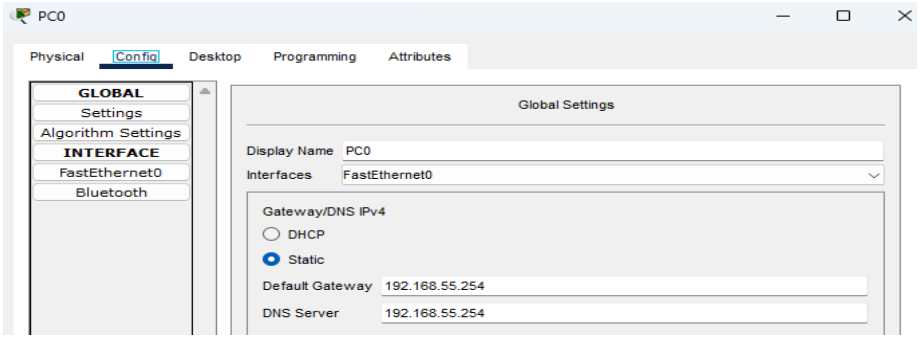
MIGUEL_ROMA_A2021138955

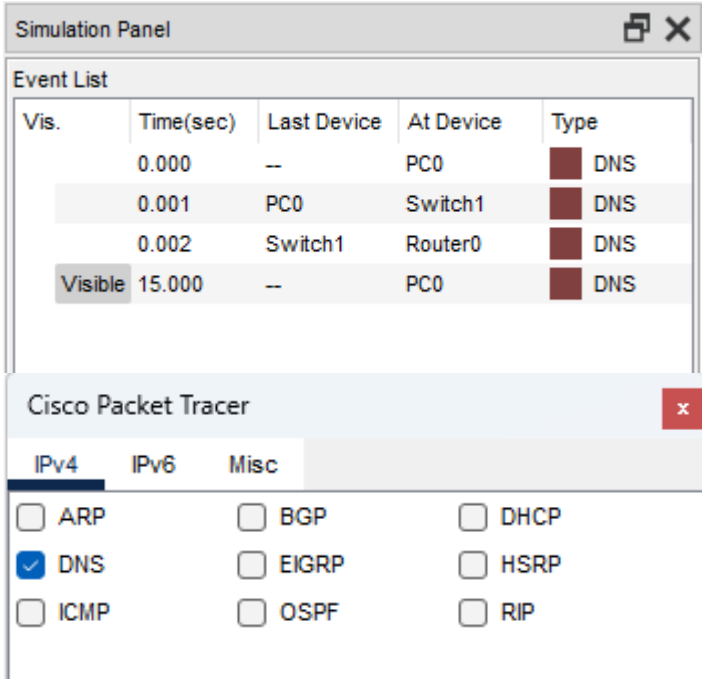
PERGUNTA 1

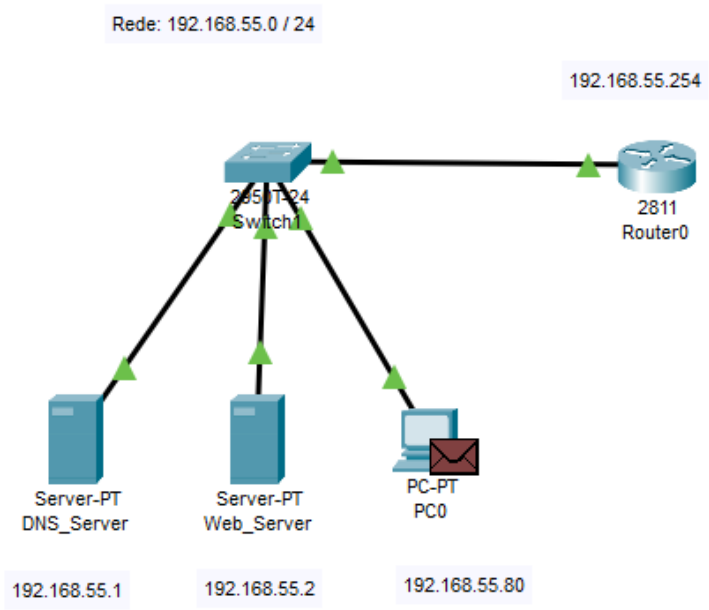
```
Router(config)#ip host PC0 192.168.55.80
Router(config)#ip host WEB_SERVER 192.168.55.2
Router(config)#ip host DNS_SERVER 192.168.55.1
```

```
Router#ping web_server
Translating "web_server"...domain server (255.255.255.255)
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.55.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 0/0/1 ms

Router#ping dns_server
Translating "dns_server"...domain server (255.255.255.255)
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.55.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/4/23 ms

Router#ping pc0
Translating "pc0"...domain server (255.255.255.255)
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.55.80, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 0/0/1 ms
```

PERGUNTA 1



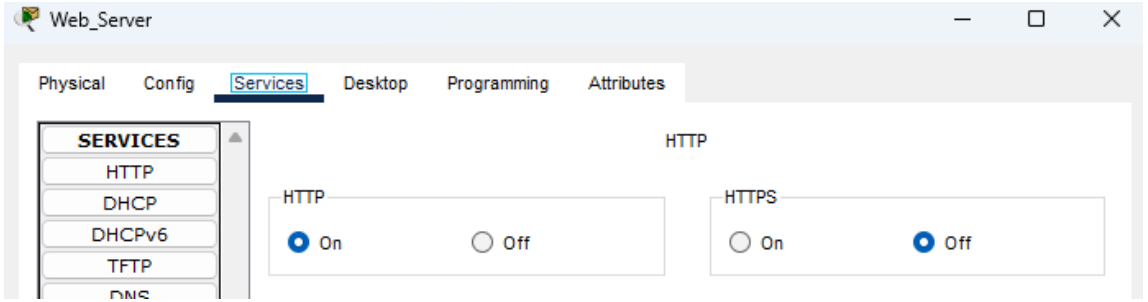


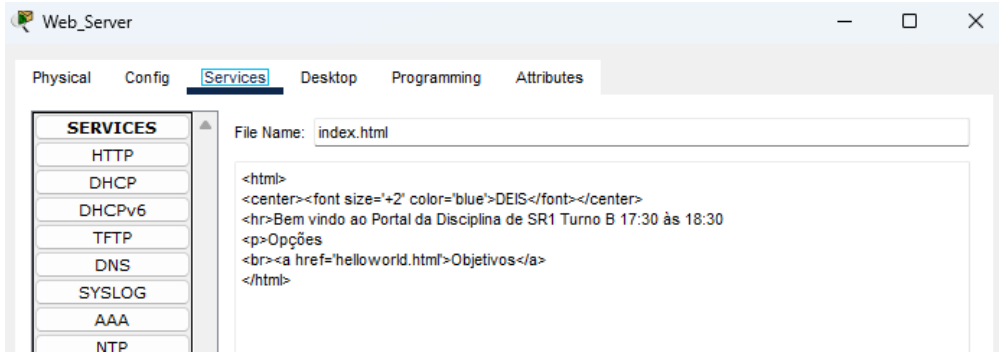


Explicação:

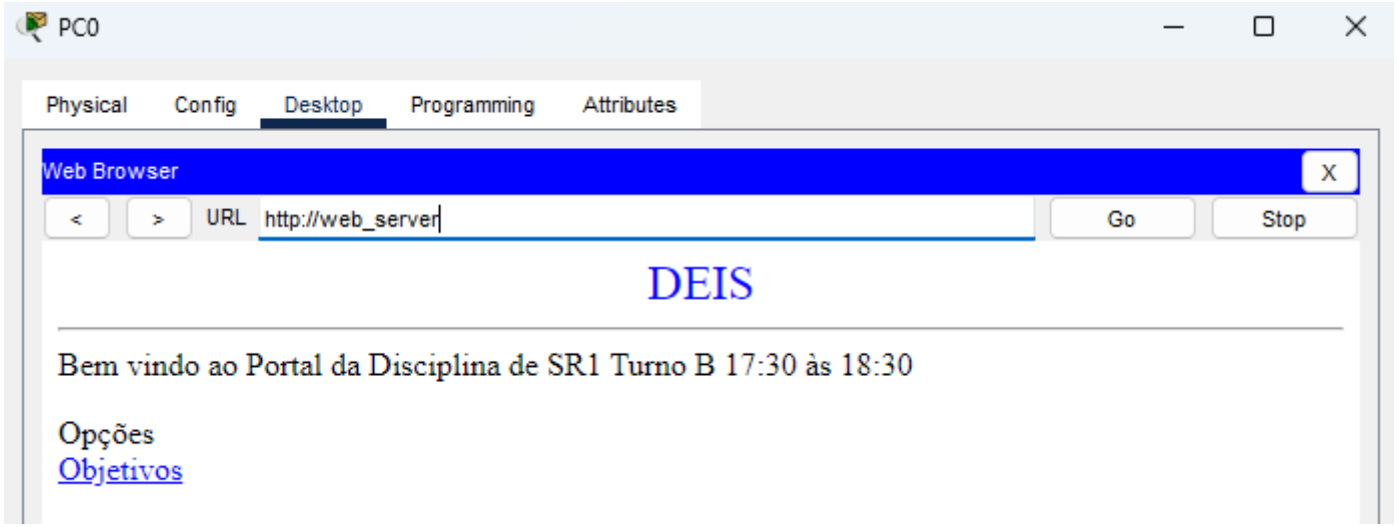
Neste caso, se o PC0 pretender aceder ao DNS_SERVER pelo seu nome, não basta ter o comando "ip host..." configurado no router, pois este apenas funciona como um alias e não como um serviço DNS completo. Consequentemente, quando o PC0 efetua um ping ao DNS_SERVER, o pedido é enviado para o Router0, contudo, o router não reconhece o nome do servidor, uma vez que apenas dispõe de um alias.

PERGUNTA 1

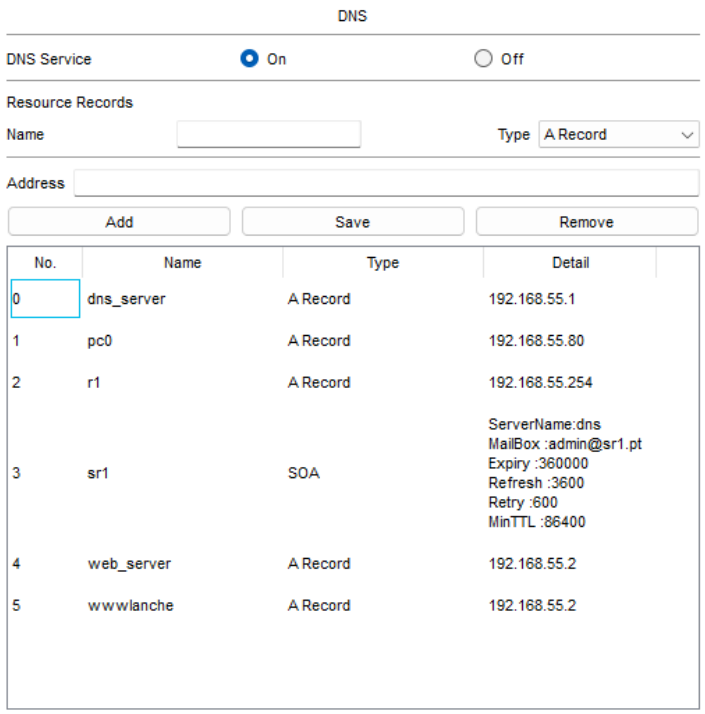

Web_Server
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
HTTP
HTTP
On
Off
HTTPS
On
Off


Web_Server
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
File Name: index.html
<html>
DEIS
<hr>Bem vindo ao Portal da Disciplina de SR1 Turno B 17:30 às 18:30
<p>Opções

Objetivos
</html>


PC0
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://web_server
Go
Stop
DEIS
Bem vindo ao Portal da Disciplina de SR1 Turno B 17:30 às 18:30
Opções
Objetivos

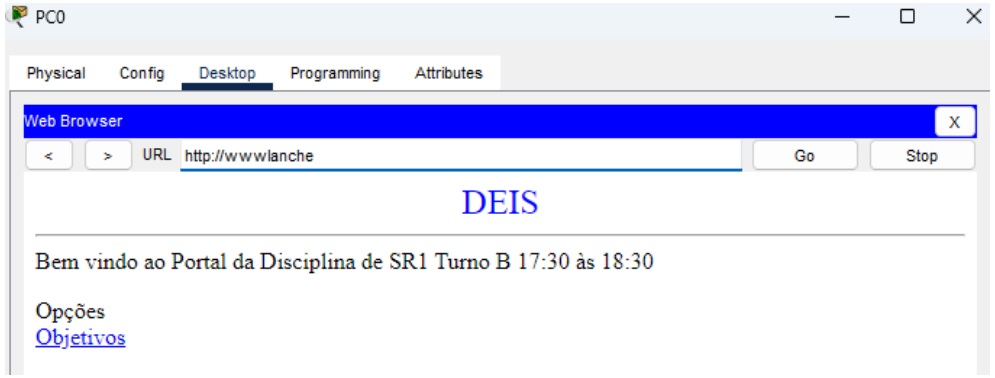
PERGUNTA 2

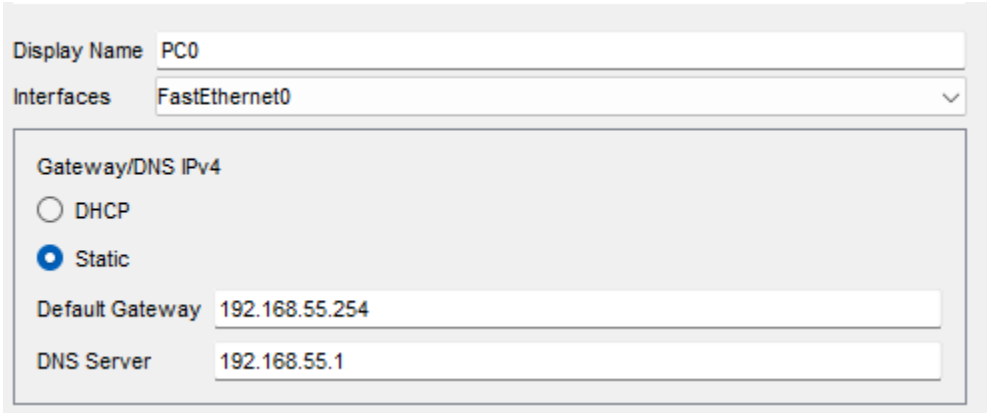



```
C:\>ping dns_server

Pinging 192.168.55.1 with 32 bytes of data:

Reply from 192.168.55.1: bytes=32 time<1ms TTL=128
Reply from 192.168.55.1: bytes=32 time=1ms TTL=128
Reply from 192.168.55.1: bytes=32 time=1ms TTL=128
Reply from 192.168.55.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.55.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping web_server

Pinging 192.168.55.2 with 32 bytes of data:

Reply from 192.168.55.2: bytes=32 time<1ms TTL=128
Reply from 192.168.55.2: bytes=32 time<1ms TTL=128
Reply from 192.168.55.2: bytes=32 time=1ms TTL=128
Reply from 192.168.55.2: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.55.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping pc0

Pinging 192.168.55.80 with 32 bytes of data:

Reply from 192.168.55.80: bytes=32 time=1ms TTL=128
Reply from 192.168.55.80: bytes=32 time=27ms TTL=128
Reply from 192.168.55.80: bytes=32 time=21ms TTL=128
Reply from 192.168.55.80: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.55.80:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 27ms, Average = 13ms

C:\>ping r1

Pinging 192.168.55.254 with 32 bytes of data:

Reply from 192.168.55.254: bytes=32 time<1ms TTL=255
Reply from 192.168.55.254: bytes=32 time<1ms TTL=255
Reply from 192.168.55.254: bytes=32 time<1ms TTL=255
Reply from 192.168.55.254: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.55.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

PERGUNTA 2

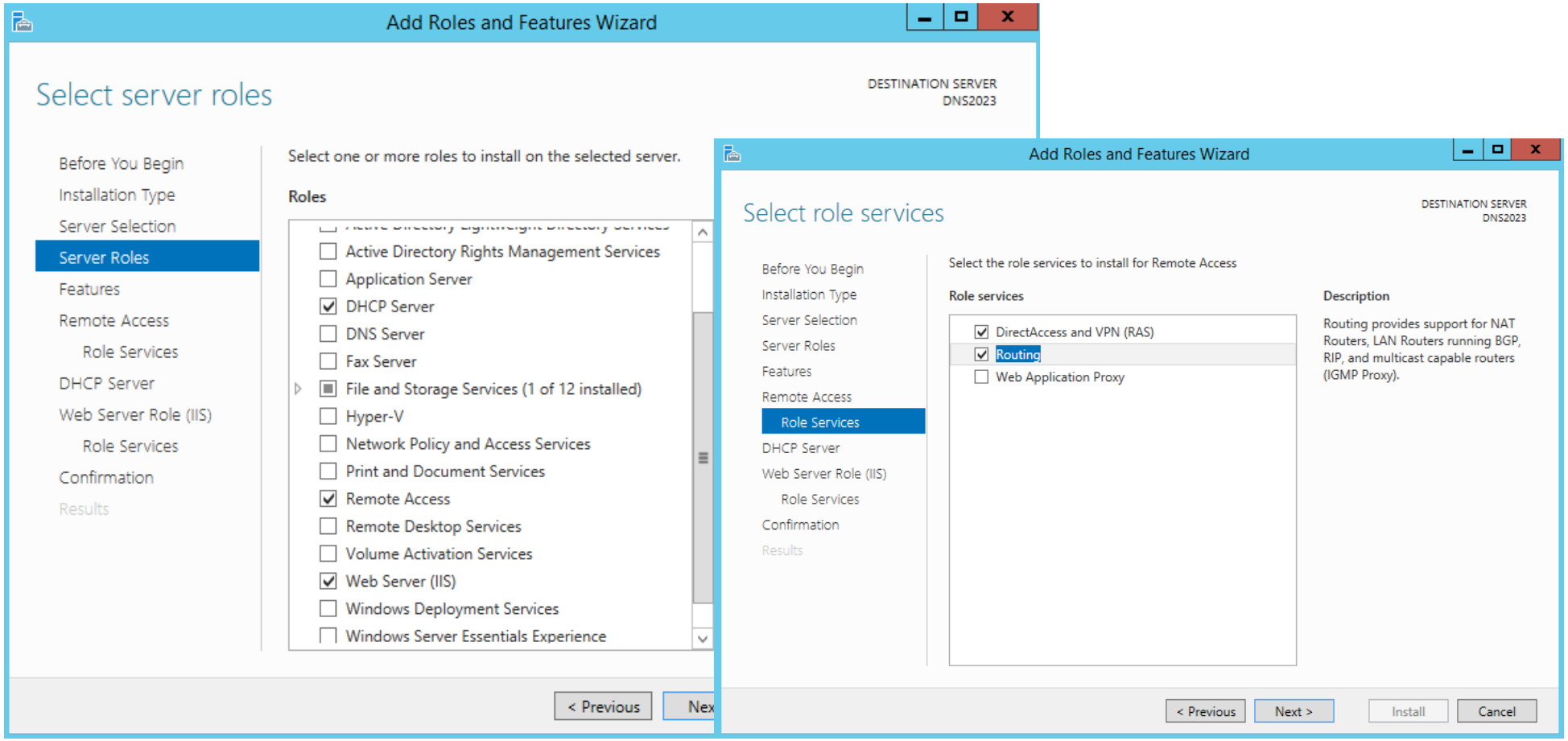




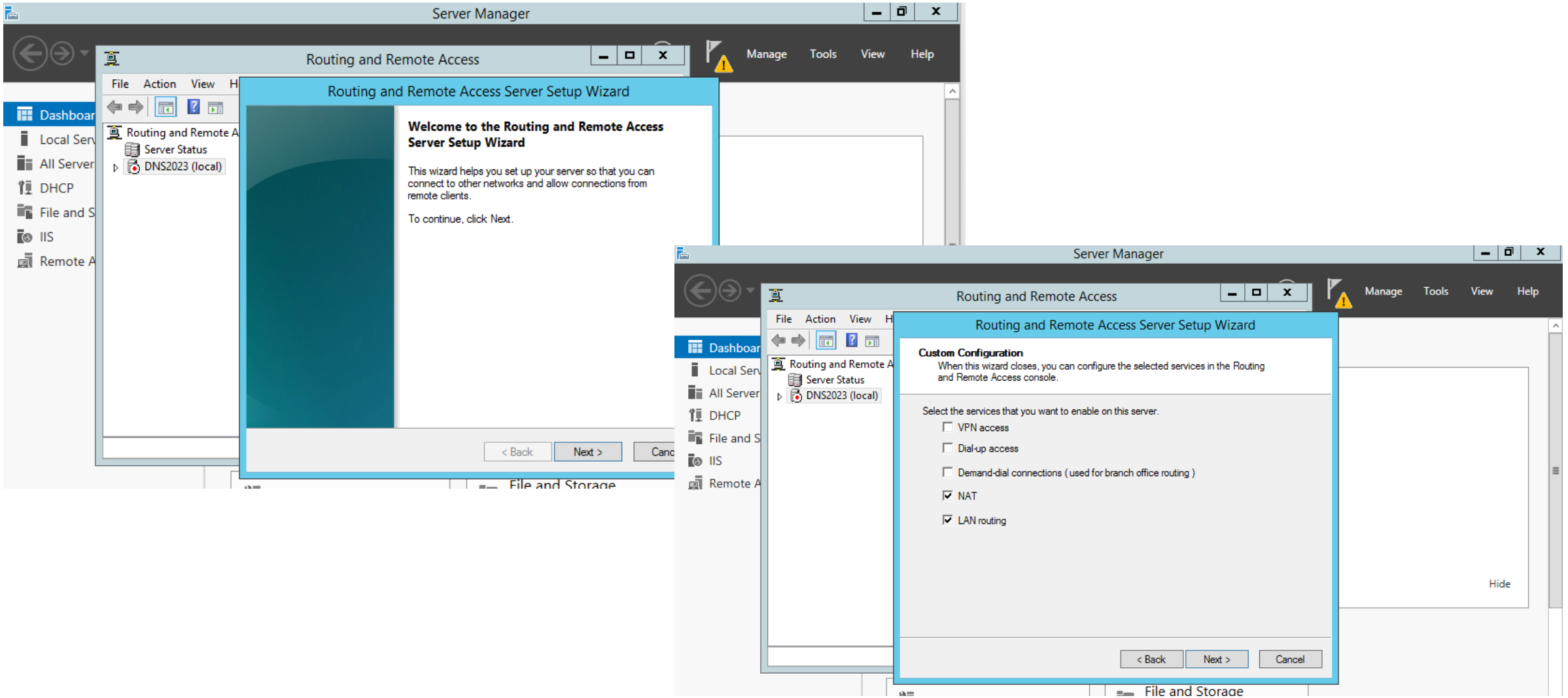

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping wwwlanche

Pinging 192.168.55.2 with 32 bytes of data:

Reply from 192.168.55.2: bytes=32 time=1ms TTL=128
Reply from 192.168.55.2: bytes=32 time<1ms TTL=128
Reply from 192.168.55.2: bytes=32 time<1ms TTL=128
Reply from 192.168.55.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.55.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping web_server

Pinging 192.168.55.2 with 32 bytes of data:

Reply from 192.168.55.2: bytes=32 time<1ms TTL=128
Reply from 192.168.55.2: bytes=32 time<1ms TTL=128
Reply from 192.168.55.2: bytes=32 time<1ms TTL=128
Reply from 192.168.55.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.55.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
Router#ping wwwlanche

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.55.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/2/13 ms

Router#ping web_server
Translating "web_server"...domain server (255.255.255.255)
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.55.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/3/15 ms
```

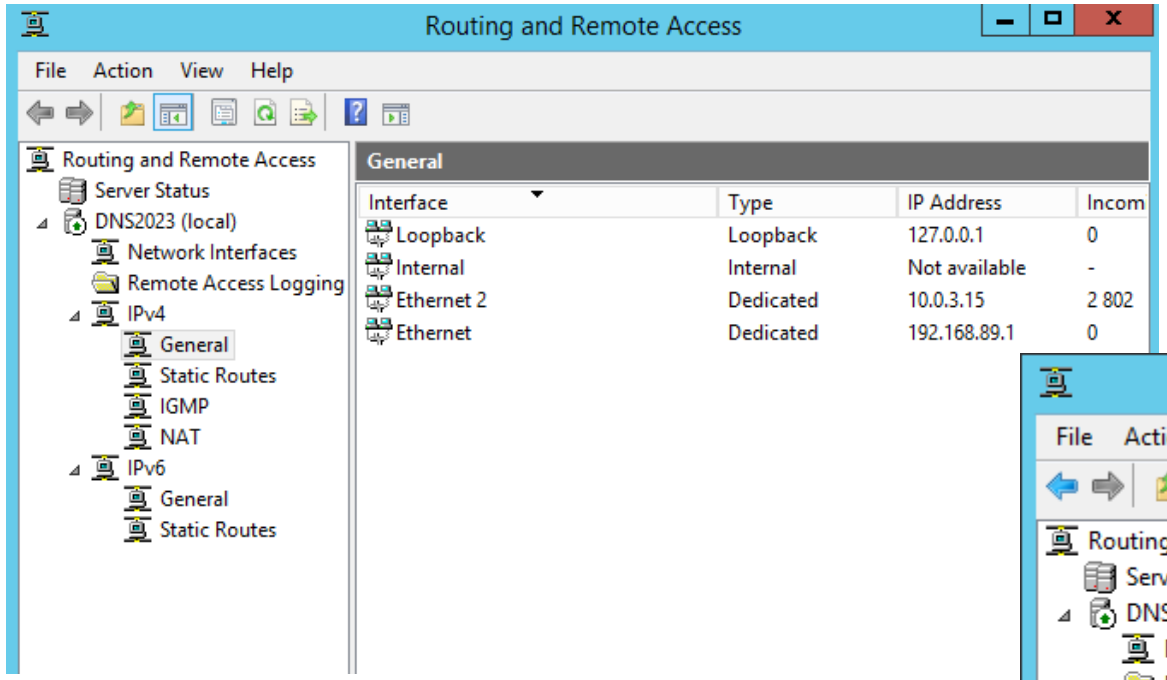
PERGUNTA 3

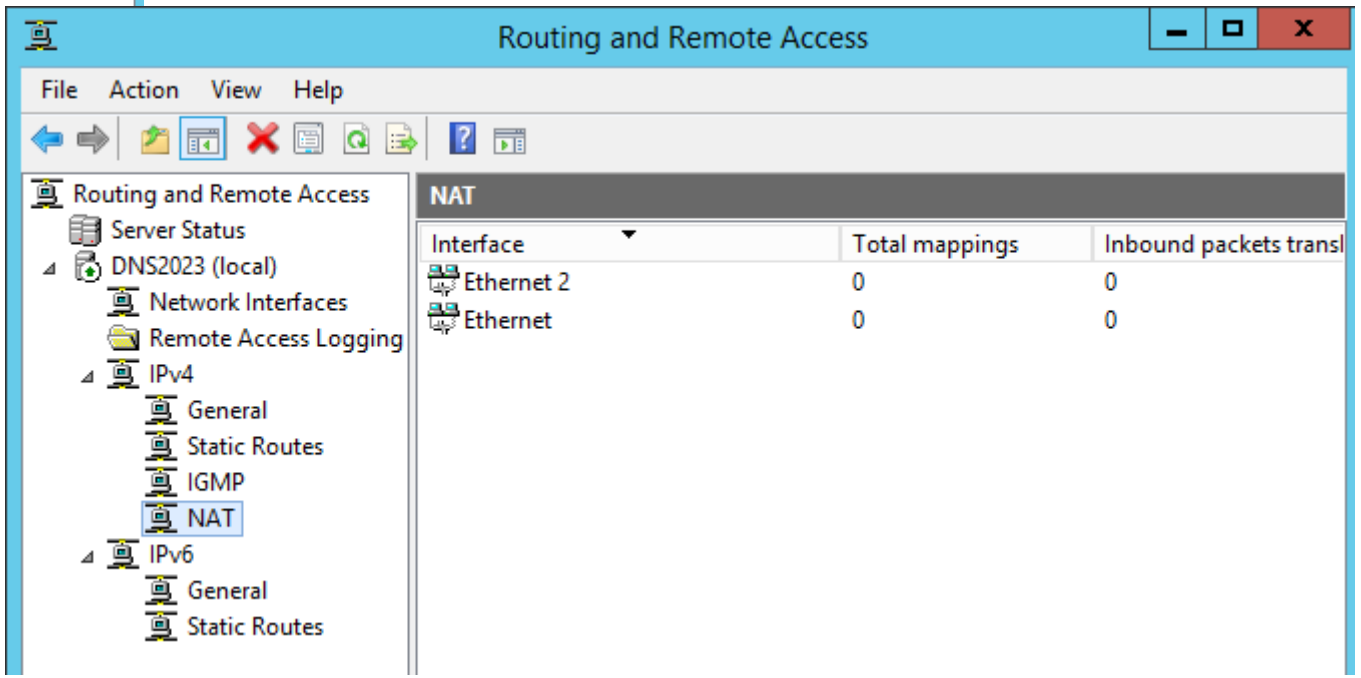

Add Roles and Features Wizard
Select server roles
DESTINATION SERVER
DNS2023
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Remote Access
Role Services
DHCP Server
Web Server Role (IIS)
Role Services
Confirmation
Results
Select one or more roles to install on the selected server.
Roles
Active Directory Rights Management Services
Application Server
DHCP Server
DNS Server
Fax Server
File and Storage Services (1 of 12 installed)
Hyper-V
Network Policy and Access Services
Print and Document Services
Remote Access
Remote Desktop Services
Volume Activation Services
Web Server (IIS)
Windows Deployment Services
Windows Server Essentials Experience
< Previous
Add Roles and Features Wizard
Select role services
DESTINATION SERVER
DNS2023
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Remote Access
Role Services
DHCP Server
Web Server Role (IIS)
Role Services
Confirmation
Results
Select the role services to install for Remote Access
Role services
DirectAccess and VPN (RAS)
Routing
Web Application Proxy
Description
Routing provides support for NAT Routers, LAN Routers running BGP, RIP, and multicast capable routers (IGMP Proxy).
< Previous
Next >
Install
Cancel

PERGUNTA 3

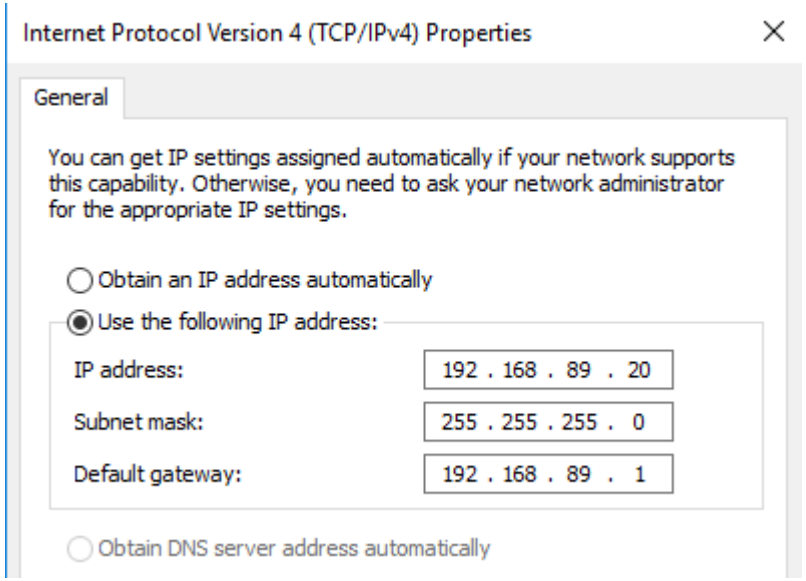

Server Manager
Routing and Remote Access
File Action View H
Routing and Remote A
Server Status
DNS2023 (local)
Routing and Remote Access Server Setup Wizard
Welcome to the Routing and Remote Access Server Setup Wizard
This wizard helps you set up your server so that you can connect to other networks and allow connections from remote clients.
To continue, click Next.
< Back
Next >
Manage
Tools
View
Help
Dashboar
Local Serv
All Server
DHCP
File and S
IIS
Remote A
File and Storage
Server Manager
Routing and Remote Access
File Action View H
Routing and Remote A
Server Status
DNS2023 (local)
Routing and Remote Access Server Setup Wizard
Custom Configuration
When this wizard closes, you can configure the selected services in the Routing and Remote Access console.
Select the services that you want to enable on this server.
VPN access
Dial-up access
Demand-dial connections (used for branch office routing)
NAT
LAN routing
< Back
Next >
Cancel
Hide
File and Storage

PERGUNTA 3

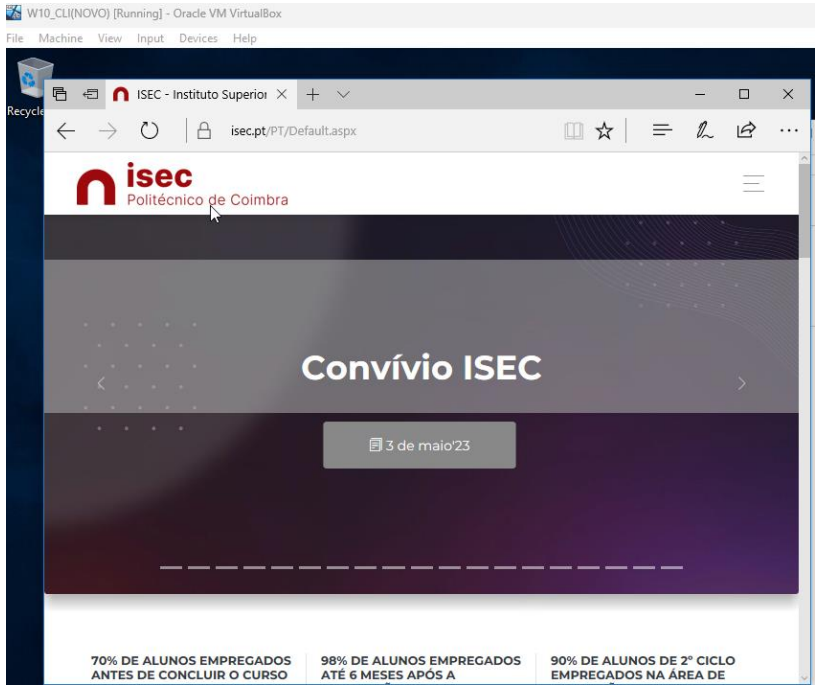

Routing and Remote Access
File Action View Help
Routing and Remote Access
Server Status
DNS2023 (local)
Network Interfaces
Remote Access Logging
IPv4
General
Static Routes
IGMP
NAT
IPv6
General
Static Routes
General
Interface Type IP Address Incom
Loopback Loopback 127.0.0.1 0
Internal Internal Not available -
Ethernet 2 Dedicated 10.0.3.15 2 802
Ethernet Dedicated 192.168.89.1 0


Routing and Remote Access
File Action View Help
Routing and Remote Access
Server Status
DNS2023 (local)
Network Interfaces
Remote Access Logging
IPv4
General
Static Routes
IGMP
NAT
IPv6
General
Static Routes
NAT
Interface Total mappings Inbound packets transl
Ethernet 2 0 0
Ethernet 0 0

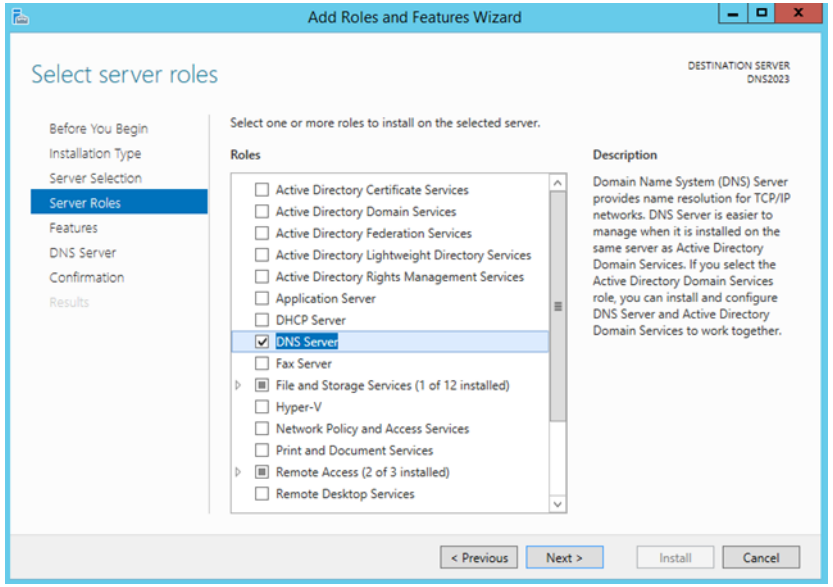
PERGUNTA 3

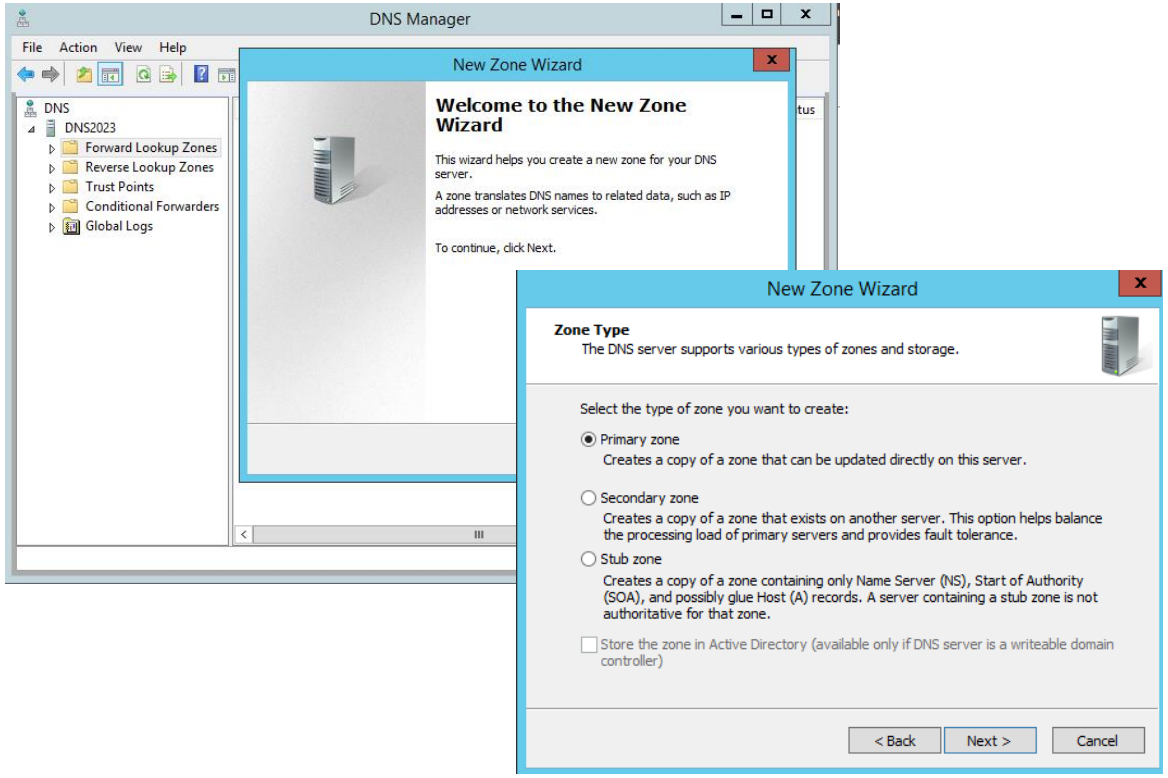



```
C:\Users\WK01>ping isec.pt

Pinging isec.pt [193.137.78.72] with 32 bytes of data:
Reply from 193.137.78.72: bytes=32 time=3ms TTL=61
Reply from 193.137.78.72: bytes=32 time=4ms TTL=61
Reply from 193.137.78.72: bytes=32 time=6ms TTL=61
Reply from 193.137.78.72: bytes=32 time=10ms TTL=61

Ping statistics for 193.137.78.72:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 10ms, Average = 5ms
```



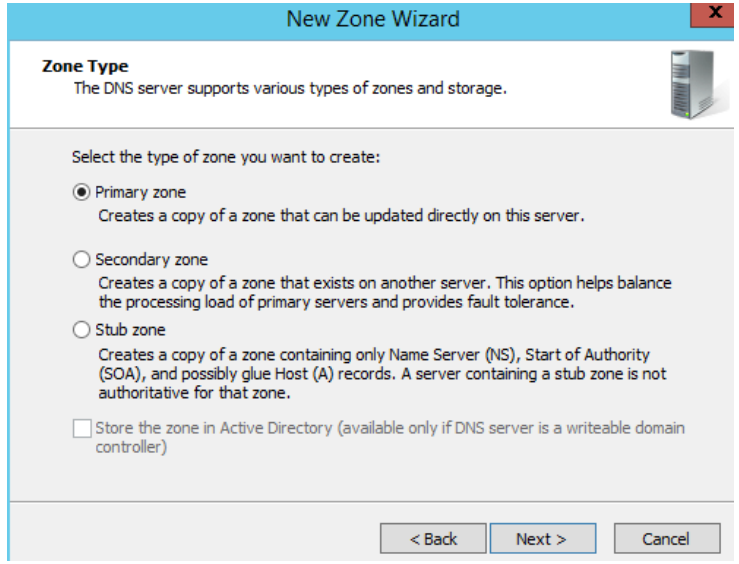
PERGUNTA 4

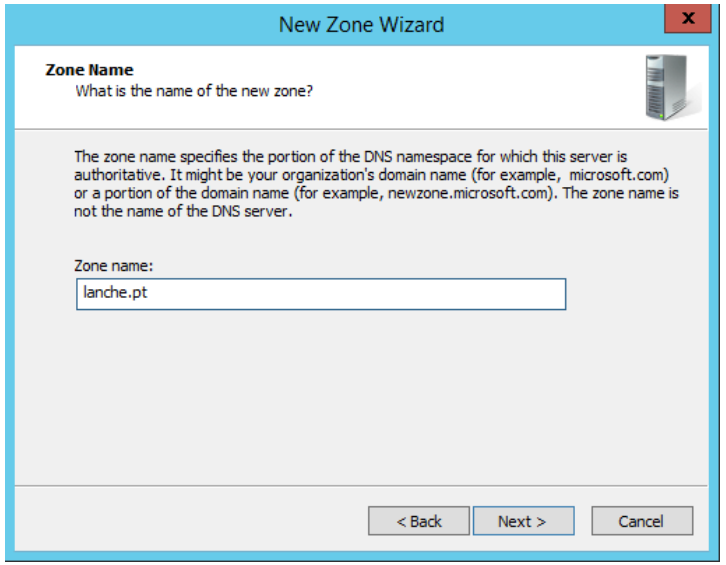

Add Roles and Features Wizard
Select server roles
DESTINATION SERVER
DNS2023
Before You Begin
Installation Type
Server Selection
Server Roles
Features
DNS Server
Confirmation
Results
Select one or more roles to install on the selected server.
Roles
Active Directory Certificate Services
Active Directory Domain Services
Active Directory Federation Services
Active Directory Lightweight Directory Services
Active Directory Rights Management Services
Application Server
DHCP Server
DNS Server
Fax Server
File and Storage Services (1 of 12 installed)
Hyper-V
Network Policy and Access Services
Print and Document Services
Remote Access (2 of 3 installed)
Remote Desktop Services
Description
Domain Name System (DNS) Server provides name resolution for TCP/IP networks. DNS Server is easier to manage when it is installed on the same server as Active Directory Domain Services. If you select the Active Directory Domain Services role, you can install and configure DNS Server and Active Directory Domain Services to work together.
< Previous
Next >
Install
Cancel

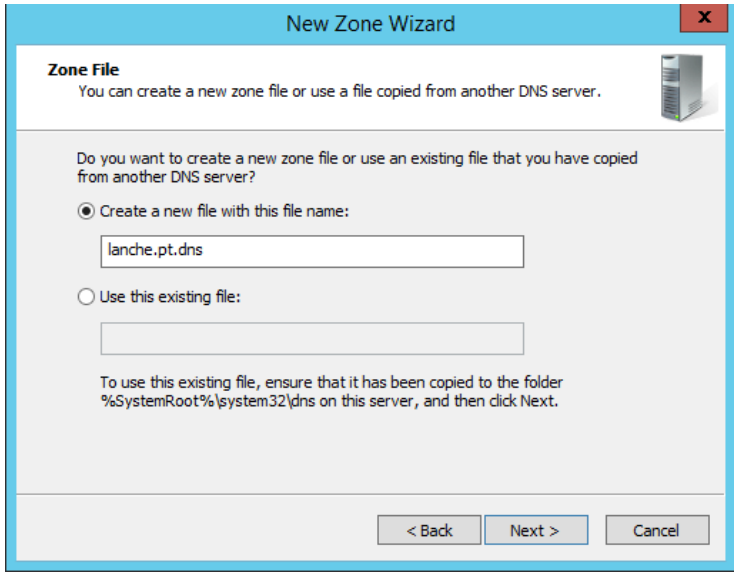

DNS Manager
File
Action
View
Help
DNS
DNS2023
Forward Lookup Zones
Reverse Lookup Zones
Trust Points
Conditional Forwarders
Global Logs
New Zone Wizard
Welcome to the New Zone Wizard
This wizard helps you create a new zone for your DNS server.
A zone translates DNS names to related data, such as IP addresses or network services.
To continue, click Next.
New Zone Wizard
Zone Type
The DNS server supports various types of zones and storage.
Select the type of zone you want to create:
Primary zone
Creates a copy of a zone that can be updated directly on this server.
Secondary zone
Creates a copy of a zone that exists on another server. This option helps balance the processing load of primary servers and provides fault tolerance.
Stub zone
Creates a copy of a zone containing only Name Server (NS), Start of Authority (SOA), and possibly glue Host (A) records. A server containing a stub zone is not authoritative for that zone.
Store the zone in Active Directory (available only if DNS server is a writeable domain controller)
< Back
Next >
Cancel

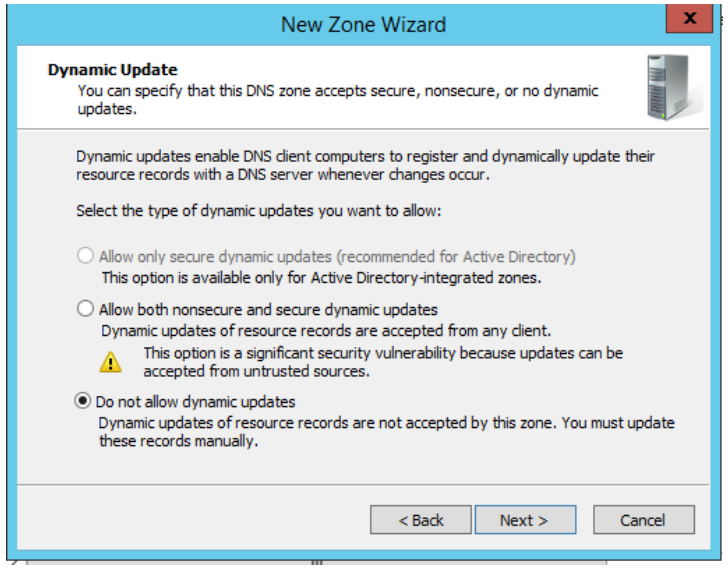
PERGUNTA 4

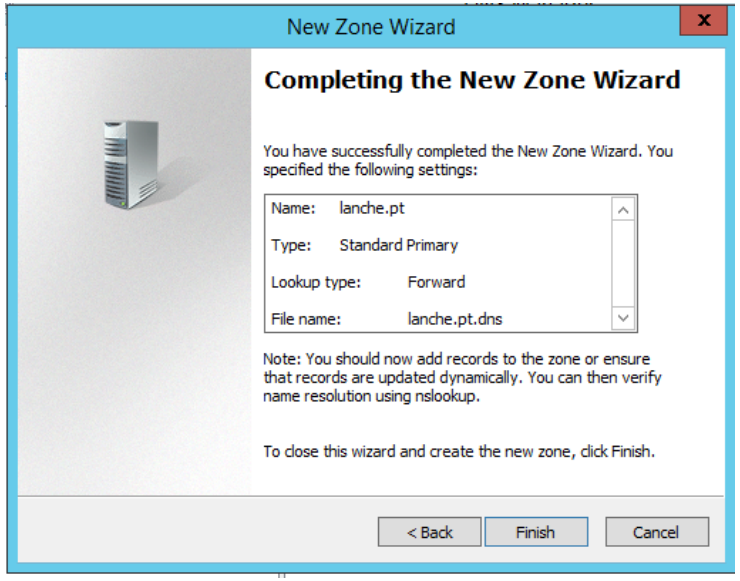

New Zone Wizard
Welcome to the New Zone Wizard
This wizard helps you create a new zone for your DNS server.
A zone translates DNS names to related data, such as IP addresses or network services.
To continue, click Next.
< Back
Next >
Cancel


New Zone Wizard
Zone Type
The DNS server supports various types of zones and storage.
Select the type of zone you want to create:
Primary zone
Creates a copy of a zone that can be updated directly on this server.
Secondary zone
Creates a copy of a zone that exists on another server. This option helps balance the processing load of primary servers and provides fault tolerance.
Stub zone
Creates a copy of a zone containing only Name Server (NS), Start of Authority (SOA), and possibly glue Host (A) records. A server containing a stub zone is not authoritative for that zone.
Store the zone in Active Directory (available only if DNS server is a writeable domain controller)
< Back
Next >
Cancel

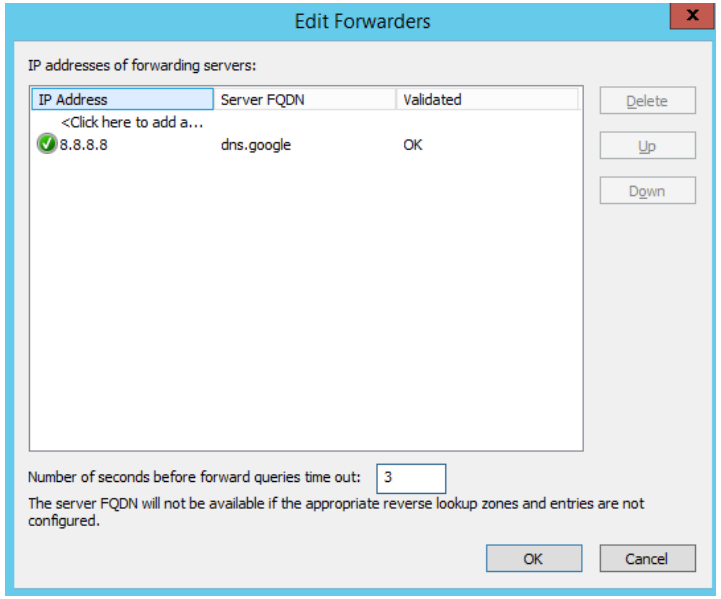

New Zone Wizard
Zone Name
What is the name of the new zone?
The zone name specifies the portion of the DNS namespace for which this server is authoritative. It might be your organization's domain name (for example, microsoft.com) or a portion of the domain name (for example, newzone.microsoft.com). The zone name is not the name of the DNS server.
Zone name:
lanche.pt
< Back
Next >
Cancel

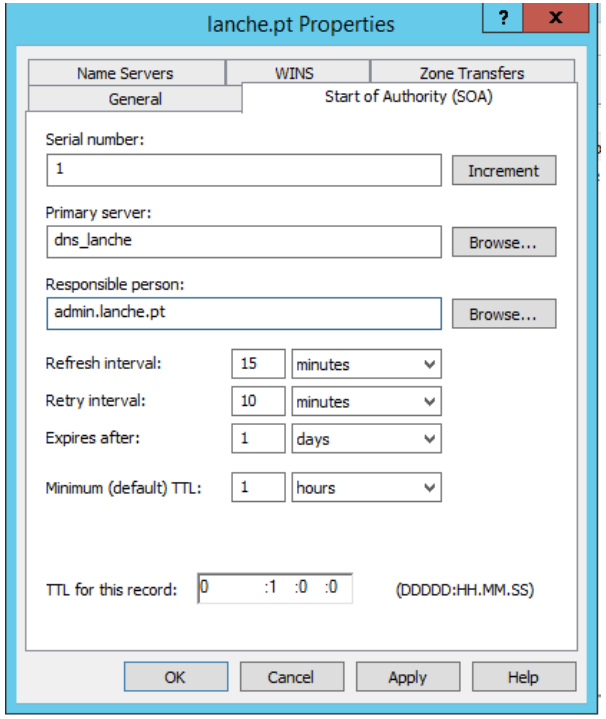

New Zone Wizard
Zone File
You can create a new zone file or use a file copied from another DNS server.
Do you want to create a new zone file or use an existing file that you have copied from another DNS server?
Create a new file with this file name:
lanche.pt.dns
Use this existing file:
To use this existing file, ensure that it has been copied to the folder %SystemRoot%\system32\dns on this server, and then click Next.
< Back
Next >
Cancel

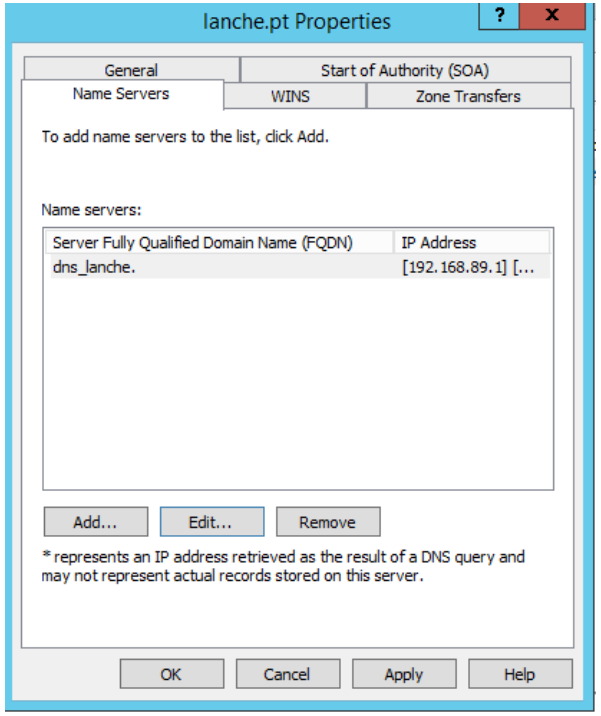

New Zone Wizard
Dynamic Update
You can specify that this DNS zone accepts secure, nonsecure, or no dynamic updates.
Dynamic updates enable DNS client computers to register and dynamically update their resource records with a DNS server whenever changes occur.
Select the type of dynamic updates you want to allow:
Allow only secure dynamic updates (recommended for Active Directory)
This option is available only for Active Directory-integrated zones.
Allow both nonsecure and secure dynamic updates
Dynamic updates of resource records are accepted from any client.
This option is a significant security vulnerability because updates can be accepted from untrusted sources.
Do not allow dynamic updates
Dynamic updates of resource records are not accepted by this zone. You must update these records manually.
< Back
Next >
Cancel


New Zone Wizard
Completing the New Zone Wizard
You have successfully completed the New Zone Wizard. You specified the following settings:
Name: lanche.pt
Type: Standard Primary
Lookup type: Forward
File name: lanche.pt.dns
Note: You should now add records to the zone or ensure that records are updated dynamically. You can then verify name resolution using nslookup.
To close this wizard and create the new zone, click Finish.
< Back
Finish
Cancel

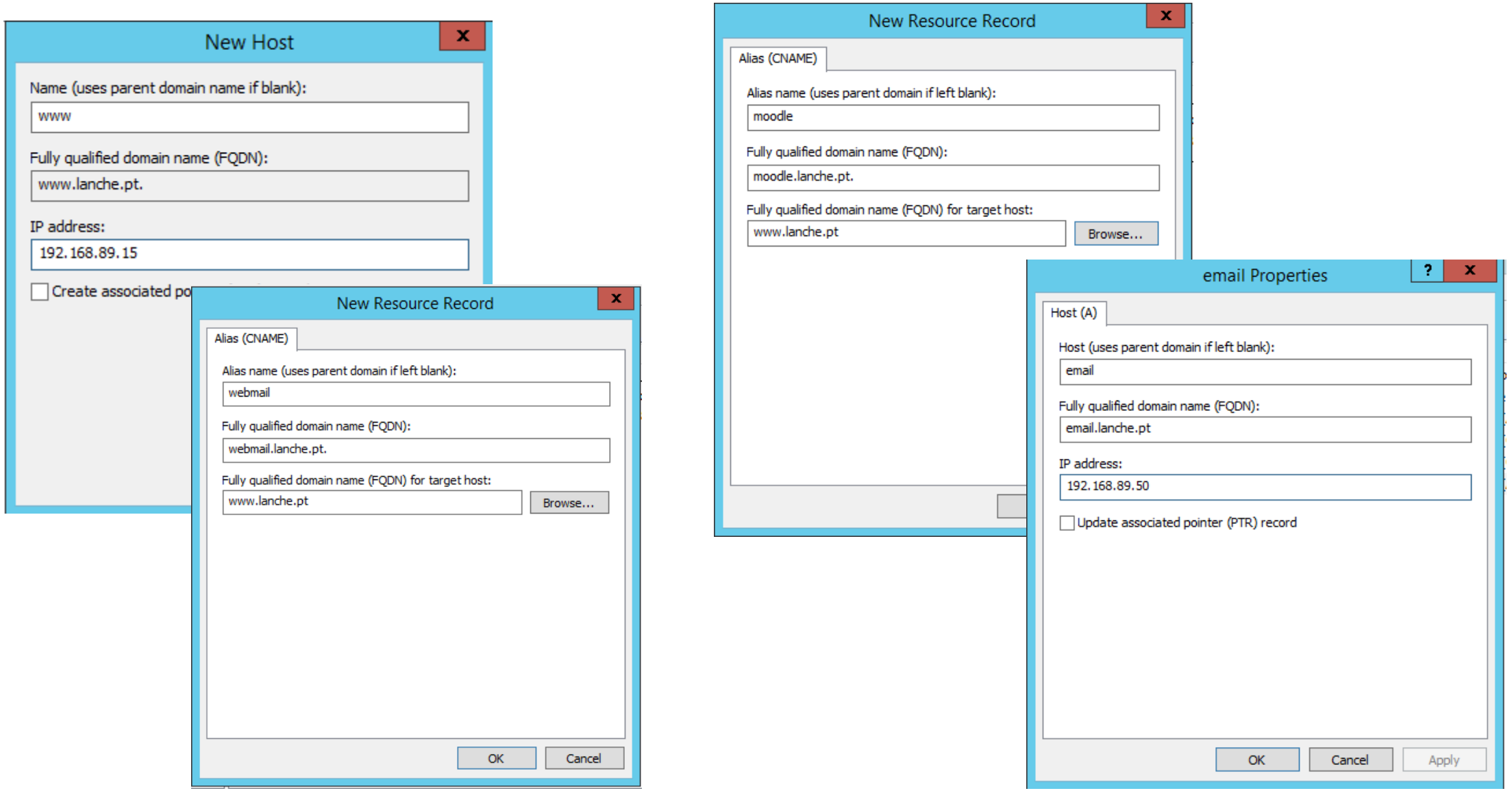
PERGUNTA 4


Edit Forwarders
IP addresses of forwarding servers:
IP Address
Server FQDN
Validated
<Click here to add a...
8.8.8.8
dns.google
OK
Delete
Up
Down
Number of seconds before forward queries time out:
3
The server FQDN will not be available if the appropriate reverse lookup zones and entries are not configured.
OK
Cancel

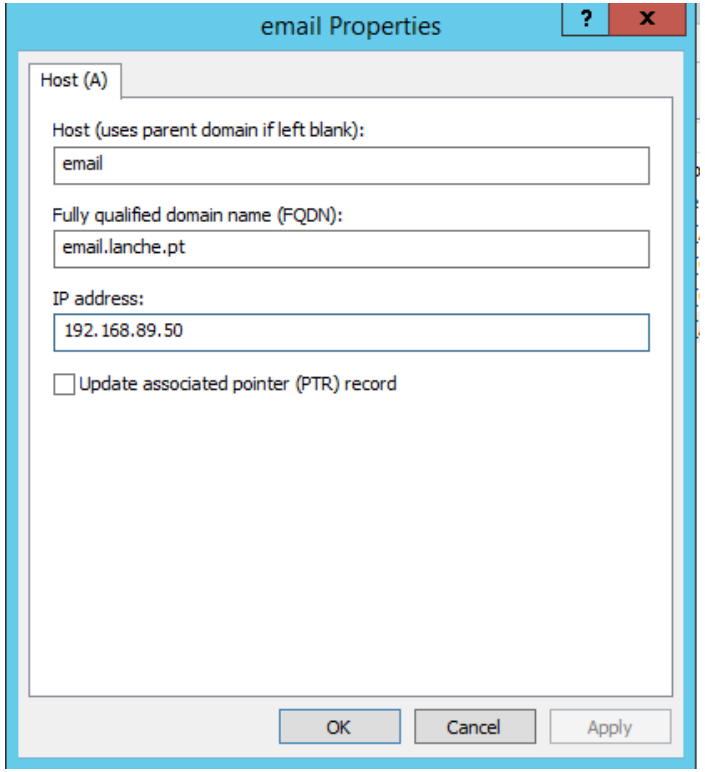

lanche.pt Properties
Name Servers
WINS
Zone Transfers
General
Start of Authority (SOA)
Serial number:
1
Increment
Primary server:
dns_lanche
Browse...
Responsible person:
admin.lanche.pt
Browse...
Refresh interval:
15
minutes
Retry interval:
10
minutes
Expires after:
1
days
Minimum (default) TTL:
1
hours
TTL for this record:
0 :1 :0 :0
(DDDDD:HH.MM.SS)
OK
Cancel
Apply
Help

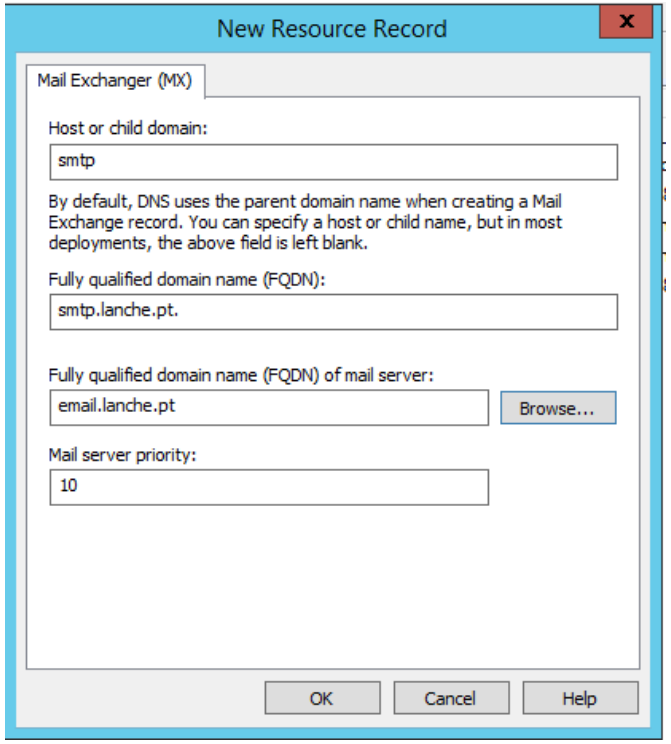

lanche.pt Properties
General
Start of Authority (SOA)
Name Servers
WINS
Zone Transfers
To add name servers to the list, click Add.
Name servers:
Server Fully Qualified Domain Name (FQDN)
IP Address
dns_lanche.
[192.168.89.1] [...
Add...
Edit...
Remove
* represents an IP address retrieved as the result of a DNS query and may not represent actual records stored on this server.
OK
Cancel
Apply
Help

PERGUNTA 4


New Host
Name (uses parent domain name if blank):
www
Fully qualified domain name (FQDN):
www.lanche.pt.
IP address:
192.168.89.15
Create associated po
New Resource Record
Alias (CNAME)
Alias name (uses parent domain if left blank):
webmail
Fully qualified domain name (FQDN):
webmail.lanche.pt.
Fully qualified domain name (FQDN) for target host:
www.lanche.pt
Browse...
OK
Cancel
New Resource Record
Alias (CNAME)
Alias name (uses parent domain if left blank):
moodle
Fully qualified domain name (FQDN):
moodle.lanche.pt.
Fully qualified domain name (FQDN) for target host:
www.lanche.pt
Browse...
email Properties
Host (A)
Host (uses parent domain if left blank):
email
Fully qualified domain name (FQDN):
email.lanche.pt
IP address:
192.168.89.50
Update associated pointer (PTR) record
OK
Cancel
Apply

PERGUNTA 4



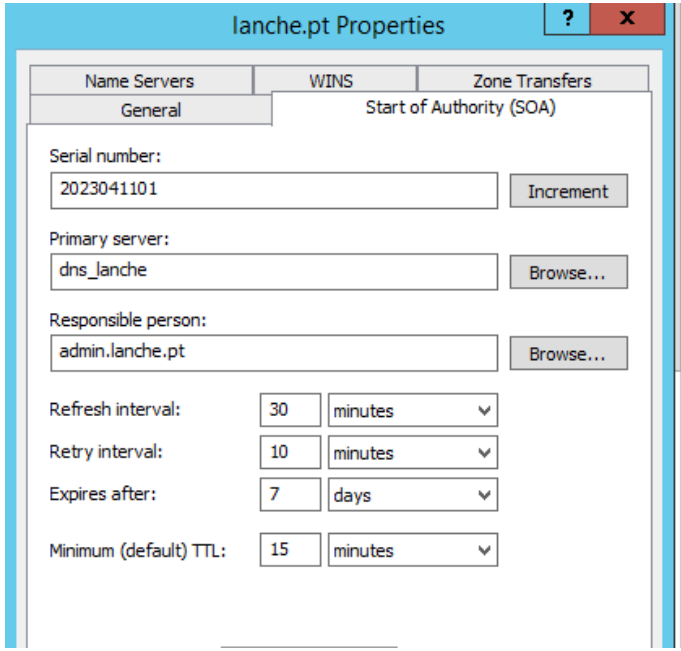


Name	Type	Data
(same as parent folder)	Start of Authority (SOA)	[1], dns_lanche, admin.lan...
(same as parent folder)	Name Server (NS)	dns_lanche.
www	Host (A)	192.168.89.15
webmail	Alias (CNAME)	www.lanche.pt
moodle	Alias (CNAME)	www.lanche.pt
email	Host (A)	192.168.89.50
smtp	Mail Exchanger (MX)	[10] email.lanche.pt

PERGUNTA 4

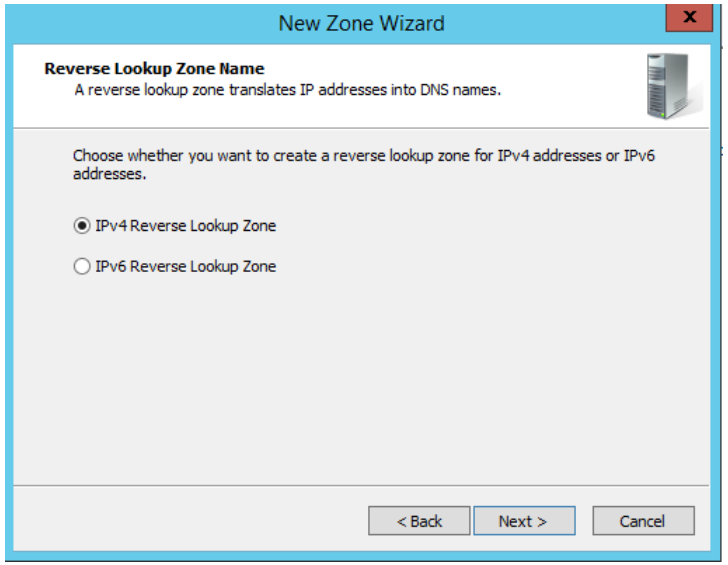
Command Prompt - nslookup

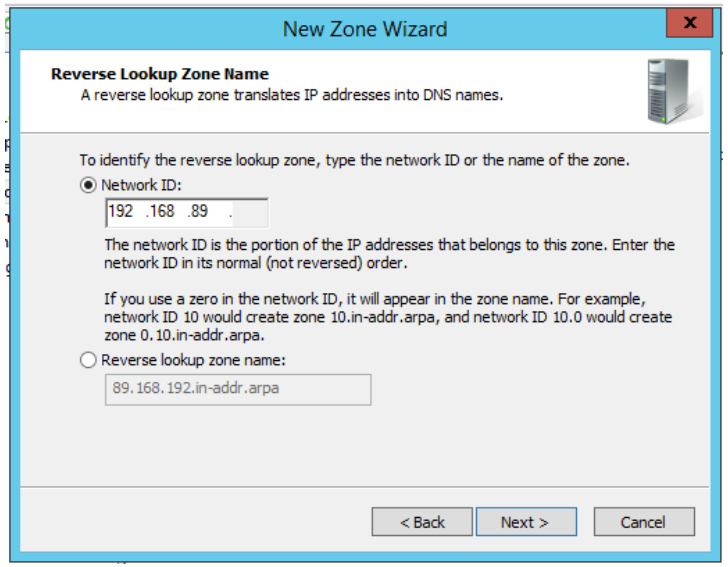
```
C:\Users\WK01>nslookup
Default Server:  UnKnown
Address:  192.168.89.1

> webmail.lanche.pt
Server:  UnKnown
Address:  192.168.89.1

Name:    www.lanche.pt
Address:  192.168.89.15
Aliases:  webmail.lanche.pt

> moodle.lanche.pt
Server:  UnKnown
Address:  192.168.89.1

Name:    www.lanche.pt
Address:  192.168.89.15
Aliases:  moodle.lanche.pt

> www.lanche.pt
Server:  UnKnown
Address:  192.168.89.1

Name:    www.lanche.pt
Address:  192.168.89.15
```

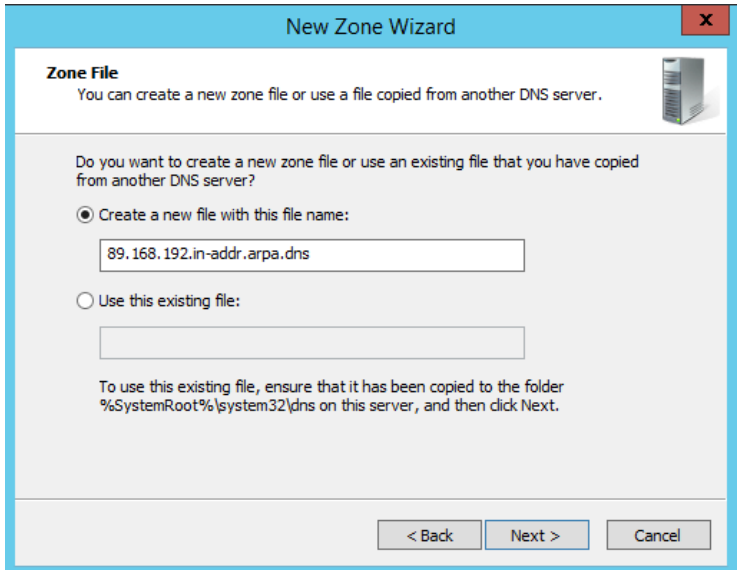



```
        default TTL = 3600 (1 hour)
> webmail.lanche.pt
Server:  dns.lanche.pt
Address:  192.168.89.1

webmail.lanche.pt       canonical name = www.lanche.pt
> publico.pt
Server:  dns.lanche.pt
Address:  192.168.89.1

publico.pt
        primary name server = dns.publico.pt
        responsible mail addr = it.publico.pt
        serial  = 2023041101
        refresh = 1800 (30 mins)
        retry   = 600 (10 mins)
        expire  = 604800 (7 days)
        default TTL = 900 (15 mins)
>
C:\Users\WK01>

C:\Users\WK01>nslookup
Default Server:  dns.lanche.pt
Address:  192.168.89.1
```

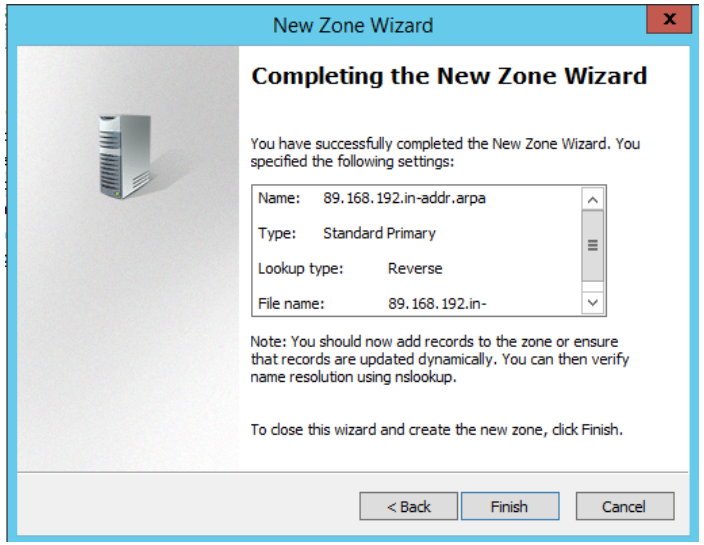
PERGUNTA 5


New Zone Wizard
Reverse Lookup Zone Name
A reverse lookup zone translates IP addresses into DNS names.
Choose whether you want to create a reverse lookup zone for IPv4 addresses or IPv6 addresses.
IPv4 Reverse Lookup Zone
IPv6 Reverse Lookup Zone
< Back
Next >
Cancel

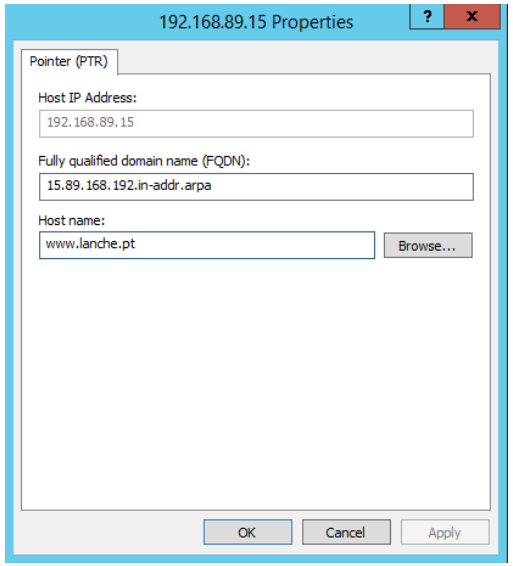

New Zone Wizard
Reverse Lookup Zone Name
A reverse lookup zone translates IP addresses into DNS names.
To identify the reverse lookup zone, type the network ID or the name of the zone.
Network ID:
192 .168 .89 .
The network ID is the portion of the IP addresses that belongs to this zone. Enter the network ID in its normal (not reversed) order.
If you use a zero in the network ID, it will appear in the zone name. For example, network ID 10 would create zone 10.in-addr.arpa, and network ID 10.0 would create zone 0.10.in-addr.arpa.
Reverse lookup zone name:
89.168.192.in-addr.arpa
< Back
Next >
Cancel

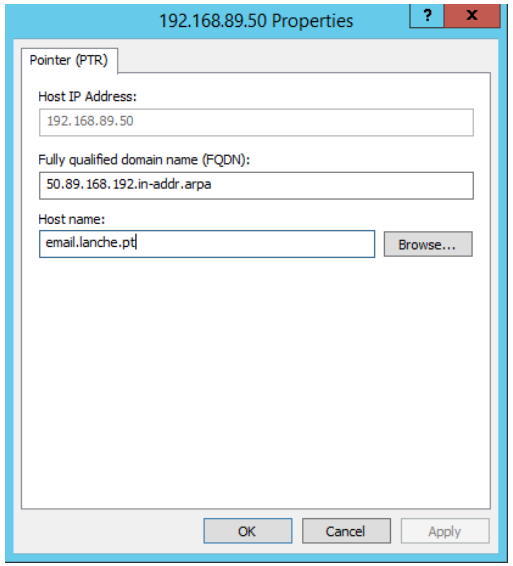

New Zone Wizard
Zone File
You can create a new zone file or use a file copied from another DNS server.
Do you want to create a new zone file or use an existing file that you have copied from another DNS server?
Create a new file with this file name:
89.168.192.in-addr.arpa.dns
Use this existing file:
To use this existing file, ensure that it has been copied to the folder %SystemRoot%\system32\dns on this server, and then click Next.
< Back
Next >
Cancel

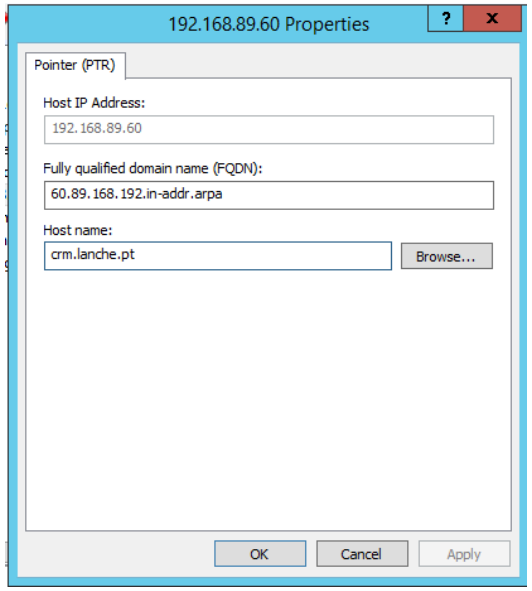

New Zone Wizard
Dynamic Update
You can specify that this DNS zone accepts secure, nonsecure, or no dynamic updates.
Dynamic updates enable DNS client computers to register and dynamically update their resource records with a DNS server whenever changes occur.
Select the type of dynamic updates you want to allow:
Allow only secure dynamic updates (recommended for Active Directory)
This option is available only for Active Directory-integrated zones.
Allow both nonsecure and secure dynamic updates
Dynamic updates of resource records are accepted from any client.
This option is a significant security vulnerability because updates can be accepted from untrusted sources.
Do not allow dynamic updates
Dynamic updates of resource records are not accepted by this zone. You must update these records manually.
< Back
Next >
Cancel

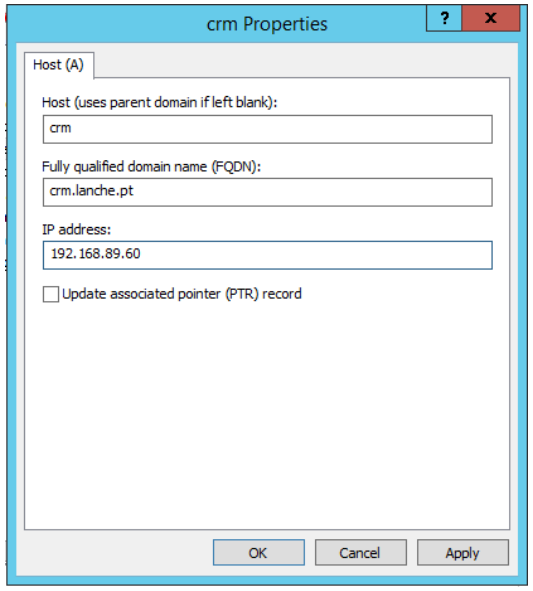

New Zone Wizard
Completing the New Zone Wizard
You have successfully completed the New Zone Wizard. You specified the following settings:
Name: 89.168.192.in-addr.arpa
Type: Standard Primary
Lookup type: Reverse
File name: 89.168.192.in-
Note: You should now add records to the zone or ensure that records are updated dynamically. You can then verify name resolution using nslookup.
To close this wizard and create the new zone, click Finish.
< Back
Finish
Cancel

PERGUNTA 5







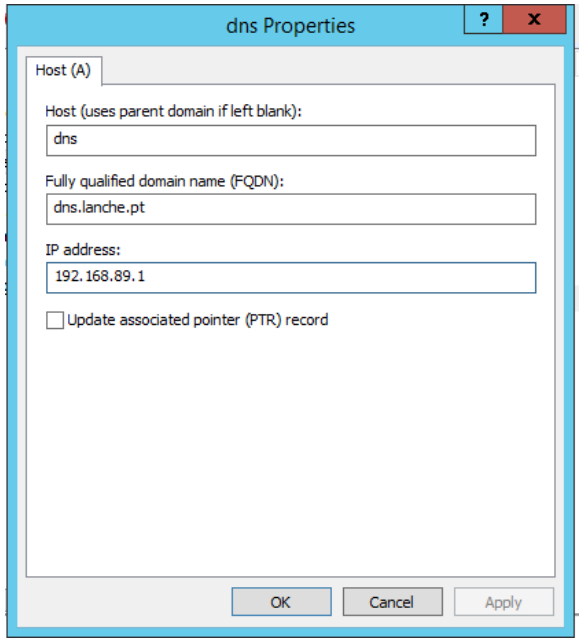


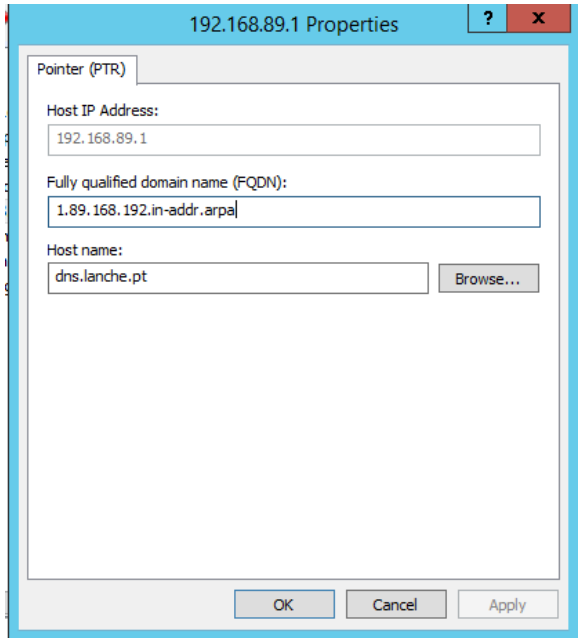
Name	Type	Data
(same as parent folder)	Start of Authority (SOA)	[1], dns_lanche, admin.lan...
(same as parent folder)	Name Server (NS)	dns_lanche.
www	Host (A)	192.168.89.15
webmail	Alias (CNAME)	www.lanche.pt
moodle	Alias (CNAME)	www.lanche.pt
email	Host (A)	192.168.89.50
smtp	Mail Exchanger (MX)	[10] email.lanche.pt
crm	Host (A)	192.168.89.60

Name	Type	Data
(same as parent folder)	Start of Authority (SOA)	[1], dns2023., hostmaste
(same as parent folder)	Name Server (NS)	dns2023.
192.168.89.15	Pointer (PTR)	www.lanche.pt
192.168.89.50	Pointer (PTR)	email.lanche.pt
192.168.89.60	Pointer (PTR)	crm.lanche.pt

PERGUNTA 5

De forma a que o servidor não apareca no comando “nslookup” como unknown, foram ainda adicionado os seguintes parâmetros:






```
C:\Users\WK01>nslookup
Default Server:  dns.lanche.pt
Address:  192.168.89.1

> set q=ptr
> crm.lanche.pt
Server:  dns.lanche.pt
Address:  192.168.89.1

lanche.pt
        primary name server = dns_lanche
        responsible mail addr = admin.lanche.pt
        serial  = 12
        refresh = 900 (15 mins)
        retry   = 600 (10 mins)
        expire  = 86400 (1 day)
        default TTL = 3600 (1 hour)
> email.lanche.pt
Server:  dns.lanche.pt
Address:  192.168.89.1

lanche.pt
        primary name server = dns_lanche
        responsible mail addr = admin.lanche.pt
        serial  = 12
        refresh = 900 (15 mins)
        retry   = 600 (10 mins)
        expire  = 86400 (1 day)
        default TTL = 3600 (1 hour)
```

PERGUNTA 6

```
C:\Users\WK01>nslookup
Default Server:  dns.lanche.pt
Address:  192.168.89.1

> www.ipc.pt
Server:  dns.lanche.pt
Address:  192.168.89.1

Non-authoritative answer:
Name:    www.ipc.pt
Address:  193.137.79.168
```

```
> set q=SOA
> www.ipc.pt
Server:  dns.lanche.pt
Address:  192.168.89.1

ipc.pt
        primary name server = ns.ipc.pt
        responsible mail addr = hostmaster
        serial  = 2023010901
        refresh = 900 (15 mins)
        retry   = 600 (10 mins)
        expire  = 86400 (1 day)
        default TTL = 3600 (1 hour)
ns.ipc.pt       internet address = 193.137.79.131
```

Pergunta: Ainda para este domínio se o administrador alterar o nome de um servidor no dia 22-05-2022 que número de série terá de ter a nova configuração para manter a regra até agora seguida?

Resposta: De forma a manter a regra sempre que se faz uma atualização ou se deseja que o DNS seja propagado terá de se incrementar o ultimo valor. Sendo o valor definido pelo IPC como (AAAAMMDDNN), então se sofrer uma alteração na data acima ficaria (2022052201).