΑΜΙΑΝΟΣ
3^ο ΕΤΟΣ
ΑΜ 1084537

Ακολουθώντας τις οδηγίες του επισυναπτόμενου αρχείου, συνδέομαι στον GNS3 SERVER VM χρησιμοποιώντας τις παρακάτω ρυθμίσεις:



Δημιουργώ την τοπολογία που περιγράφετε στις οδηγίες:



A) Εκτελώ την εντολή help στο PC1:

```
PC1
All rights reserved.

VPCS is free software, distributed under the terms of the "BSD" licence.
Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.
Executing the startup file

PC1> help

?                Print help
arp              Shortcut for: show arp. Show arp table
clear ARG       Clear IPv4/IPv6, arp/neighbor cache, command history
dhcp [OPTION]   Shortcut for: ip dhcp. Get IPv4 address via DHCP
disconnect      Exit the telnet session (daemon mode)
echo TEXT       Display TEXT in output. See also set echo ?
help            Print help
history         Shortcut for: show history. List the command history
ip ARG ... [OPTION] Configure the current VPC's IP settings. See ip ?
load [FILENAME] Load the configuration/script from the file FILENAME
ping HOST [OPTION ...] Ping HOST with ICMP (default) or TCP/UDP. See ping ?
quit           Quit program
relay ARG ...   Configure packet relay between UDP ports. See relay ?
rlogin [ip] port Telnet to port on host at ip (relative to host PC)
save [FILENAME] Save the configuration to the file FILENAME
set ARG ...     Set VPC name and other options. Try set ?
show [ARG ...]  Print the information of VPCs (default). See show ?
sleep [seconds] [TEXT] Print TEXT and pause running script for seconds
trace HOST [OPTION ...] Print the path packets take to network HOST
version         Shortcut for: show version

To get command syntax help, please enter '?' as an argument of the command.

PC1>
```

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Β) Εκτελώ την εντολή ip ώστε να ελέγξω τις παραμέτρους που χρειάζεται προκειμένου να εκτελεστεί:



```
quit          Quit program
relay ARG ... Configure packet relay between UDP ports. See relay ?
rlogin [ip] port Telnet to port on host at ip (relative to host PC)
save [FILENAME] Save the configuration to the file FILENAME
set ARG ...   Set VPC name and other options. Try set ?
show [ARG ...] Print the information of VPCs (default). See show ?
sleep [seconds] [TEXT] Print TEXT and pause running script for seconds
trace HOST [OPTION ...] Print the path packets take to network HOST
version       Shortcut for: show version

To get command syntax help, please enter '?' as an argument of the command.

PC1> ip

ip ARG ... [OPTION]
Configure the current VPC's IP settings
ARG ...:
  address [mask] [gateway]
  address [gateway] [mask]
  Set the VPC's ip, default gateway ip and network mask
  Default IPv4 mask is /24, IPv6 is /64. Example:
  ip 10.1.1.70/26 10.1.1.65 set the VPC's ip to 10.1.1.70,
  the gateway to 10.1.1.65, the netmask to 255.255.255.192.
  In tap mode, the ip of the tapx is the maximum host ID
  of the subnet. In the example above the tapx ip would be
  10.1.1.126
  mask may be written as /26, 26 or 255.255.255.192
  auto Attempt to obtain IPv6 address, mask and gateway using SLAAC
  dhcp [OPTION] Attempt to obtain IPv4 address, mask, gateway, DNS via DHCP
    -d Show DHCP packet decode
    -r Renew DHCP lease
    -x Release DHCP lease
  dns ip Set DNS server ip, delete if ip is '0'
  dns6 ipv6 Set DNS server ipv6, delete if ipv6 is '0'
  domain NAME Set local domain name to NAME

PC1> 
```

solarwinds | Solar-PuTTY free tool

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Γ) Αναθέτω τις διευθύνσεις 192.168.1.1, 192.168.1.2, 192.168.1.3, 192.168.1.4 στα PC1, PC2, PC3 και PC4 αντίστοιχα και έπειτα ελέγχω με show ip το αποτέλεσμα της ανάθεσης:



The screenshot shows a Solar-PuTTY terminal window with tabs for PC1, PC2, PC3, and PC4. The PC1 tab is active. The terminal displays the following text:

```
Welcome to Virtual PC Simulator, version 0.8.2
Dedicated to Daling.
Build time: Aug 23 2021 11:15:00
Copyright (c) 2007-2015, Paul Meng (mirnshi@gmail.com)
All rights reserved.

VPCS is free software, distributed under the terms of the "BSD" licence.
Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.

Executing the startup file

PC1> ip 192.168.1.1
Checking for duplicate address...
PC1 : 192.168.1.1 255.255.255.0

PC1> show ip

NAME       : PC1[1]
IP/MASK    : 192.168.1.1/24
GATEWAY    : 0.0.0.0
DNS        :
MAC        : 00:50:79:66:68:00
LPORT      : 20008
RHOST:PORT : 127.0.0.1:20009
MTU        : 1500

PC1>
```

The bottom of the window shows the SolarWinds logo and the text "Solar-PuTTY free tool" and "© 2019 SolarWinds Worldwide, LLC. All rights reserved."



The screenshot shows the same Solar-PuTTY terminal window, but now the PC2 tab is active. The terminal displays the following text:

```
Welcome to Virtual PC Simulator, version 0.8.2
Dedicated to Daling.
Build time: Aug 23 2021 11:15:00
Copyright (c) 2007-2015, Paul Meng (mirnshi@gmail.com)
All rights reserved.

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Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.

Executing the startup file

PC2> ip 192.168.1.2
Checking for duplicate address...
PC2 : 192.168.1.2 255.255.255.0

PC2> show ip

NAME       : PC2[1]
IP/MASK    : 192.168.1.2/24
GATEWAY    : 0.0.0.0
DNS        :
MAC        : 00:50:79:66:68:01
LPORT      : 20010
RHOST:PORT : 127.0.0.1:20011
MTU        : 1500

PC2>
```

The bottom of the window shows the SolarWinds logo and the text "Solar-PuTTY free tool" and "© 2019 SolarWinds Worldwide, LLC. All rights reserved."

```

Welcome to Virtual PC Simulator, version 0.8.2
Dedicated to Daling.
Build time: Aug 23 2021 11:15:00
Copyright (c) 2007-2015, Paul Meng (mirnshi@gmail.com)
All rights reserved.

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Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.
Executing the startup file
\
PC3> ip 192.168.1.3
Checking for duplicate address...
PC3 : 192.168.1.3 255.255.255.0

PC3> show ip

NAME       : PC3[1]
IP/MASK     : 192.168.1.3/24
GATEWAY     : 0.0.0.0
DNS         :
MAC         : 00:50:79:66:68:02
LPORT      : 20012
RHOST:PORT  : 127.0.0.1:20013
MTU         : 1500

PC3> █
```

```

Welcome to Virtual PC Simulator, version 0.8.2
Dedicated to Daling.
Build time: Aug 23 2021 11:15:00
Copyright (c) 2007-2015, Paul Meng (mirnshi@gmail.com)
All rights reserved.

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Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.
Executing the startup file
\
PC4> ip 192.168.1.4
Checking for duplicate address...
PC4 : 192.168.1.4 255.255.255.0

PC4> show ip

NAME       : PC4[1]
IP/MASK     : 192.168.1.4/24
GATEWAY     : 0.0.0.0
DNS         :
MAC         : 00:50:79:66:68:03
LPORT      : 20014
RHOST:PORT  : 127.0.0.1:20015
MTU         : 1500

PC4> █
```

Δ) Εκτελώ από κάθε PC προς τα άλλα την εντολή ping και επιβεβαιώνω ότι οι υπολογιστές επικοινωνούν.

The image displays two screenshots of the SolarWinds Solar-PuTTY terminal application, showing network connectivity tests between four PCs (PC1, PC2, PC3, PC4). The terminal windows are titled with the PC names and show the results of ping commands executed from each PC to the others.

Top Screenshot (PC1):

```
PC1> ping 192.168.1.2
84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=0.215 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=0.249 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=0.251 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=0.279 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=0.268 ms

PC1> ping 192.168.1.3
84 bytes from 192.168.1.3 icmp_seq=1 ttl=64 time=0.192 ms
84 bytes from 192.168.1.3 icmp_seq=2 ttl=64 time=0.220 ms
84 bytes from 192.168.1.3 icmp_seq=3 ttl=64 time=0.229 ms
84 bytes from 192.168.1.3 icmp_seq=4 ttl=64 time=0.210 ms
84 bytes from 192.168.1.3 icmp_seq=5 ttl=64 time=0.211 ms

PC1> ping 192.168.1.4
84 bytes from 192.168.1.4 icmp_seq=1 ttl=64 time=0.221 ms
84 bytes from 192.168.1.4 icmp_seq=2 ttl=64 time=0.261 ms
84 bytes from 192.168.1.4 icmp_seq=3 ttl=64 time=0.257 ms
84 bytes from 192.168.1.4 icmp_seq=4 ttl=64 time=0.208 ms
84 bytes from 192.168.1.4 icmp_seq=5 ttl=64 time=0.263 ms

PC1>
```

Bottom Screenshot (PC2):

```
PC2> ping 192.168.1.1
84 bytes from 192.168.1.1 icmp_seq=1 ttl=64 time=0.311 ms
84 bytes from 192.168.1.1 icmp_seq=2 ttl=64 time=0.273 ms
84 bytes from 192.168.1.1 icmp_seq=3 ttl=64 time=0.247 ms
84 bytes from 192.168.1.1 icmp_seq=4 ttl=64 time=0.231 ms
84 bytes from 192.168.1.1 icmp_seq=5 ttl=64 time=0.238 ms

PC2> ping 192.168.1.3
84 bytes from 192.168.1.3 icmp_seq=1 ttl=64 time=0.185 ms
84 bytes from 192.168.1.3 icmp_seq=2 ttl=64 time=0.223 ms
84 bytes from 192.168.1.3 icmp_seq=3 ttl=64 time=0.203 ms
84 bytes from 192.168.1.3 icmp_seq=4 ttl=64 time=0.204 ms
84 bytes from 192.168.1.3 icmp_seq=5 ttl=64 time=0.222 ms

PC2> ping 192.168.1.4
84 bytes from 192.168.1.4 icmp_seq=1 ttl=64 time=0.176 ms
84 bytes from 192.168.1.4 icmp_seq=2 ttl=64 time=0.255 ms
84 bytes from 192.168.1.4 icmp_seq=3 ttl=64 time=0.280 ms
84 bytes from 192.168.1.4 icmp_seq=4 ttl=64 time=0.234 ms
84 bytes from 192.168.1.4 icmp_seq=5 ttl=64 time=0.222 ms

PC2>
```

Both screenshots show successful ping results with response times in milliseconds. The SolarWinds logo and "Solar-PuTTY free tool" are visible in the bottom left corner of each window, and the copyright notice "© 2019 SolarWinds Worldwide, LLC. All rights reserved." is in the bottom right corner.

```

PC3> ping 192.168.1.1
84 bytes from 192.168.1.1 icmp_seq=1 ttl=64 time=0.496 ms
84 bytes from 192.168.1.1 icmp_seq=2 ttl=64 time=0.221 ms
84 bytes from 192.168.1.1 icmp_seq=3 ttl=64 time=0.260 ms
84 bytes from 192.168.1.1 icmp_seq=4 ttl=64 time=0.208 ms
84 bytes from 192.168.1.1 icmp_seq=5 ttl=64 time=0.185 ms

PC3> ping 192.168.1.2
84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=0.138 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=0.151 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=0.152 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=0.176 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=0.178 ms

PC3> ping 192.168.1.4
84 bytes from 192.168.1.4 icmp_seq=1 ttl=64 time=0.172 ms
84 bytes from 192.168.1.4 icmp_seq=2 ttl=64 time=0.197 ms
84 bytes from 192.168.1.4 icmp_seq=3 ttl=64 time=0.206 ms
84 bytes from 192.168.1.4 icmp_seq=4 ttl=64 time=0.267 ms
84 bytes from 192.168.1.4 icmp_seq=5 ttl=64 time=0.200 ms

PC3>

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PC4> ping 192.168.1.1
84 bytes from 192.168.1.1 icmp_seq=1 ttl=64 time=0.213 ms
84 bytes from 192.168.1.1 icmp_seq=2 ttl=64 time=0.231 ms
84 bytes from 192.168.1.1 icmp_seq=3 ttl=64 time=0.161 ms
84 bytes from 192.168.1.1 icmp_seq=4 ttl=64 time=0.196 ms
84 bytes from 192.168.1.1 icmp_seq=5 ttl=64 time=0.234 ms

PC4> ping 192.168.1.2
84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=0.146 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=0.155 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=0.267 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=0.190 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=0.181 ms

PC4> ping 192.168.1.3
84 bytes from 192.168.1.3 icmp_seq=1 ttl=64 time=0.262 ms
84 bytes from 192.168.1.3 icmp_seq=2 ttl=64 time=0.218 ms
84 bytes from 192.168.1.3 icmp_seq=3 ttl=64 time=0.212 ms
84 bytes from 192.168.1.3 icmp_seq=4 ttl=64 time=0.221 ms
84 bytes from 192.168.1.3 icmp_seq=5 ttl=64 time=0.230 ms

PC4>

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```

Κάνουμε save και αποθηκεύουμε το αρχείο μας.

```
PC3> ip 192.168.1.3
Checking for duplicate address...
PC3 : 192.168.1.3 255.255.255.0

PC3> save
Saving startup configuration to startup.vpc
. done

PC3> █
```