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2014013189

# PARTE B

## 1 Configure this local server

```
Administrator: Command Prompt

Ethernet adapter Ethernet 2:

    Connection-specific DNS Suffix  . : Home
    Link-local IPv6 Address . . . . . : fe80::2d0a:f5e7:cd2f:b340%13
    IPv4 Address. . . . . : 10.0.2.15
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.0.2.2

Ethernet adapter Ethernet:

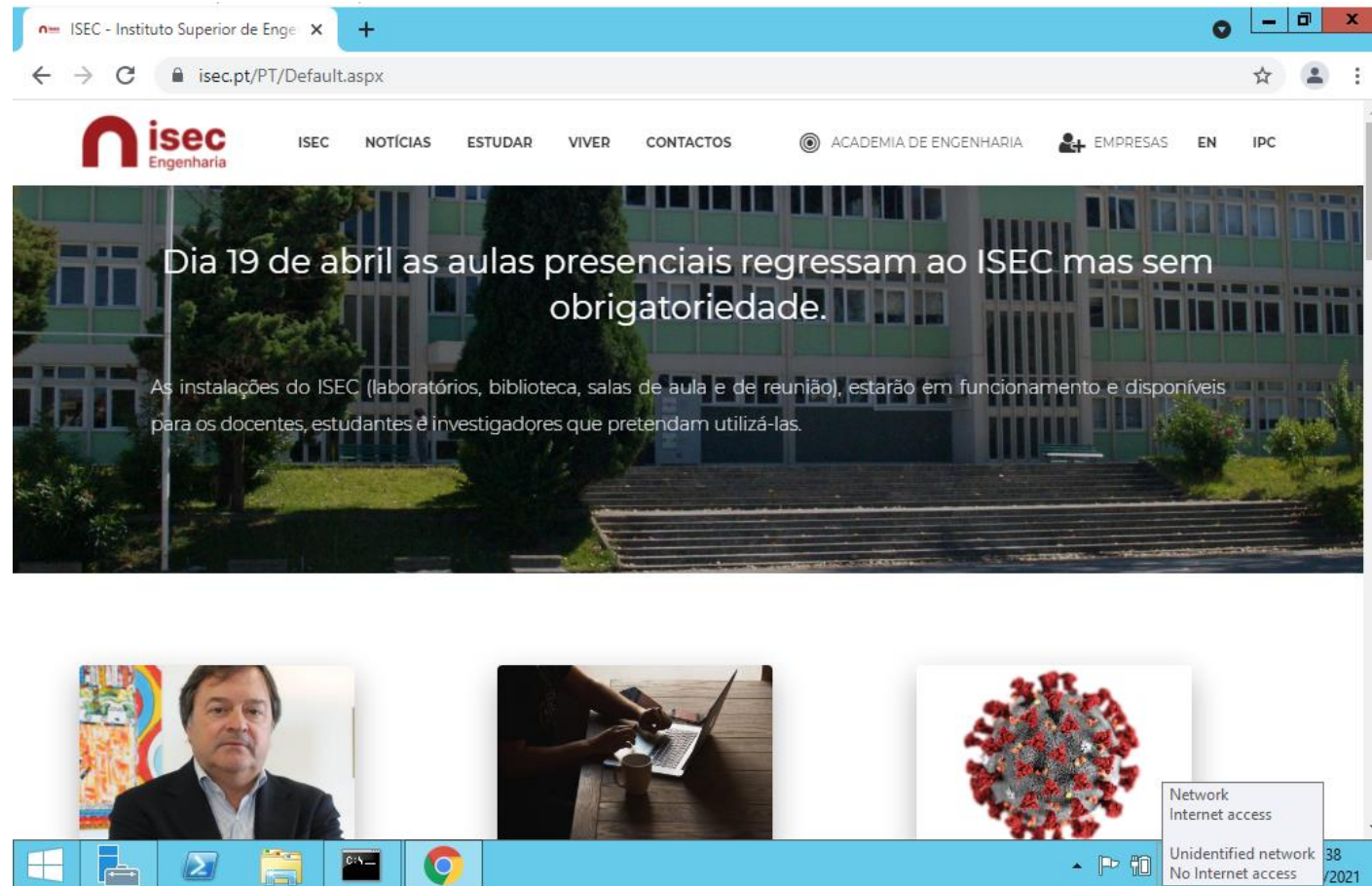
    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::9063:2376:f063:95d5%12
    IPv4 Address. . . . . : 192.168.20.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.20.254

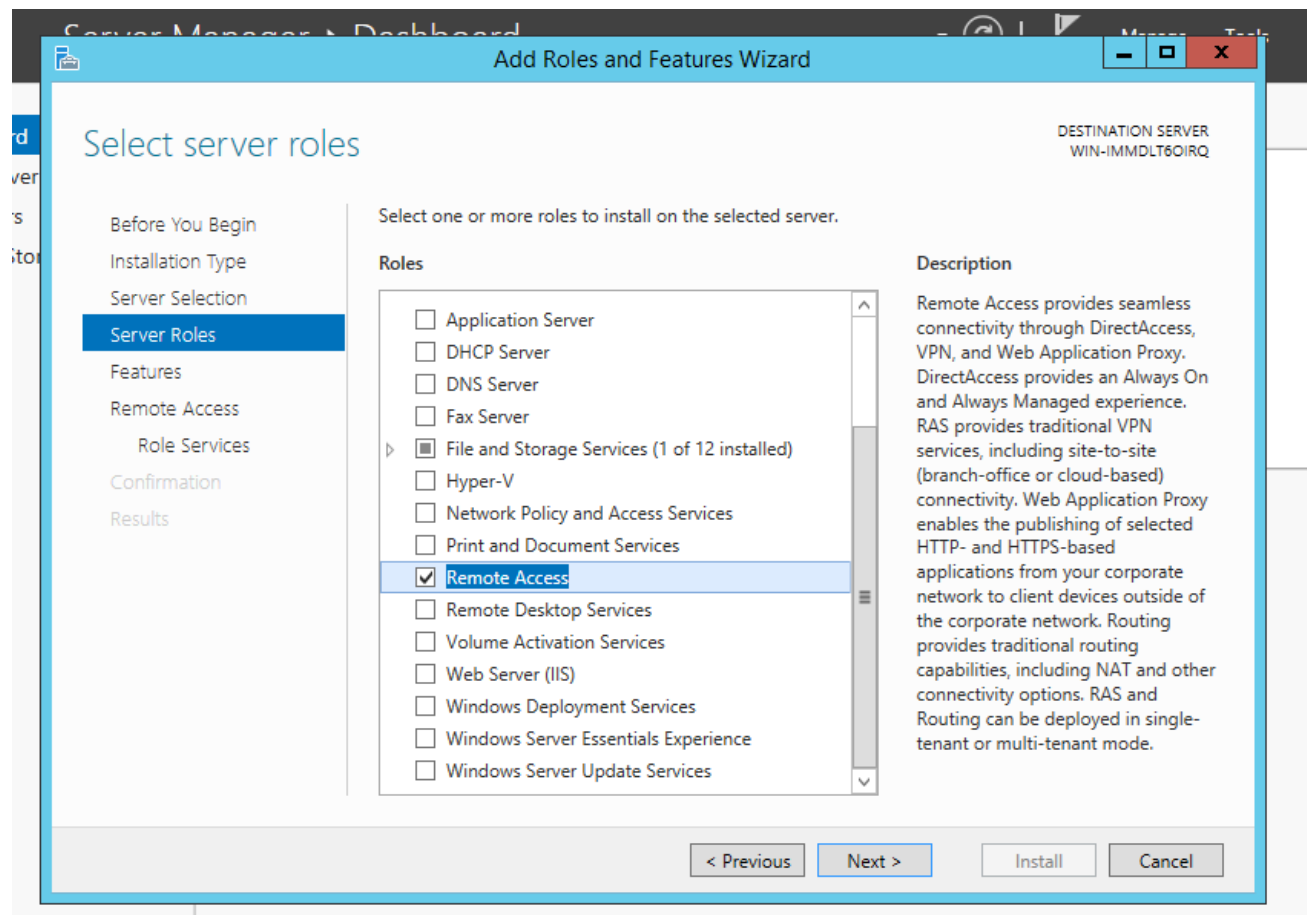
Tunnel adapter isatap.Home:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : Home

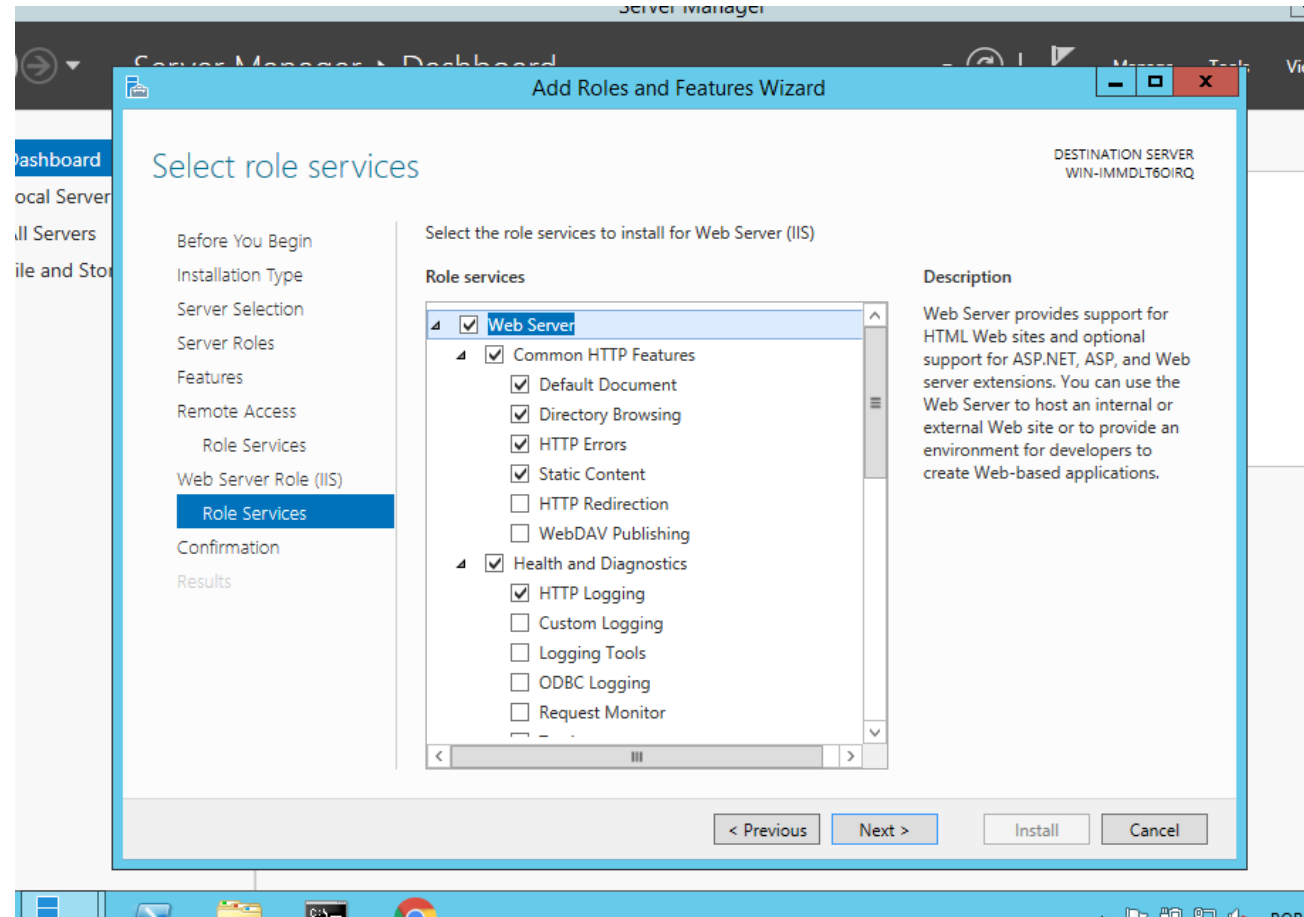
Tunnel adapter isatap.{A2D181BD-3B3F-4C5A-99FE-D0A2D801B69F}:

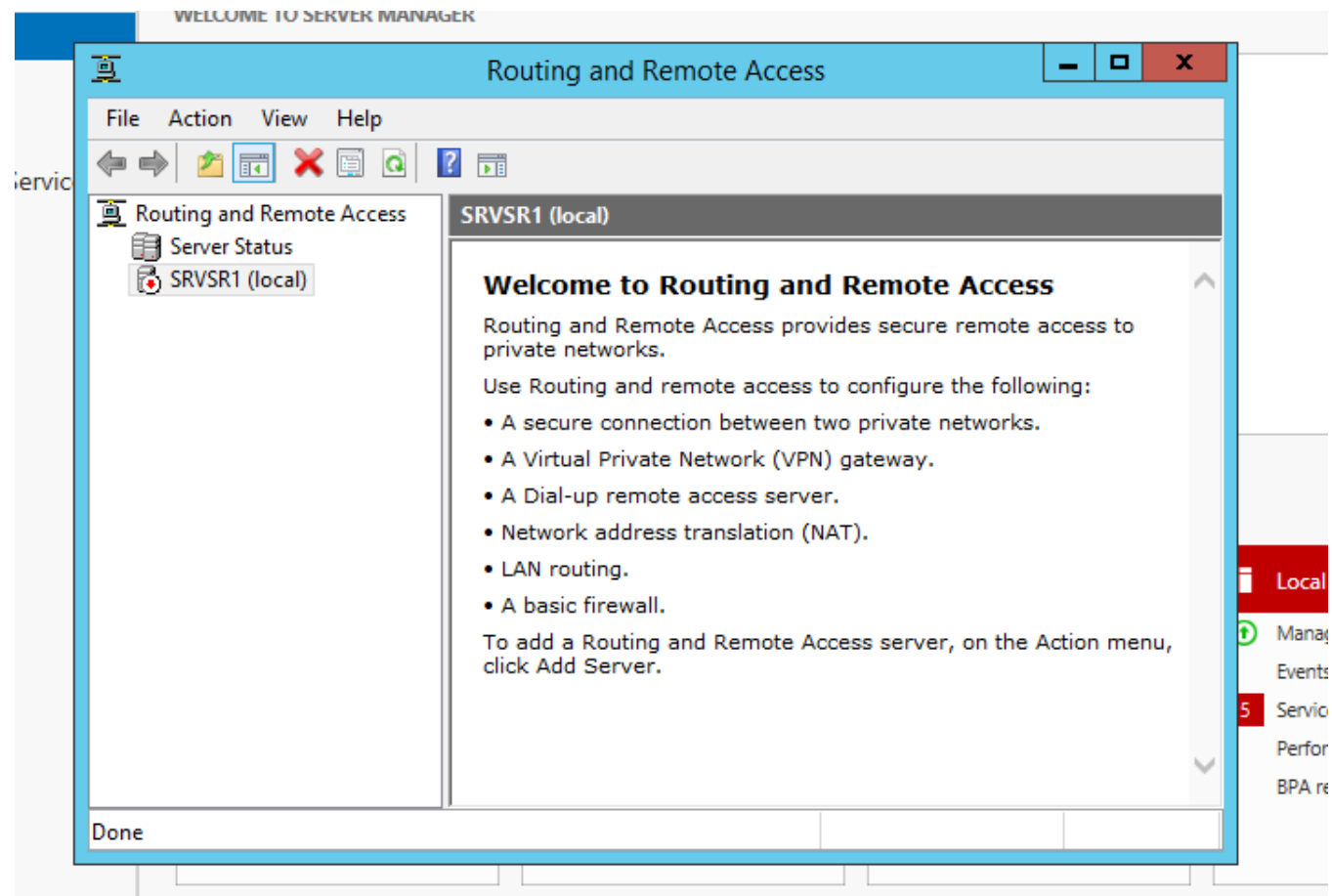
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :
```



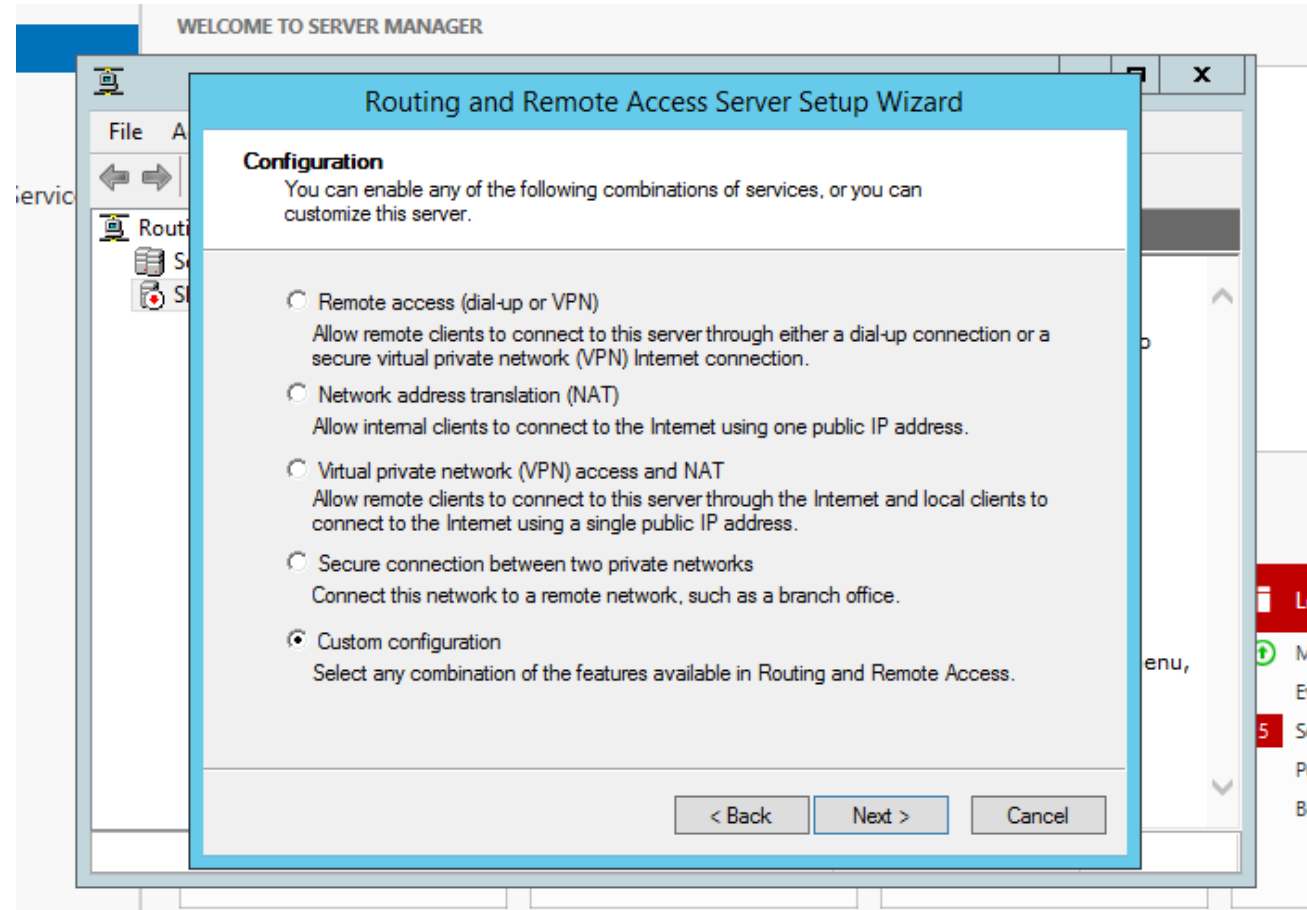


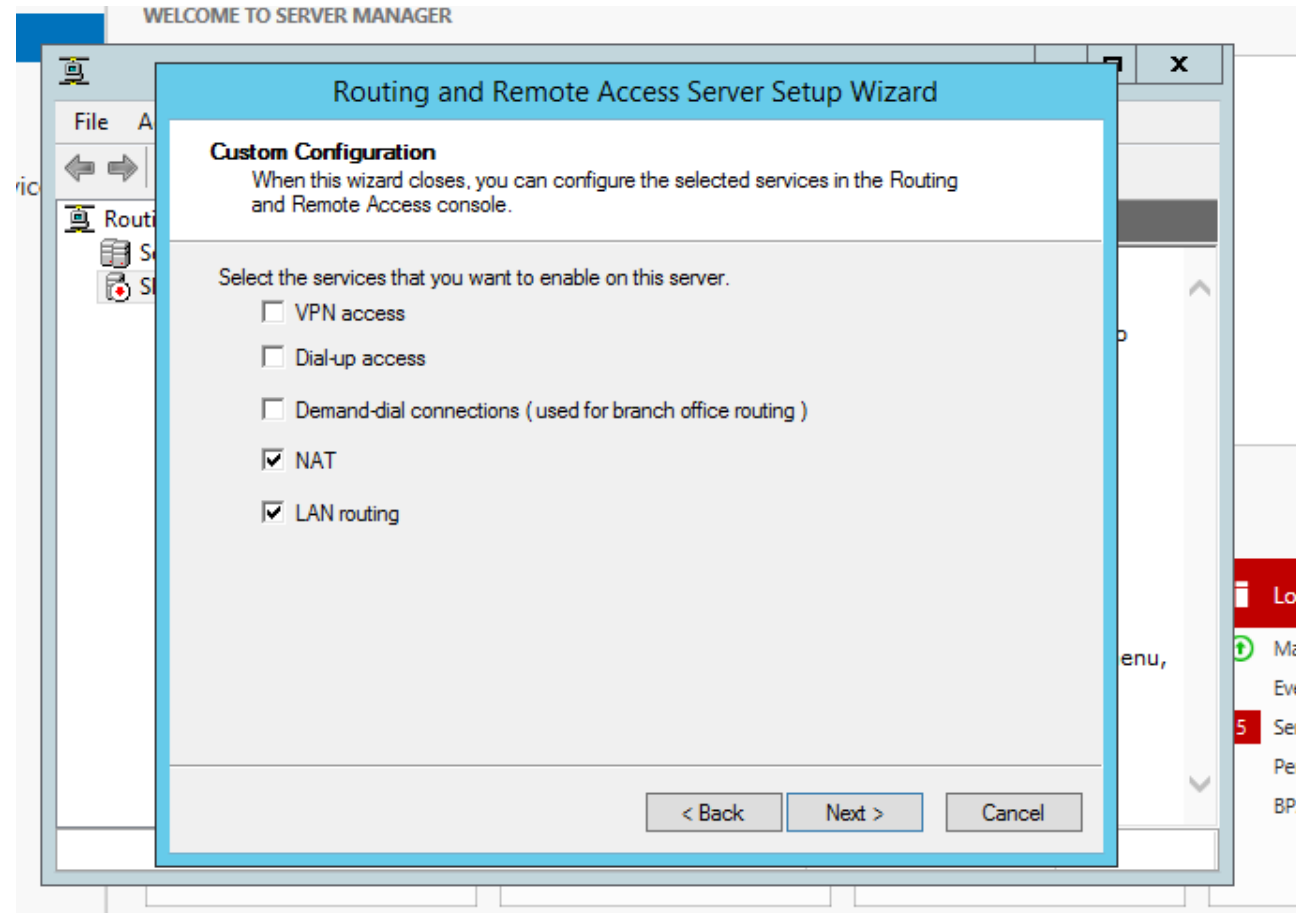












Service

Routing and Remote Access

File Action View Help

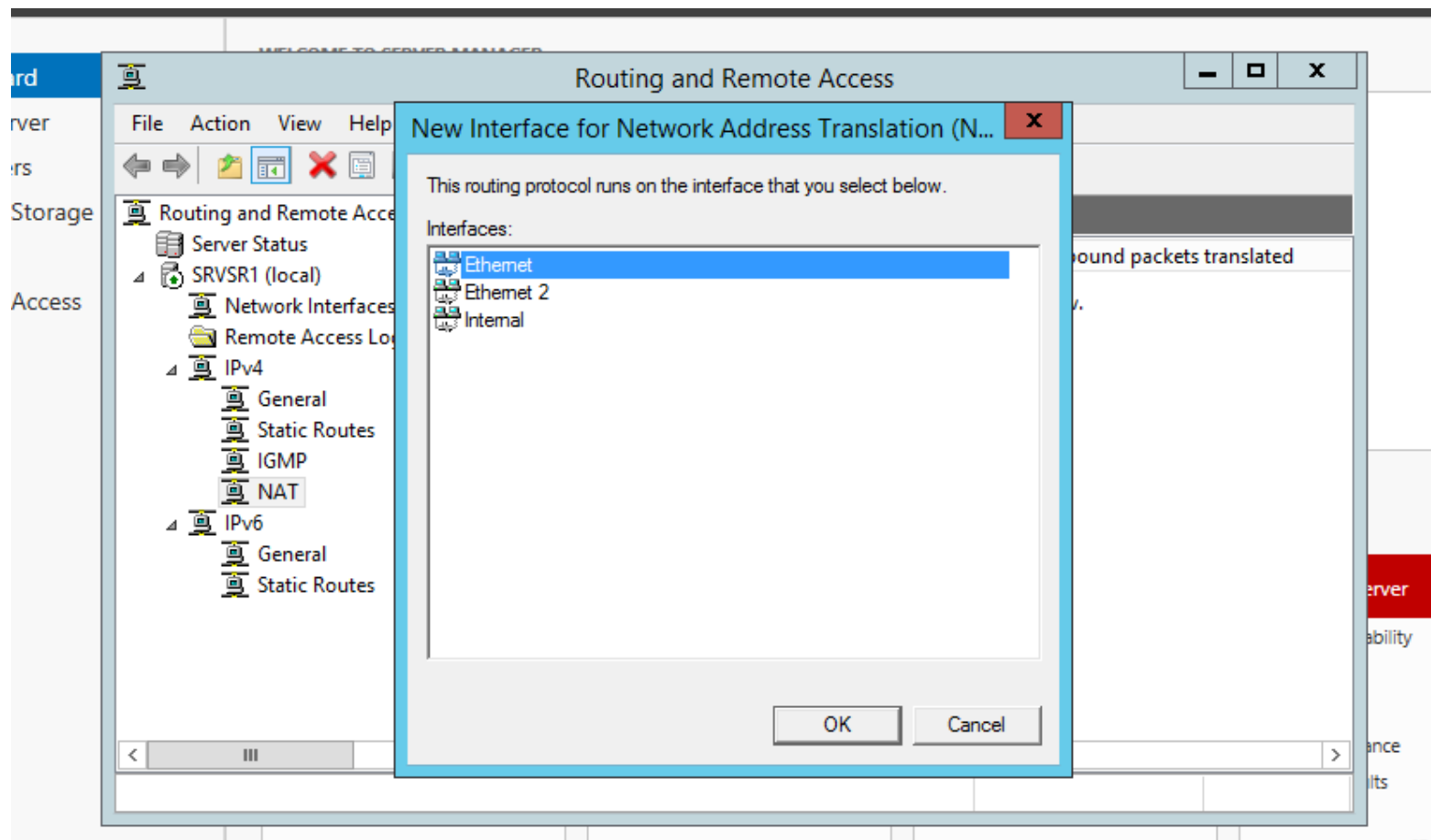
Routing and Remote Access

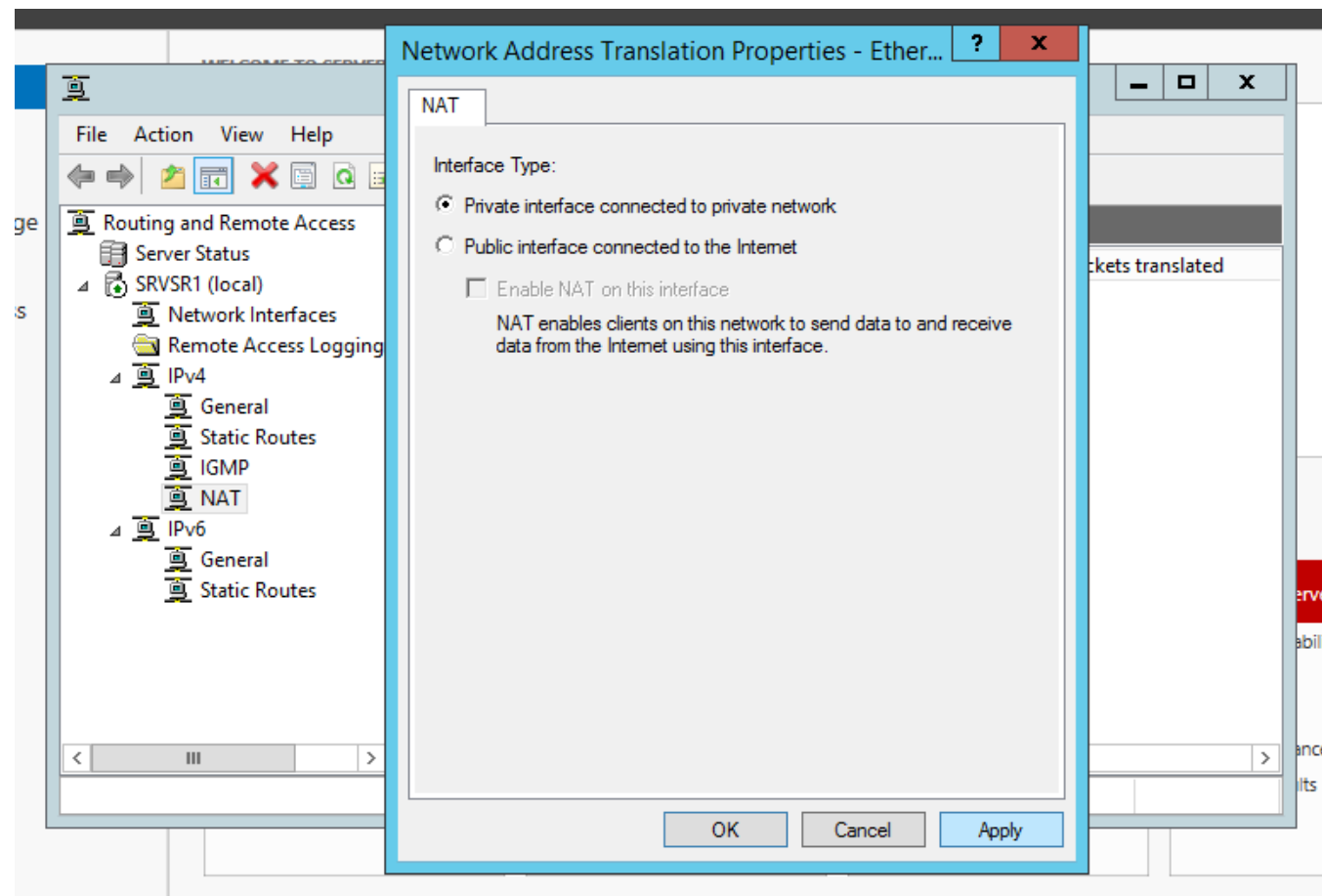
- Server Status
- SRVSR1 (local)
  - Network Interfaces
  - Remote Access Logging
  - IPv4
    - General
    - Static Routes
    - IGMP
    - NAT
  - IPv6
    - General
    - Static Routes

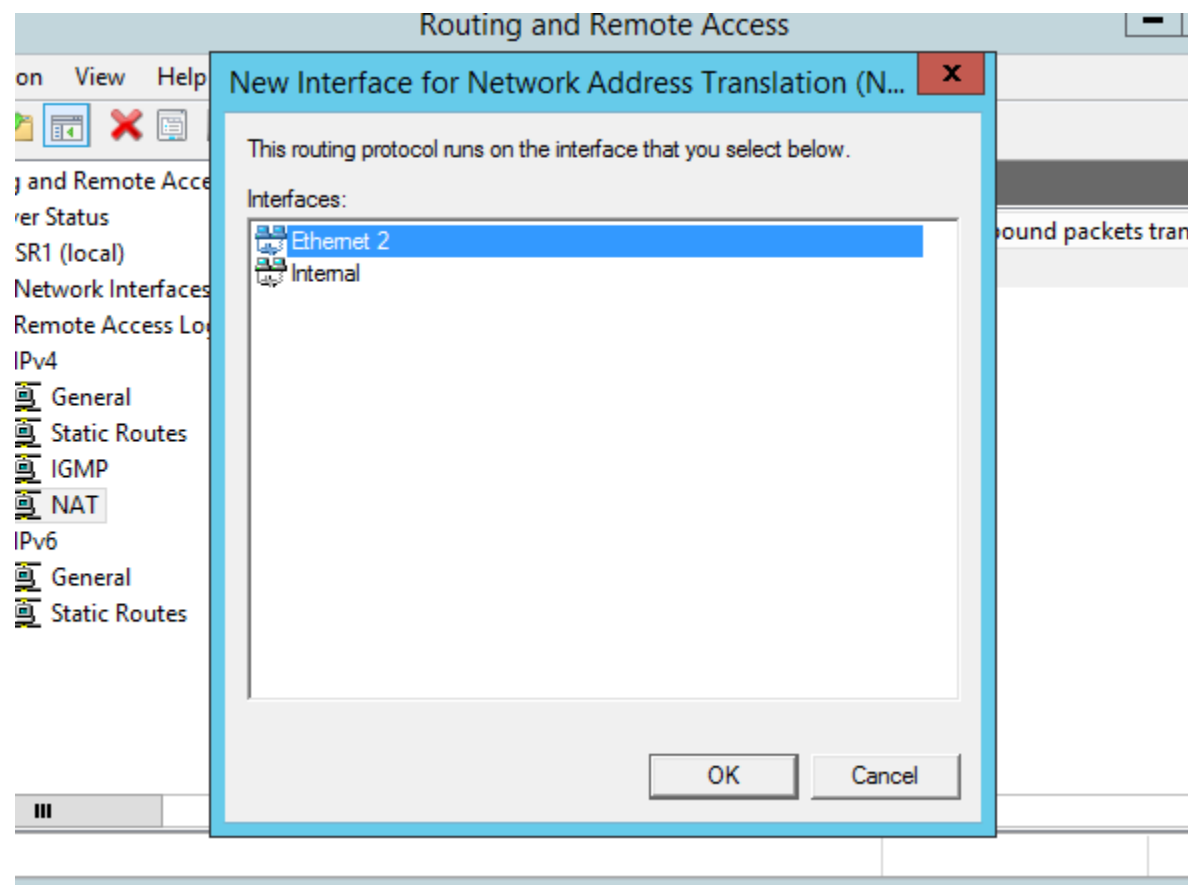
General

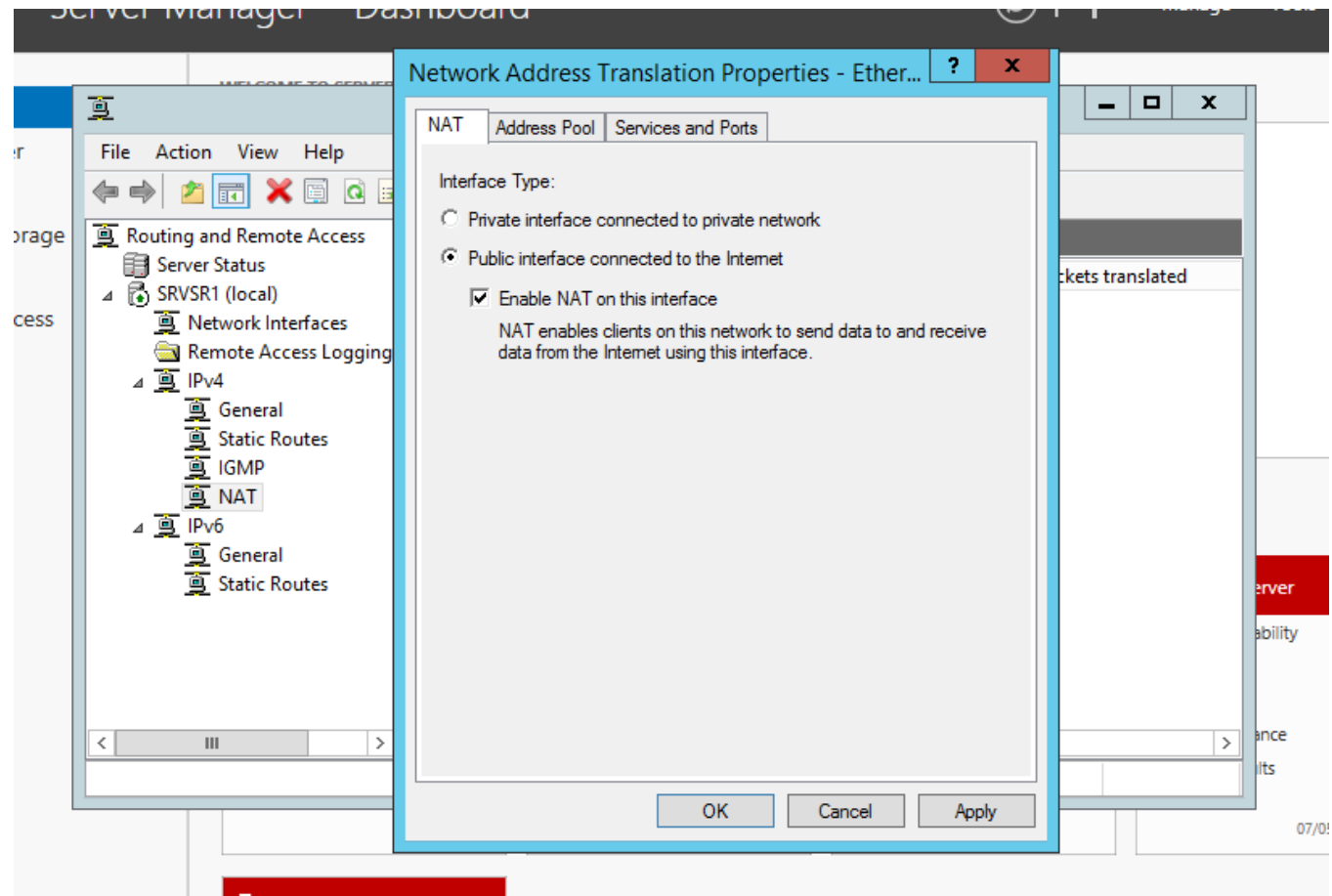
Interface	Type	IP Address	Incoming bytes
Loopback	Loopback	127.0.0.1	0
Internal	Internal	Not available	-
Ethernet 2	Dedicated	10.0.2.15	7 067 260
Ethernet	Dedicated	192.168.20.1	0

05/2021









WELCOME TO SERVER MANAGER

### Routing and Remote Access

File Action View Help

Navigation icons: Back, Forward, Home, Stop, Refresh, Print, Help, etc.

Left pane (Tree View):

- Routing and Remote Access
  - Server Status
  - SRVSR1 (local)
    - Network Interfaces
    - Remote Access Logging
    - IPv4
      - General
      - Static Routes
      - IGMP
      - NAT**
    - IPv6
      - General
      - Static Routes

Right pane (Table):

NAT		
Interface	Total mappings	Inbound packets translated
Ethernet	0	0
Ethernet 2	0	0

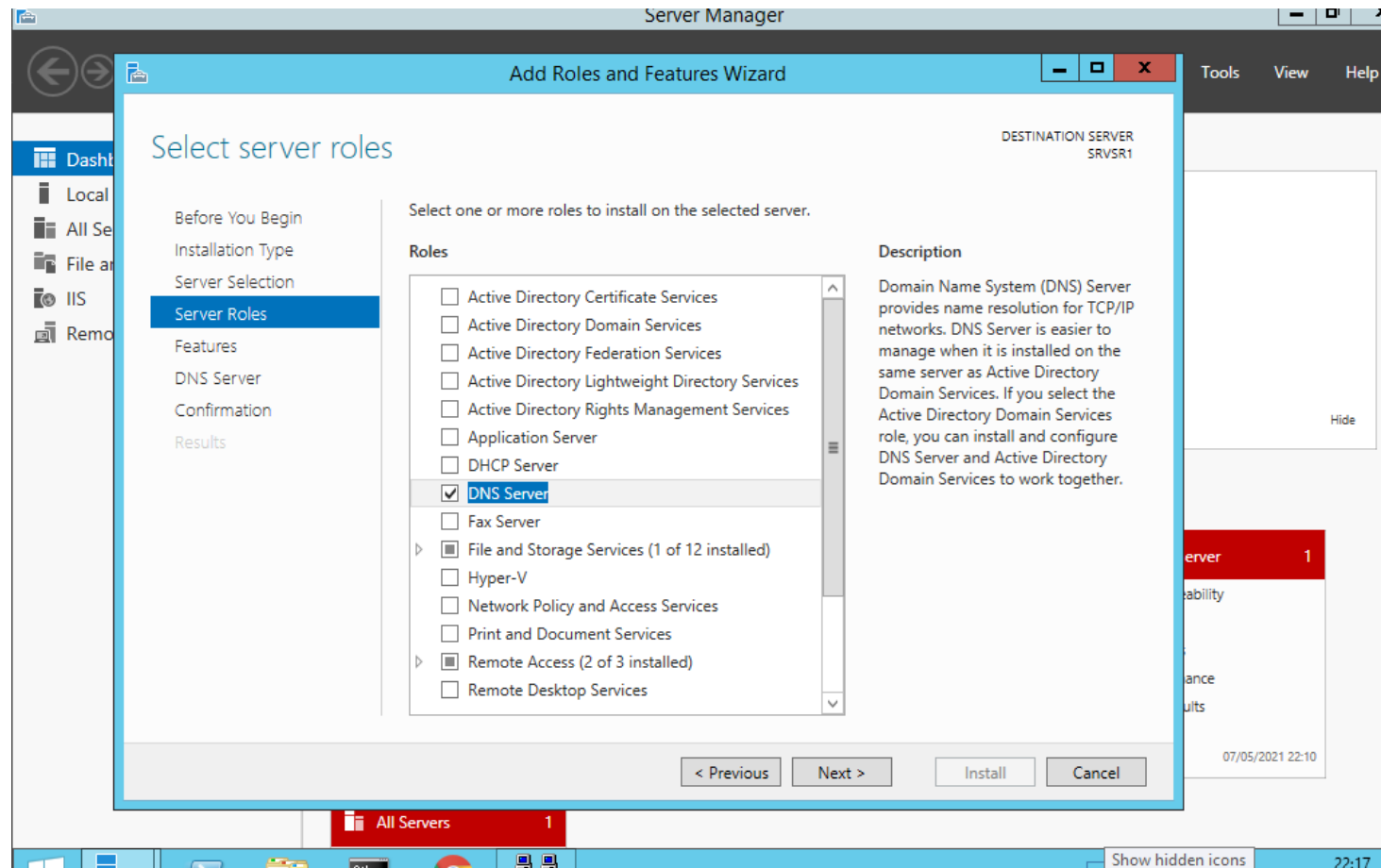
Bottom status bar: < ||| >

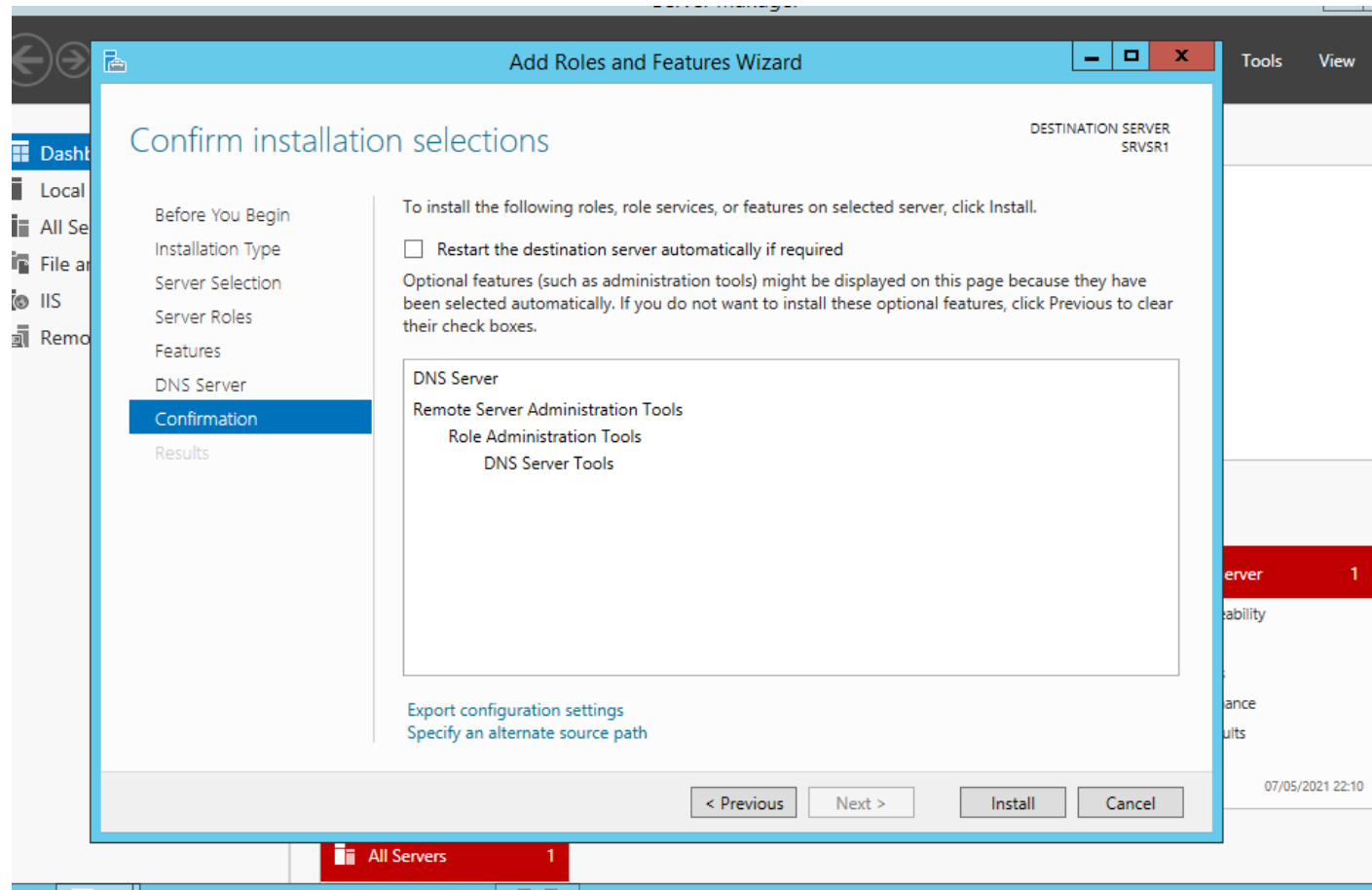
Server Manager sidebar (right):

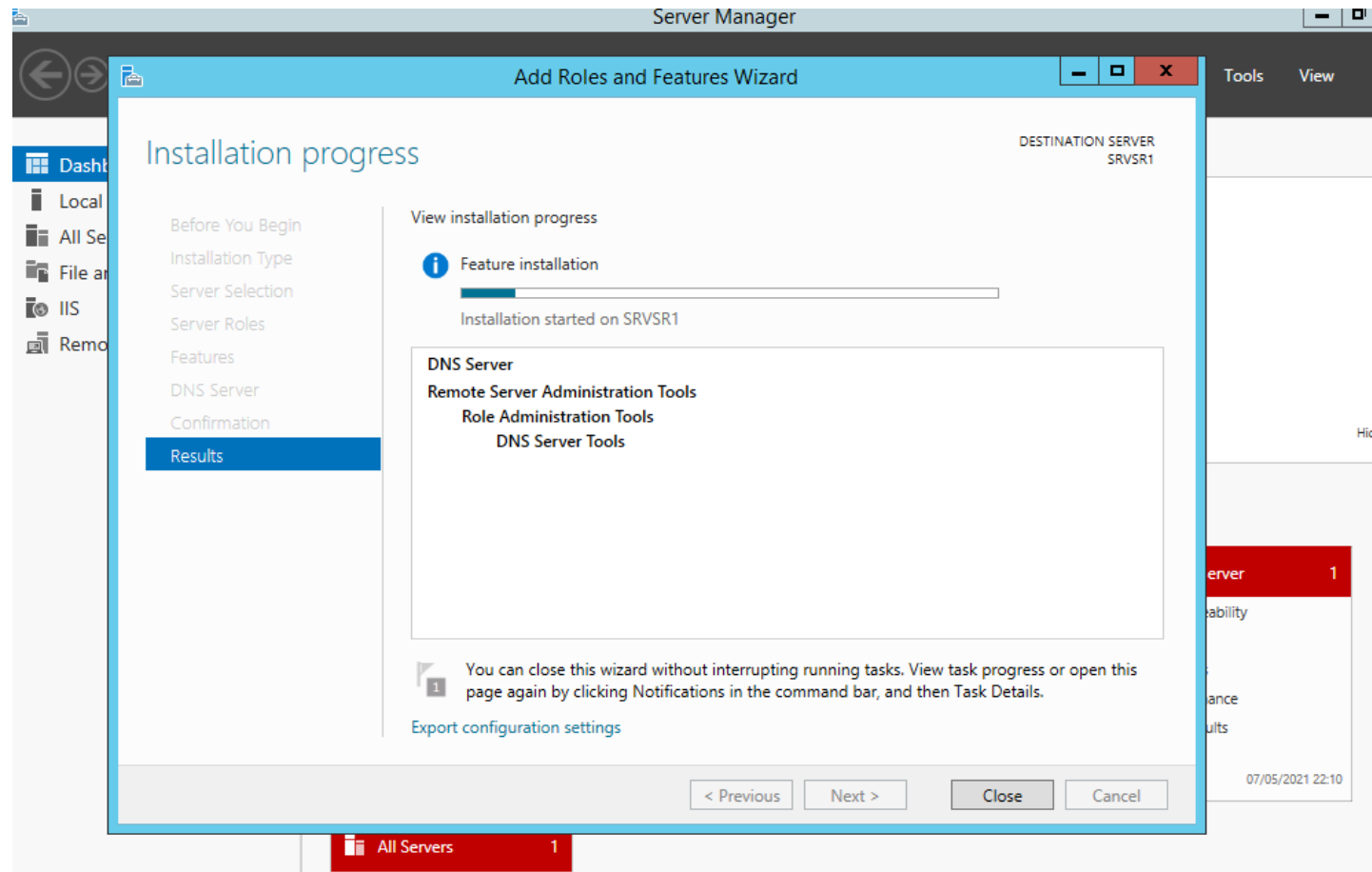
- server
- ability
- ance
- lts

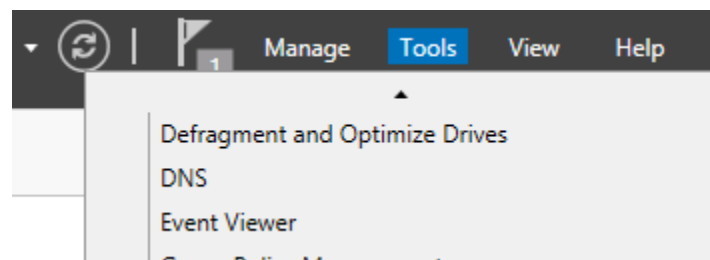
07.

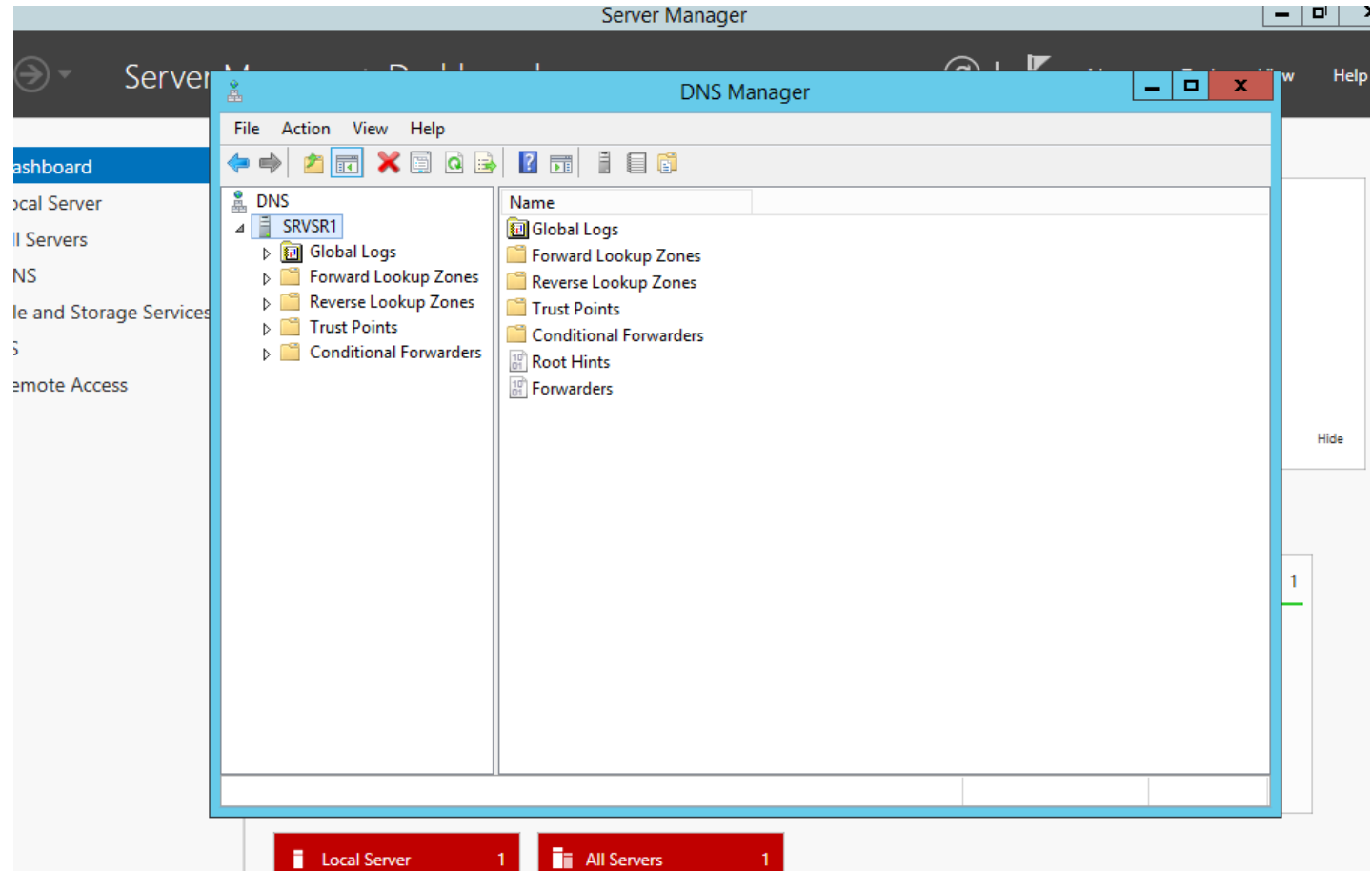


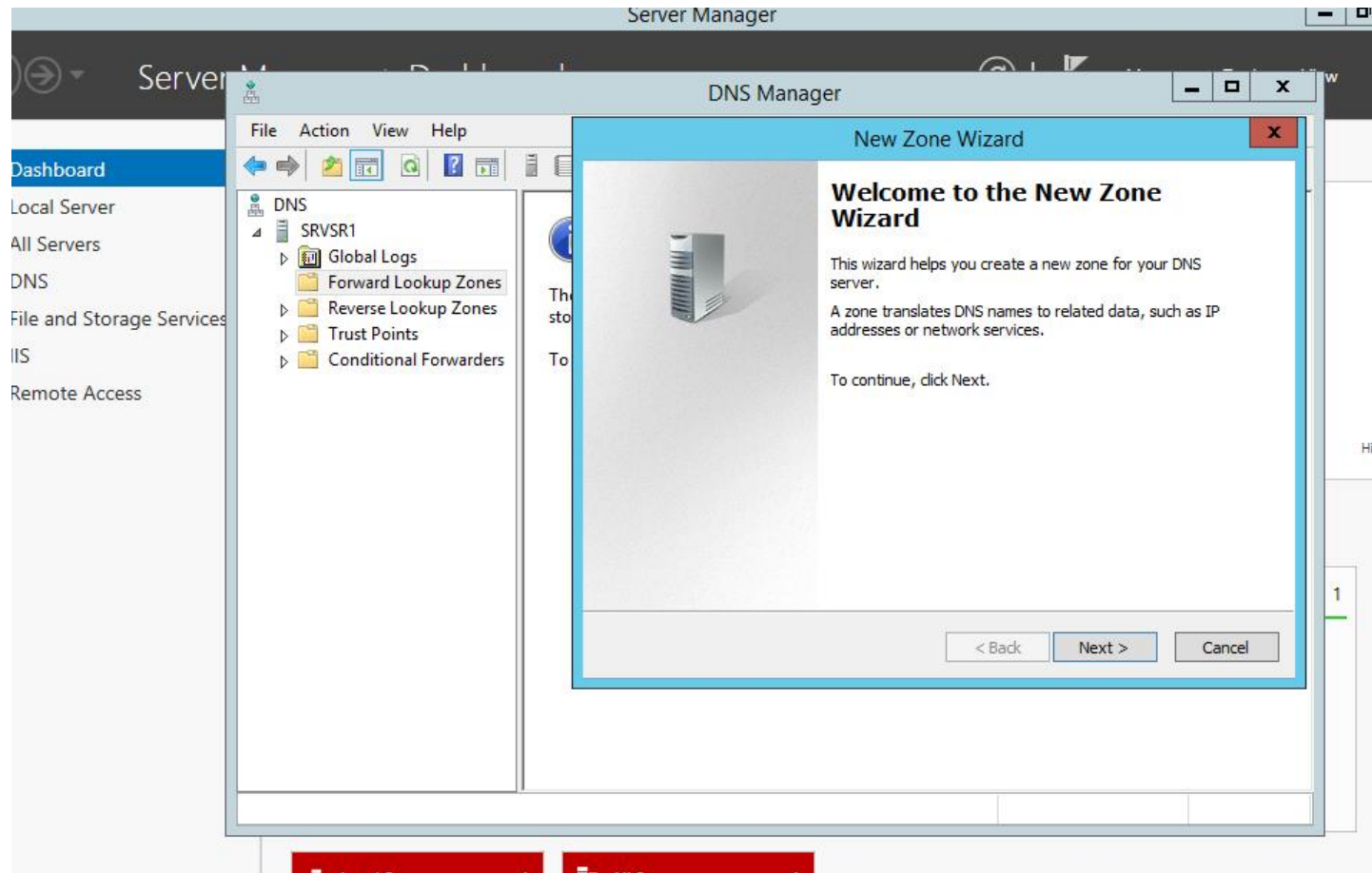


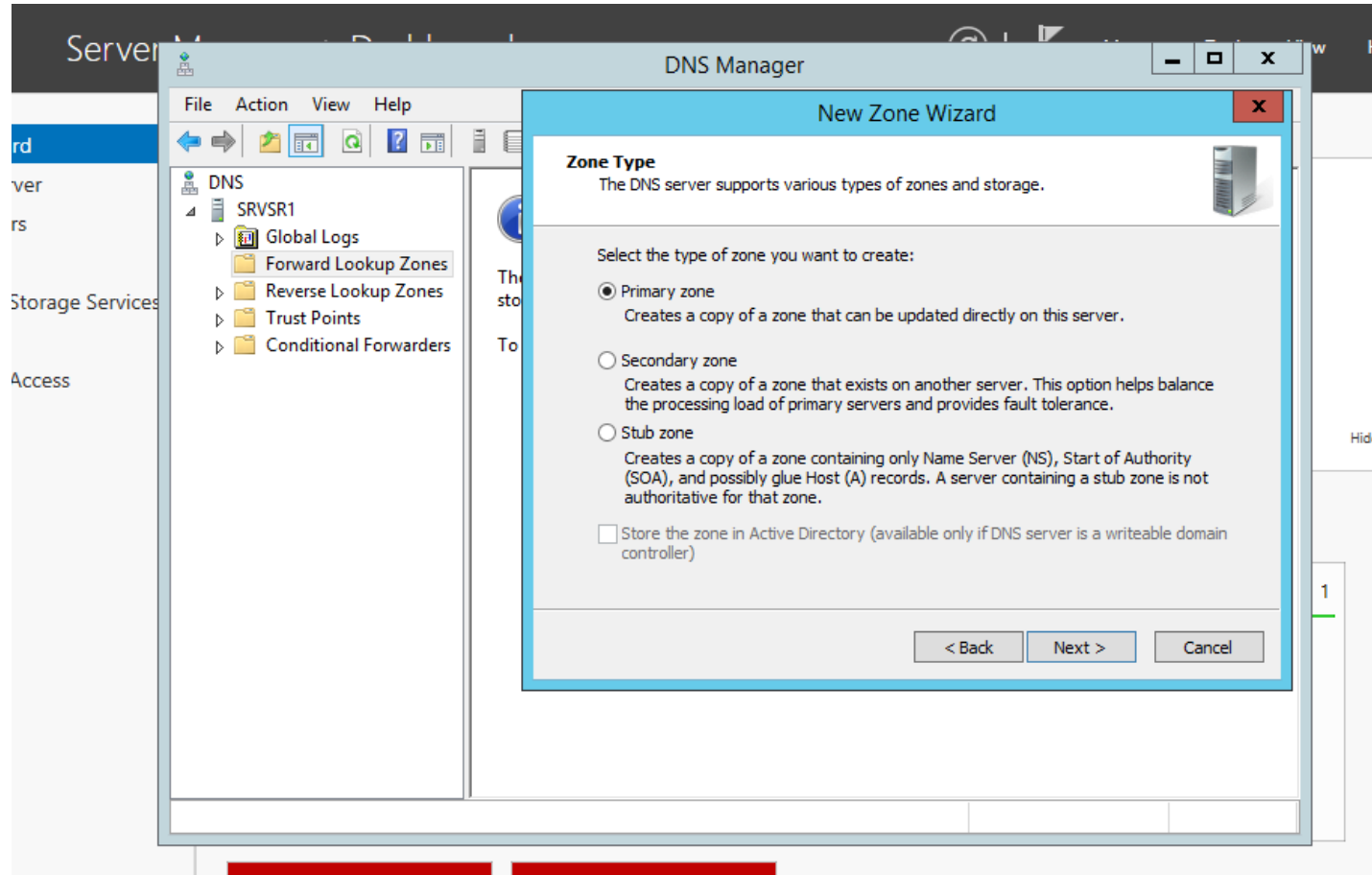


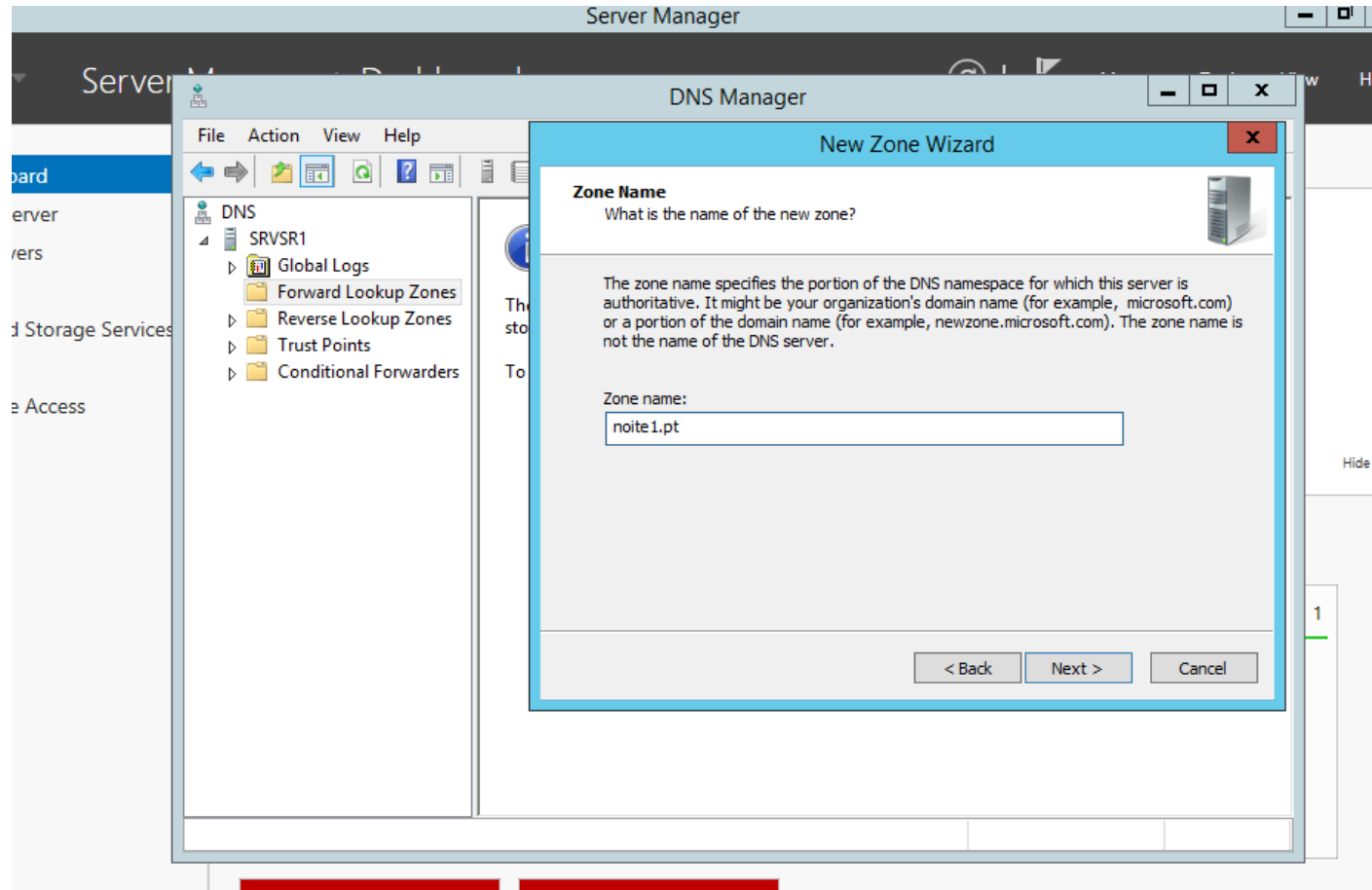




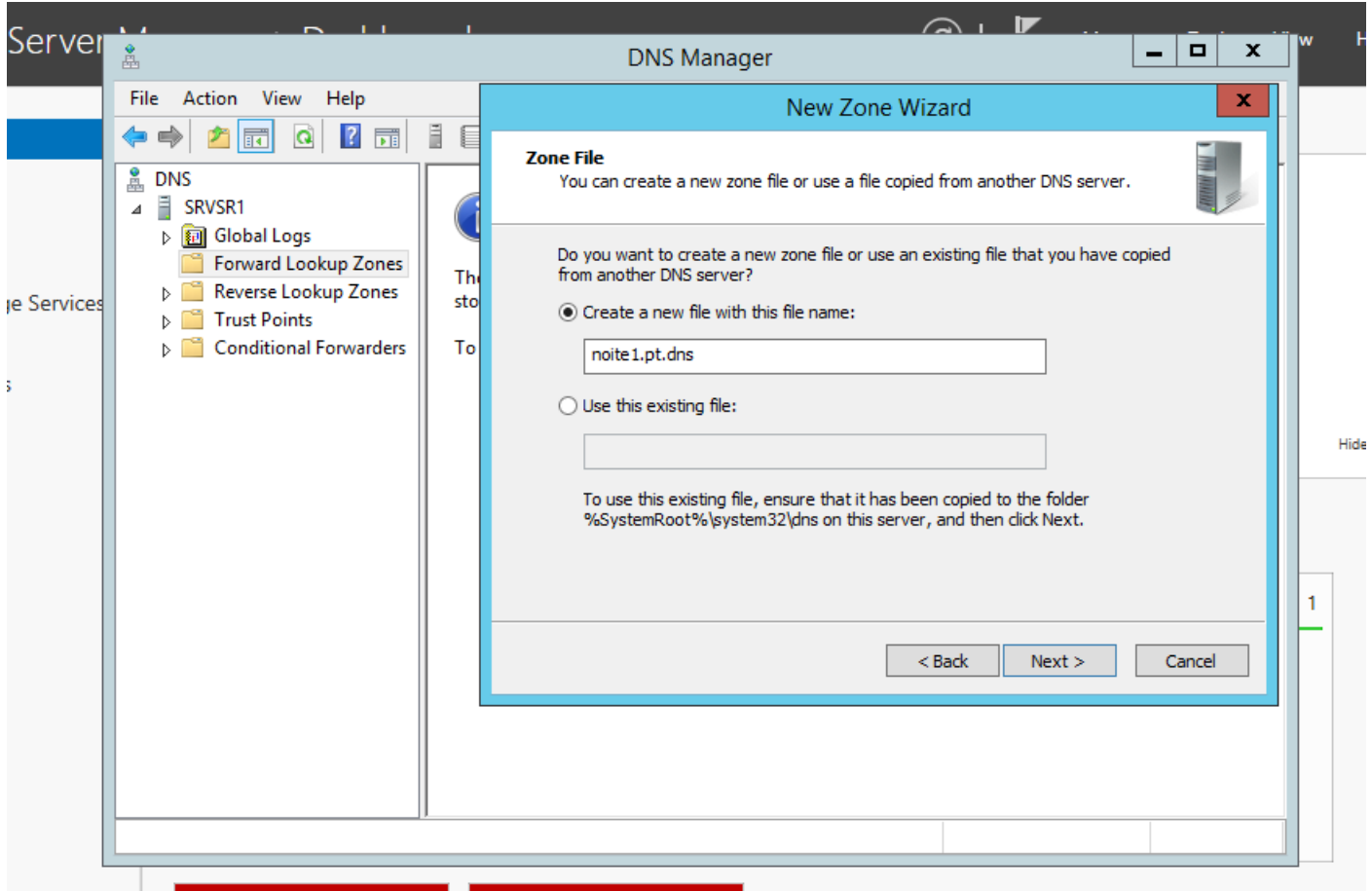


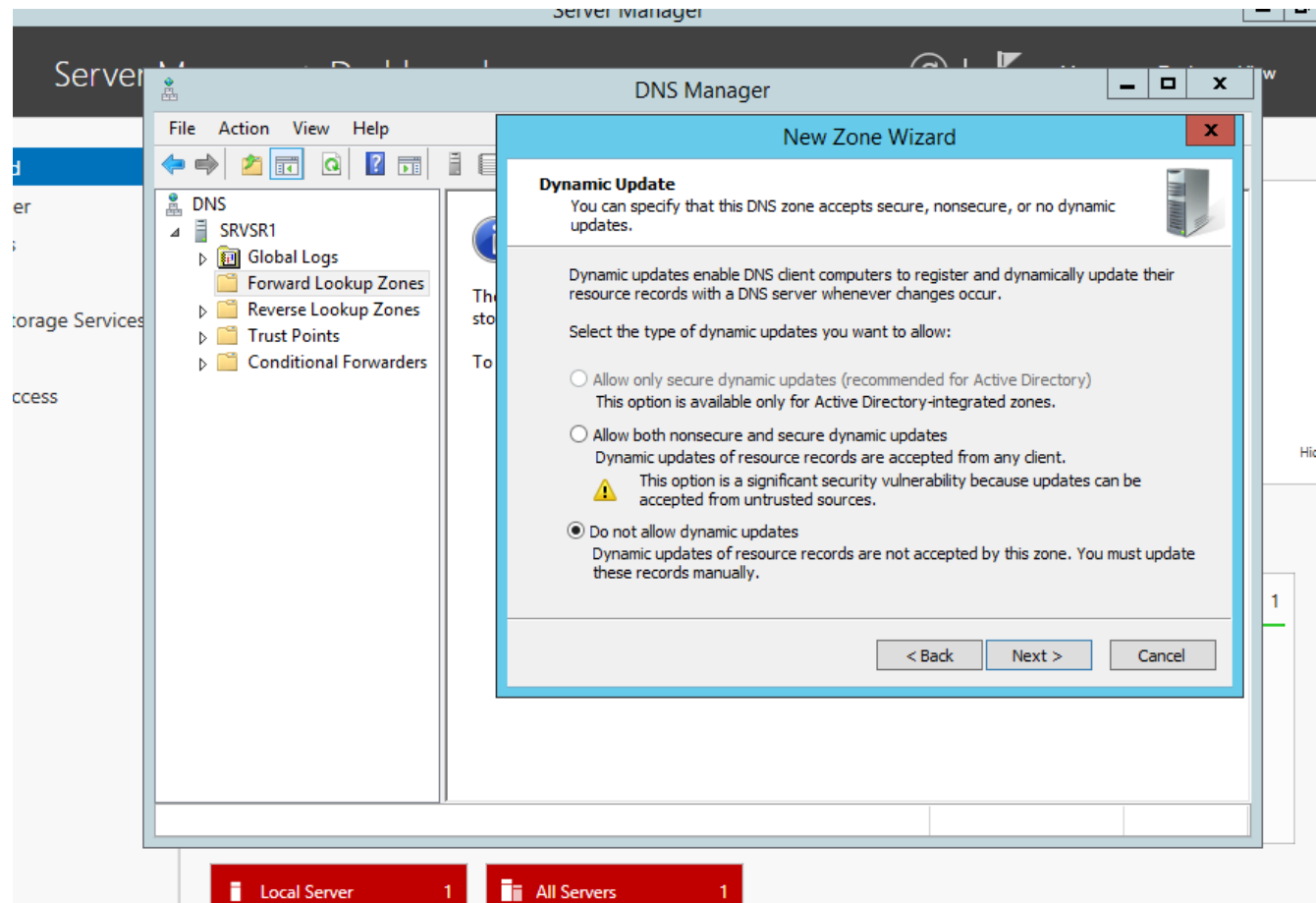


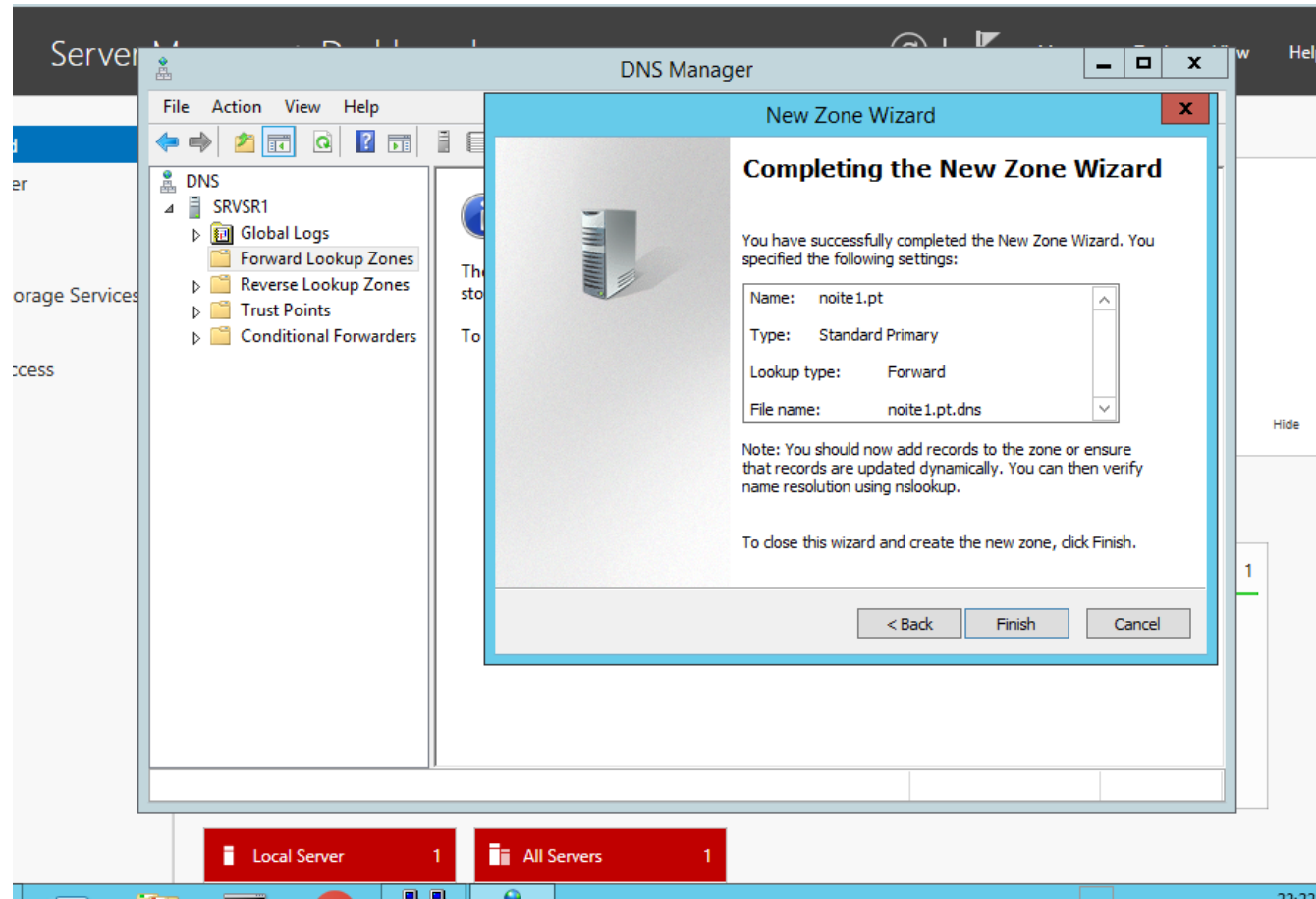


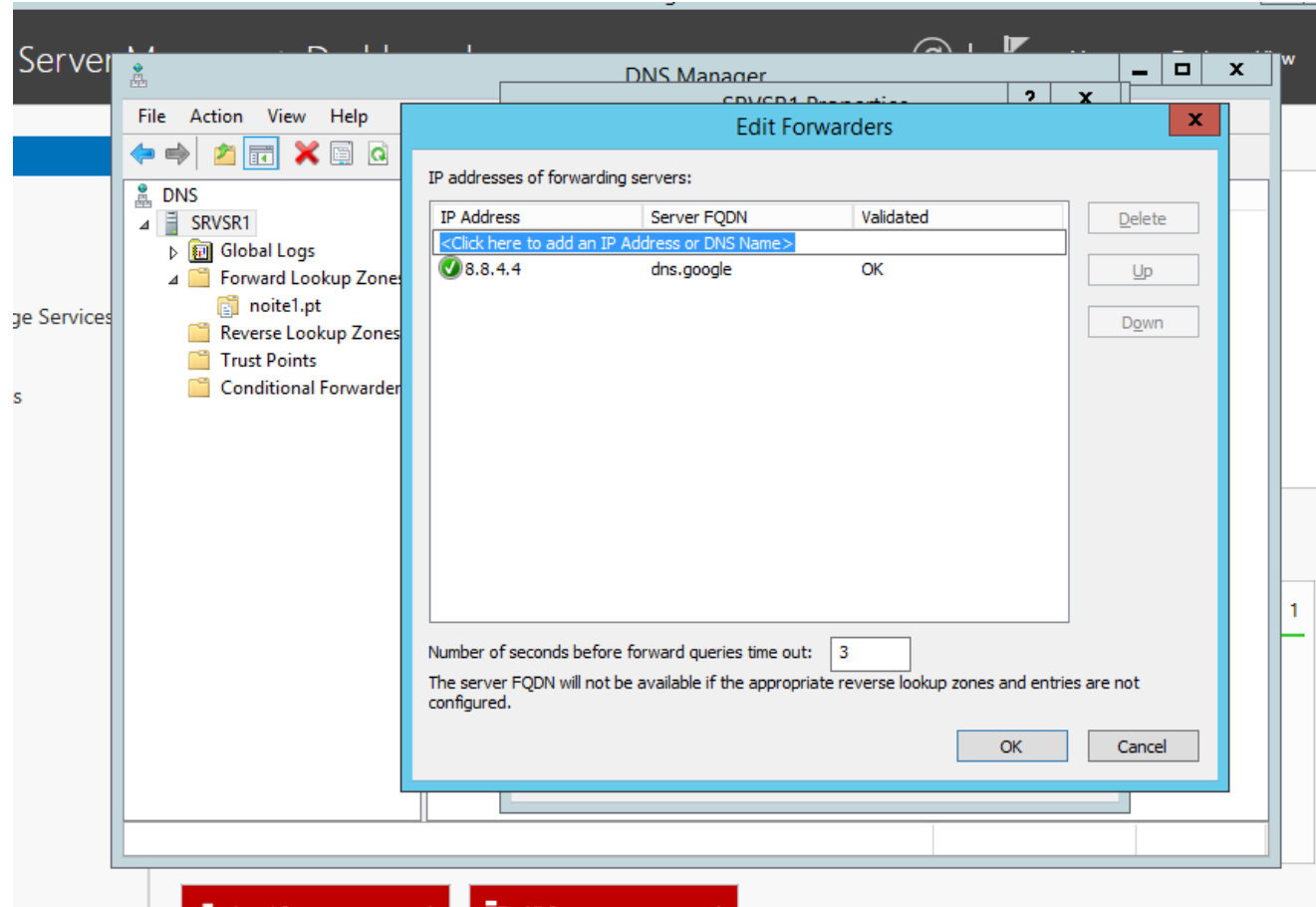


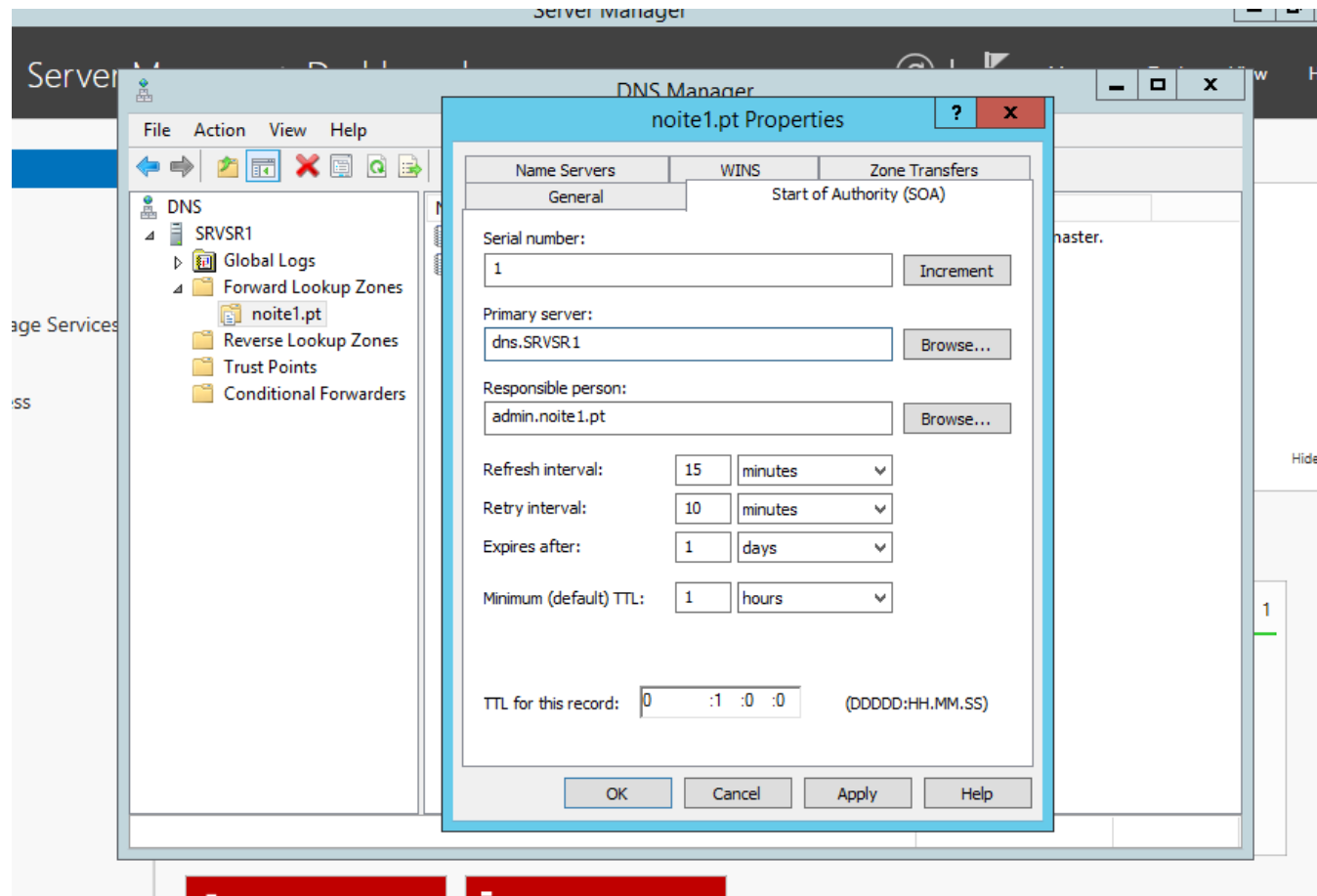


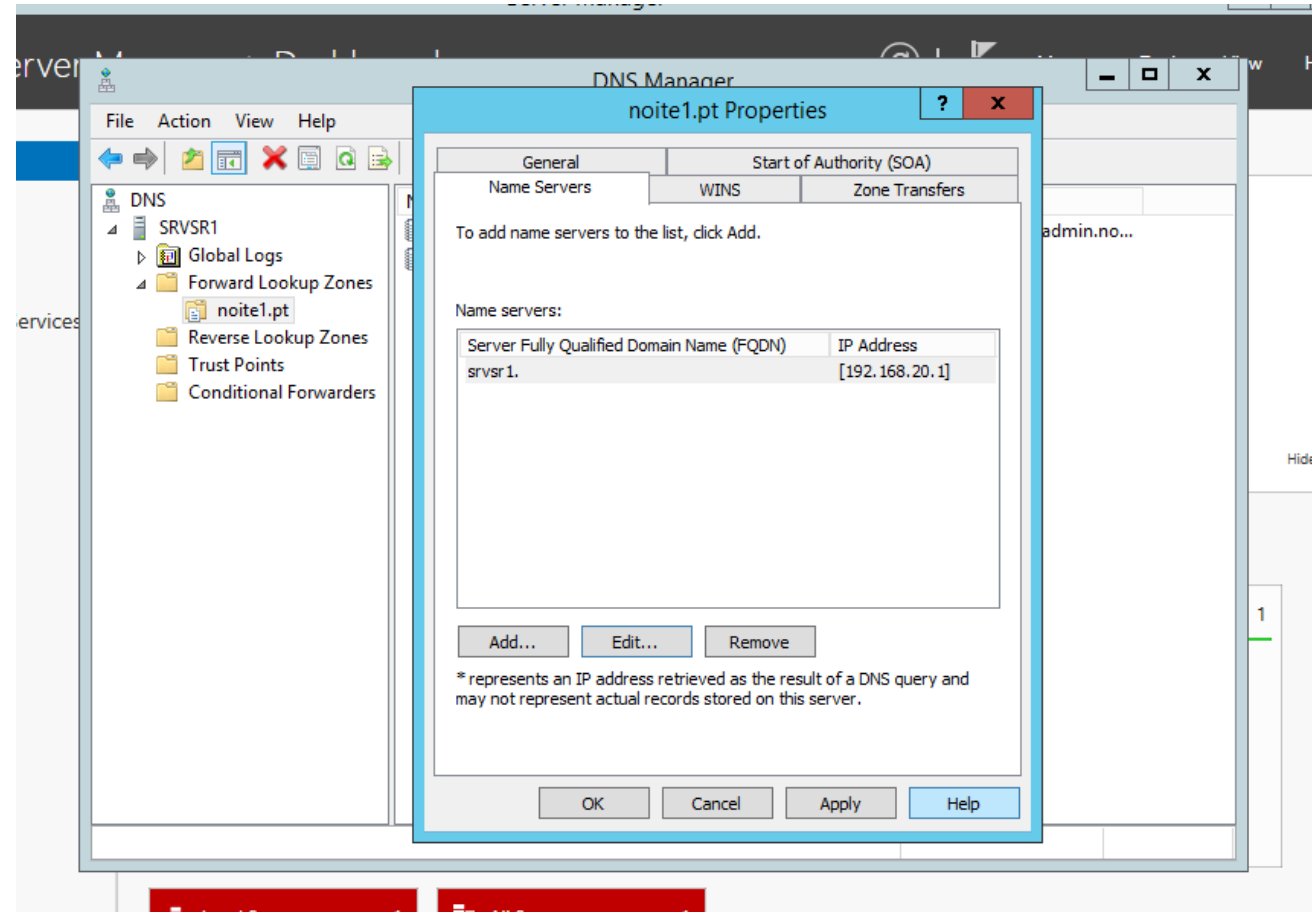


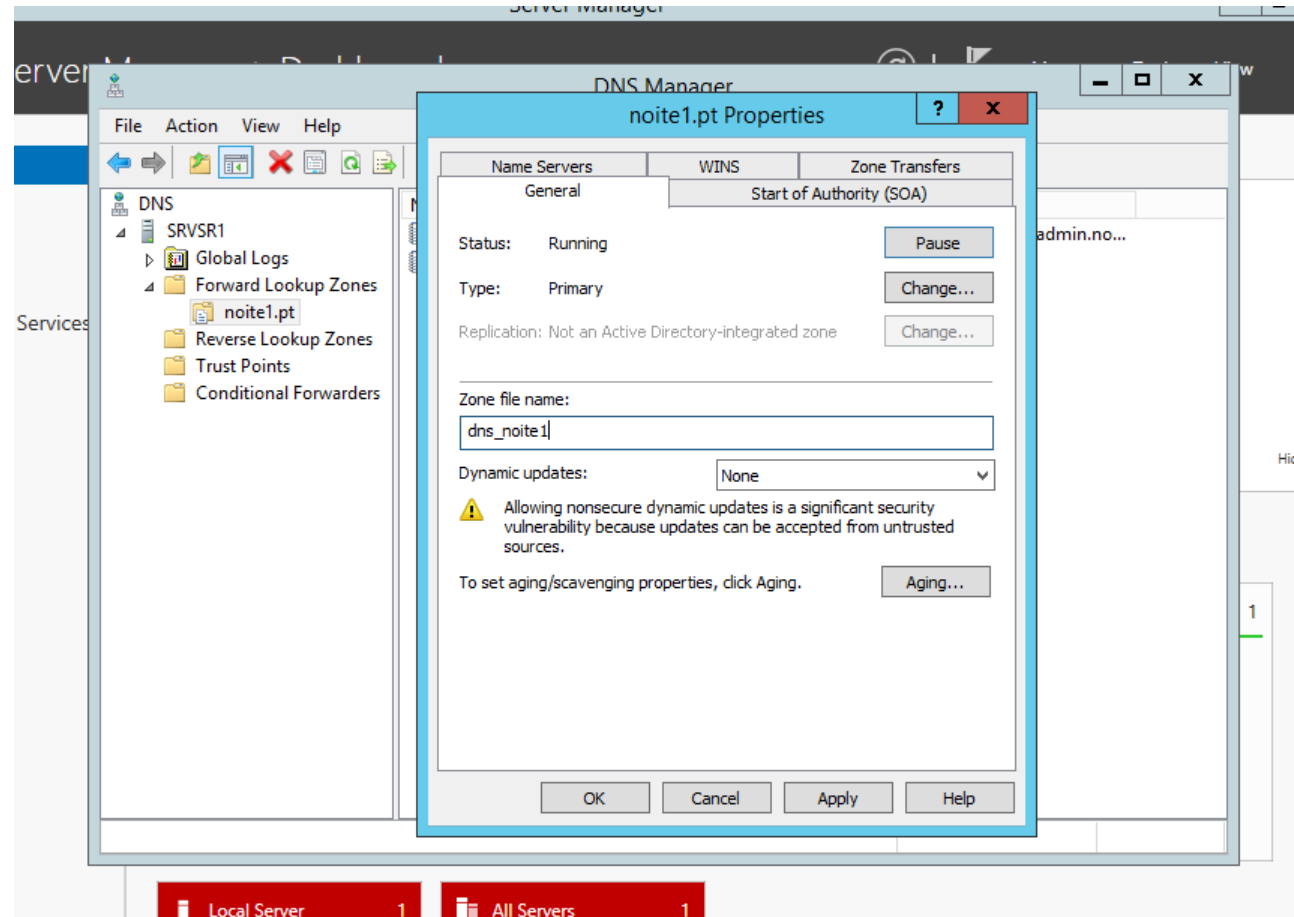


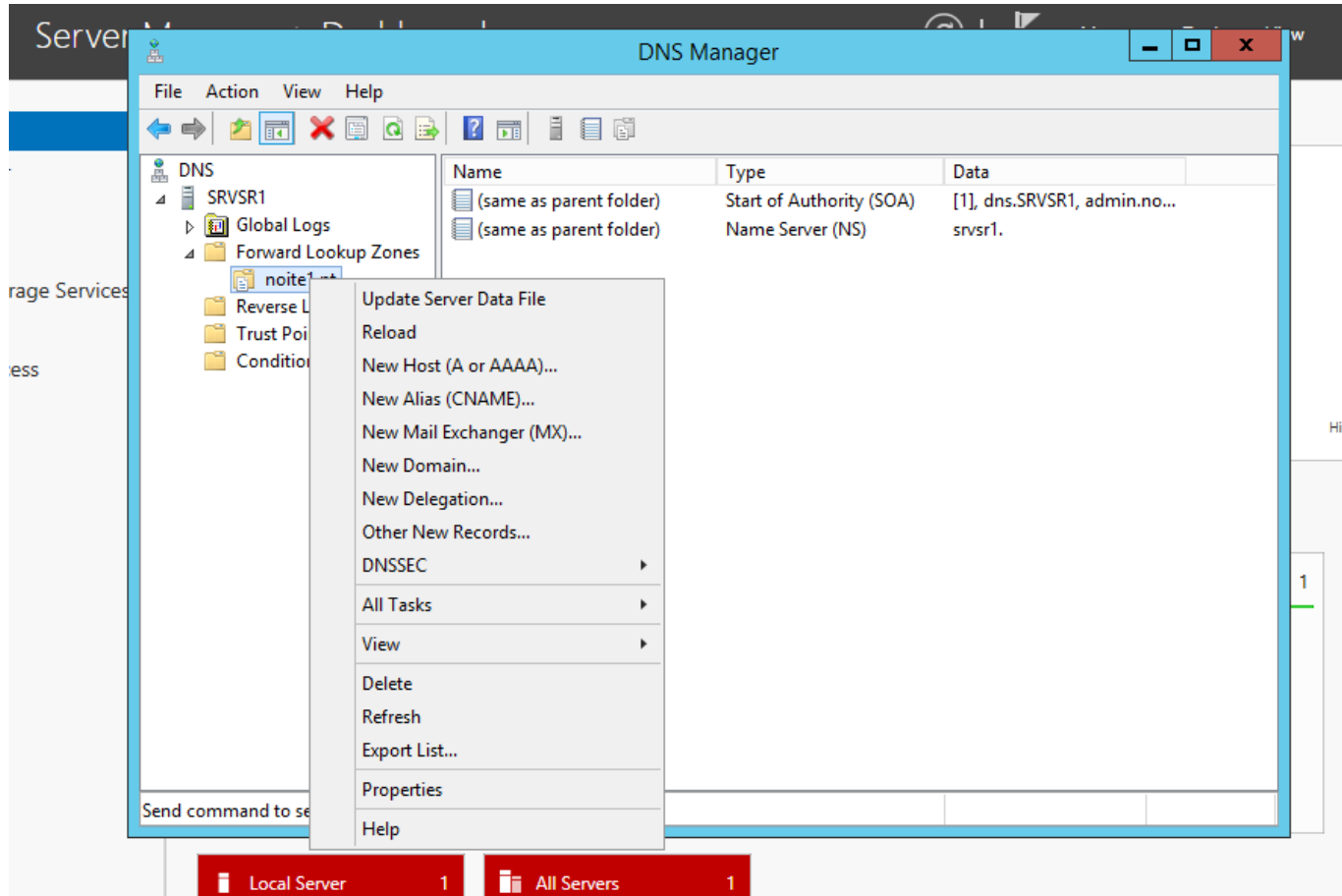






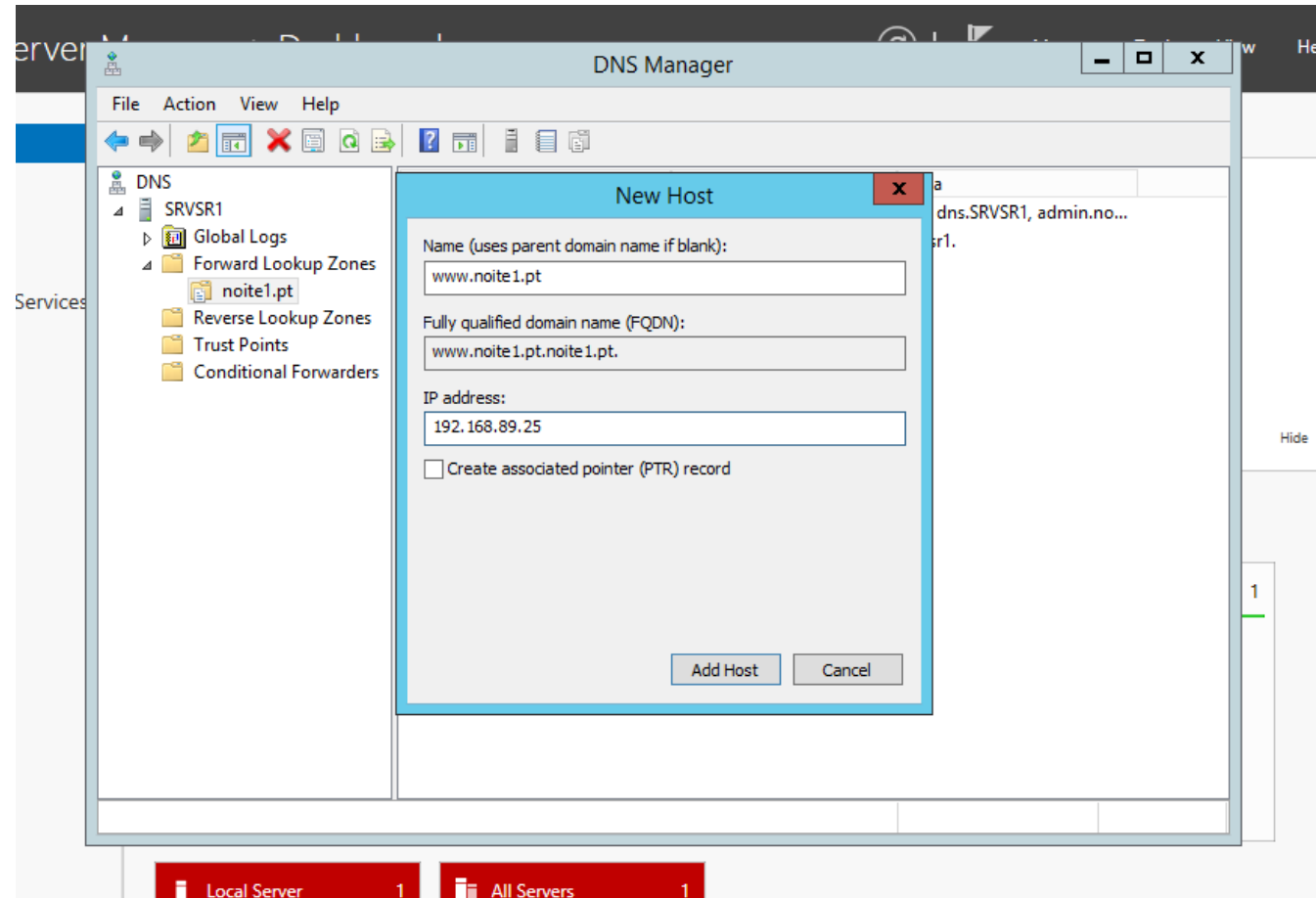


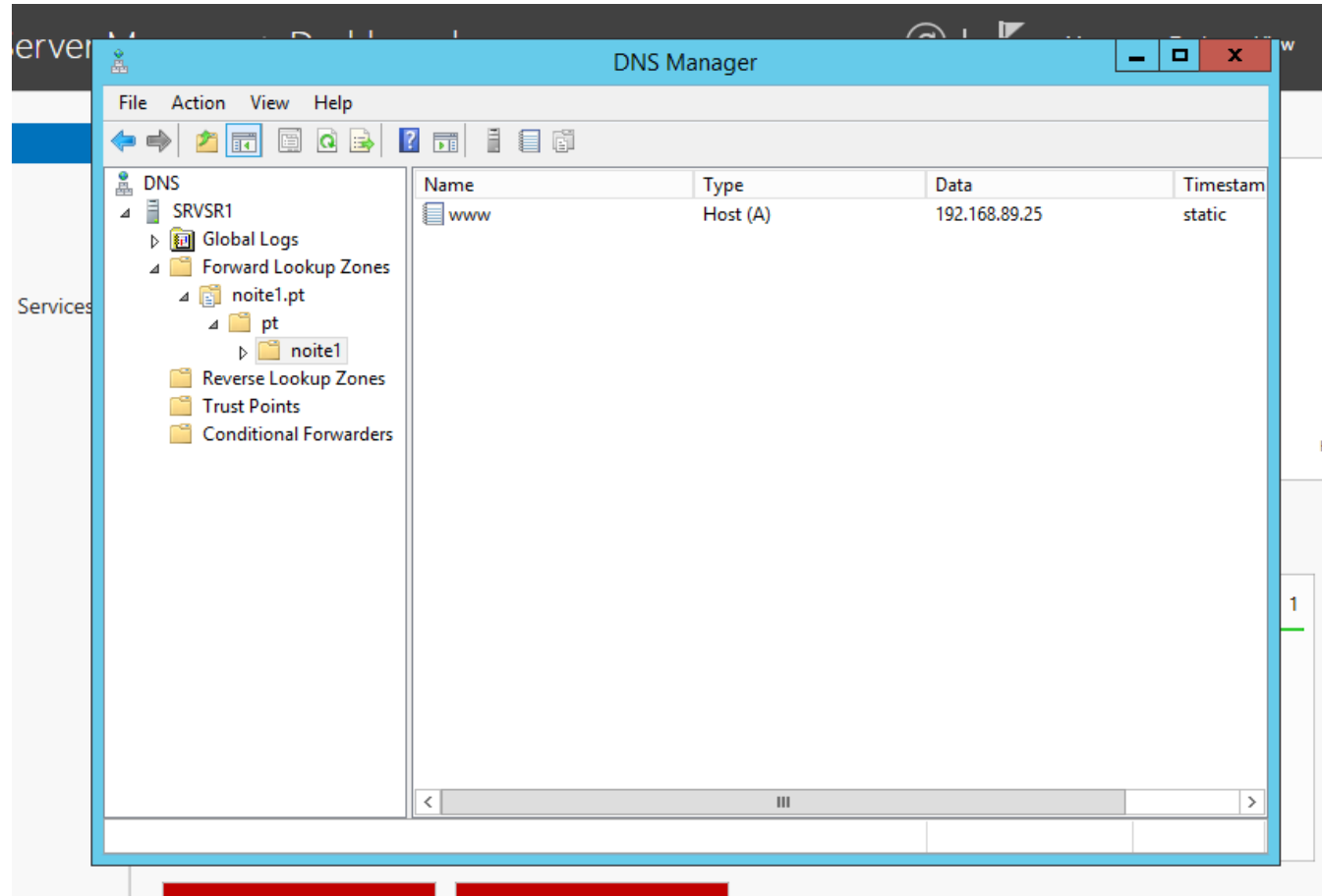


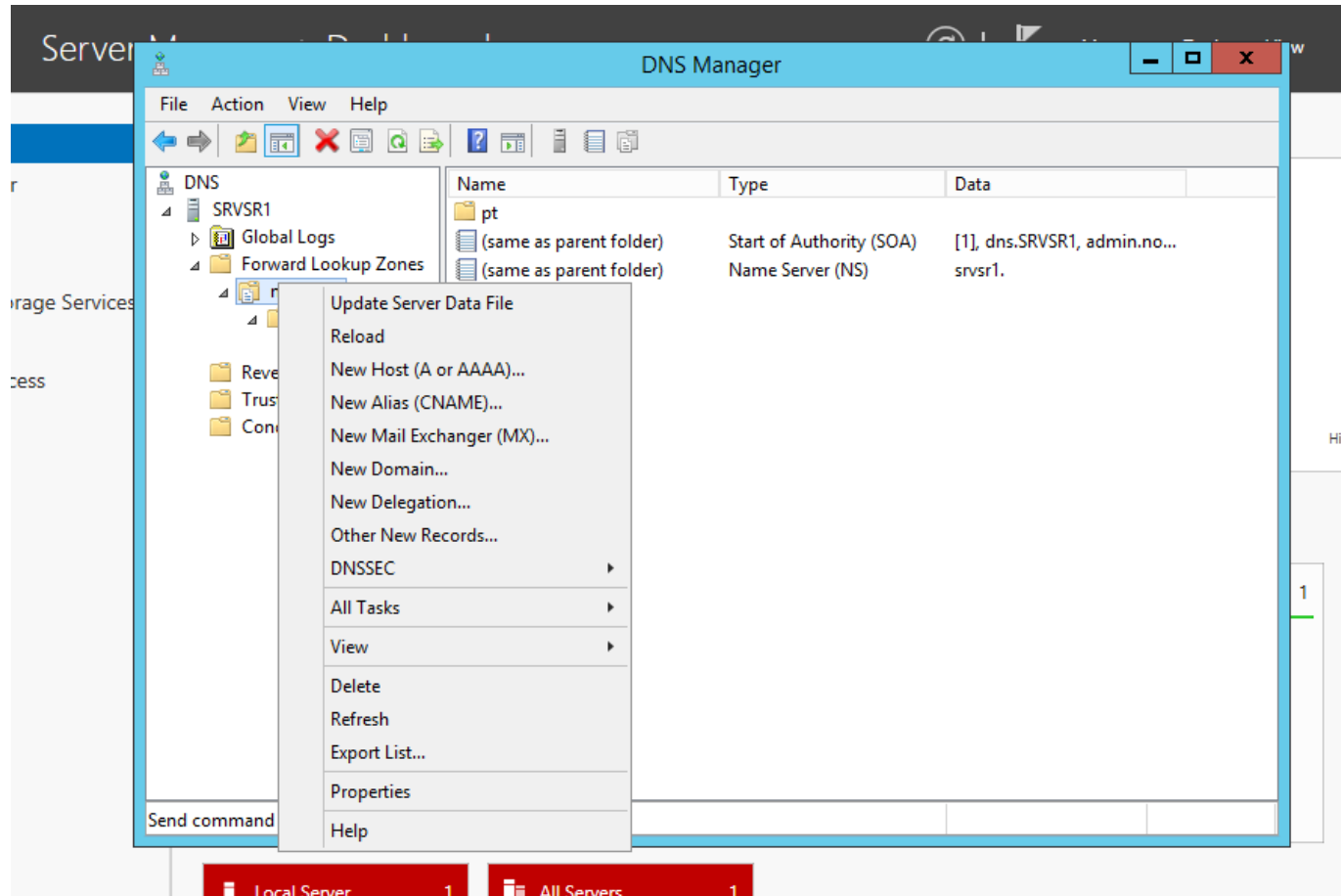


->NEW HOST (A OR AAA)









-> NEW ALIAS (CNAME)

DNS Manager

Help

New Resource Record

Alias (CNAME)

Alias name (uses parent domain if left blank):

webmail

Fully qualified domain name (FQDN):

webmail.noite1.pt.

Fully qualified domain name (FQDN) for target host:

webmail.noite1.pt

Browse...

OK Cancel

s

okup Zon

pt

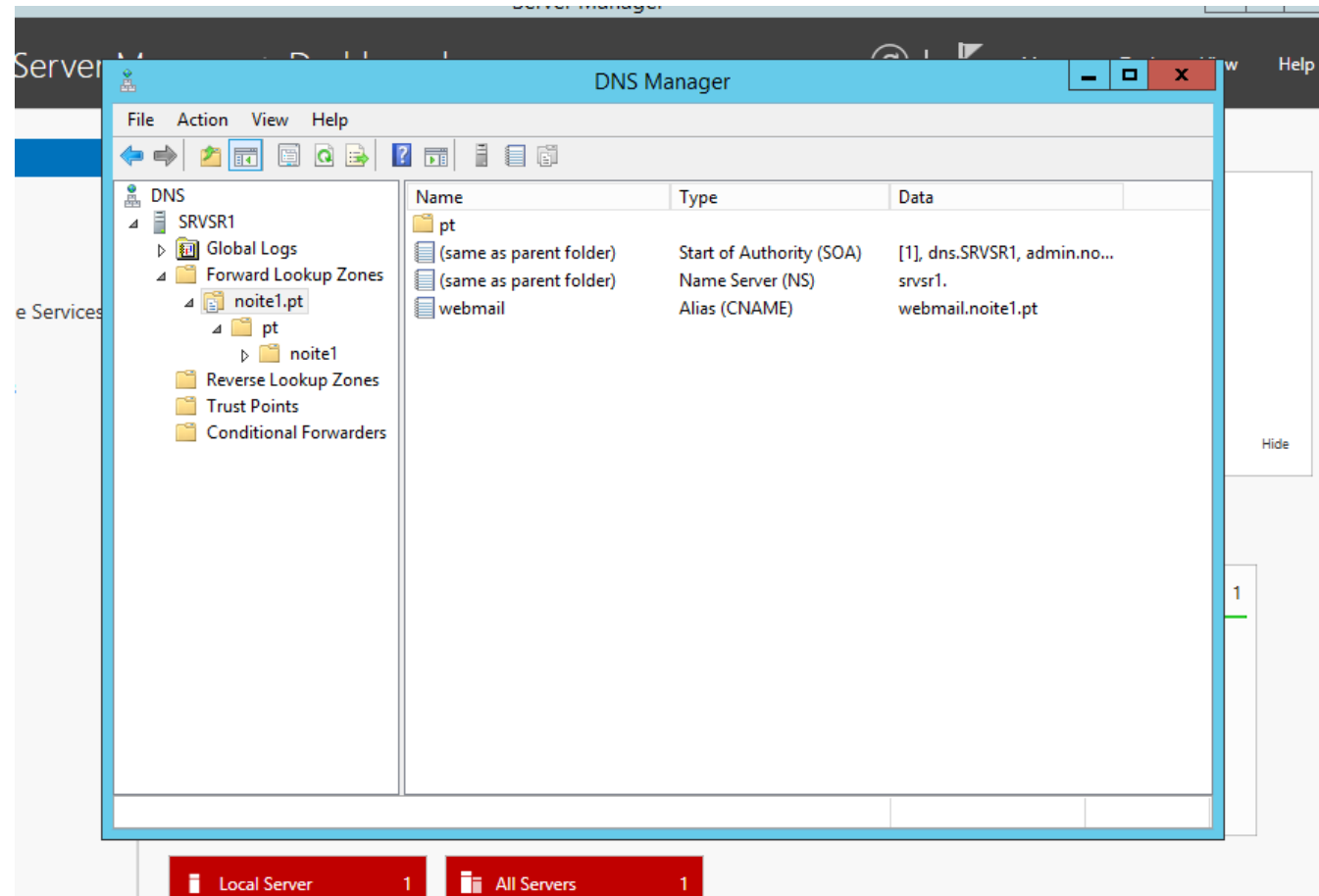
noite1

okup Zon

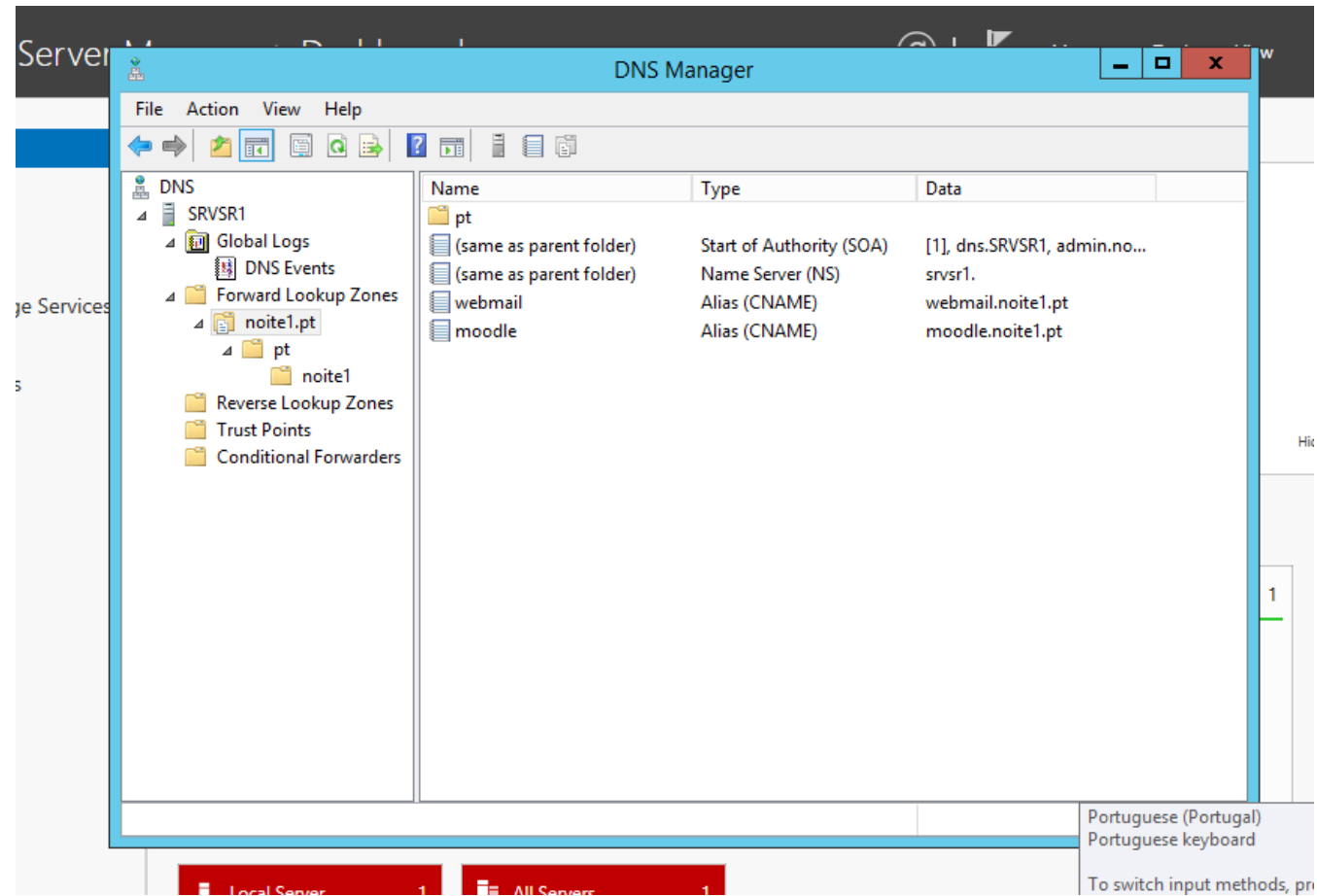
s

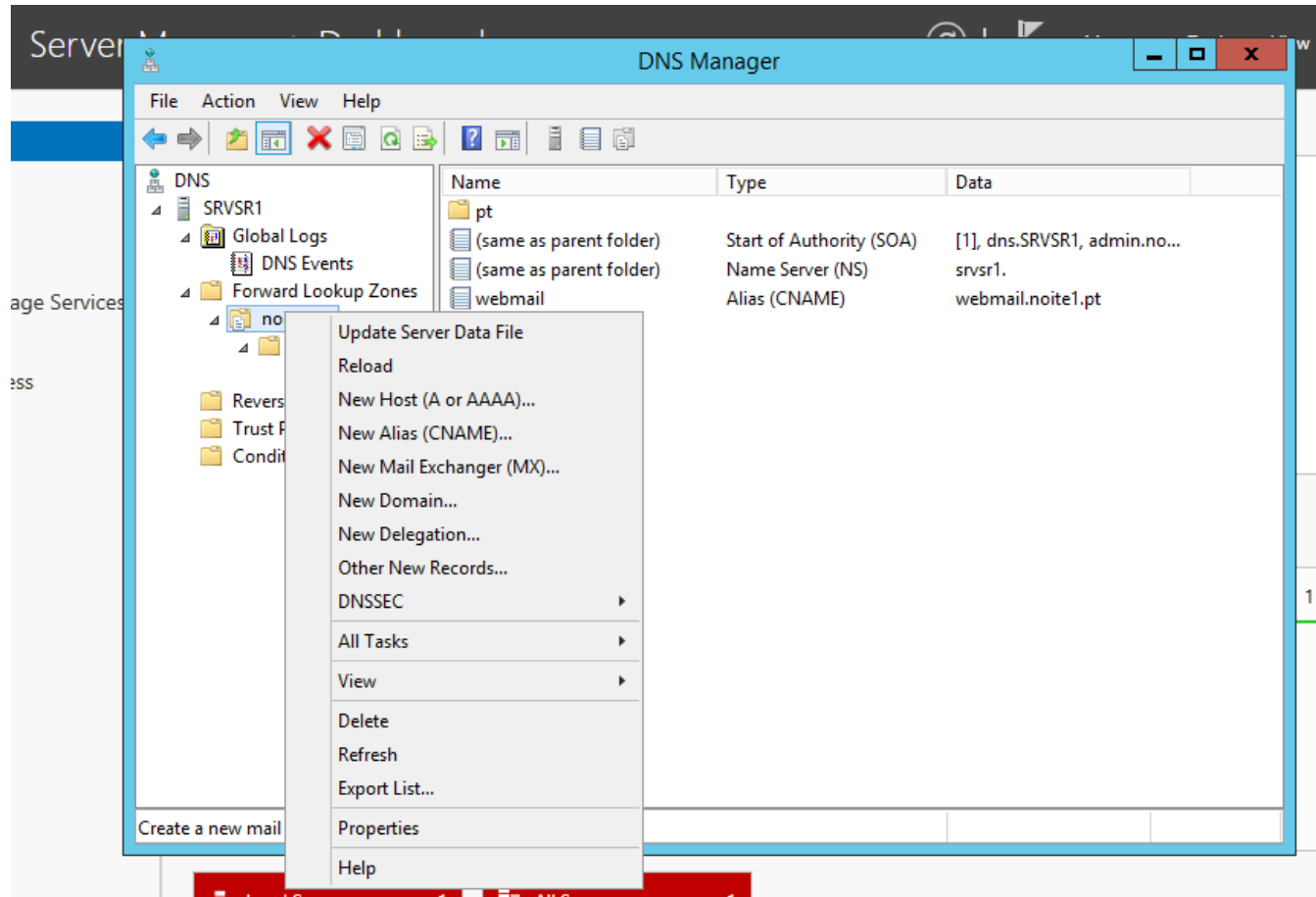
il Forward

SRVSR1, ac

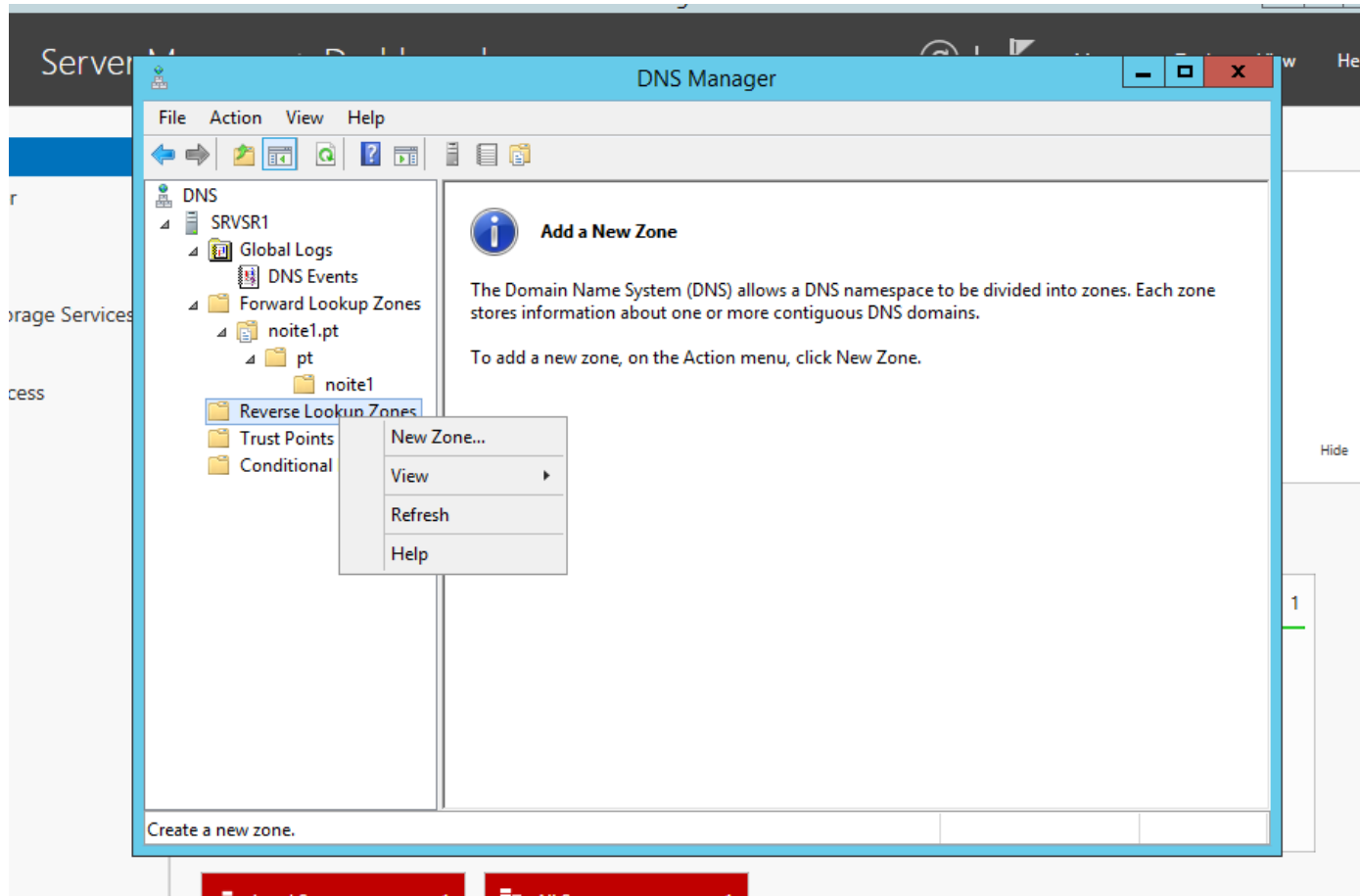


-> MOODLE

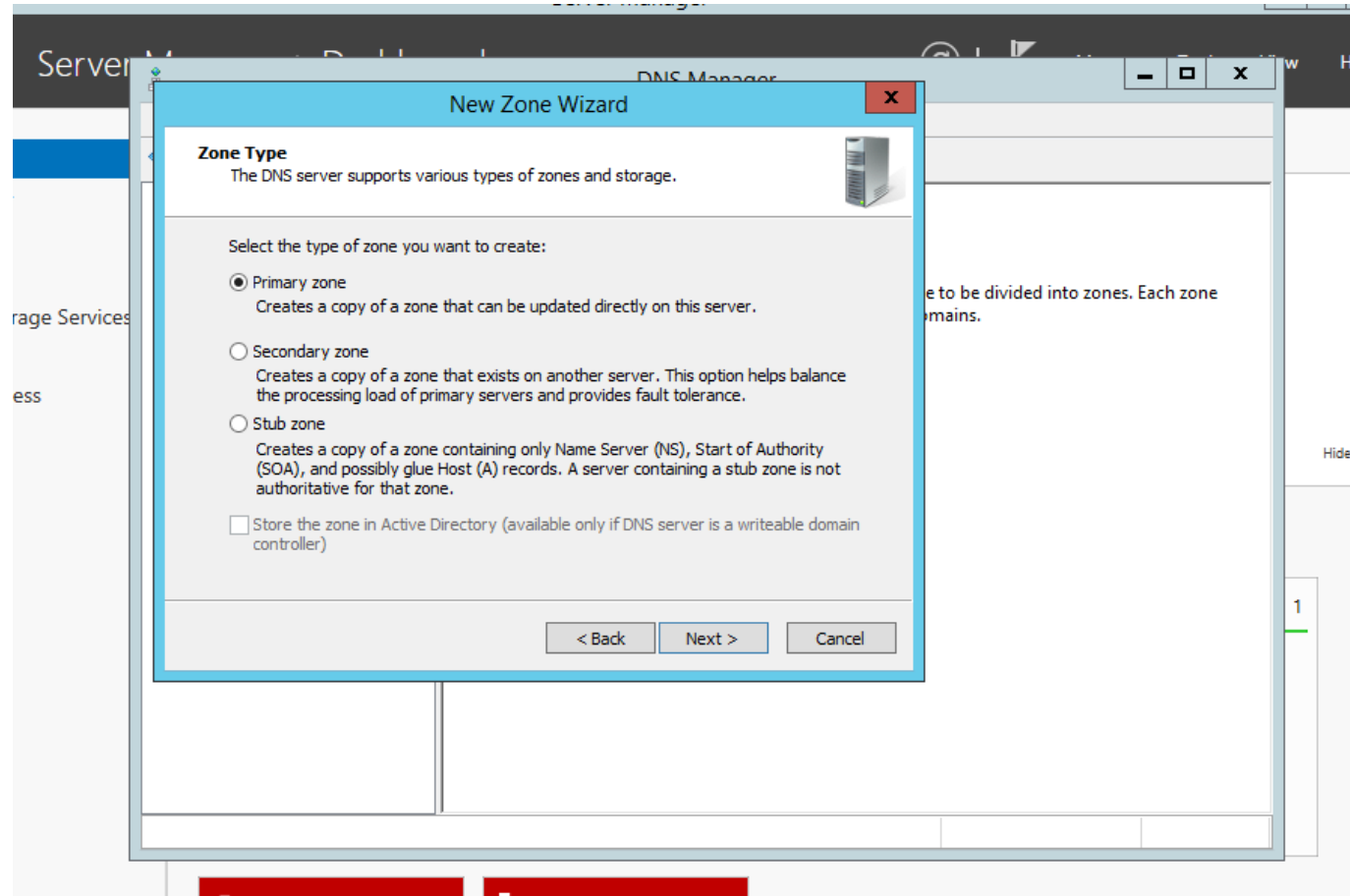


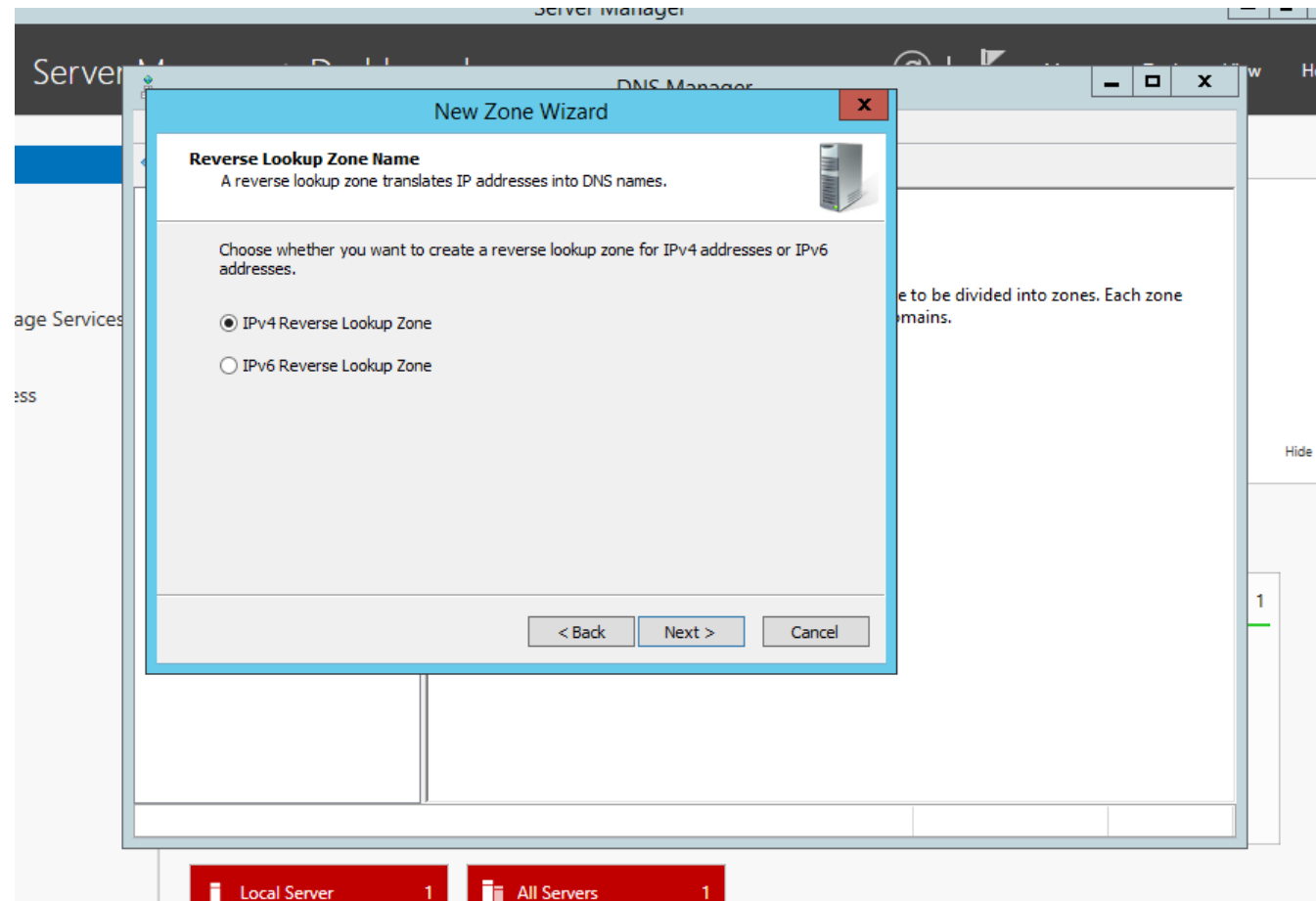


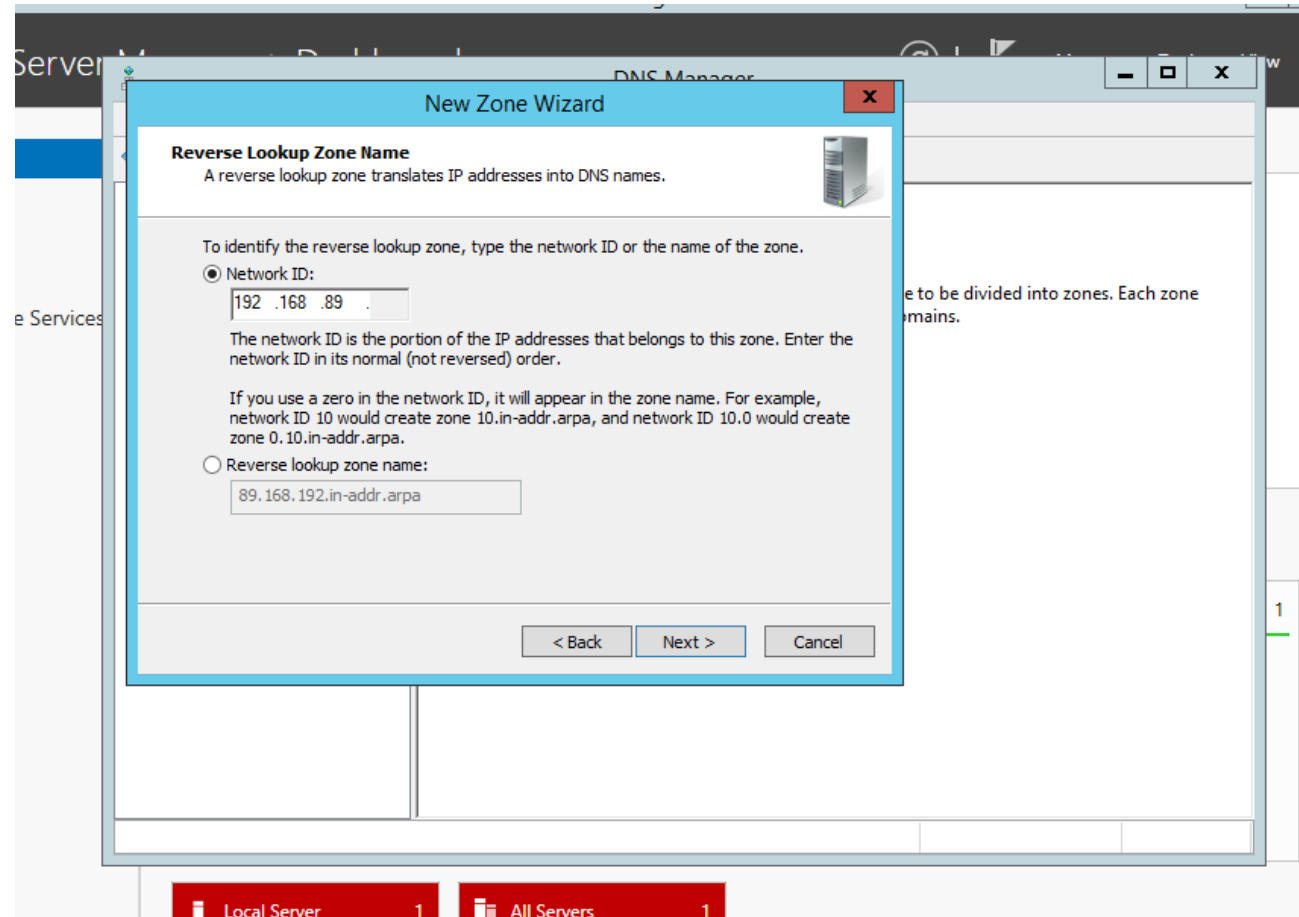
-> NEW MAIL EXCHANGER (MX)

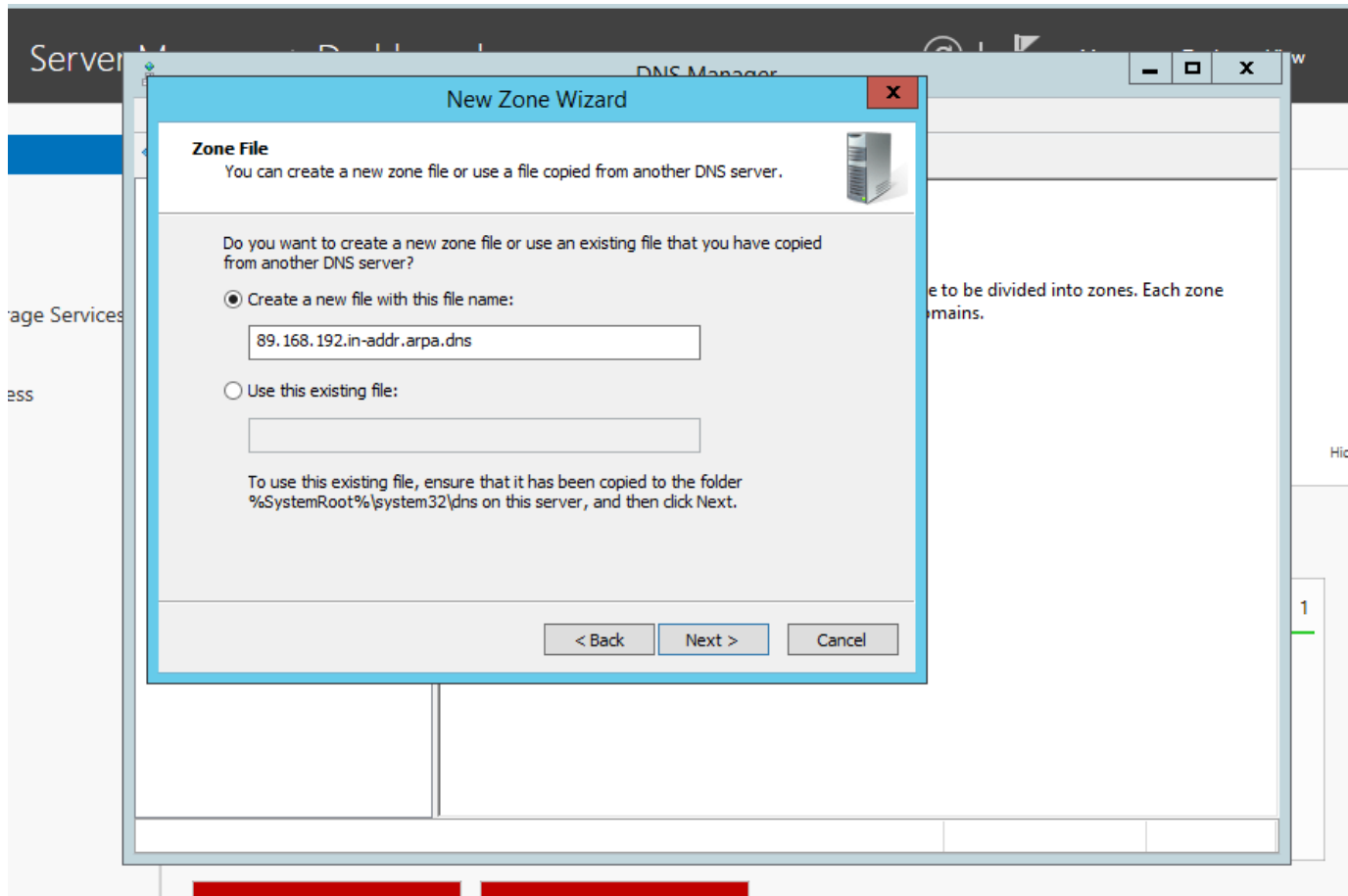


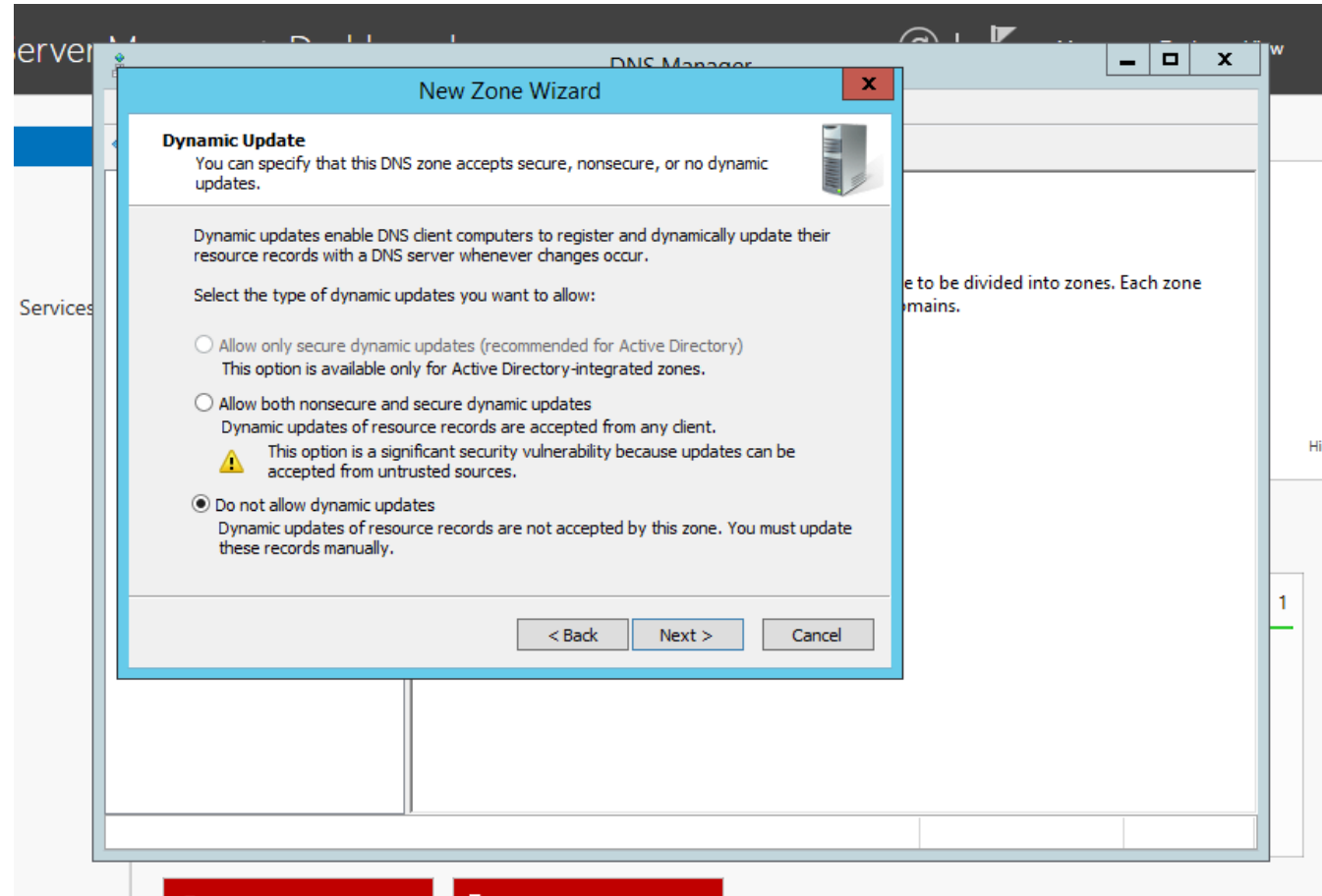


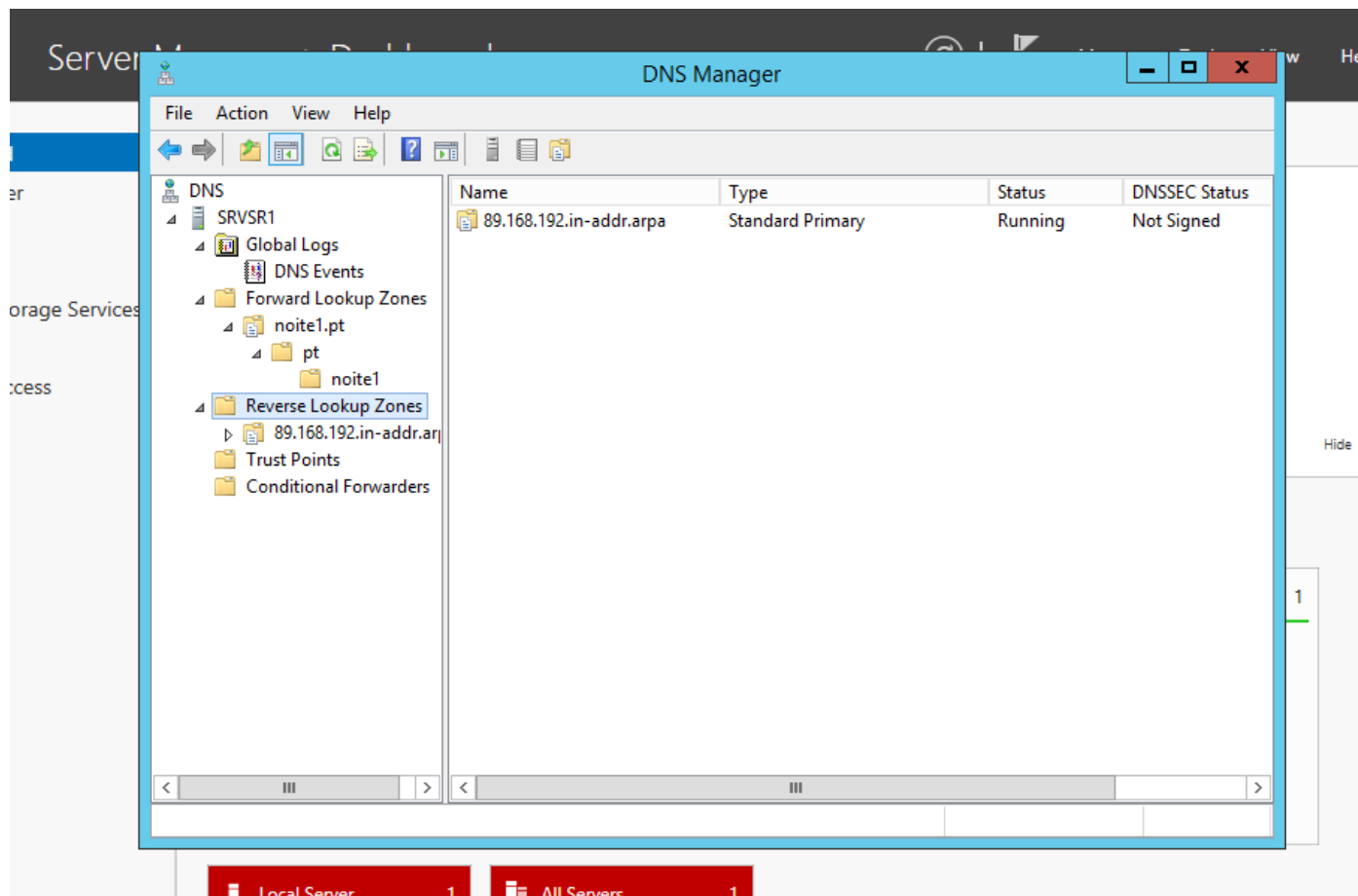




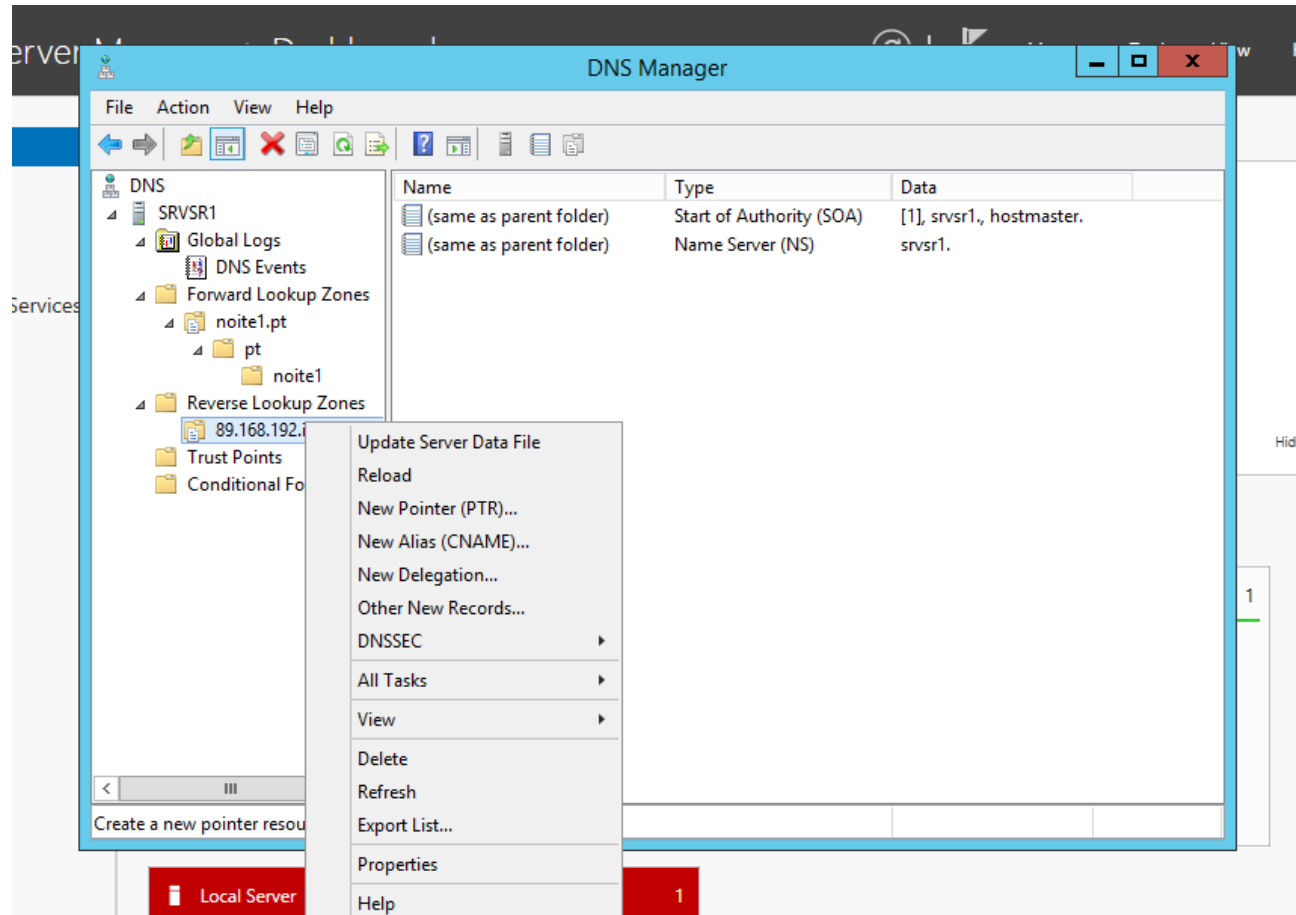


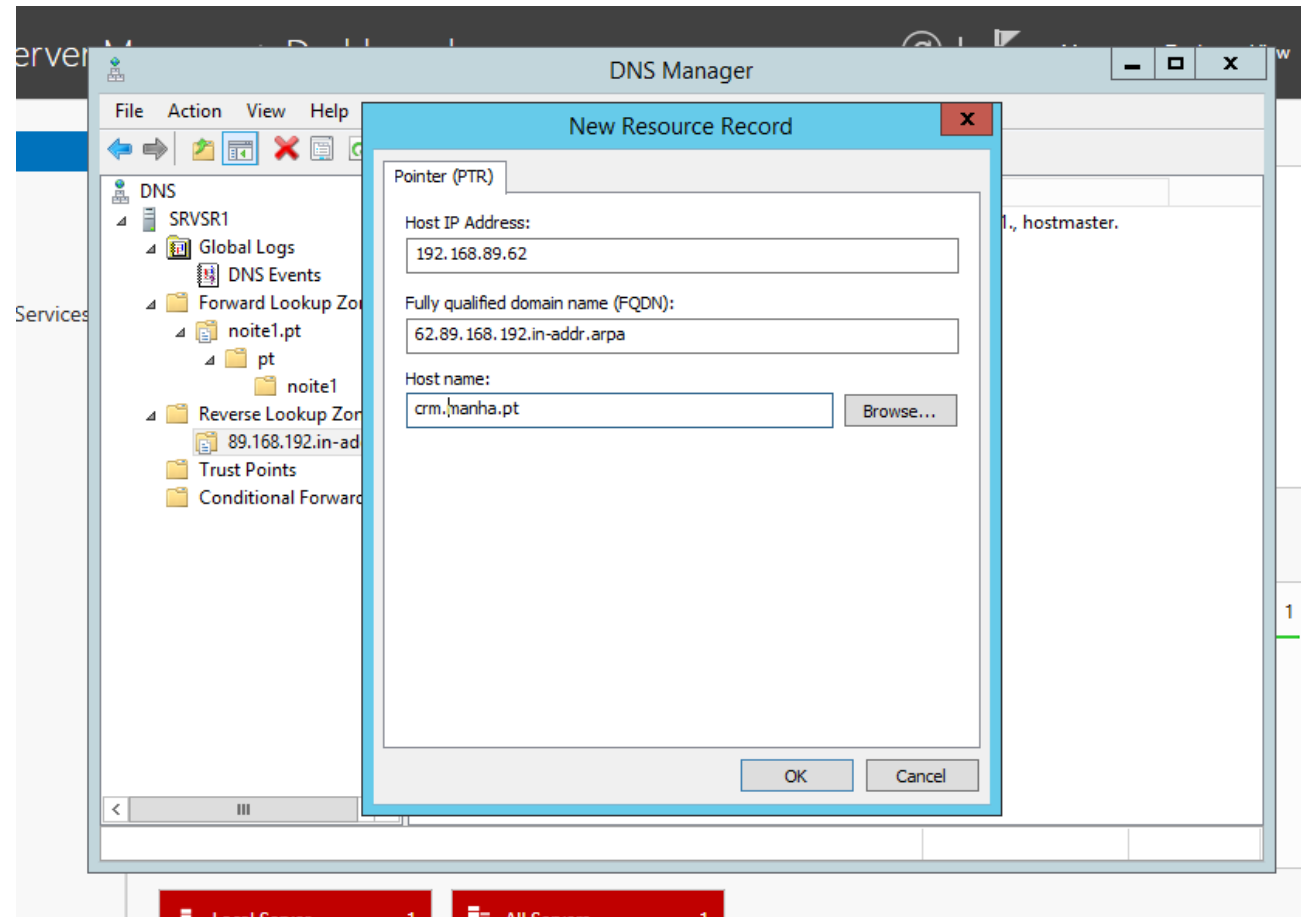






->NEW POINTER (PTR)







Server Manager

DNS Manager

File Action View Help

DNS

SRVSR1

Global Logs

DNS Events

Forward Lookup Zones

noite1.pt

pt

noite1

Reverse Lookup Zones

89.168.192.in-addr.arpa

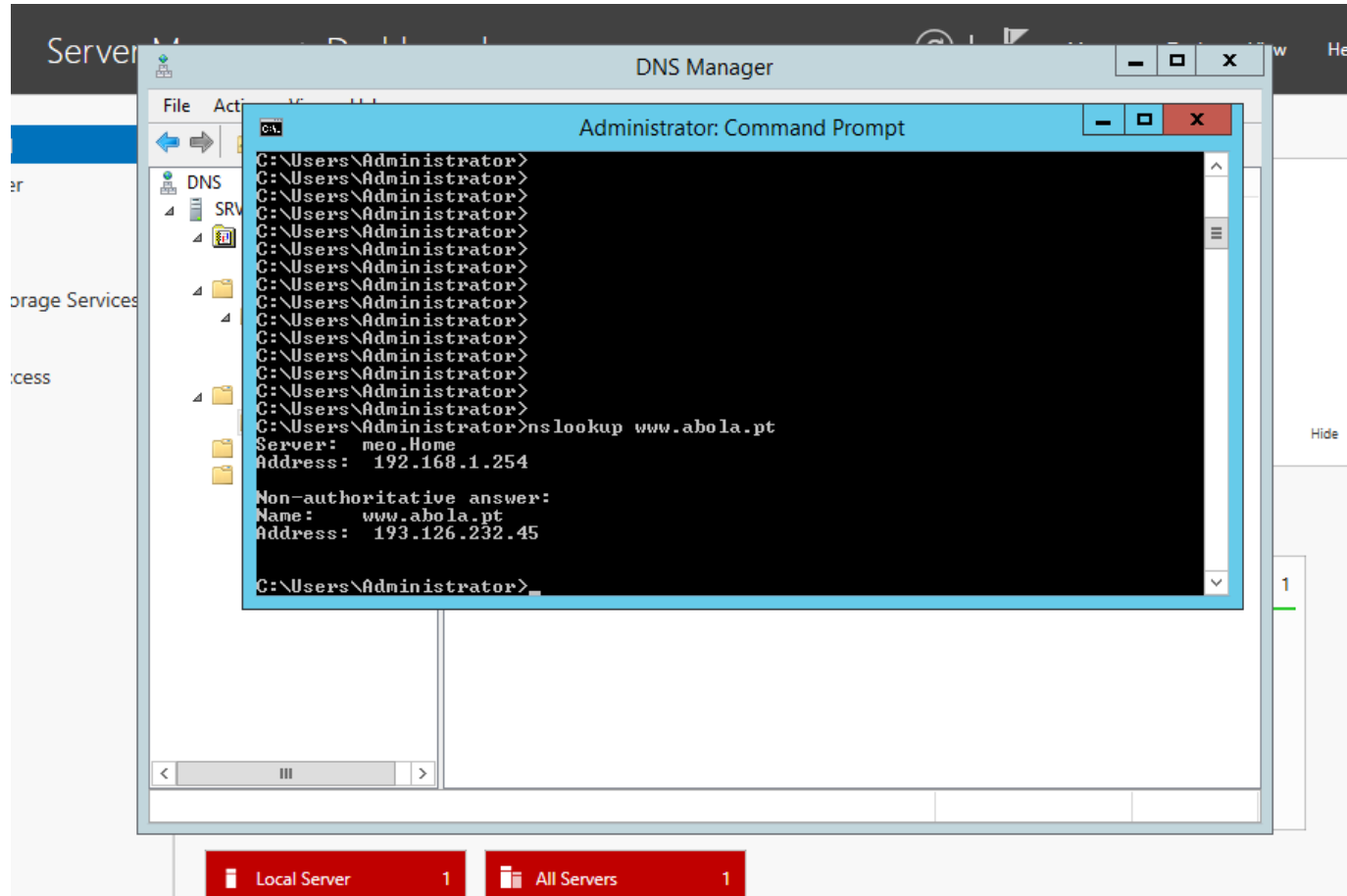
Trust Points

Conditional Forwarders

Name	Type	Data
(same as parent folder)	Start of Authority (SOA)	[1], srvsr1., hostmaster.
(same as parent folder)	Name Server (NS)	srvsr1.
192.168.89.62	Pointer (PTR)	crm.manha.pt

Local Server 1

All Servers 1









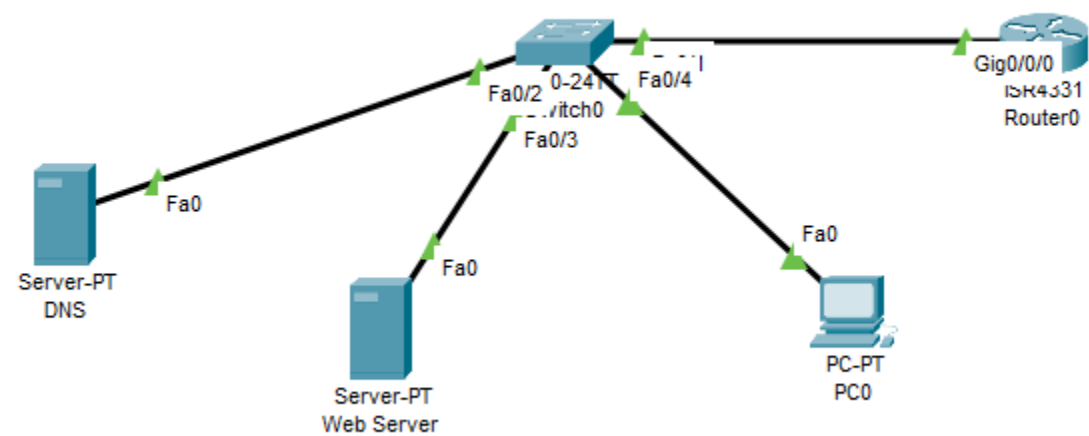








# Parte A



Router0

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0/0

GigabitEthernet0/0/1

GigabitEthernet0/0/2

GigabitEthernet0/0/0

Port Status

☒ On

Bandwidth

☐ 1000 Mbps ☒ 100 Mbps ☐ 10 Mbps

☒ Auto

Duplex

☐ Half Duplex ☒ Full Duplex

☒ Auto

MAC Address

0001.43E3.B701

IP Configuration

IPv4 Address

192.168.89.254

Subnet Mask

255.255.255.0

Tx Ring Limit

10

Equivalent IOS Commands

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface GigabitEthernet0/0/0

Router(config-if)#

Router(config-if)#exit

Router(config)#interface GigabitEthernet0/0/0

Router(config-if)#ip address 192.168.89.254 255.255.255.0

Router(config-if)#

PC0

Physical **Config** Desktop Programming Attributes

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

Bluetooth

Global Settings

Display Name: PC0

Interfaces: FastEthernet0

Gateway/DNS IPv4

☐ DHCP

☒ Static

Default Gateway: 192.168.89.254

DNS Server: 192.168.89.1

Gateway/DNS IPv6

☐ Automatic

☒ Static

Default Gateway:

DNS Server:

Top

PC0

Physical **Config** Desktop Programming Attributes

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

Bluetooth

FastEthernet0

Port Status: ☒ On

Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address: 0001.63EE.A9B3

IP Configuration

☐ DHCP

☒ Static

IPv4 Address: 192.168.89.80

Subnet Mask: 255.255.255.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address:

Link Local Address: FE80::201:63FF:FEEE:A9B3

Top

DNS

PhysicalConfigServicesDesktopProgrammingAttributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

FastEthernet0

Global Settings

Display NameDNS

Gateway/DNS IPv4

DHCP

Static

Default Gateway192.168.89.254

DNS Server192.168.89.1

Gateway/DNS IPv6

Automatic

Static

Default Gateway

DNS Server

Top

DNS

PhysicalConfigServicesDesktopProgrammingAttributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

FastEthernet0

FastEthernet0

Port StatusOn

Bandwidth

100 Mbps

10 Mbps

Auto

Duplex

Half Duplex

Full Duplex

Auto

MAC Address00D0.BC45.20A3

IP Configuration

DHCP

Static

IPv4 Address192.168.89.1

Subnet Mask255.255.255.0

IPv6 Configuration

Automatic

Static

IPv6 Address

Link Local AddressFE80::2D0:BCFF:FE45:20A3

Top

Web Server

Physical **Config** Services Desktop Programming Attributes

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

Global Settings

Display Name: Web Server

Gateway/DNS IPv4

☐ DHCP

☒ Static

Default Gateway: 192.168.89.254

DNS Server: 192.168.89.1

Gateway/DNS IPv6

☐ Automatic

☒ Static

Default Gateway:

DNS Server:

☐ Top

Web Server

Physical **Config** Services Desktop Programming Attributes

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

FastEthernet0

Port Status: ☒ On

Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address: 0001.C933.E30B

IP Configuration

☐ DHCP

☒ Static

IPv4 Address: 192.168.89.2

Subnet Mask: 255.255.255.0

IPv6 Configuration

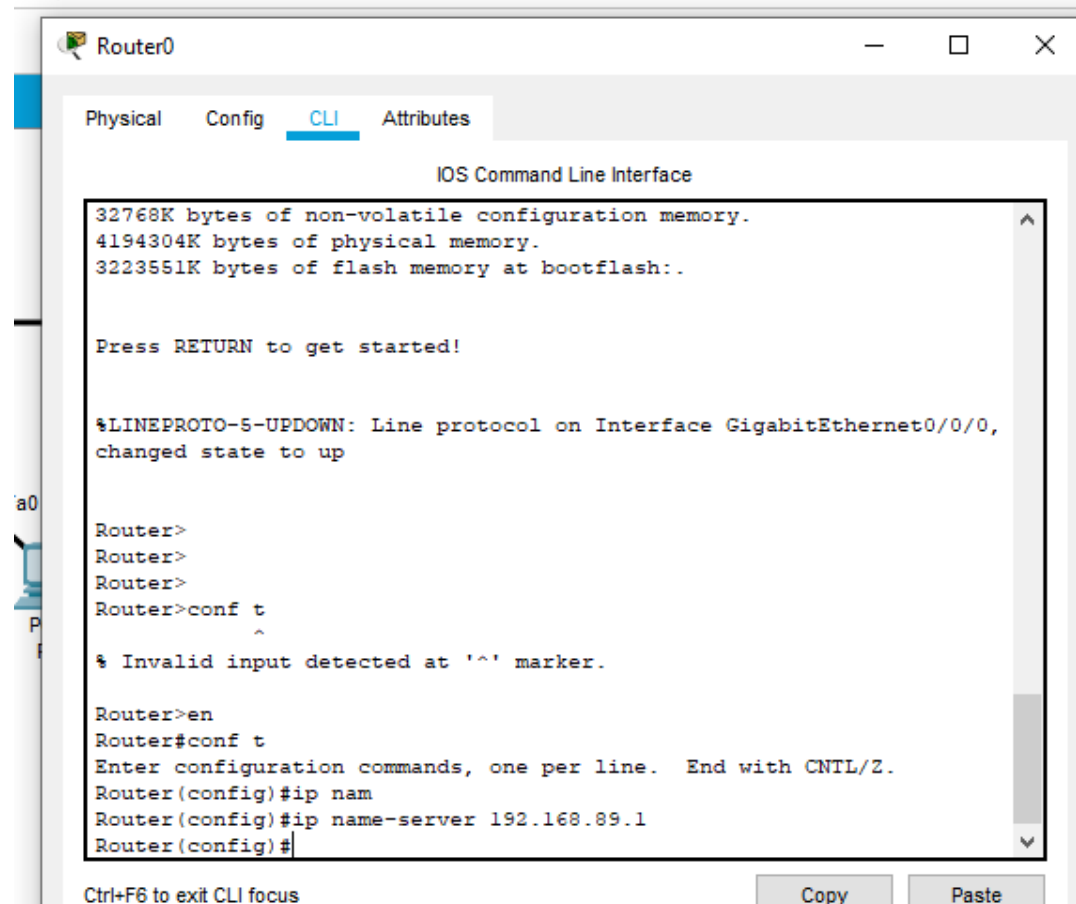
☐ Automatic

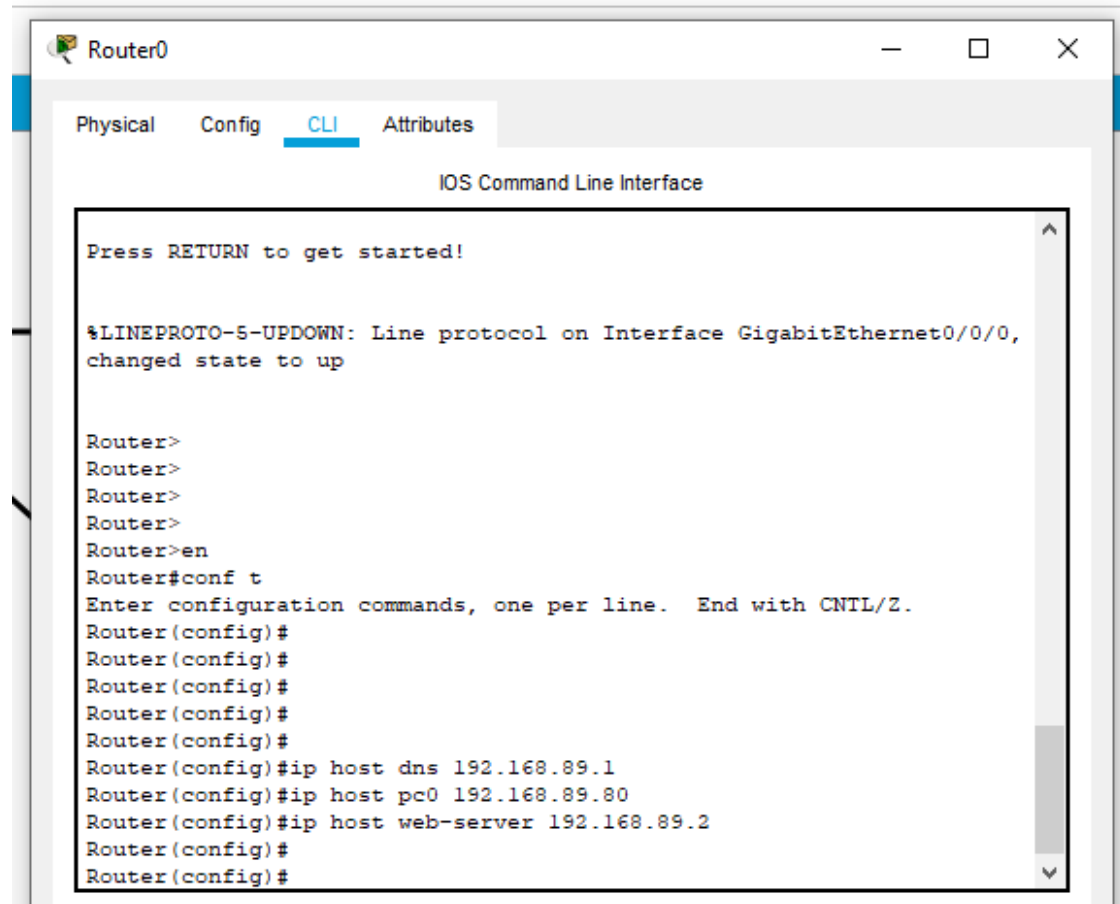
☒ Static

IPv6 Address:

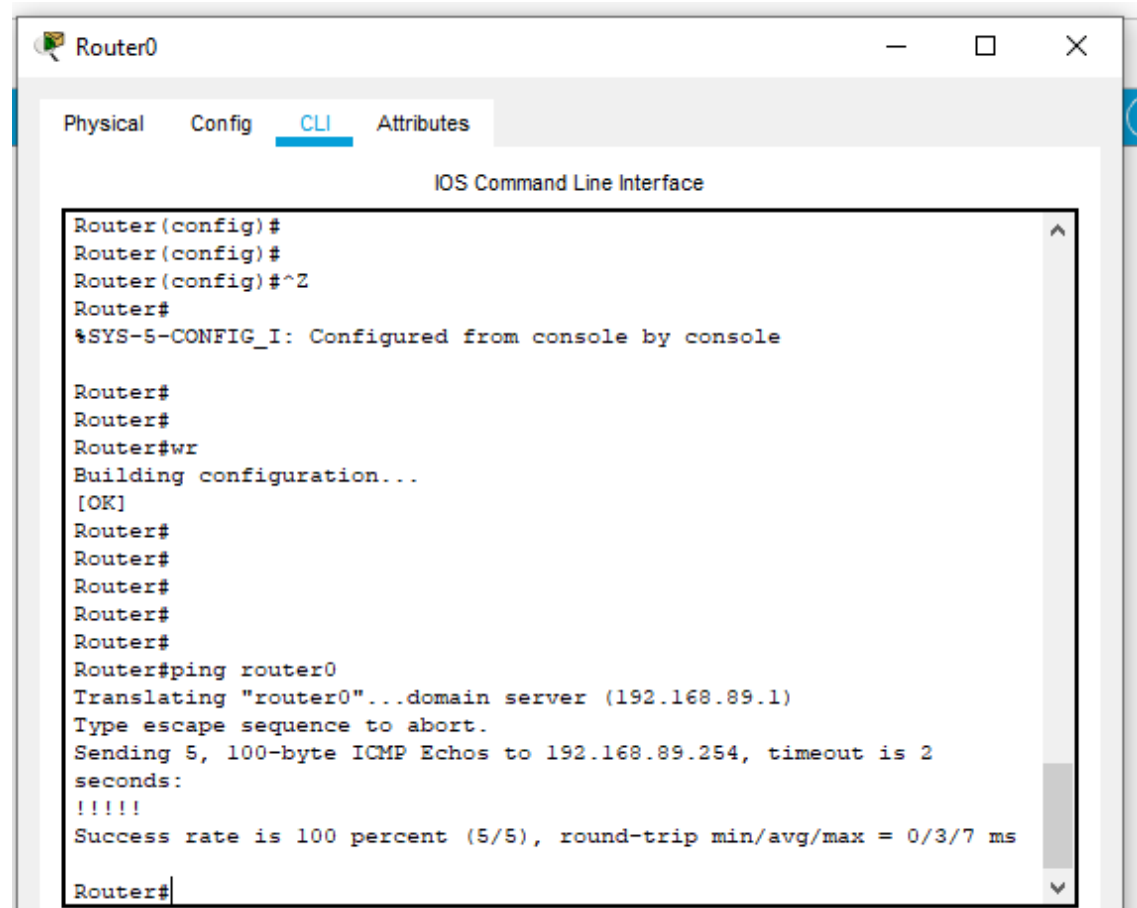
Link Local Address: FE80::201:C9FF:FE33:E30B

☐ Top



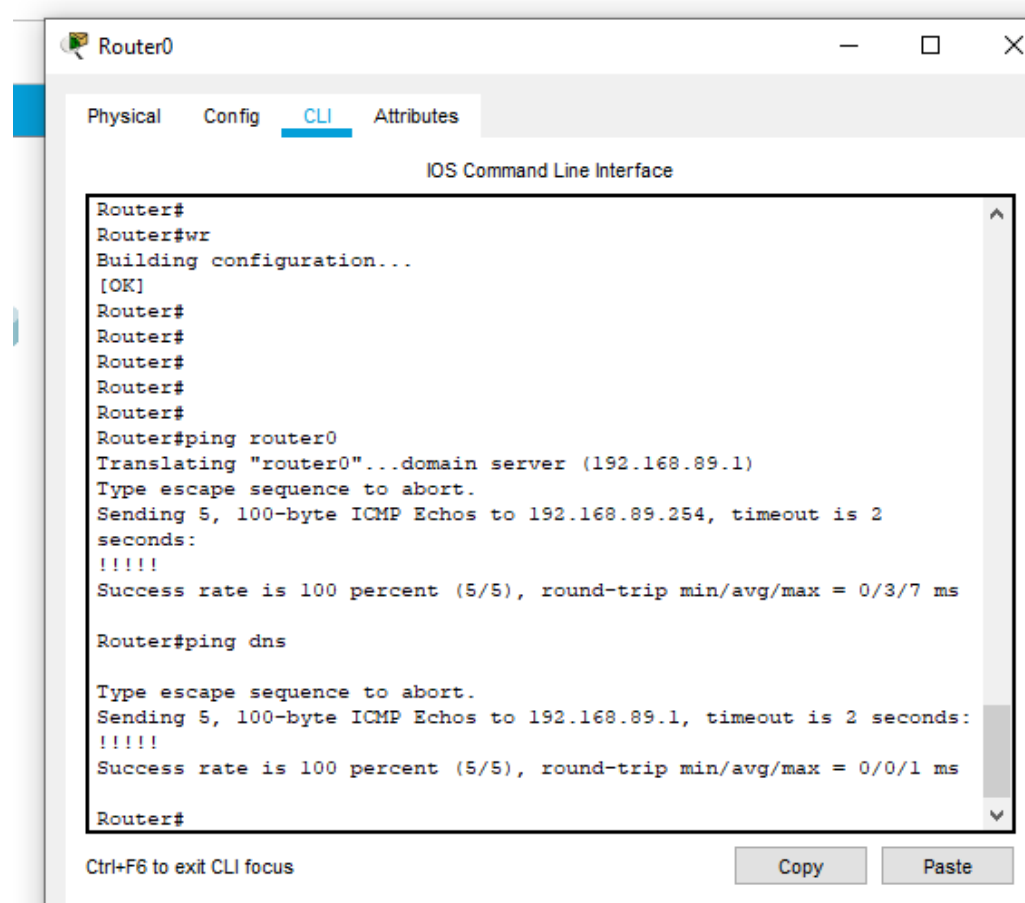


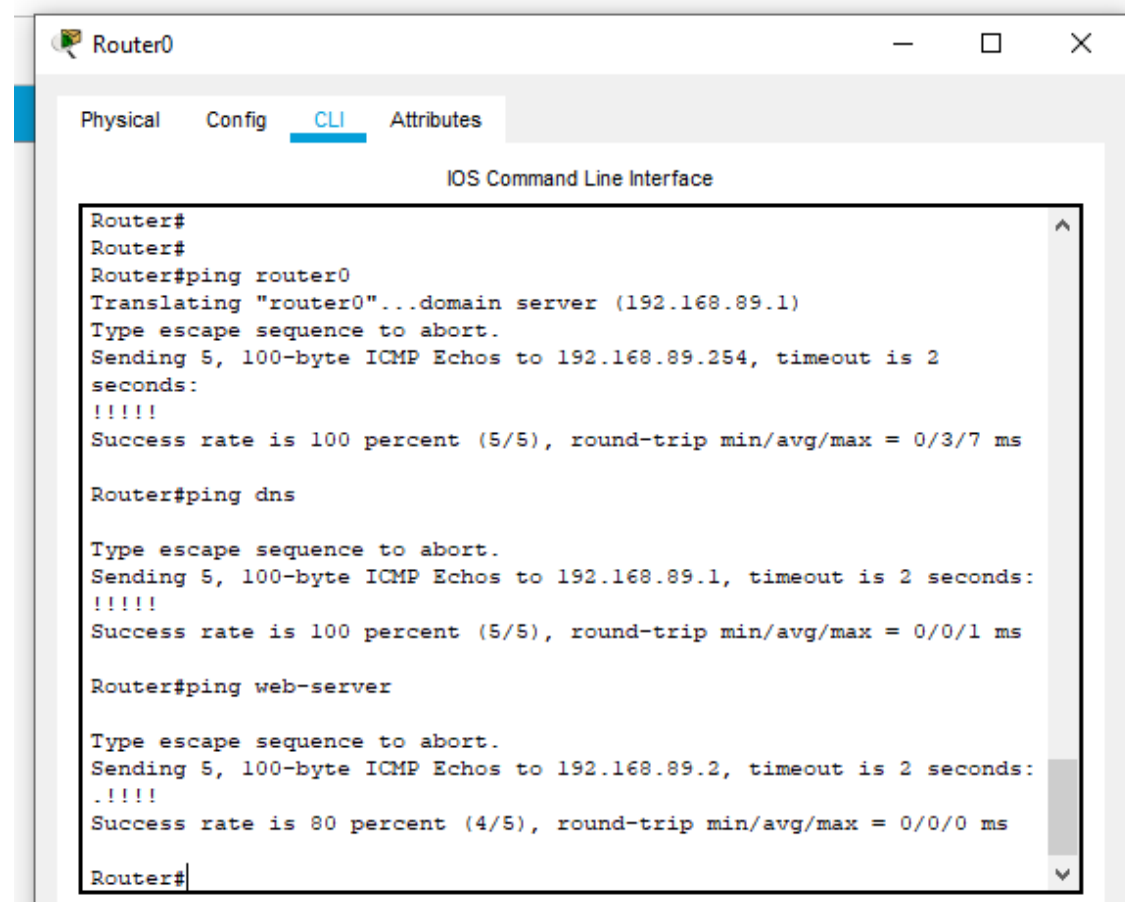


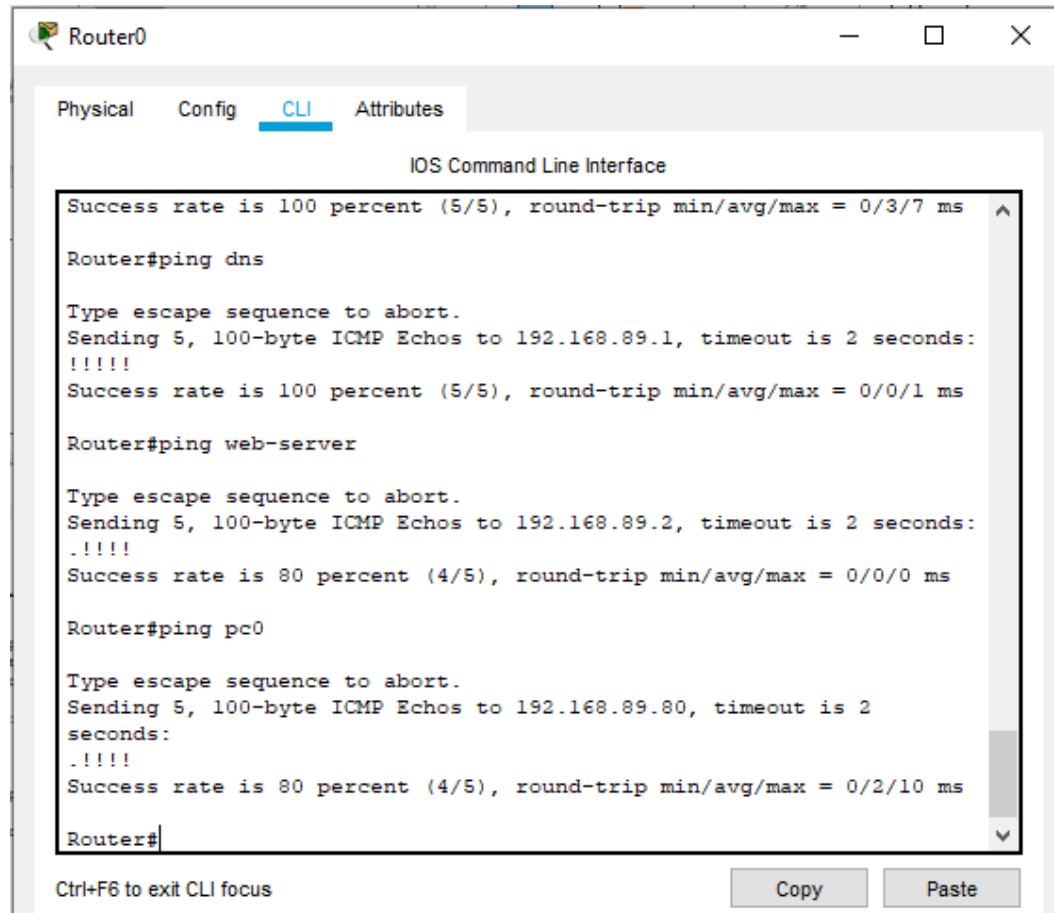


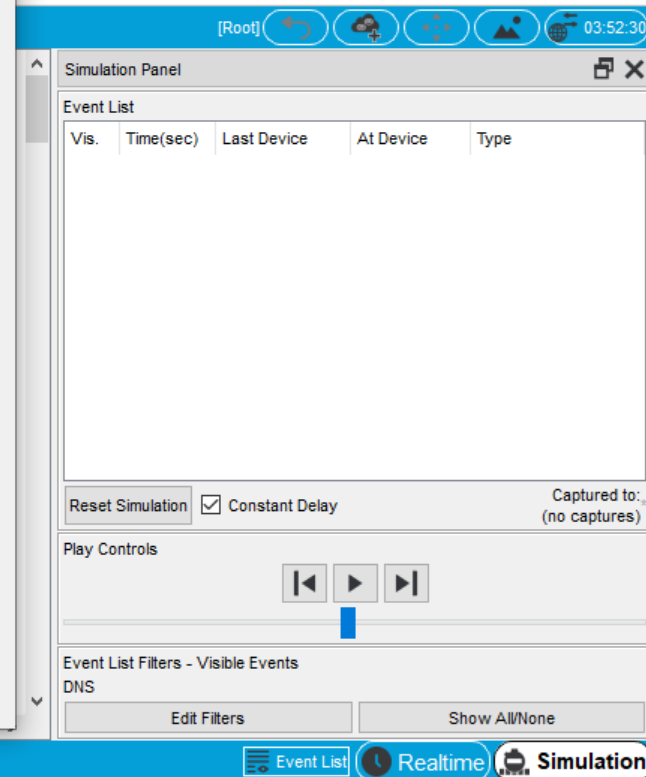
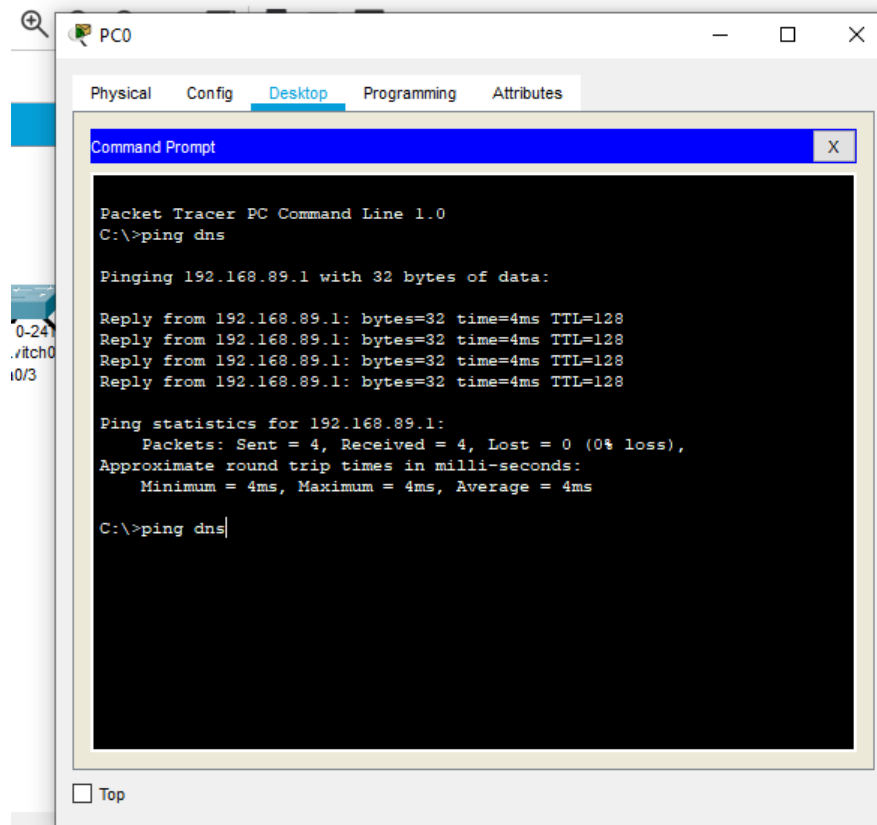
```
Router0
Physical Config CLI Attributes
IOS Command Line Interface
Router(config)#
Router(config)#
Router(config)^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console

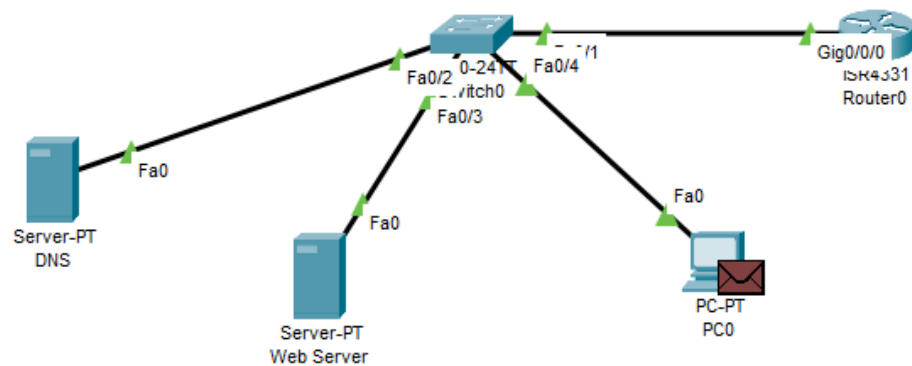
Router#
Router#
Router#wr
Building configuration...
[OK]
Router#
Router#
Router#
Router#
Router#
Router#ping router0
Translating "router0"...domain server (192.168.89.1)
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.89.254, timeout is 2
seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/3/7 ms
Router#
```











**Event List**

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	DNS

Reset Simulation ☒ Constant Delay Captured to: 0.000 s

**Play Controls**

Navigation buttons: Previous, Play, Next

**Event List Filters - Visible Events**

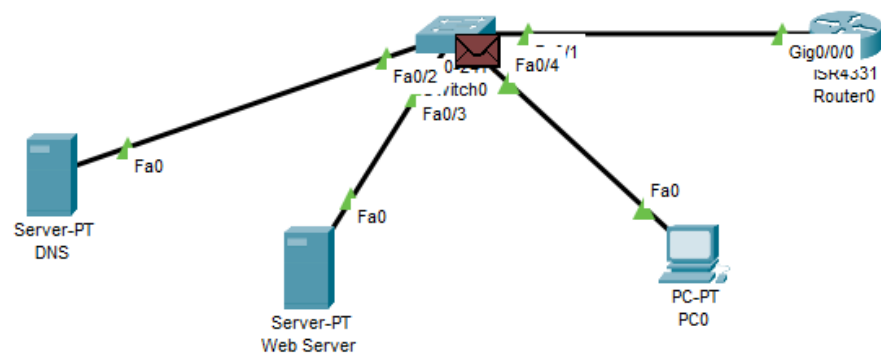
DNS

Edit Filters Show All/None



Logical Physical x: 747, y: 289

[Root] 04:21:30



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	DNS
	0.001	PC0	Switch0	DNS

Reset Simulation ☒ Constant Delay Captured to: 0.001 s

Play Controls



Event List Filters - Visible Events

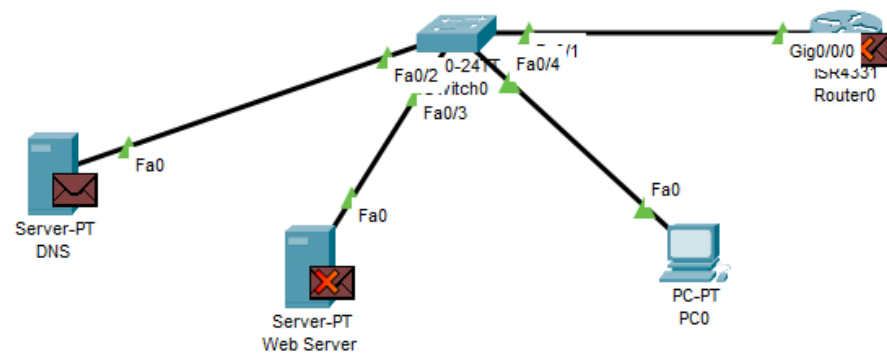
DNS

Edit Filters Show All/None

Time: 00:21:35.083 PLAY CONTROLS: Previous Play Next

Event List Realtime Simulation

Fire Last Status Source Destination Time Color Time(sec) Periodic Num Ed



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	DNS
	0.001	PC0	Switch0	DNS
	0.002	Switch0	Router0	DNS
	0.002	Switch0	DNS	DNS
	0.002	Switch0	Web Server	DNS

Reset Simulation
☒ Constant Delay
Captured to: 0.002 s

Play Controls

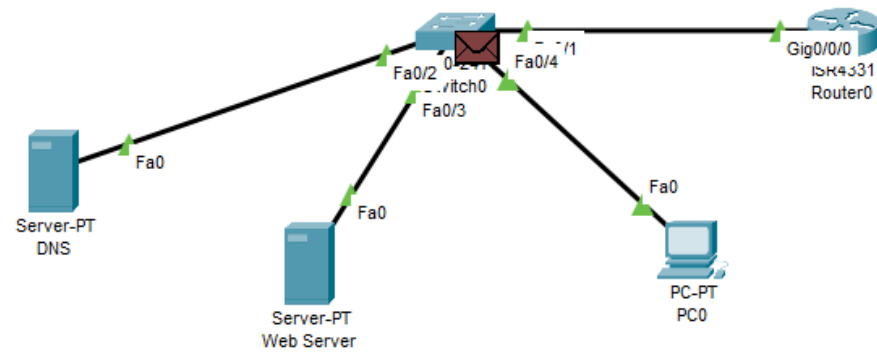
Event List Filters - Visible Events

DNS

Edit Filters
Show All/None

Event List
Realtime
Simulation





Simulation Panel

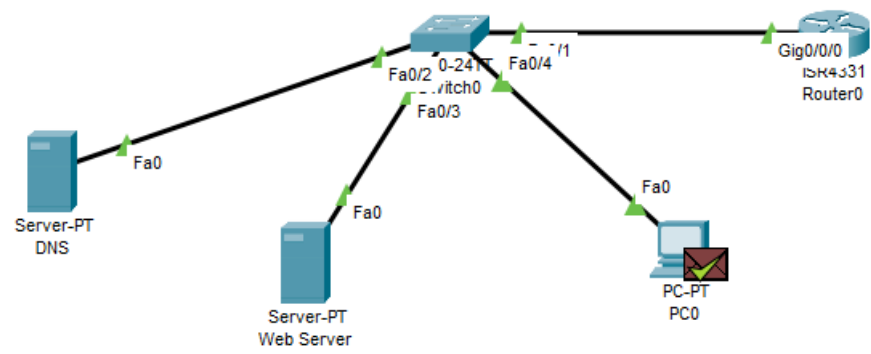
Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	DNS
	0.001	PC0	Switch0	DNS
	0.002	Switch0	Router0	DNS
	0.002	Switch0	DNS	DNS
	0.002	Switch0	Web Server	DNS
	0.003	DNS	Switch0	DNS

Reset Simulation
☒ Constant Delay
Captured to: 0.003 s

Play Controls

Event List Filters - Visible Events
DNS



Simulation Panel

Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	DNS
	0.001	PC0	Switch0	DNS
	0.002	Switch0	Router0	DNS
	0.002	Switch0	DNS	DNS
	0.002	Switch0	Web Server	DNS
	0.003	DNS	Switch0	DNS
	0.004	Switch0	PC0	DNS

Reset Simulation ☒ Constant Delay Captured to: 0.004 s

Play Controls

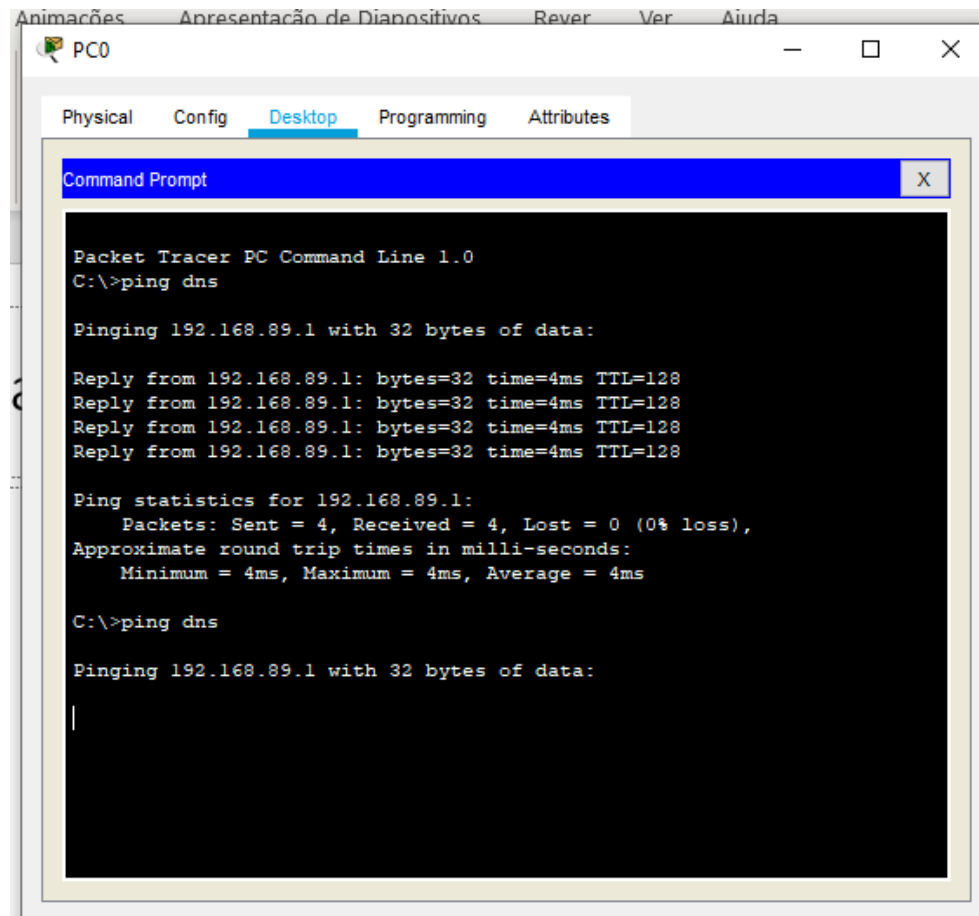
⏮ ⏪ ⏩ ⏭

Progress bar: [Blue bar indicating current time]

Event List Filters - Visible Events

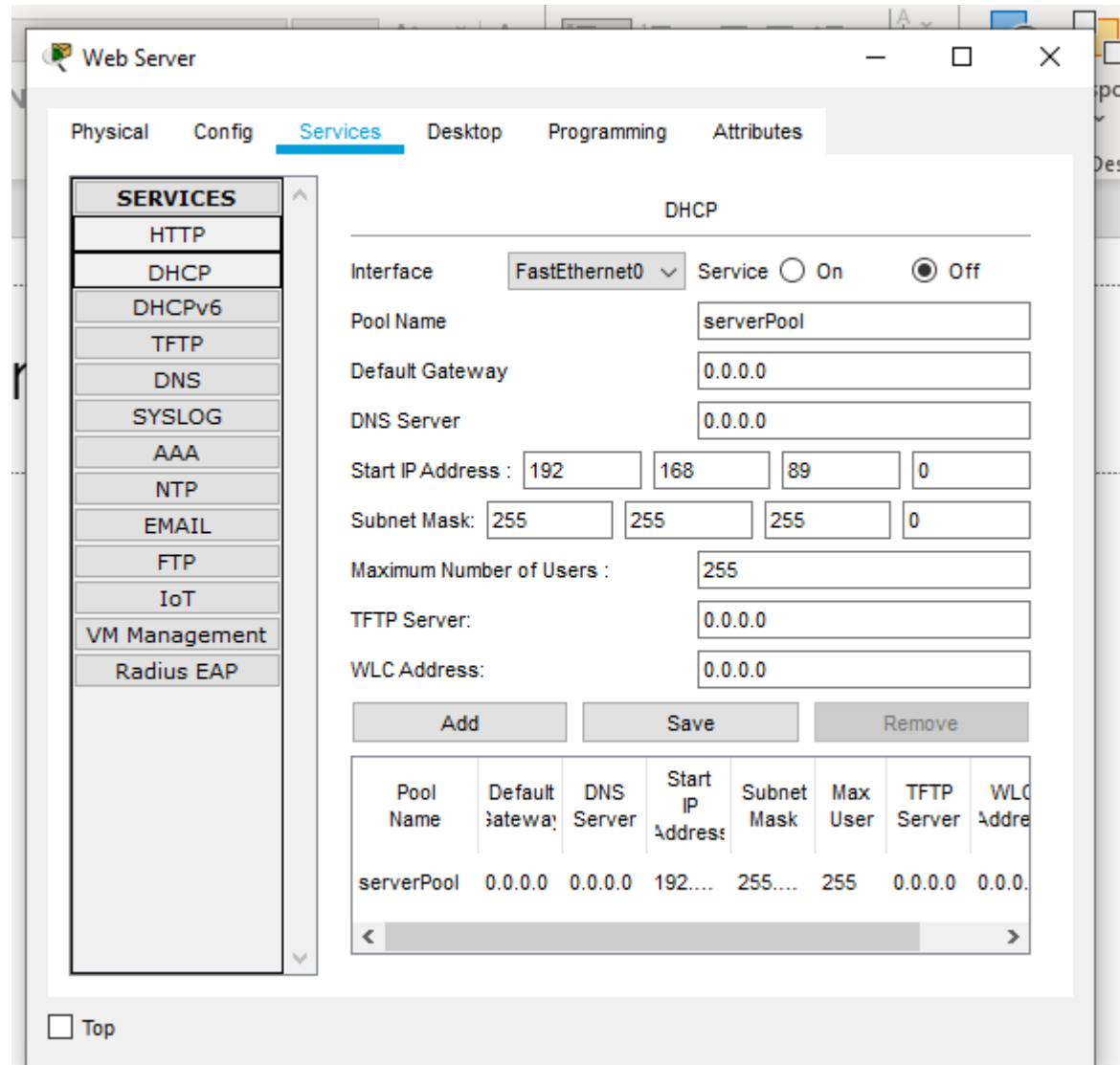
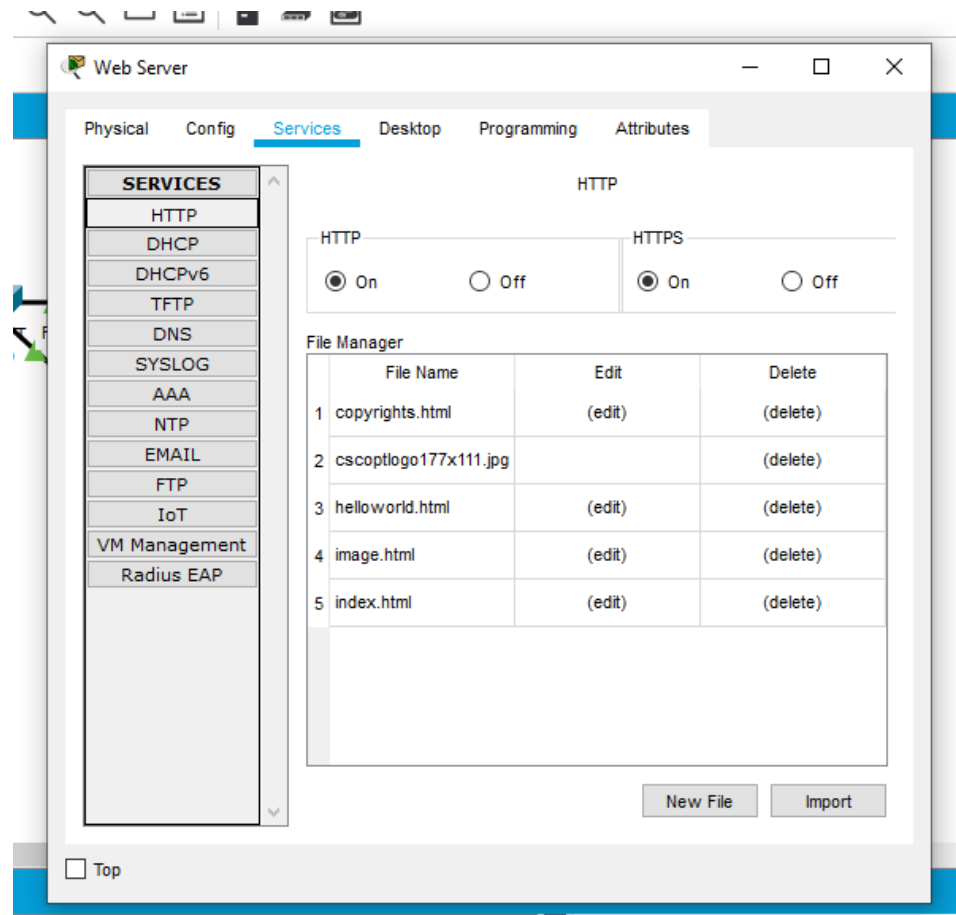
DNS

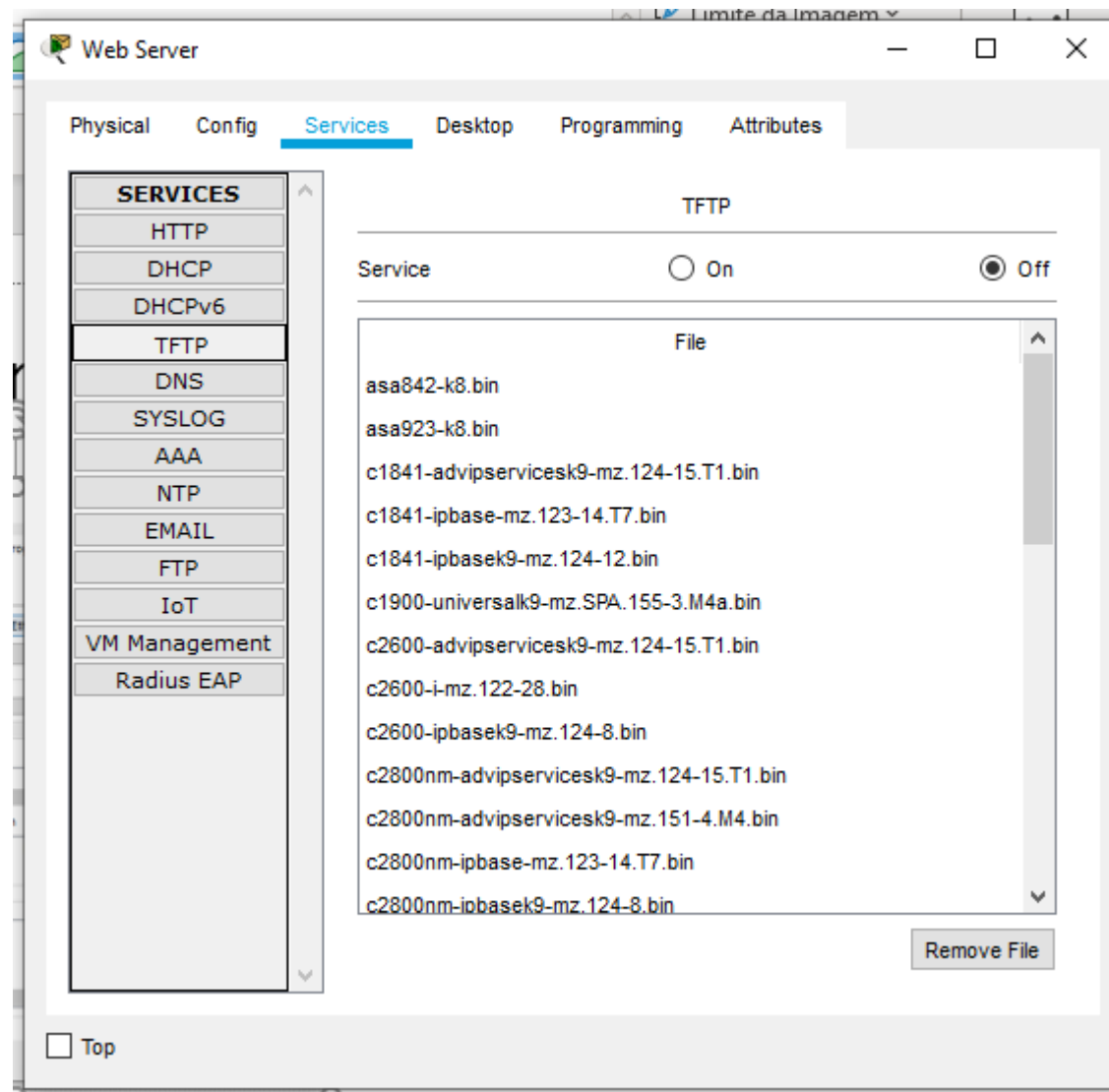
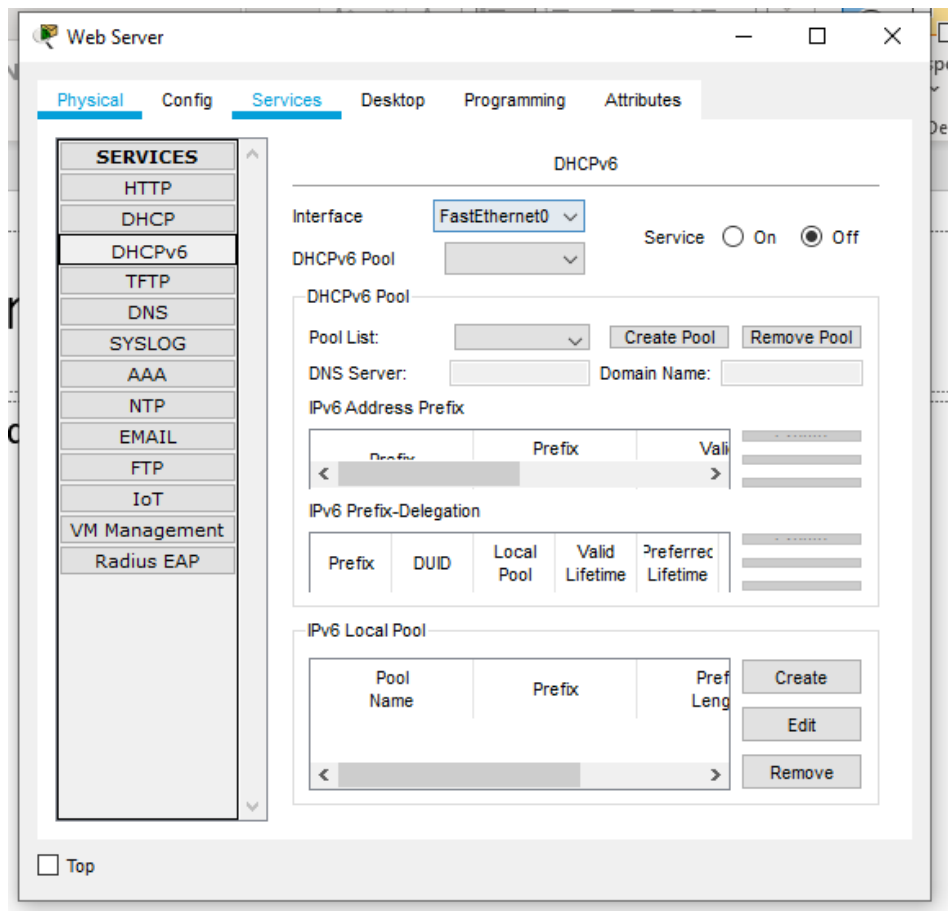
Edit Filters Show All/None

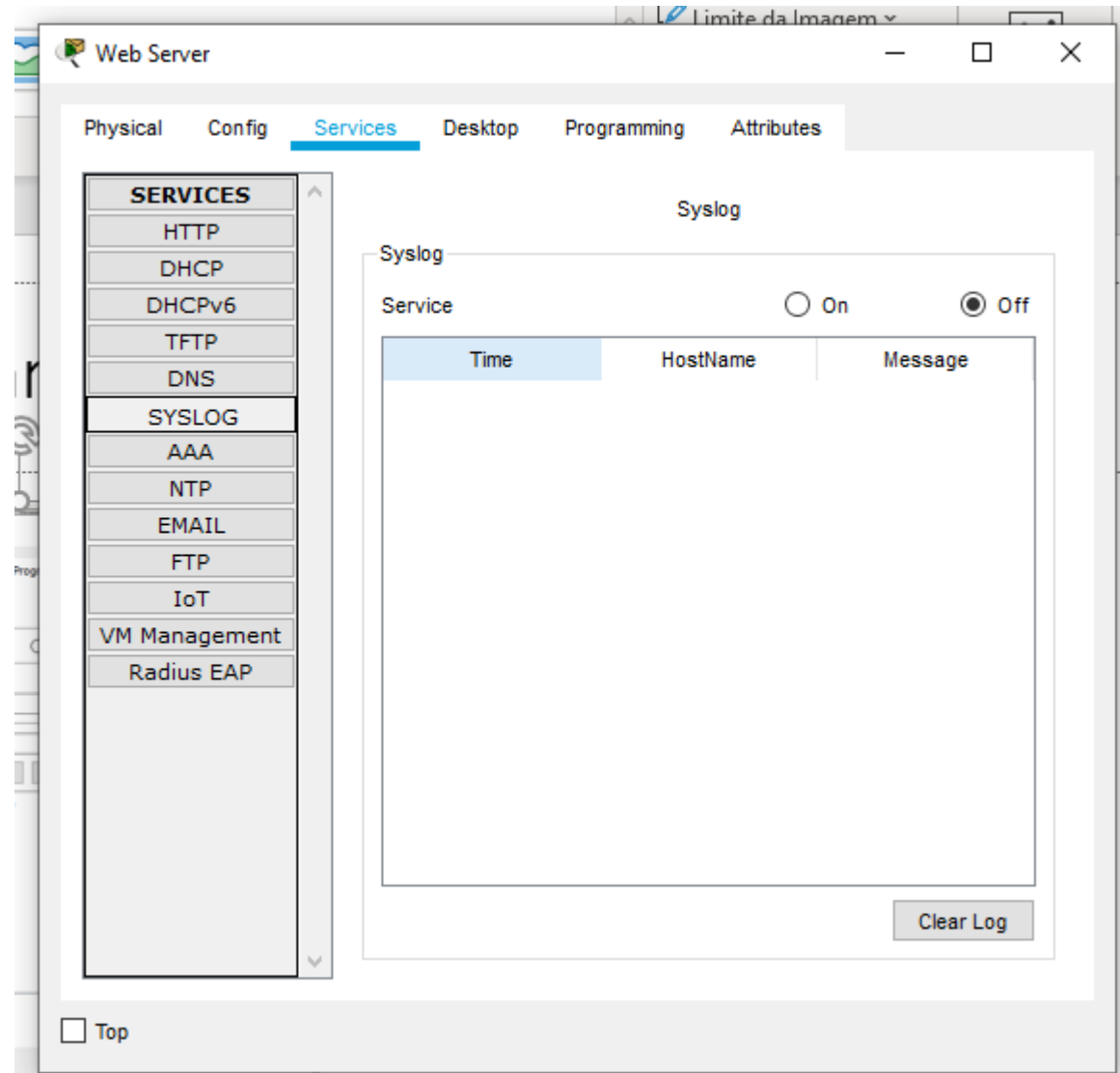
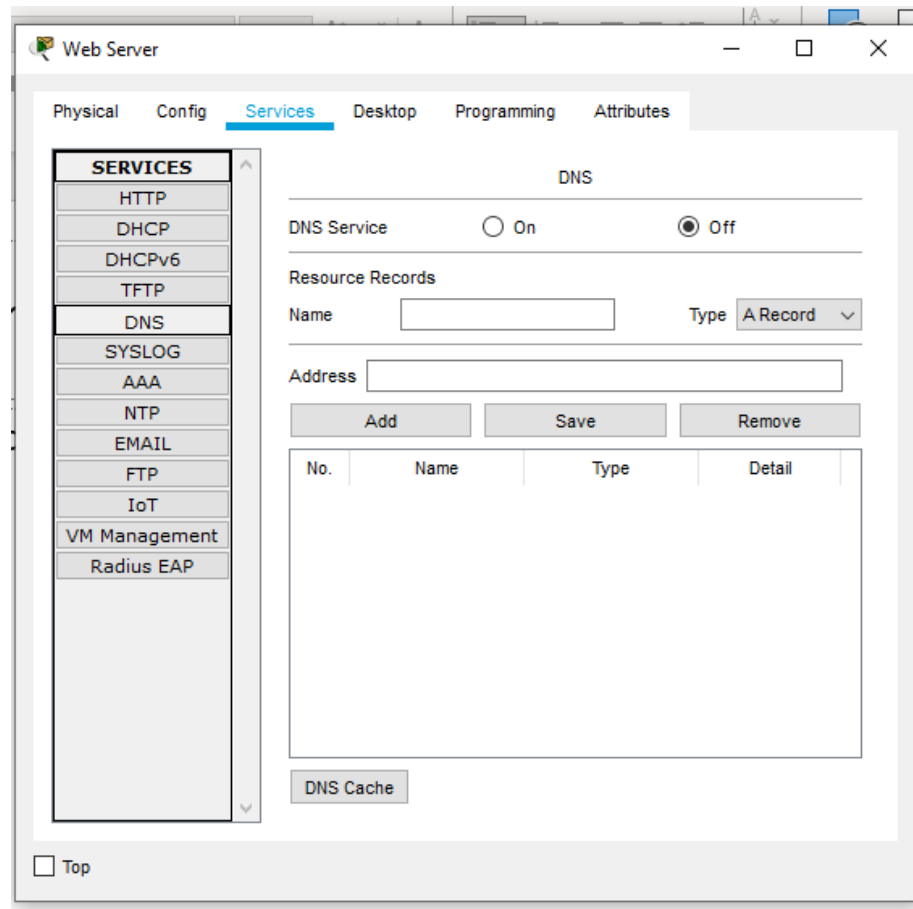


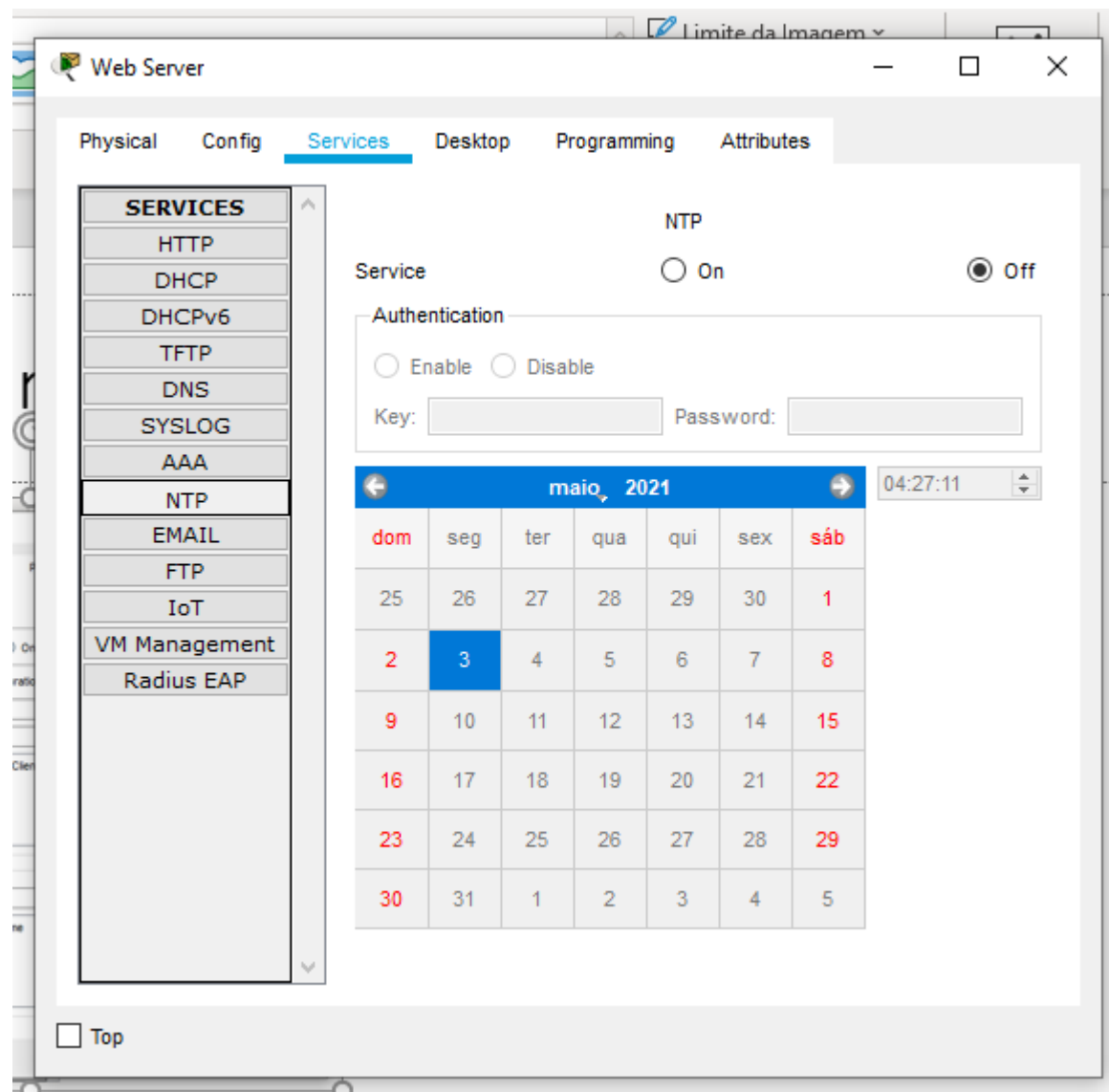
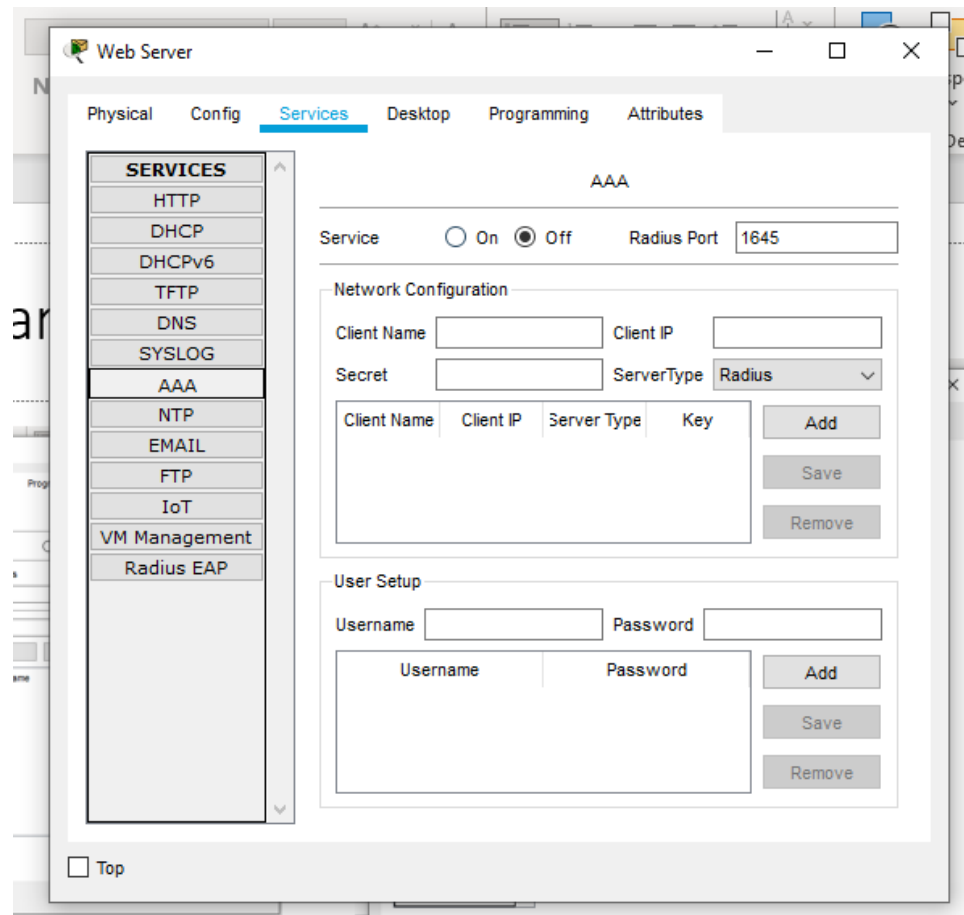
# Explicação:

Ao fazer ping dns no pc0 é emitido um pacote com o SRC IP:192.168.89.80 e DST IP:192.168.89.1. O pacote ao chegar ao swicth é distribuído pelas várias interfaces ativas e ao chegar ao Web Server e Router0 é devolvido um reply à origem (PC0) sem resposta porque o ip de destino não era o que ia no pacote, como o pacote tinha o DST IP:192.168.89.1 chega ao DNS e é devolvido um reply à origem (PC0) com a resposta.

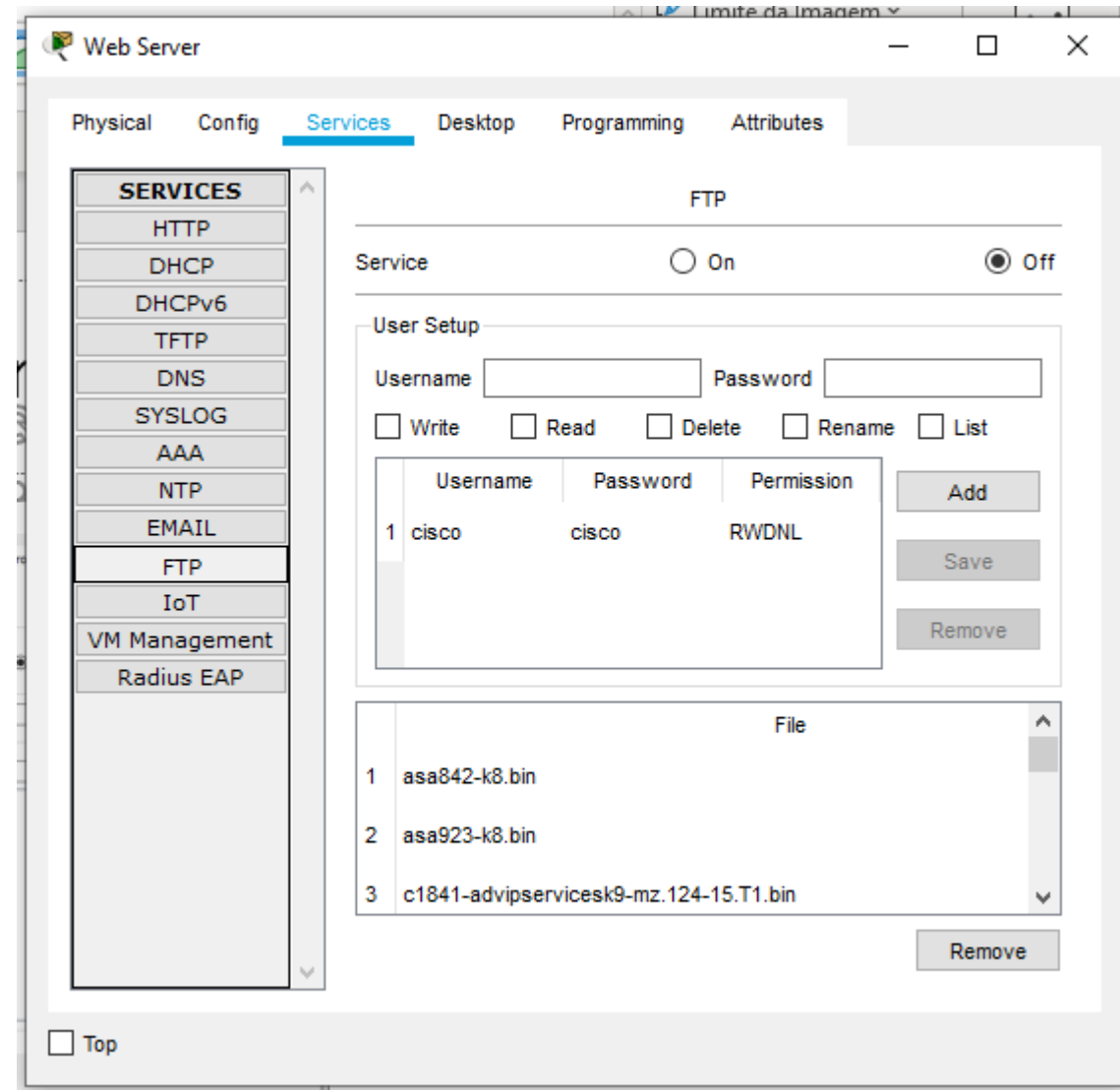
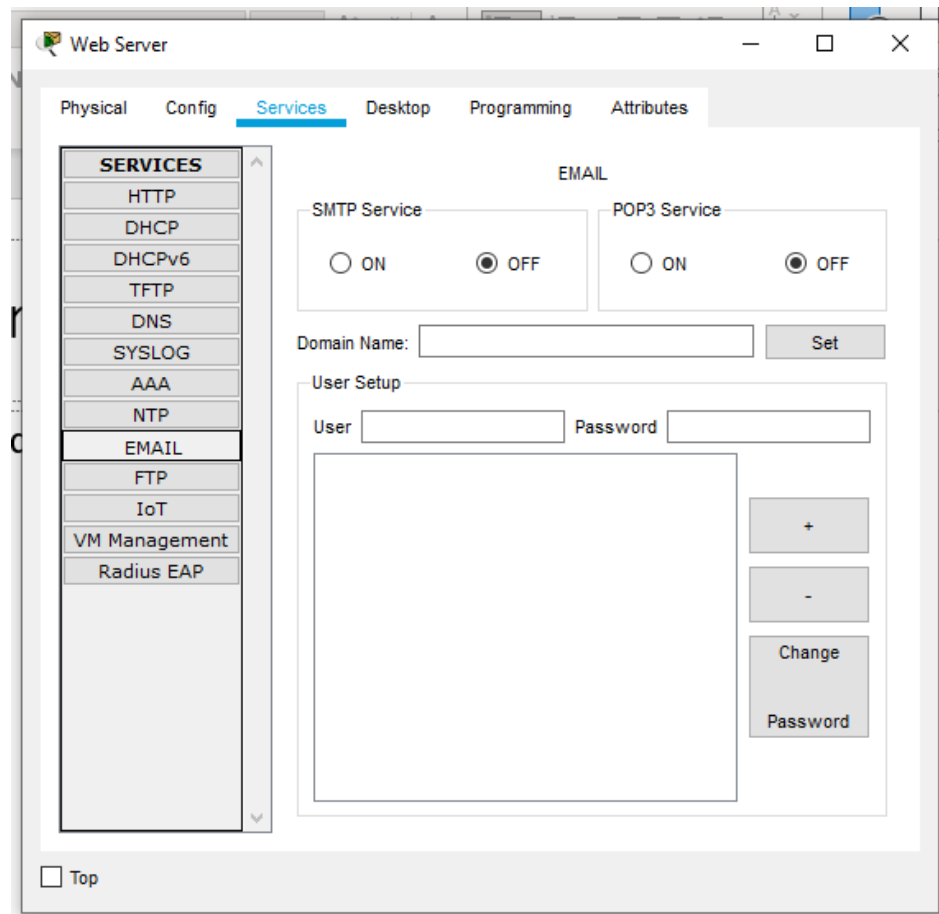


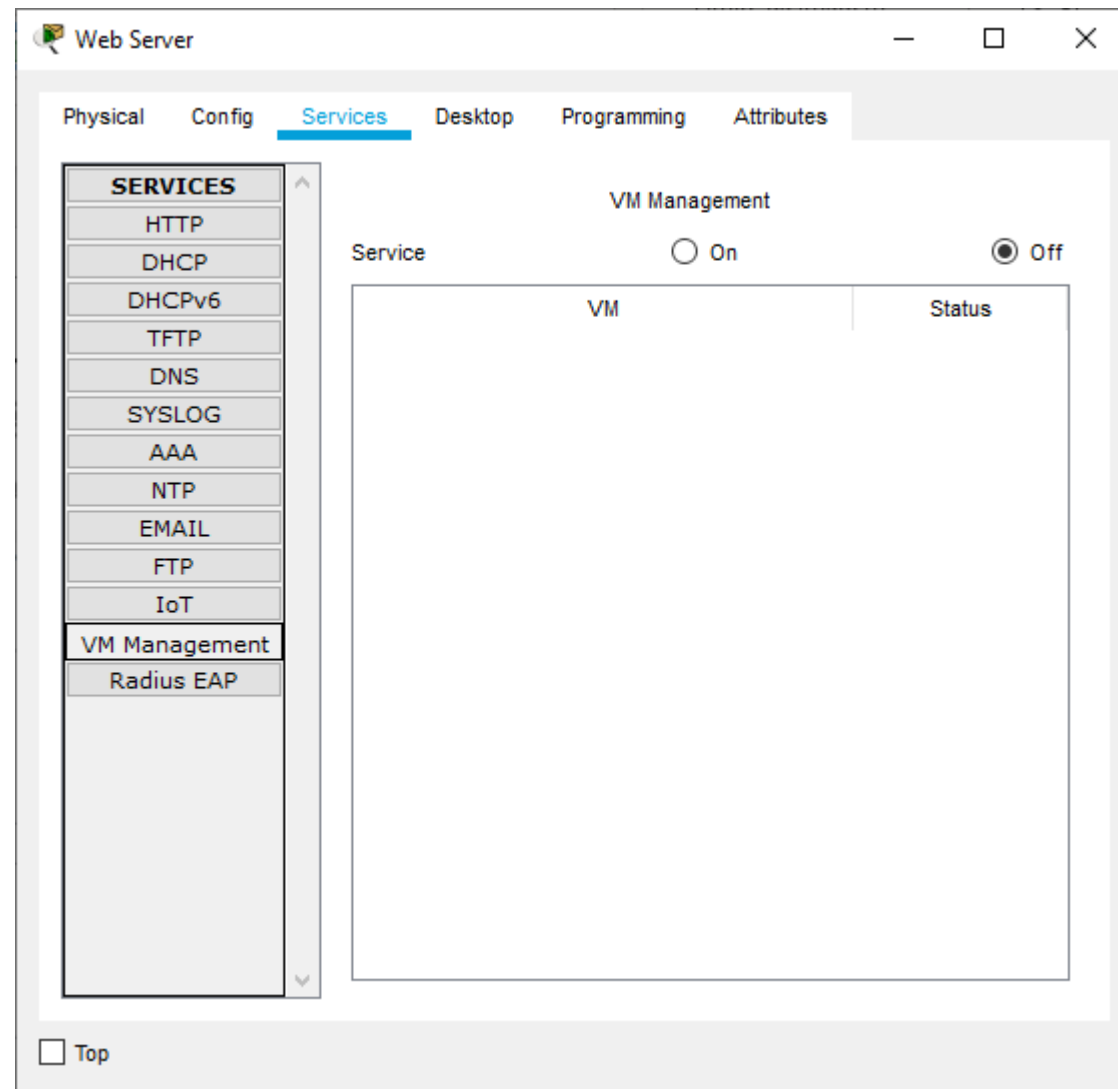
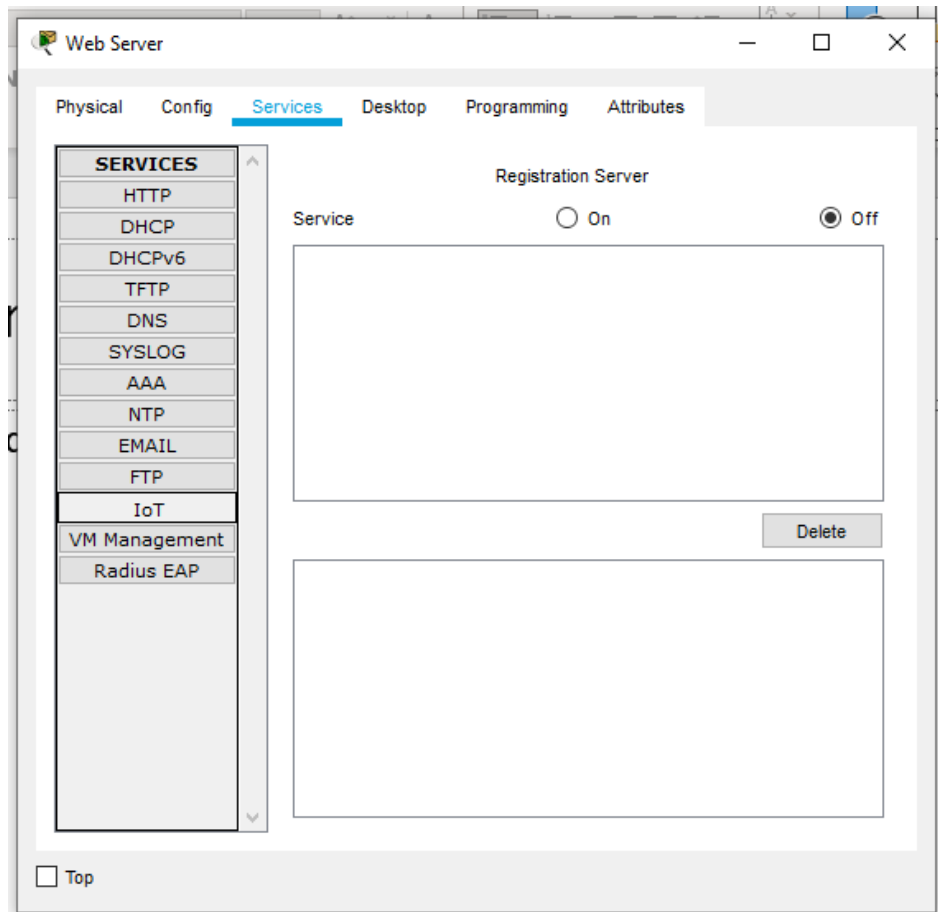


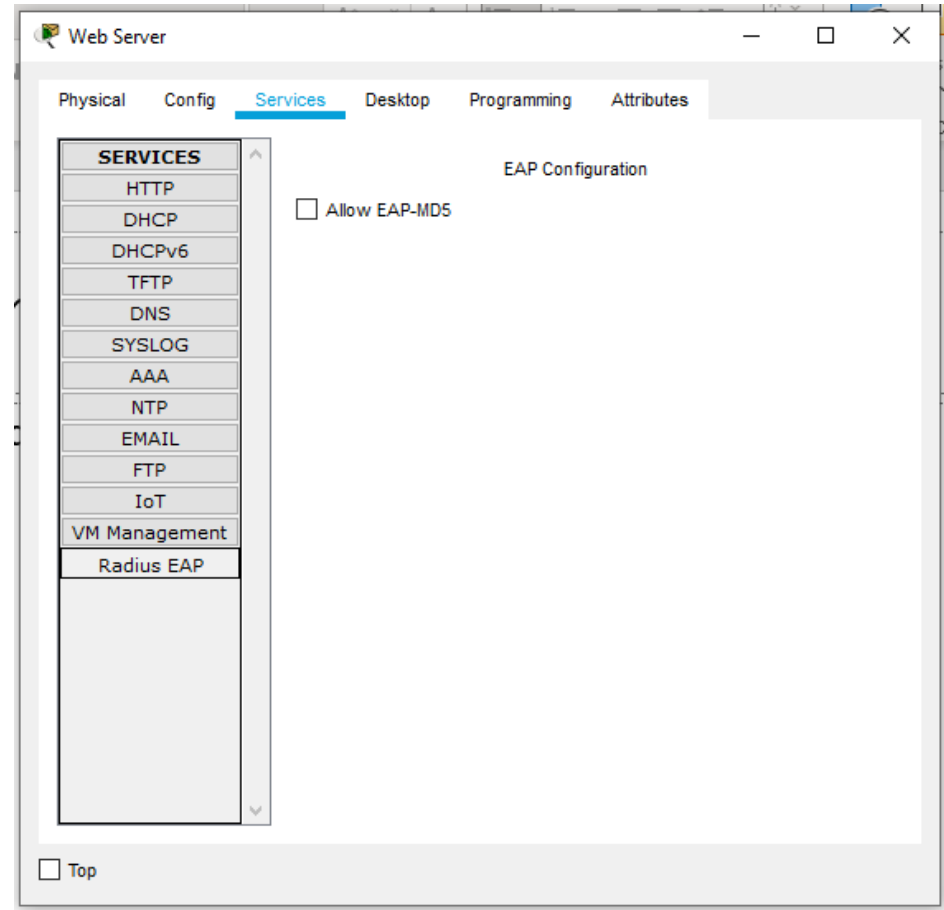












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EAP

HTTP

☒ On

☐ Off

HTTPS

☒ On

☐ Off

File Manager

	File Name	Edit	Delete
1	copyrights.html	(edit)	(delete)
2	cscoptlogo177x111.jpg		(delete)
3	helloworld.html	(edit)	(delete)
4	image.html	(edit)	(delete)
5	index.html	(edit)	(delete)

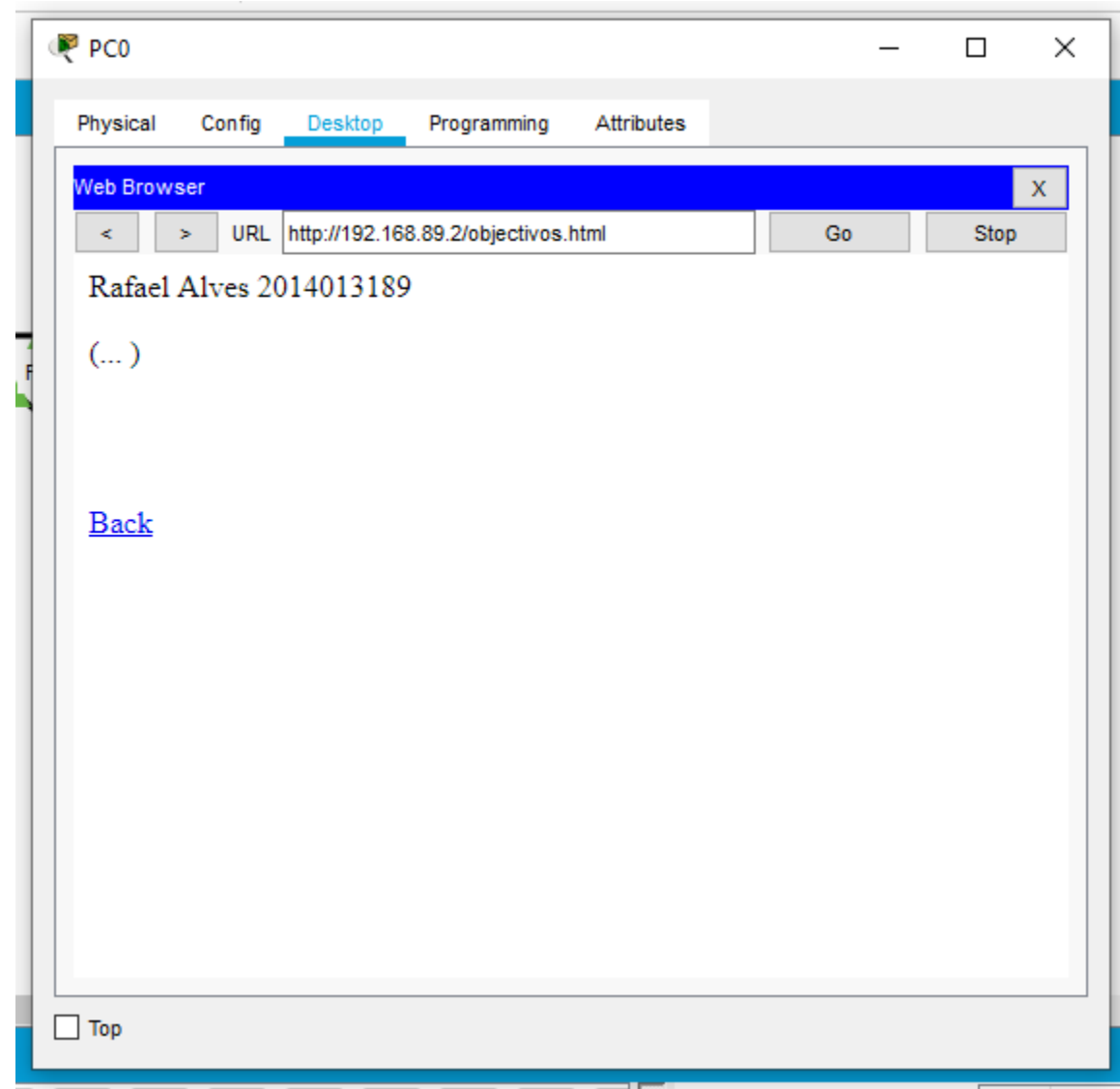
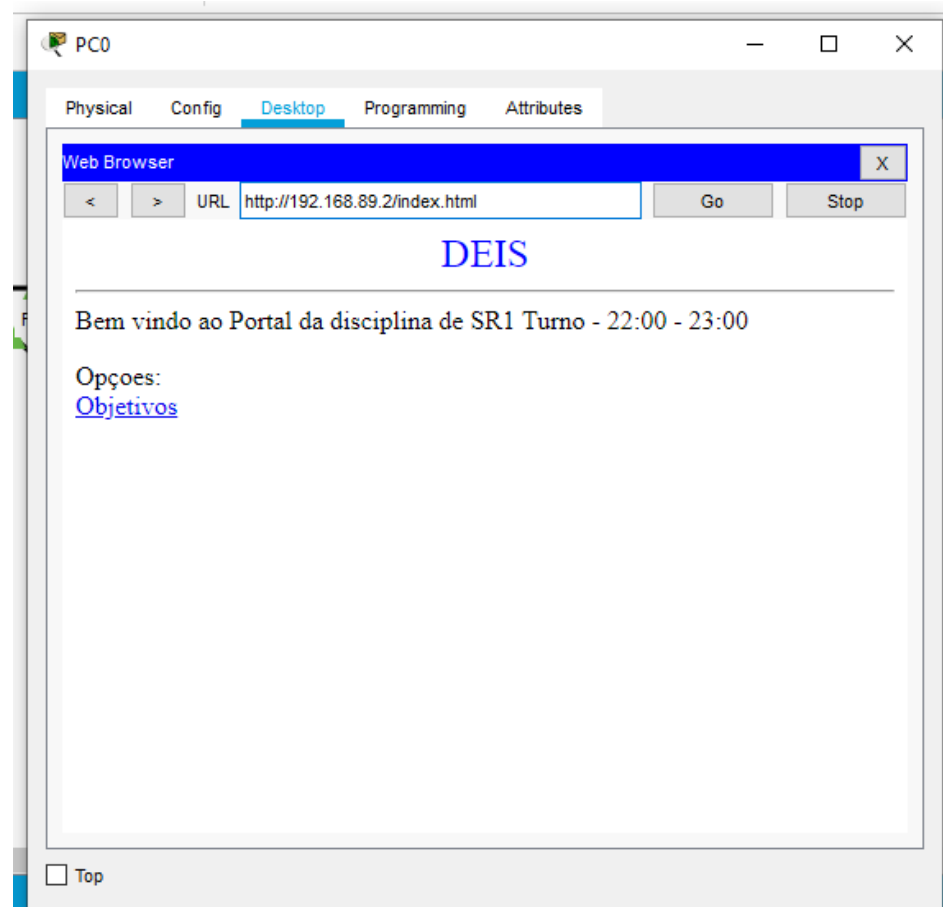
File Name: index.html

```
<html>
<center><font size='+2' color='blue'>DEIS</font></center>
<hr> Bem vindo ao Portal da disciplina de SR1 Turno - 22:00 - 23:00
<p>Opções:
<br><a href='helloworld.html'>Objetivos</a>

</html>
```

File Name: helloworld.html

```
<html>
<p>Rafael Alves 2014013189</p>
<p>( ... )</p>
<br><br><br><a href='index.html'>Back</a>
</html>
```



DNS

PhysicalConfigServicesDesktopProgrammingAttributes

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

DNS

DNS Service

☒ On☐ Off

Resource Records

Name

Type

A Record

Address

Add

Save

Remove

No.	Name	Type	Detail
0	dns	A Record	192.168.89.1
1	pc0	A Record	192.168.89.80
2	router0	A Record	192.168.89.254
3	web-server	A Record	192.168.89.2
4	wwwnoite	CNAME	web server

DNS Cache

☐ Top

