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Computer Networks Lab 9 Work

Lab 8 - GNS3

File Edit View Control Node Annotate Tools Help

Topo... [X]

Node

- PC1
- PC2
- PC3
- R1
- R2
- Switch1
- Switch2

Serv... [X]

- DES...

2 warnings

77°

Windows taskbar: [Icons for various applications]

ENG 2:58 PM 3/26/2024

PC1 PC2 PC3

```
Welcome to Virtual PC Simulator, version 0.6.2
Dedicated to Daling.
Build time: Apr 18 2019 02:42:28
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GNS3 is free software, distributed under the terms of the "BSD" licence.
Source code and license can be found at vpc.sourceforge.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.

Executing the startup file

PC1> ip 10.0.4.11/24 10.0.4.1
Checking for duplicate address...
PC1 : 10.0.4.11 255.255.255.0 gateway 10.0.4.1

PC1> show
Saving startup configuration to startup.vpc
. done

PC1> ping 11.11.11.1
64 bytes from 11.11.11.1: icmp_seq=1 ttl=254 time=0.318 ms
64 bytes from 11.11.11.1: icmp_seq=2 ttl=254 time=0.776 ms
64 bytes from 11.11.11.1: icmp_seq=3 ttl=254 time=0.049 ms
64 bytes from 11.11.11.1: icmp_seq=4 ttl=254 time=0.432 ms
64 bytes from 11.11.11.1: icmp_seq=5 ttl=254 time=0.099 ms

PC1>
```

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Windows taskbar: [Icons for various applications]

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R1

R2

PC1

PC2

PC3

Welcome to Virtual PC Simulator, version 0.6.2
Dedicated to Daling.
Build time: Apr 10 2019 02:42:20
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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

PC2> ip 10.0.4.10/24 10.0.4.1/24
Checking for duplicate address...
PC1 : 10.0.4.10 255.255.255.0 gateway 10.0.4.1

PC2> save
Saving startup configuration to startup.vpc
done

PC2> ping 11.11.11.1
11.11.11.1 icmp_seq=1 timeout
64 bytes from 11.11.11.1 icmp_seq=2 ttl=254 time=46.612 ms
64 bytes from 11.11.11.1 icmp_seq=3 ttl=254 time=41.721 ms
64 bytes from 11.11.11.1 icmp_seq=4 ttl=254 time=45.797 ms
64 bytes from 11.11.11.1 icmp_seq=5 ttl=254 time=46.999 ms

PC2> ping 11.11.11.1
64 bytes from 11.11.11.1 icmp_seq=1 ttl=254 time=41.746 ms
64 bytes from 11.11.11.1 icmp_seq=2 ttl=254 time=45.431 ms
64 bytes from 11.11.11.1 icmp_seq=3 ttl=254 time=45.752 ms
64 bytes from 11.11.11.1 icmp_seq=4 ttl=254 time=42.407 ms
64 bytes from 11.11.11.1 icmp_seq=5 ttl=254 time=45.516 ms

PC2> █

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R1

R2

PC1

PC2

PC3

ip 10.0.2.10/24 10.0.2.1
Checking for duplicate address...
PC1 : 10.0.2.10 255.255.255.0 gateway 10.0.2.1

PC3> save
Saving startup configuration to startup.vpc
done

PC3> ping 11.11.11.1/28
11.11.11.1 icmp_seq=1 timeout
11.11.11.1 icmp_seq=2 timeout
11.11.11.1 icmp_seq=3 timeout
11.11.11.1 icmp_seq=4 timeout
11.11.11.1 icmp_seq=5 timeout

PC3> ping 11.11.11.1/28
11.11.11.1 icmp_seq=1 timeout
64 bytes from 11.11.11.1 icmp_seq=2 ttl=254 time=45.876 ms
64 bytes from 11.11.11.1 icmp_seq=3 ttl=254 time=41.553 ms
64 bytes from 11.11.11.1 icmp_seq=4 ttl=254 time=46.784 ms
64 bytes from 11.11.11.1 icmp_seq=5 ttl=254 time=47.012 ms

PC3> █

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R1

R2

PC1

PC2

PC3

```
R1(config-if)#ip address 11.11.11.1 255.255.255.248
R1(config-if)#no shutdown
R1(config-if)#exit
R1#
*Mar 1 00:03:29.575: NVR5-5-CMW10-1: Configured from console by console
R1#
*Mar 1 00:03:29.787: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Mar 1 00:03:30.787: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R1#
Building configuration...
[OK]
R1#debug icmp
R1#debug ip icmp
ICMP packet debugging is on
R1#
*Mar 1 00:09:22.147: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.3
R1#
*Mar 1 00:09:24.351: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.3
R1#
*Mar 1 00:09:25.231: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.3
R1#
*Mar 1 00:09:26.299: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.3
R1#
*Mar 1 00:09:27.367: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.3
R1#
*Mar 1 00:14:06.495: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.4
R1#
*Mar 1 00:14:08.479: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.4
R1#
*Mar 1 00:14:09.563: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.4
R1#
*Mar 1 00:14:10.643: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.4
R1#
*Mar 1 00:14:11.711: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.4
R1#
*Mar 1 00:20:34.935: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:35.995: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:37.063: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:38.147: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:39.207: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:44.619: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:45.687: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:46.771: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:47.839: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
*Mar 1 00:20:48.911: ICMP: echo reply sent, src 11.11.11.1, dst 11.11.11.2
R1#
```

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R1

R2

PC1

PC2

PC3

```
R1#clear ip nat translation
% Incomplete command.

R1#clear ip nat translation *
R1#config t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#do show run | in nat
ip nat outside
ip nat inside
ip nat inside
ip nat pool lab 11.11.11.4 11.11.11.14 netmask 255.255.255.248
ip nat inside source list 1 pool lab
ip nat inside source static 10.0.2.10 11.11.11.3
R1(config)#int fa0/0
R1(config-if)#ip nat outside
R1(config-if)#exit
R1(config)#int f2/0
R1(config-if)#ip nat inside
R1(config-if)#exit
R1(config)#do ip nat pool lab 11.11.11.4 11.11.11.14 netmask 255.255.255.248
R1(config)#exit
R1#
*Mar 1 00:17:52.979: NVR5-5-CMW10-1: Configured from console by console
R1#config t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#access-list permit 10.0.4.0 0.0.0.255
% Invalid input detected at '^' marker.

R1(config)#access-list 1 permit 10.0.4.0 0.0.0.255
R1(config)#ip nat inside source list 1 interface fa0/0 overload
R1(config)#if f2/0
% Invalid input detected at '^' marker.

R1(config)#int f2/0
R1(config-if)#ip nat inside
R1(config-if)#exit
R1(config)#int fa0/0
R1(config-if)#ip nat outside
R1(config-if)#exit
R1(config)#exit
R1#
*Mar 1 00:20:19.435: NVR5-5-CMW10-1: Configured from console by console
R1#sh ip nat translation

```

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	Inside global	Inside local	Outside local	Outside global
--	11.11.11.3	10.0.2.10	--	--
icmp	11.11.11.1:32197	10.0.4.10:32197	11.11.11.1:32197	11.11.11.1:32197
icmp	11.11.11.1:32453	10.0.4.10:32453	11.11.11.1:32453	11.11.11.1:32453
icmp	11.11.11.1:32709	10.0.4.10:32709	11.11.11.1:32709	11.11.11.1:32709
icmp	11.11.11.1:32965	10.0.4.10:32965	11.11.11.1:32965	11.11.11.1:32965
icmp	11.11.11.1:33221	10.0.4.10:33221	11.11.11.1:33221	11.11.11.1:33221
icmp	11.11.11.1:34581	10.0.4.11:34581	11.11.11.1:34581	11.11.11.1:34581
icmp	11.11.11.1:34937	10.0.4.11:34937	11.11.11.1:34937	11.11.11.1:34937
icmp	11.11.11.1:35249	10.0.4.11:35249	11.11.11.1:35249	11.11.11.1:35249
icmp	11.11.11.1:35781	10.0.4.11:35781	11.11.11.1:35781	11.11.11.1:35781

R1R2PC1PC2PC3

```
R1#
Building configuration...
[OK]
R1#sh ip nat translation
Two Inside global      Inside local      Outside local      Outside global
---  ---  ---  ---
comp 11.11.11.1:57826  10.0.2.10:57826  11.11.11.1:57826  11.11.11.1:57826
comp 11.11.11.1:57794  10.0.2.10:57794  11.11.11.1:57794  11.11.11.1:57794
---  ---  ---  ---
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#ip nat pool lab 11.11.11.14 11.11.11.14 netmask 255.255.255.240
R1(config)#access-list 1 permit 10.0.0.0 0.0.0.255
R1(config)#ip nat inside source list 1 pool lab
R1(config)#int f2/0
R1(config-if)#ip nat inside
R1(config-if)#int fa/0
R1(config-if)#exit
R1(config)#int f2/0
R1(config-if)#ip nat inside
R1(config-if)#int fa/0
R1(config)#int fa/0
R1(config-if)#ip nat outside
R1(config-if)#exit
R1(config)#exit
R1#
Building configuration...
[OK]
R1#
*Mar 1 00:11:56.530: NIOS-5-CMW10_1: Configured from console by console
R1#sh ip nat translation
Two Inside global      Inside local      Outside local      Outside global
---  ---  ---  ---
comp 11.11.11.1:63683  10.0.4.10:63683  11.11.11.1:63683  11.11.11.1:63683
comp 11.11.11.1:64195  10.0.4.10:64195  11.11.11.1:64195  11.11.11.1:64195
comp 11.11.11.1:64451  10.0.4.10:64451  11.11.11.1:64451  11.11.11.1:64451
comp 11.11.11.1:64707  10.0.4.10:64707  11.11.11.1:64707  11.11.11.1:64707
comp 11.11.11.1:64963  10.0.4.10:64963  11.11.11.1:64963  11.11.11.1:64963
---  ---  ---  ---
R1#clear ip nat translation *
% Invalid input detected at '^' marker.
R1#clear ip nat translation
% Incomplete command.
R1#clear ip nat translation
% Incomplete command.
R1#clear ip nat translation *
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#do show run | in nat
ip nat outside
ip nat inside
ip nat inside
R1#
```

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R1R2PC1PC2PC3

```
st2/0, changed state to down
R1#enable
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#int fa/0
R1(config-if)#ip address 11.11.11.2 255.255.255.240
R1(config-if)#no shutdown
R1(config-if)#
*Mar 1 00:01:57.307: N1NK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
R1(config-if)#exit
R1(config)#int f2/0
R1(config-if)#ip address 10.0.2.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#int fa/0
*Mar 1 00:02:11.203: N1NK-3-UPDOWN: Interface FastEthernet1/0, changed state to up
R1(config)#int f2/0
R1(config-if)#ip address 10.0.4.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
*Mar 1 00:02:35.237: N1NK-3-UPDOWN: Interface FastEthernet2/0, changed state to up
R1(config-if)#exit
*Mar 1 00:02:36.207: N1NK-3-UPDOWN: Interface FastEthernet2/0, changed state to up
R1(config-if)#exit
R1(config)#exit
R1#
*Mar 1 00:02:40.275: NIOS-5-CMW10_1: Configured from console by console
R1#end
Translating "end"
Translating "end"
% Unknown command or computer name, or unable to find computer address
R1#
Building configuration...
[OK]
R1#conf t
Translating "config"
Translating "config"
% Unknown command or computer name, or unable to find computer address
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#ip nat inside source static 10.0.2.10 11.11.11.3
R1(config)#int
*Mar 1 00:04:07.003: N1NK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
R1(config)#int f2/0
R1(config-if)#ip nat inside
R1(config-if)#int fa/0
R1(config-if)#ip nat outside
R1(config-if)#exit
R1(config)#exit
R1#
*Mar 1 00:04:40.227: NIOS-5-CMW10_1: Configured from console by console
R1#
Building configuration...
[OK]
R1#sh ip nat translation
```

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