Assignment

Creating a DNS forward lookup zone

Description fromadataka:

"You are a system administrator in an IT company. You'll need to create a new DNS lookup DNS, which will be called itcompany.lan. Additional requirements to be met are:

- *Create a type A record, with the name IT1 and the IP address 192.168.201.199.*
- *DNS Forwarders should be set up in the following order:*
  - *8.4.4.4 (8.8.8.8)*
  - *2.2.4.4 (1.1.1.1)*

- *Activate the Scavenging process at the server level and set the Refresh and No-refresh interval to 10 days.*
- *Enable Transfer Zones for all servers that send a request to this DNS server.*

Submit the solution in text form, with a step-by-step description of the required steps of the task, according to a step-by-step system.

In addition to the text solution, attach screenshots of the following settings:

1. *DNS manager console in which you can see the created zone itcompany.lan and the A record from it;*
2. *DNS forwarders (after entering the specified addresses);*
3. *setting the Scavenging option for the DNS server;*
4. *setting the Transfer zone – you will send the images separately or as part of a text solution."*

Course: Network Server Services

Module: DNS Implementation

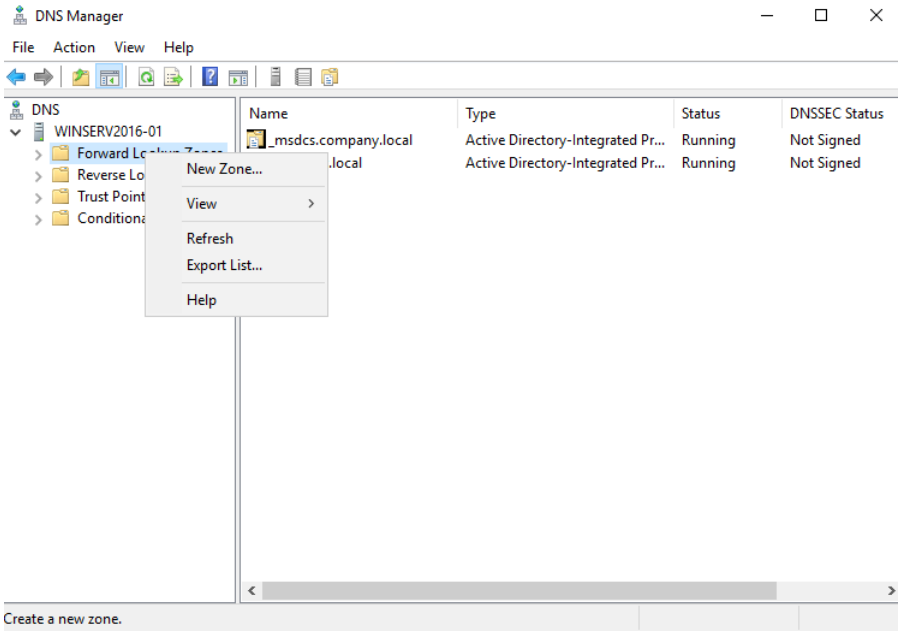
Student: Jovan Ljušić

CONTENT

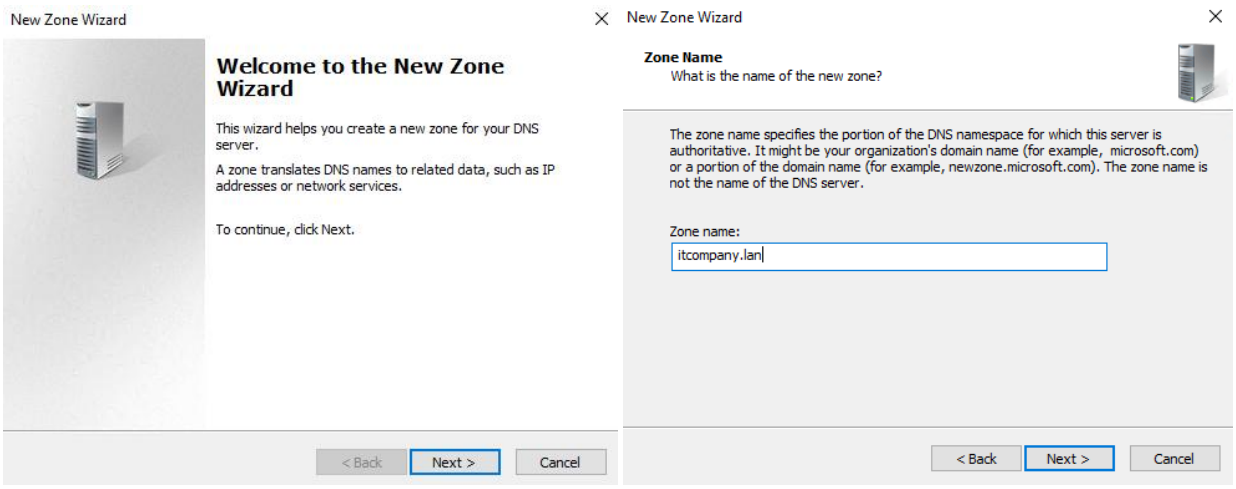
This document presents a step-by-step approach to solving a specific task, outlining the methodology, execution, and expected outcomes. By following the instructions, the reader will gain hands-on experience in applying technical concepts to practical situations, reinforcing both theoretical knowledge and problem-solving abilities.

The structured approach ensures that each step is clearly defined, making the process easy to follow and implement in professional environments.

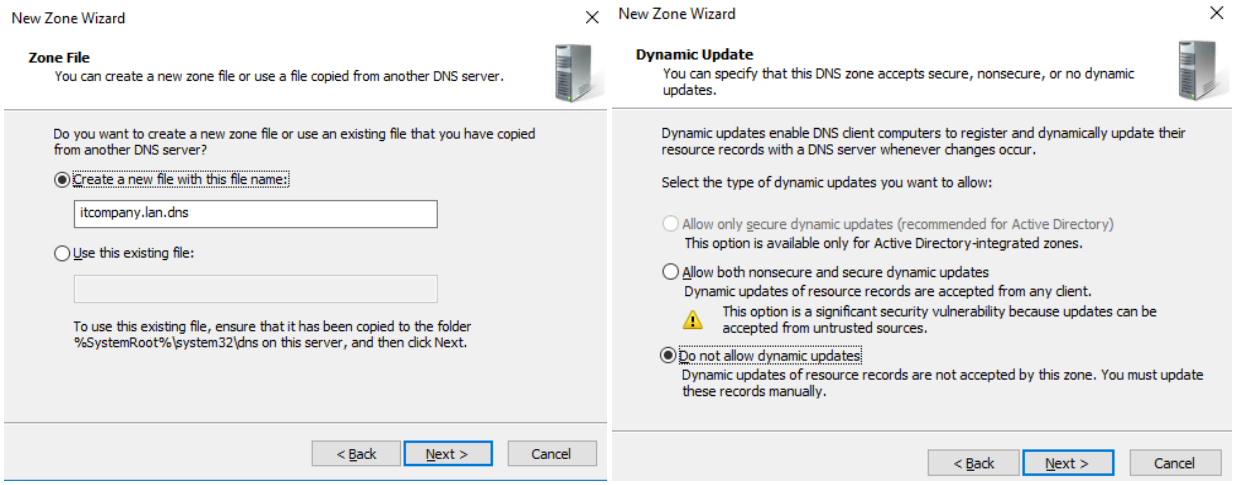
1. PRIMARY DNS ZONE



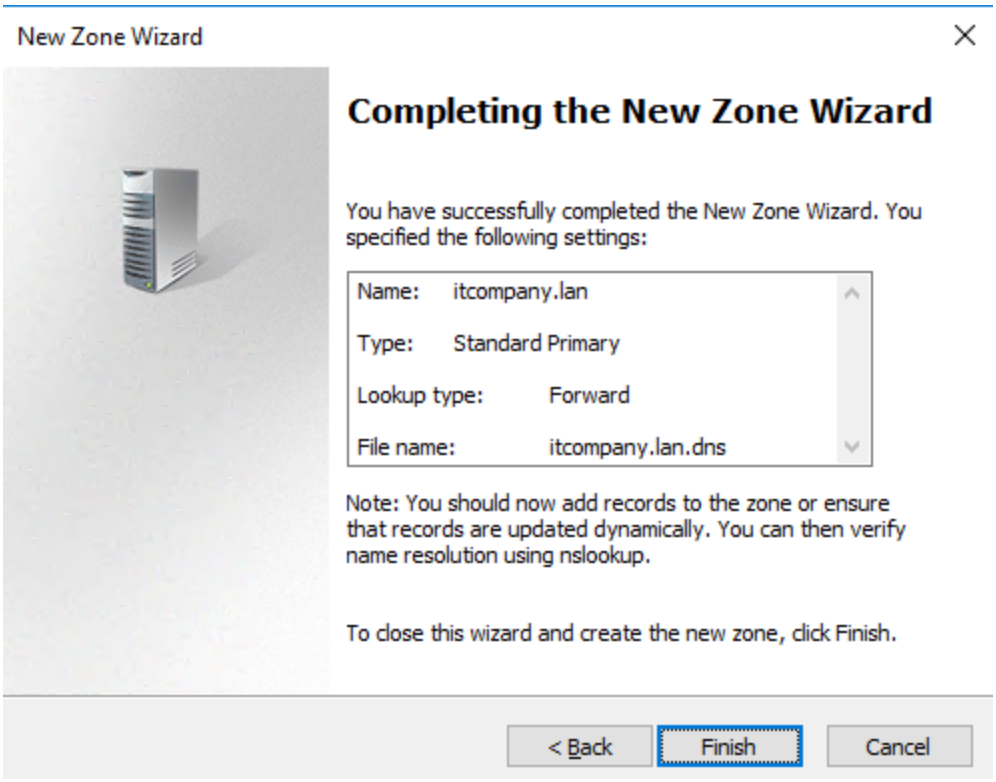
As can be seen in **DNS Manager**, the first step is followed by an action, with which we right-click to open the Forward Lookup Zones field and select **the New Zone field**. The following process is followed by the following screenshoots that show everything.

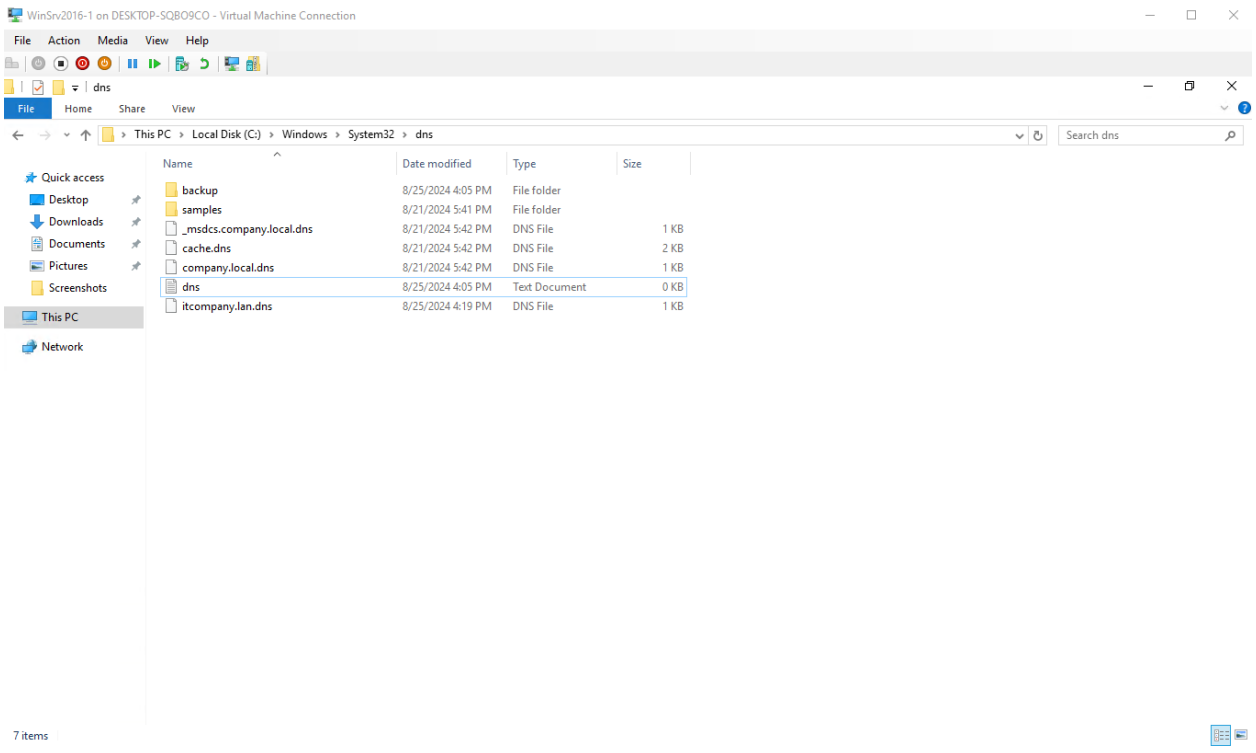


In this case, the name of the new zone is **itcompany.lan,** after that selecting the section named **"Create a new file with the file name" with the** name **itcompany.lan.dns**.



For the purposes of this task, we select the field "**Do not allow dynamic updates**", and the next step follows the Next action, which gets to the details of the entire zone.



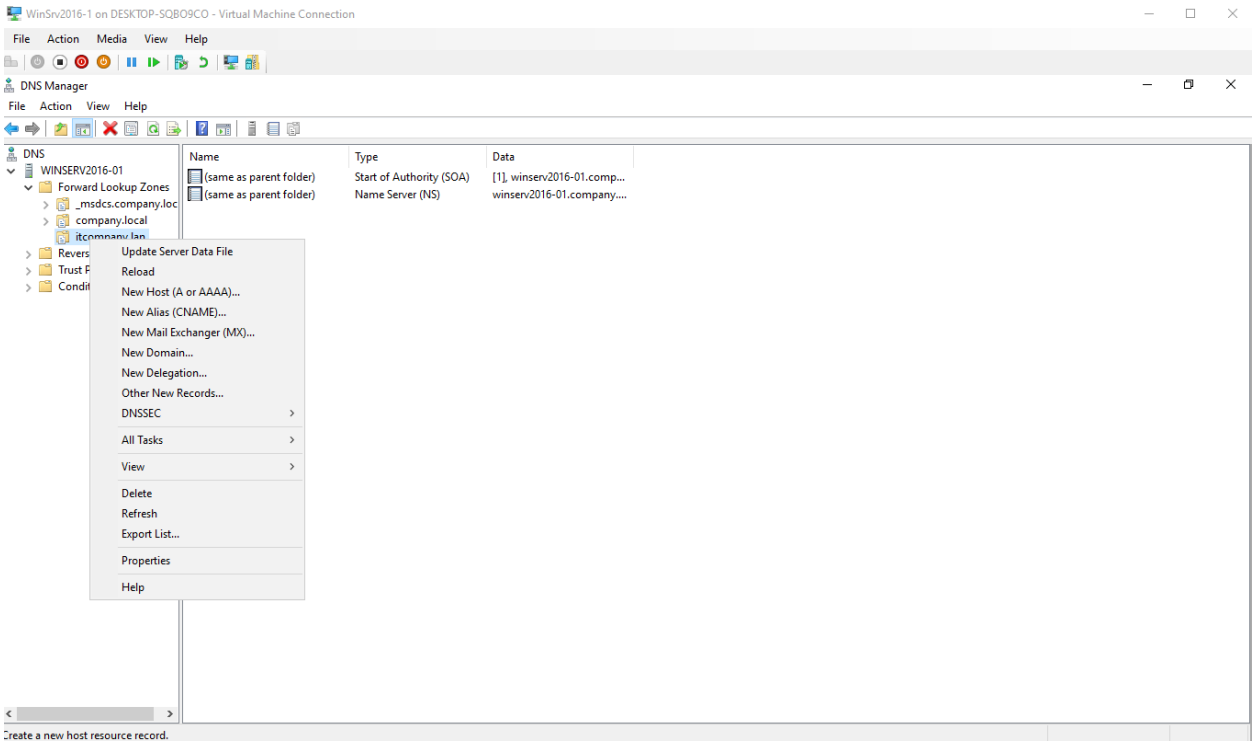


The last screenshot shows the detailed path on which the file on the server was created, as attached. The next chapter will follow the process of creating new records.

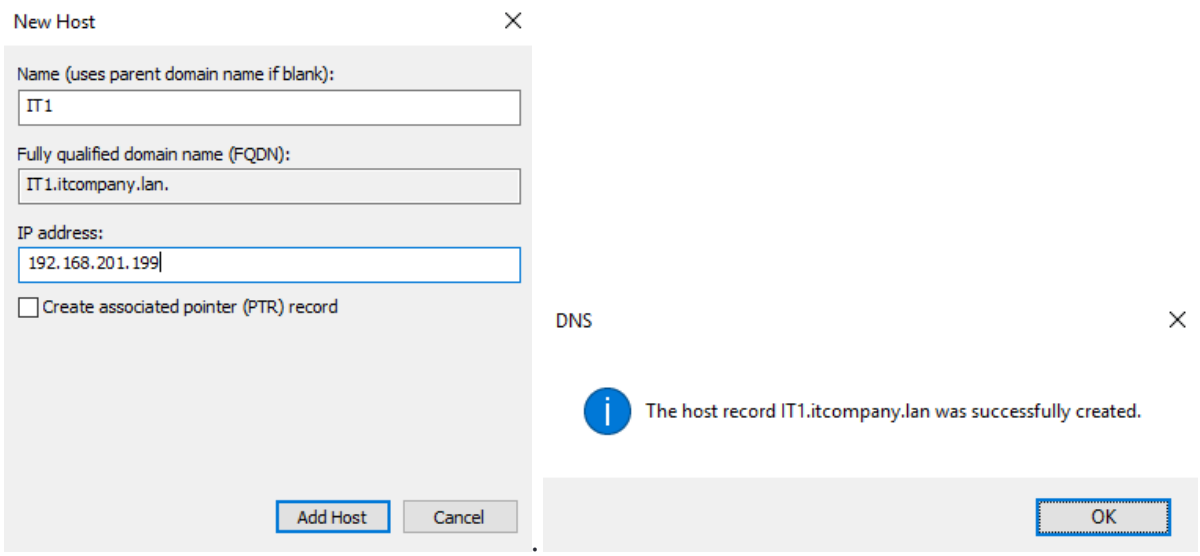
2. RECORD CREATION

As provided in the assignment, this title follows the following instructions:

- *Create a Type A record, with the name IT1 and the IP address 192.168.201.199*



In the first screenshot we select the **New Host(A or AAAA) field** and after that the name IT1 is assigned with the corresponding **IP** address. The next step follows the action in which the record was created.

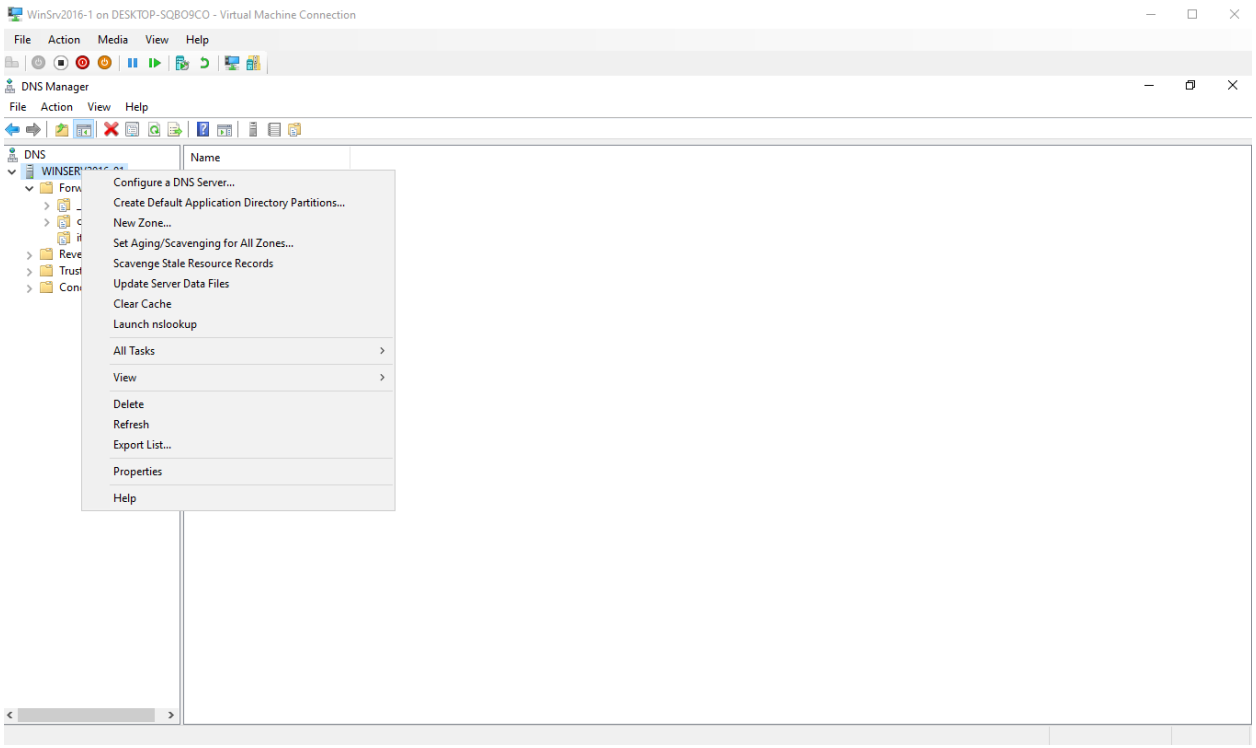


3. DNS FORWARDERS

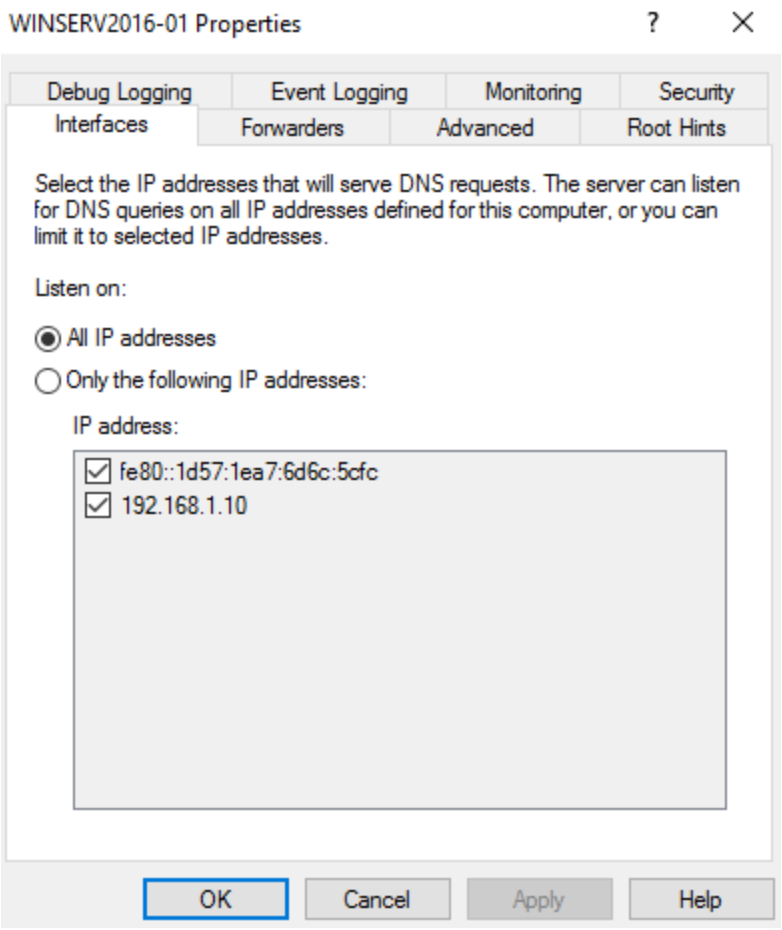
In this part of the task, setting up the DNS forwarder will be presented, but with some modifications because the addresses that were assigned could not be found when

performing this action. In this regard, the store keeps track of the following addresses that are left in parentheses.

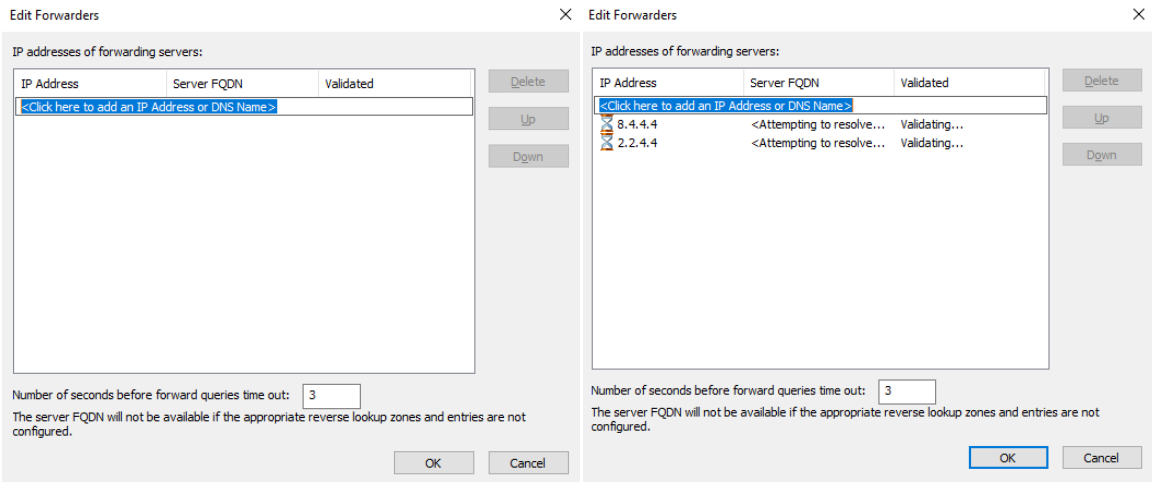
- *DNS Forwarders should be set up in the following order:*
  - *8.4.4.4* ***(8.8.8.8)***
  - *2.2.4.4* ***(1.1.1.1)***

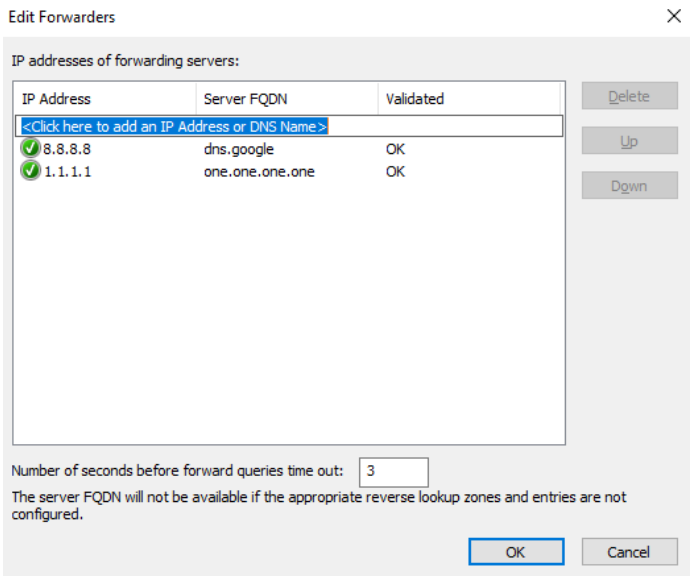


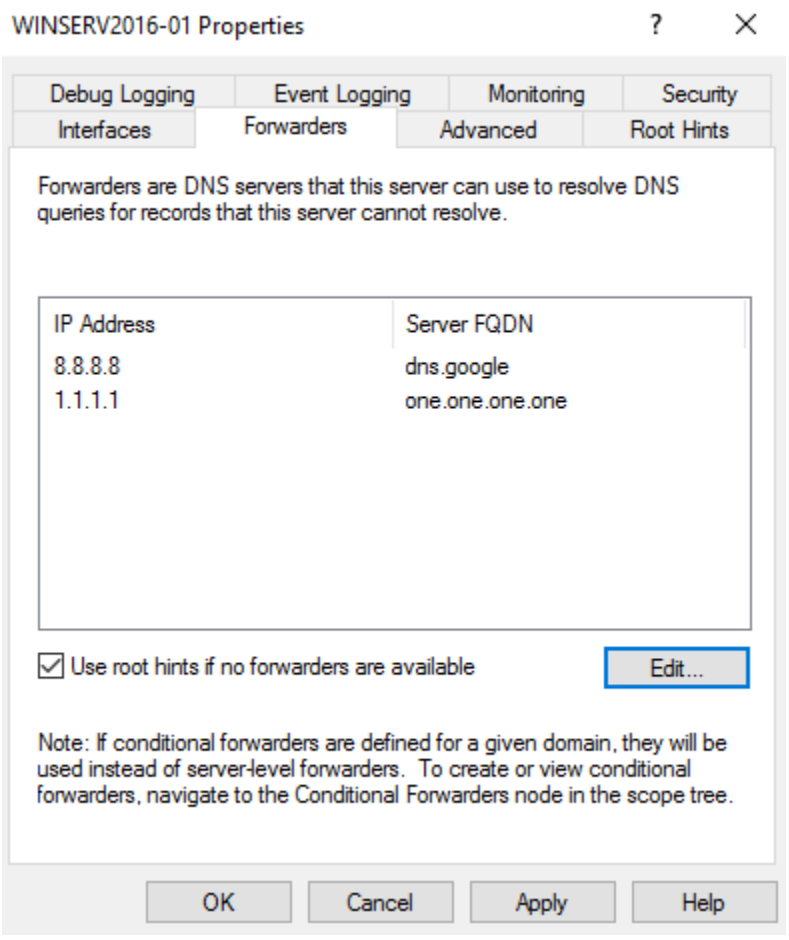
This image shows the section where the Properties field is selected to add specific Forwarders.



The next step is to select an icon called **Forwards**.

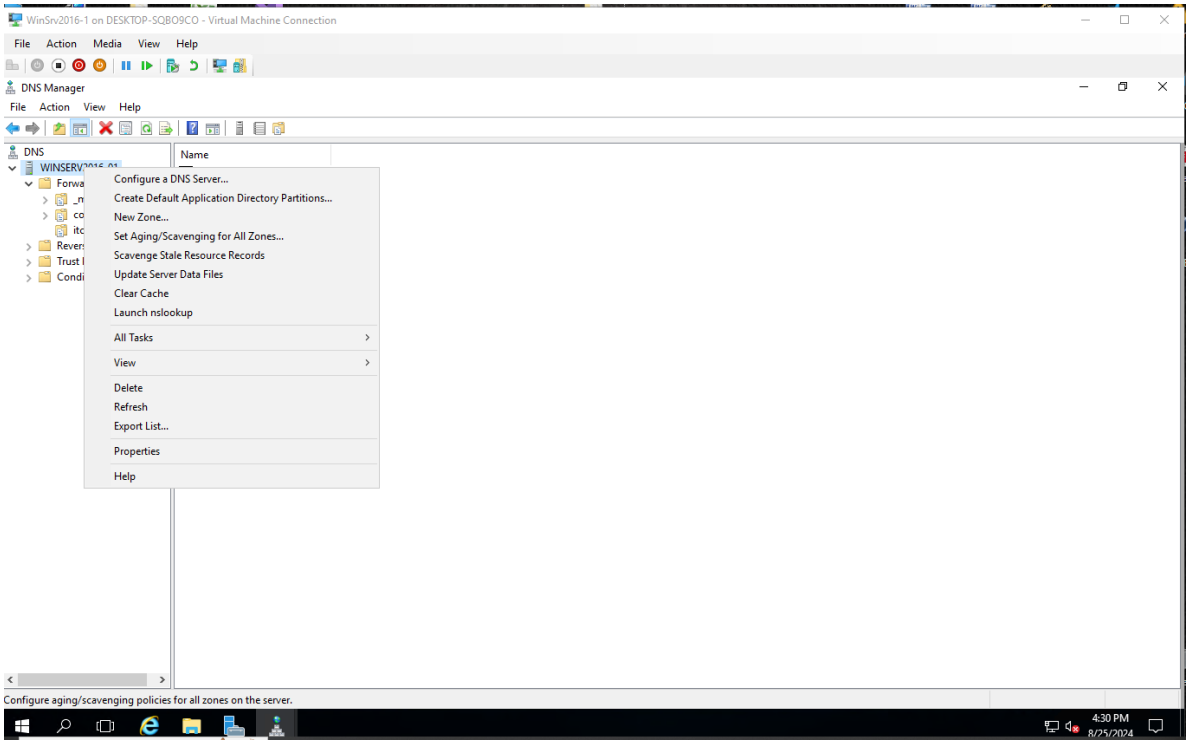



Edit Forwarders
IP addresses of forwarding servers:
IP Address
Server FQDN
Validated
<Click here to add an IP Address or DNS Name>
8.8.8.8
dns.google
OK
1.1.1.1
one.one.one.one
OK
Delete
Up
Down
Number of seconds before forward queries time out:
3
The server FQDN will not be available if the appropriate reverse lookup zones and entries are not configured.
OK
Cancel


WINSERV2016-01 Properties
Debug Logging
Event Logging
Monitoring
Security
Interfaces
Forwarders
Advanced
Root Hints
Forwarders are DNS servers that this server can use to resolve DNS queries for records that this server cannot resolve.
IP Address
Server FQDN
8.8.8.8
dns.google
1.1.1.1
one.one.one.one
Use root hints if no forwarders are available
Edit...
Note: If conditional forwarders are defined for a given domain, they will be used instead of server-level forwarders. To create or view conditional forwarders, navigate to the Conditional Forwarders node in the scope tree.
OK
Cancel
Apply
Help

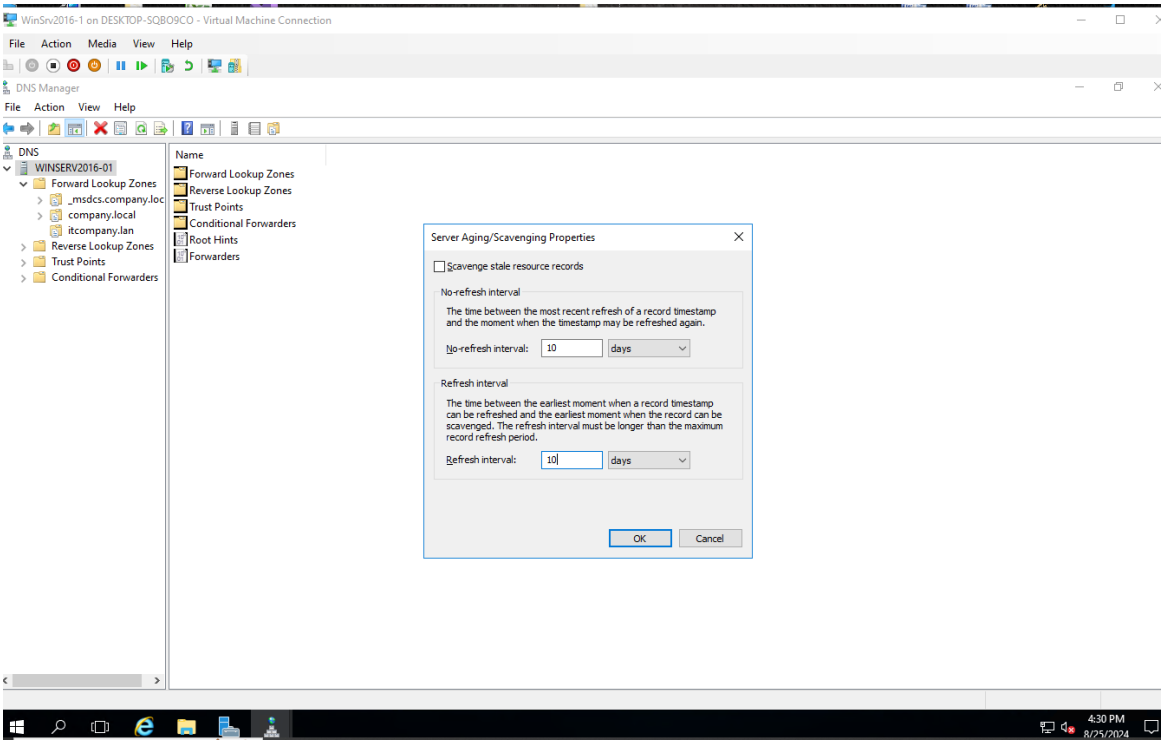
4. SETTING "SCAVENGING"

- *Activate the Scavenging process at the server level and set the Refresh and No-refresh interval to 10 days.*



As you can see in the screenshot, right-clicking on the server field selects an icon called **Set Aging/Scavenging for all Zones**.

To activate the Scavenging process on the DNS server, access the DNS server settings, enable automatic clearing of DNS records, and configure the intervals for "Refresh" and "No-refresh" to 10 days. This configuration ensures that the DNS server regularly removes obsolete records, thereby improving the accuracy and efficiency of the DNS resolution. The following screenshot shows the detailed settings of this procedure.

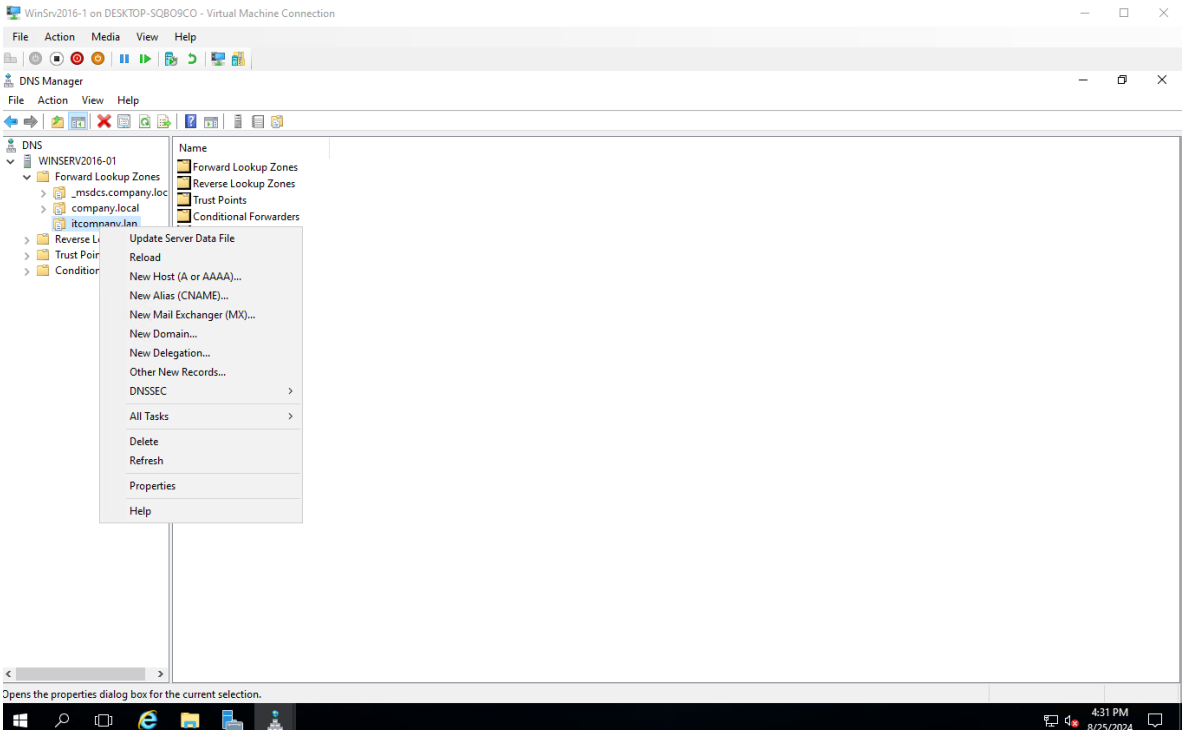


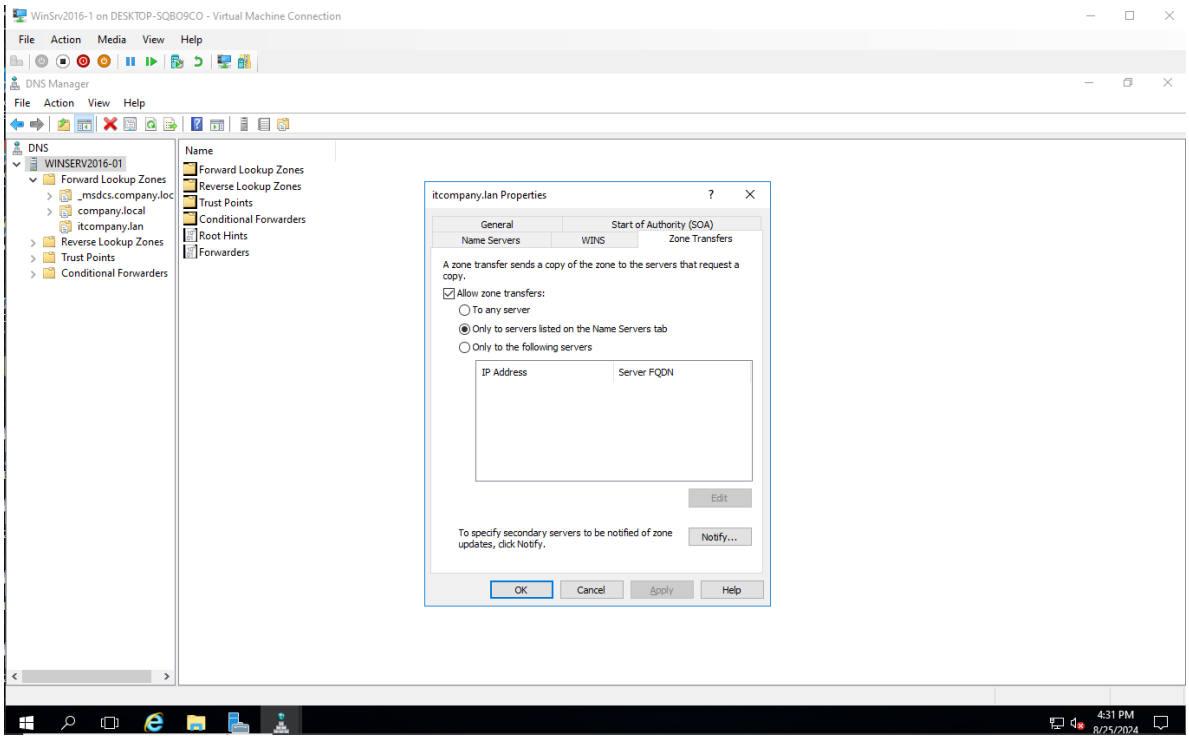
5. TRANSFER ZONE

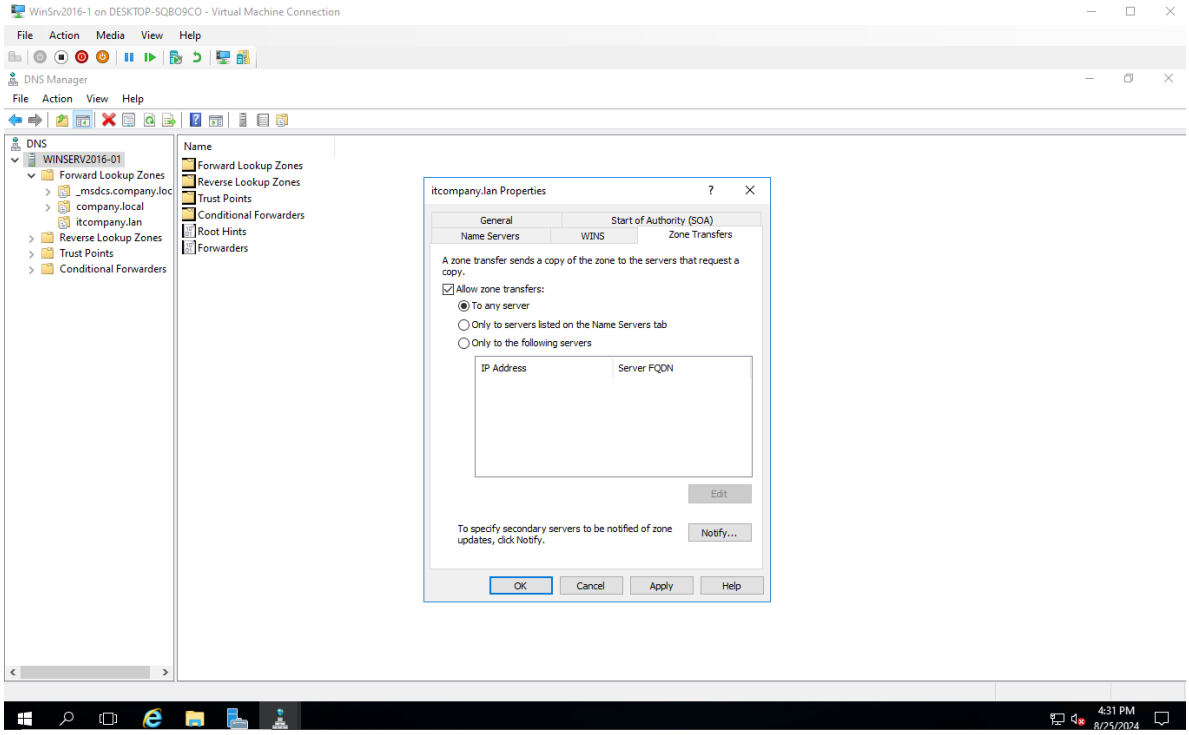
Enable Transfer Zones for all servers that send a request to this DNS server.

The following screenshots show the action which describes the situation in which the Transfer Zone is enabled, the procedure is as follows:

Access the **DNS server** settings, open the transfer option (**Properties**, **Zone Transfers section**) and enable the option that allows the transfer of all servers. This configuration allows all DNS servers that require access to your DNS zones to receive copies of the zones, which contributes to better interoperability and replication in network environments.


WinSrv2016-1 on DESKTOP-SQBO9CO - Virtual Machine Connection
File Action Media View Help
DNS Manager
File Action View Help
DNS
WINSERV2016-01
Forward Lookup Zones
_msdcs.company.loc
company.local
itcompany.lan
Reverse L
Trust Poir
Condition
Name
Forward Lookup Zones
Reverse Lookup Zones
Trust Points
Conditional Forwarders
Update Server Data File
Reload
New Host (A or AAAA)...
New Alias (CNAME)...
New Mail Exchanger (MX)...
New Domain...
New Delegation...
Other New Records...
DNSSEC
All Tasks
Delete
Refresh
Properties
Help
Opens the properties dialog box for the current selection.
4:31 PM
8/25/2024


WinSrv2016-1 on DESKTOP-SQBO9CO - Virtual Machine Connection
File Action Media View Help
DNS Manager
File Action View Help
DNS
WINSERV2016-01
Forward Lookup Zones
_msdcs.company.loc
company.local
itcompany.lan
Reverse Lookup Zones
Trust Points
Conditional Forwarders
Name
Forward Lookup Zones
Reverse Lookup Zones
Trust Points
Conditional Forwarders
Root Hints
Forwarders
itcompany.lan Properties
General
Start of Authority (SOA)
Name Servers
WINS
Zone Transfers
A zone transfer sends a copy of the zone to the servers that request a copy.
Allow zone transfers:
To any server
Only to servers listed on the Name Servers tab
Only to the following servers
IP Address
Server FQDN
Edit
To specify secondary servers to be notified of zone updates, click Notify.
Notify...
OK
Cancel
Apply
Help
4:31 PM
8/25/2024


WinSrv2016-1 on DESKTOP-SQBO9CO - Virtual Machine Connection
File Action Media View Help
DNS Manager
File Action View Help
DNS
WINSERV2016-01
Forward Lookup Zones
_msdcs.company.loc
company.local
itcompany.lan
Reverse Lookup Zones
Trust Points
Conditional Forwarders
Name
Forward Lookup Zones
Reverse Lookup Zones
Trust Points
Conditional Forwarders
Root Hints
Forwarders
itcompany.lan Properties
General
Start of Authority (SOA)
Name Servers
WINS
Zone Transfers
A zone transfer sends a copy of the zone to the servers that request a copy.
Allow zone transfers:
To any server
Only to servers listed on the Name Servers tab
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IP Address
Server FQDN
Edit
To specify secondary servers to be notified of zone updates, click Notify.
Notify...
OK
Cancel
Apply
Help
4:31 PM
8/25/2024