



Pengenalan SERVER



Created by :

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Revised by :

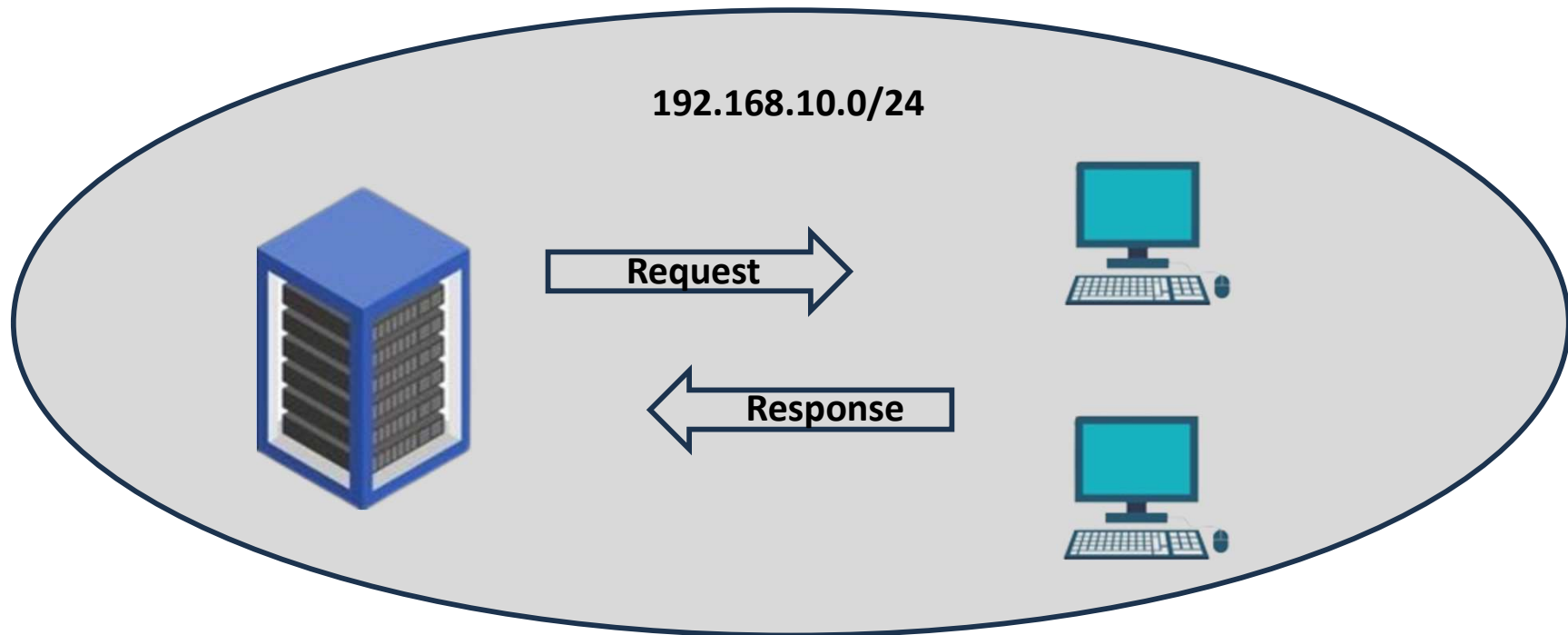
Ning Ratwastuti

Kevin Trikusuma Dewo

Tim Pengajar Jarkom

PENGERTIAN SERVER

- ❖ **Server** merupakan komputer atau sistem yang menyediakan layanan, data, atau sumber daya ke komputer lain, yang disebut **klien**, melalui jaringan.



- ❖ Server biasanya merupakan **komputer dengan spesifikasi yang tinggi**, sehingga dapat menyediakan layanan untuk klien.



KLASIFIKASI SERVER

❖ PHYSICAL SERVER

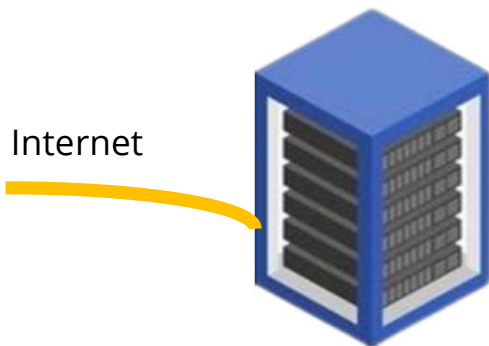
Server yang **berdiri sendiri** dan dirancang khusus untuk menjalankan aplikasi, layanan, atau menyimpan data. Dan **semua sumber dayanya** (CPU, RAM, Storage) digunakan langsung **untuk satu sistem operasi**.

❖ VIRTUAL SERVER

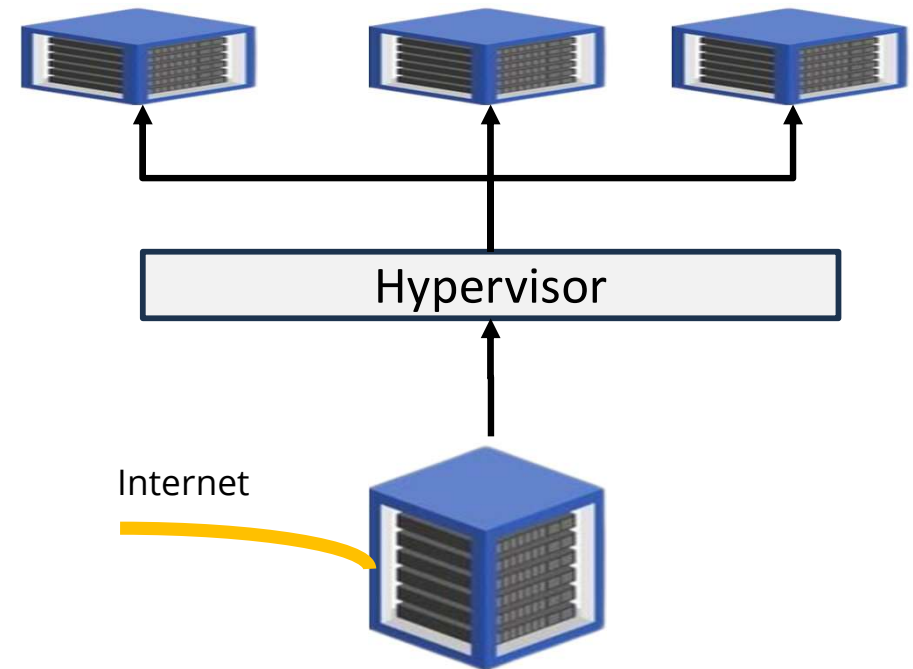
Server yang **berjalan di atas server fisik** menggunakan teknologi virtualisasi. satu server fisik **dapat menjalankan beberapa server** virtual yang masing-masing beroperasi secara independen.

KLASIFIKASI SERVER

❖ PHYSICAL SERVER



❖ VIRTUAL SERVER



Hypervisor adalah lapisan perangkat lunak yang **bertindak sebagai perantara** antara perangkat keras fisik dan server virtual, **mengalokasikan sumber daya fisik (seperti CPU, RAM, dan storage)**.



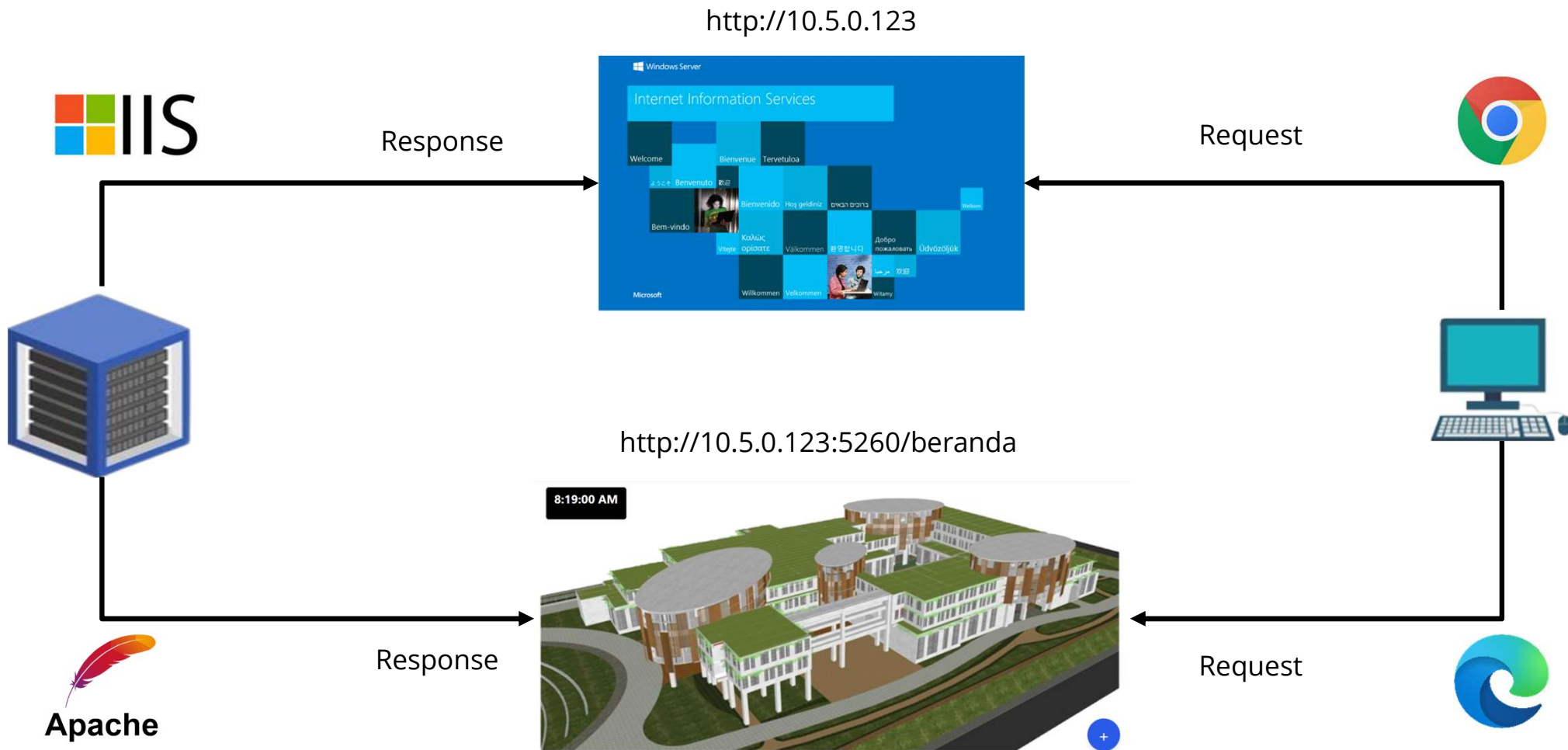
JENIS SERVER

Jenis server berdasarkan kegunaannya, diantaranya :

- **Web Server**
- Database Server *
- Mail Server
- Printer Server
- **FTP Server**
- DHCP Server
- **DNS Server**

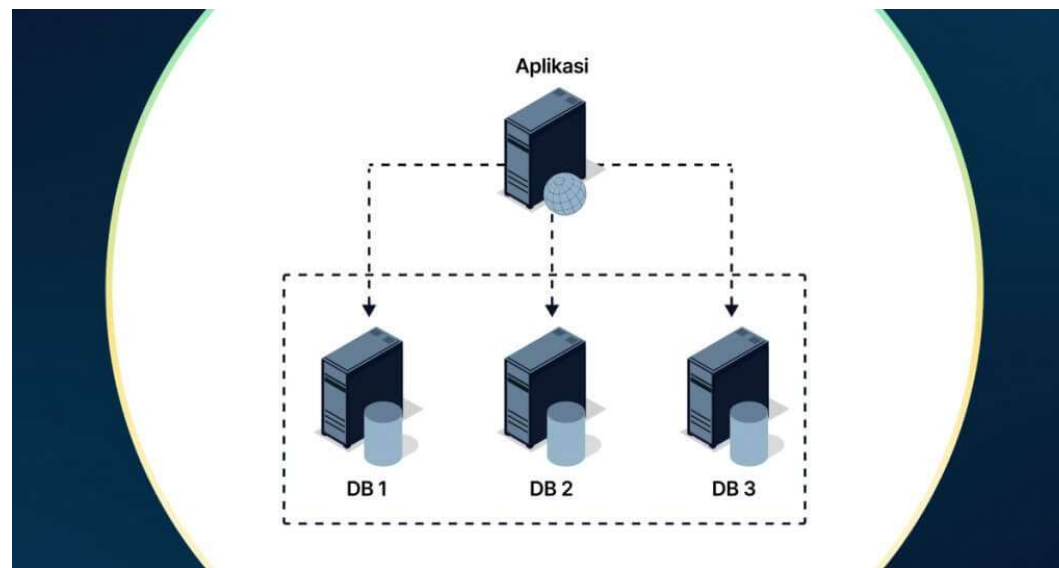
JENIS SERVER : WEB SERVER

Web Server adalah sistem yang **bertugas menerima, memproses, dan merespons permintaan** dari klien melalui protokol HTTP atau HTTPS.



JENIS SERVER : DATABASE SERVER

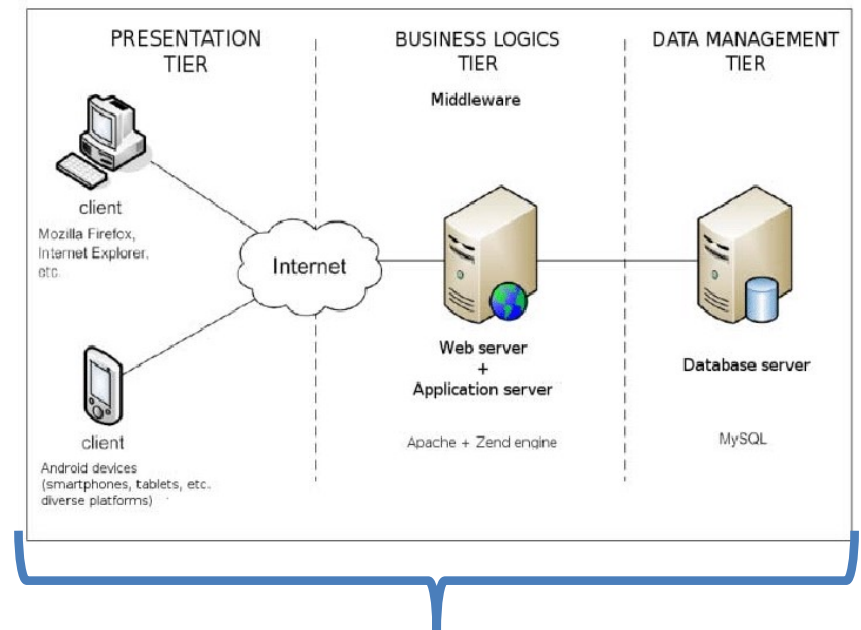
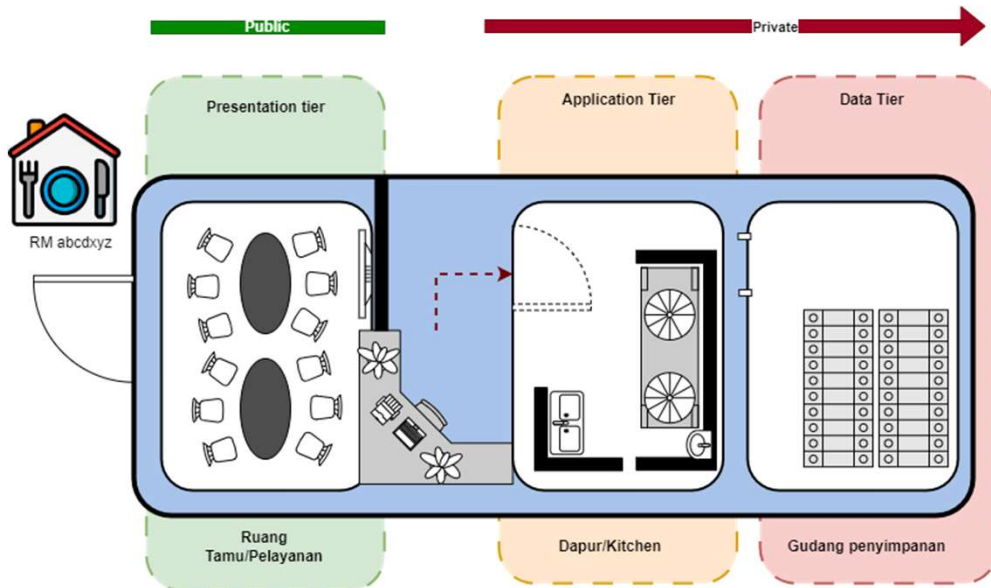
Database server adalah **basis data yang diletakkan pada suatu jaringan komputer**, baik lokal maupun interlokal, sehingga dapat diakses dari mana pun melalui jaringan tersebut.



Dengan pemanfaatan jaringan komputer ini, manfaat *database* dapat diperluas karena selain dapat diakses di mana pun, juga dapat dibuat suatu klaster database (*database cluster*) sehingga *database* dapat menampung permintaan pengolahan data secara lebih masif.

KONSEP THREE TIER ARCHITECTURE

Three-Tier Architecture adalah arsitektur **Client-Server** yang **membagi menjadi tiga bagian**, yaitu **presentation, application, dan data-tier**. Konsep ini sangat bermanfaat dalam menentukan dan merencanakan baik dari aplikasi atau dari arsitektur yang akan dibuat

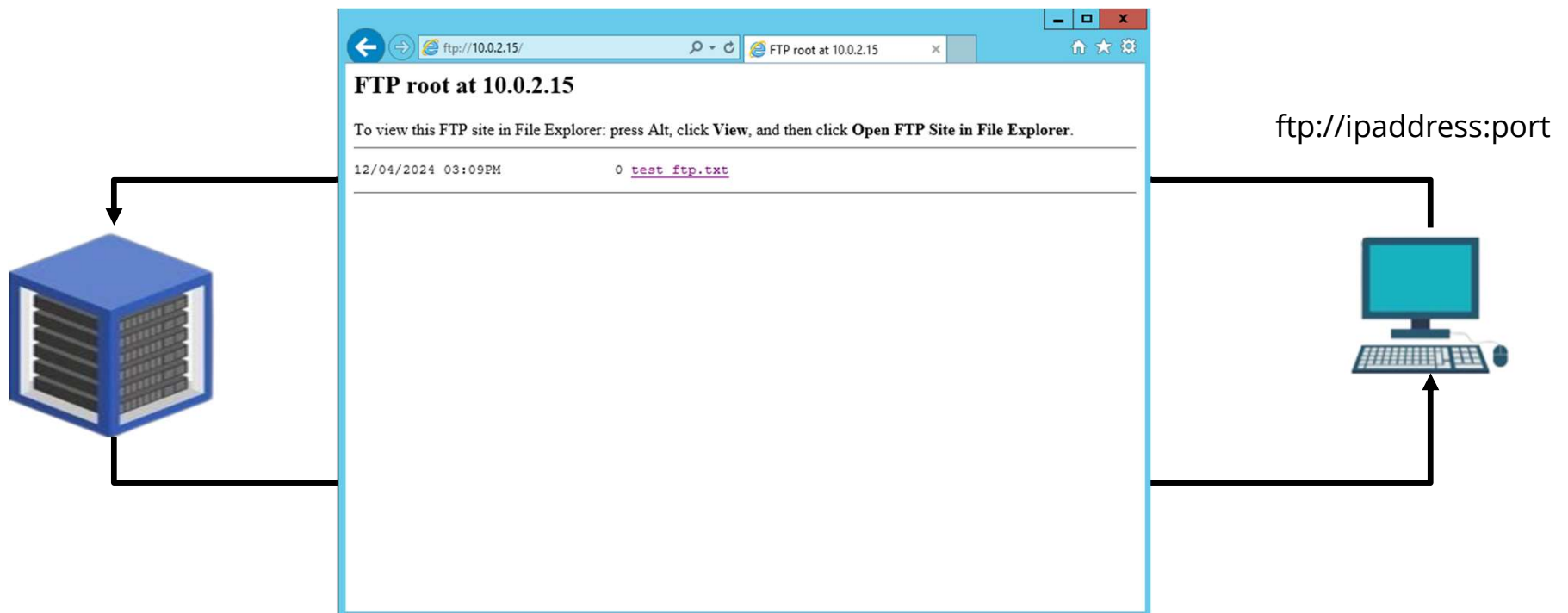


 **XAMPP**

Apache + MariaDB + PHP + Perl

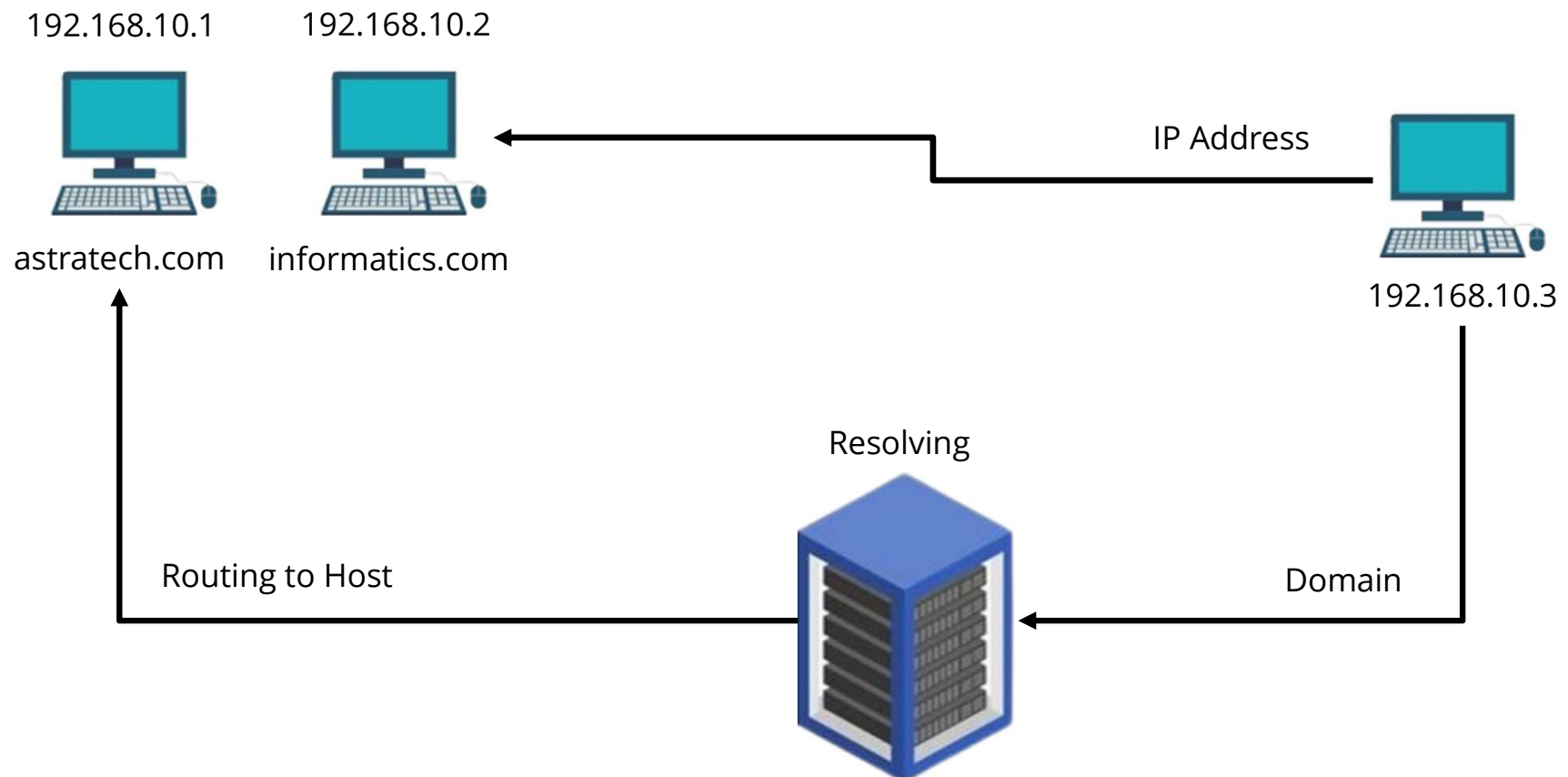
JENIS SERVER : FTP SERVER

FTP Server adalah layanan jaringan yang memungkinkan transfer file antara klien dan server. Biasanya digunakan untuk mengunggah, mengunduh, dan mengelola file di server.



JENIS SERVER : DNS SERVER

DNS Server adalah **sistem yang menerjemahkan nama domain** (misalnya, www.google.com) **menjadi alamat IP** (misalnya, 192.168.10.1) yang dapat dimengerti oleh komputer.





KLASIFIKASI DNS

❖ FORWARD LOOKUP ZONE

Digunakan untuk mengonversi **nama domain menjadi alamat IP** yang sesuai. Contohnya, saat mengetik **www.contohdomain.com** di browser, DNS server akan mencari alamat IP terkait, seperti **192.168.1.254**, yang digunakan untuk menghubungkan ke situs web atau server tersebut.

❖ REVERSE LOOKUP ZONE

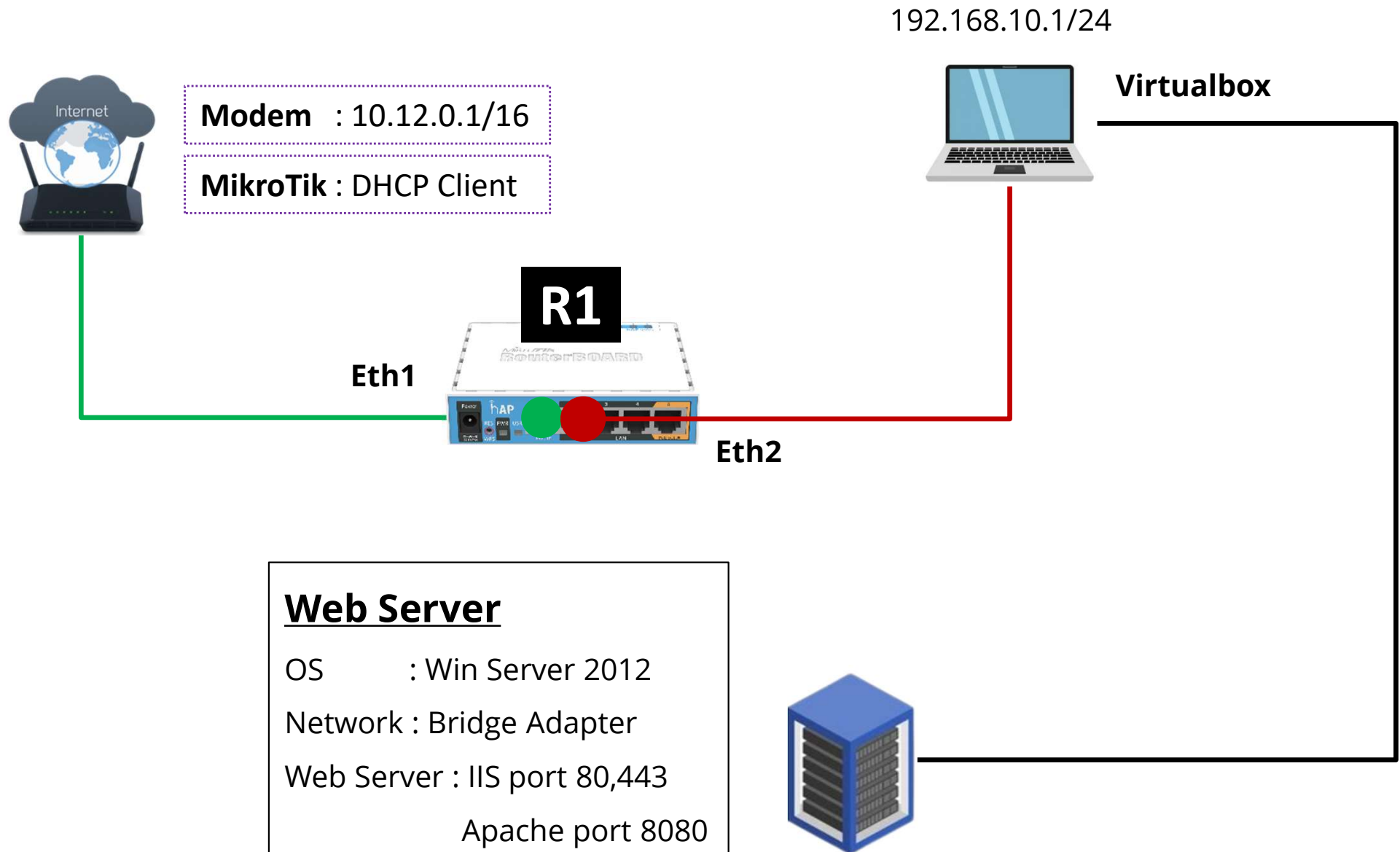
Di sisi lain, digunakan untuk mengonversi **alamat IP menjadi nama domain** atau hostname. jika IP **192.168.1.254** diminta, server DNS akan mengembalikan nama domain yang terhubung, misalnya **www.contohdomain.com**.



Praktikum **WEB SERVER**

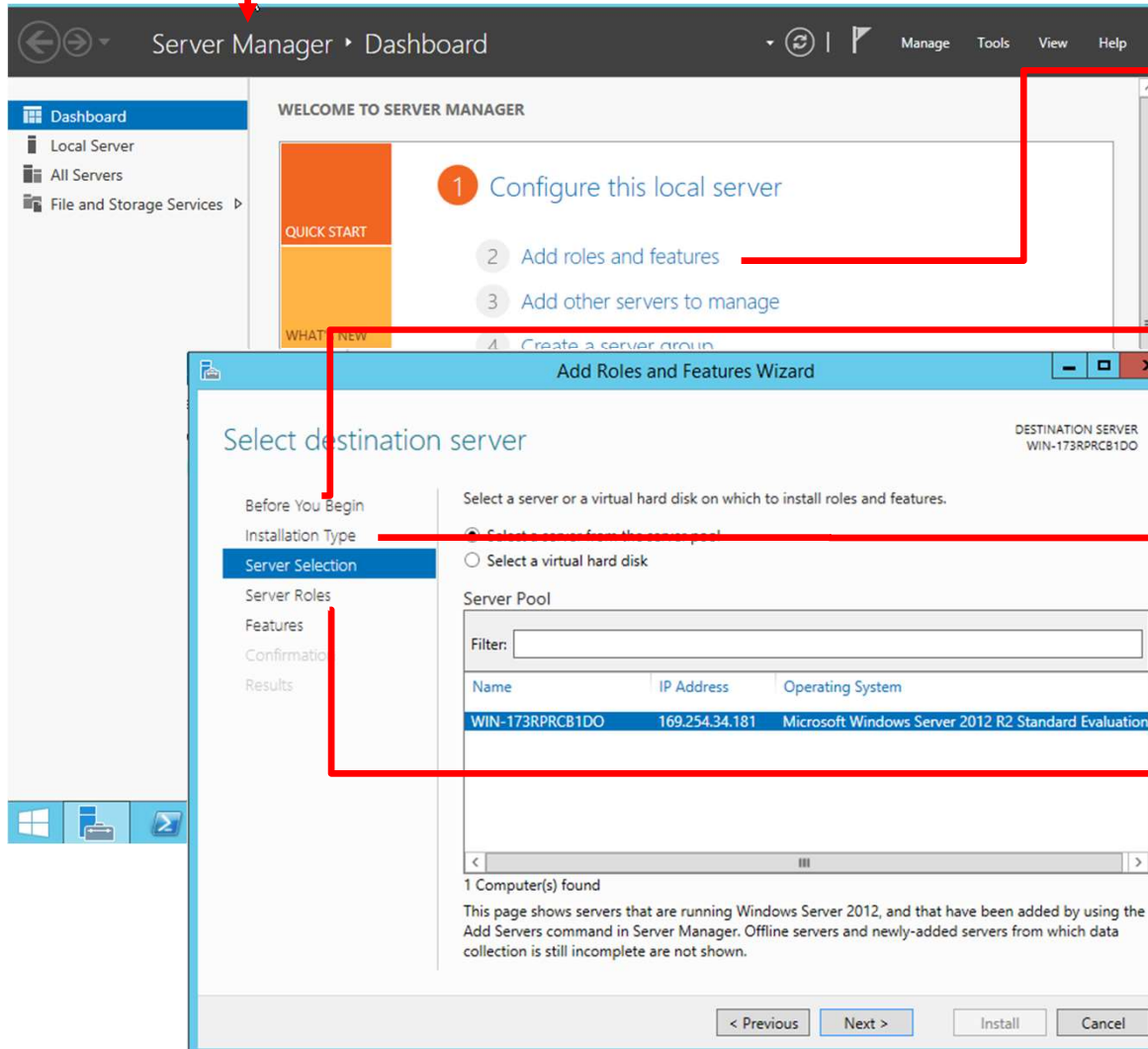


TOPOLOGI WEB SERVER



CREATING WEB SERVER

1. Membuka Server Manager



2. Add roles and features.

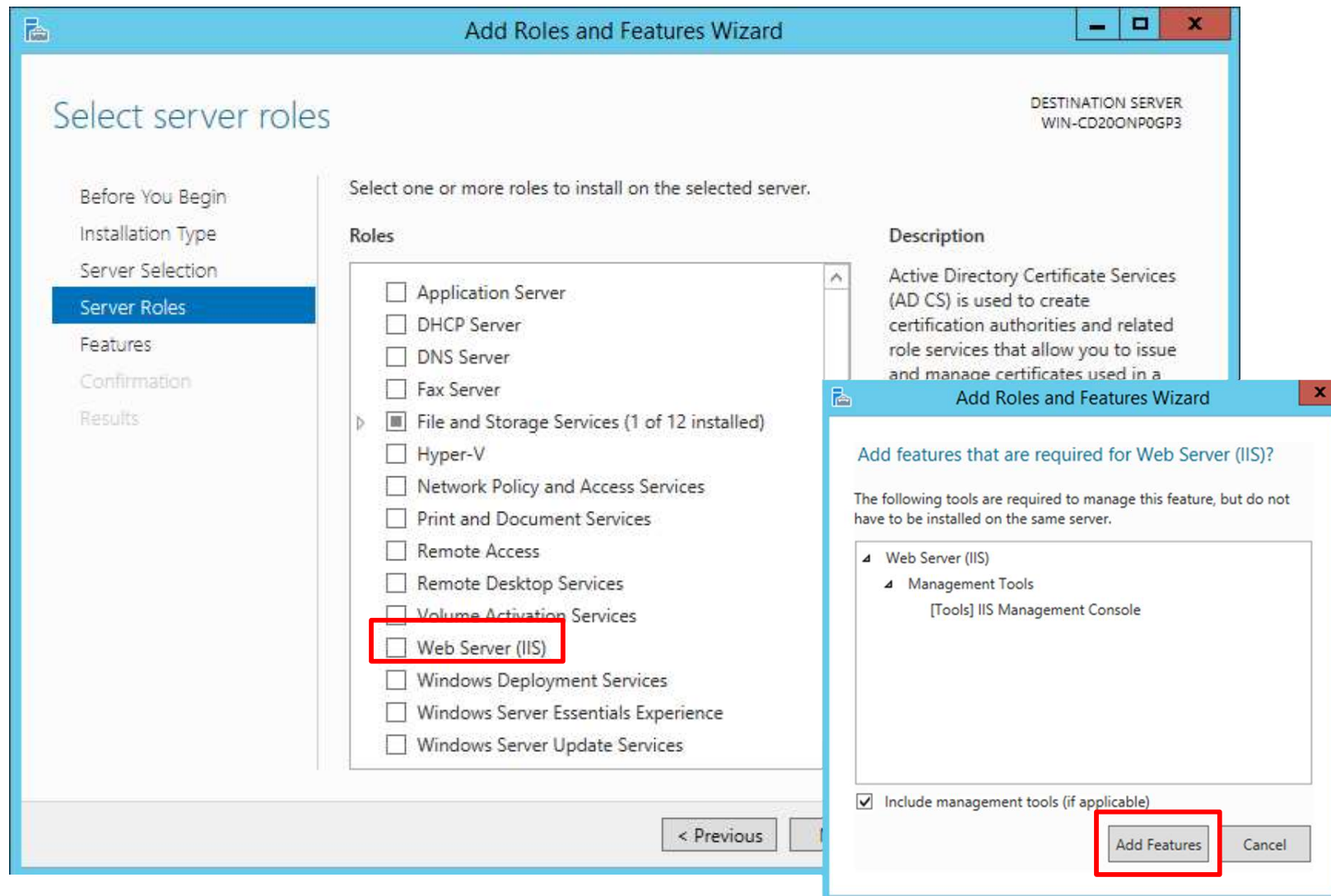
3. Pilih "Next".

4. Role-Based or Feature-Based installation

5. Pilih name server

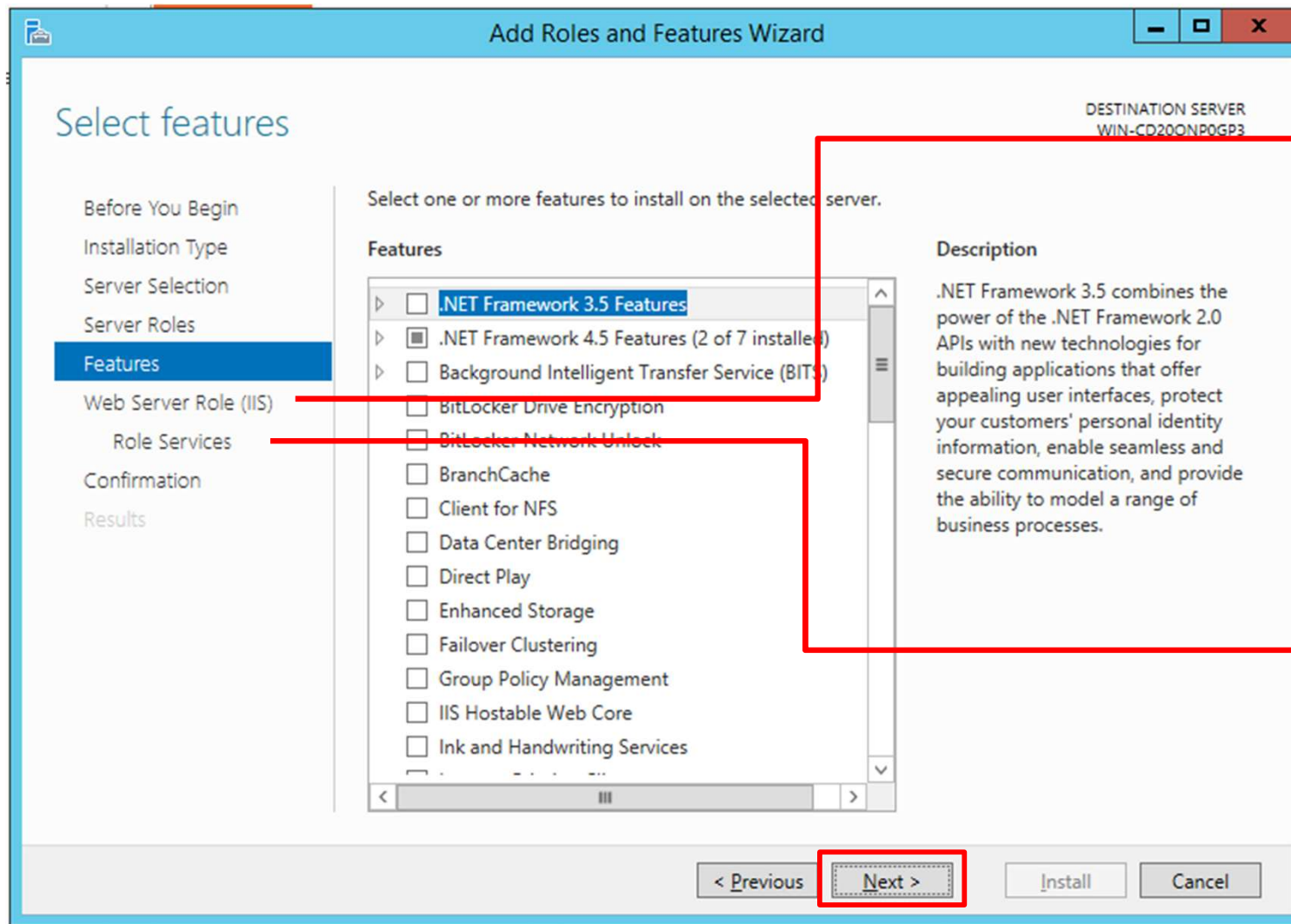
CREATING WEB SERVER

6. Membuka Server Manager



CREATING WEB SERVER

7. Lanjutkan tahapan, pilih Next.

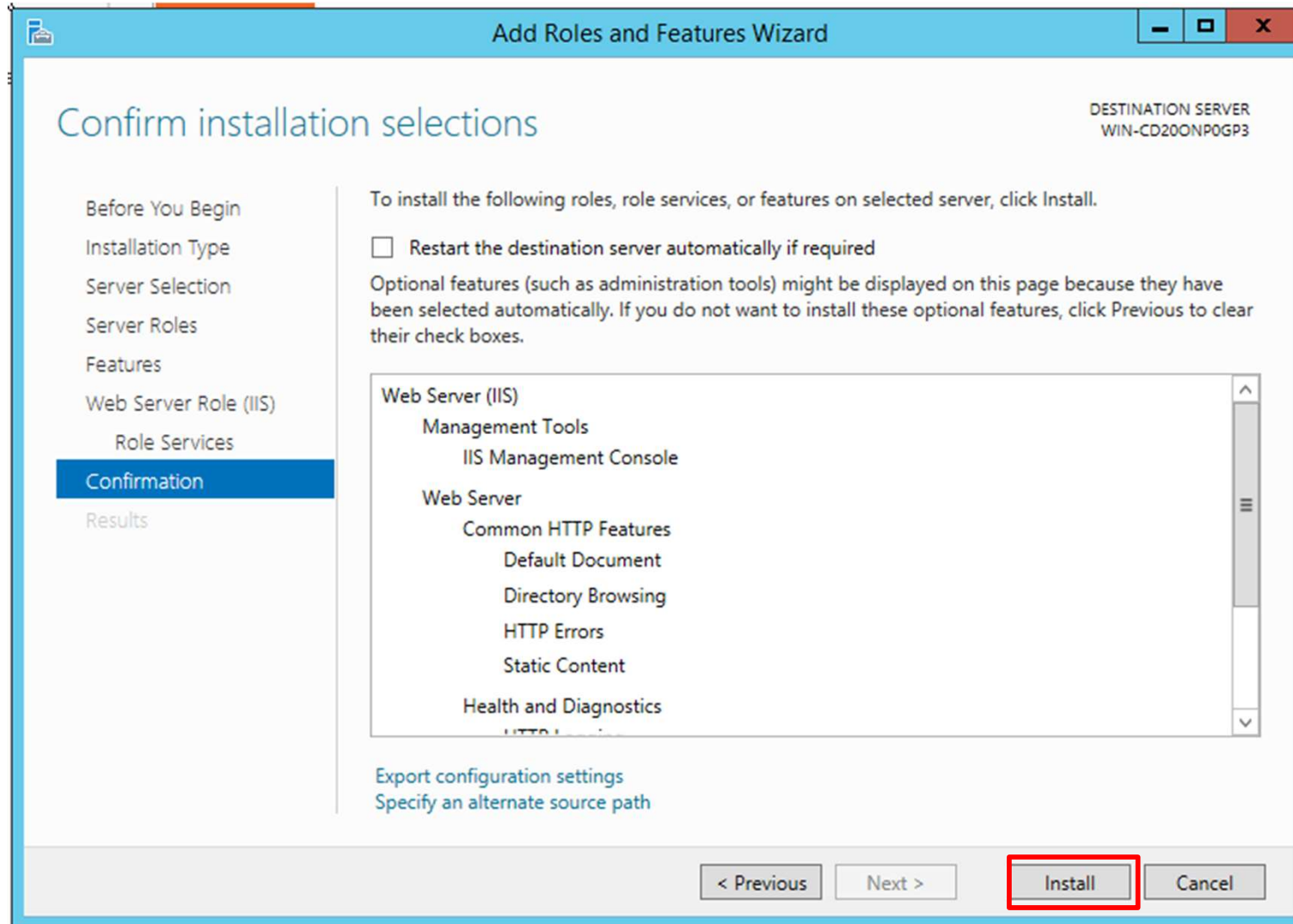


8. Pilih "Next".

9. Pilih "Next".

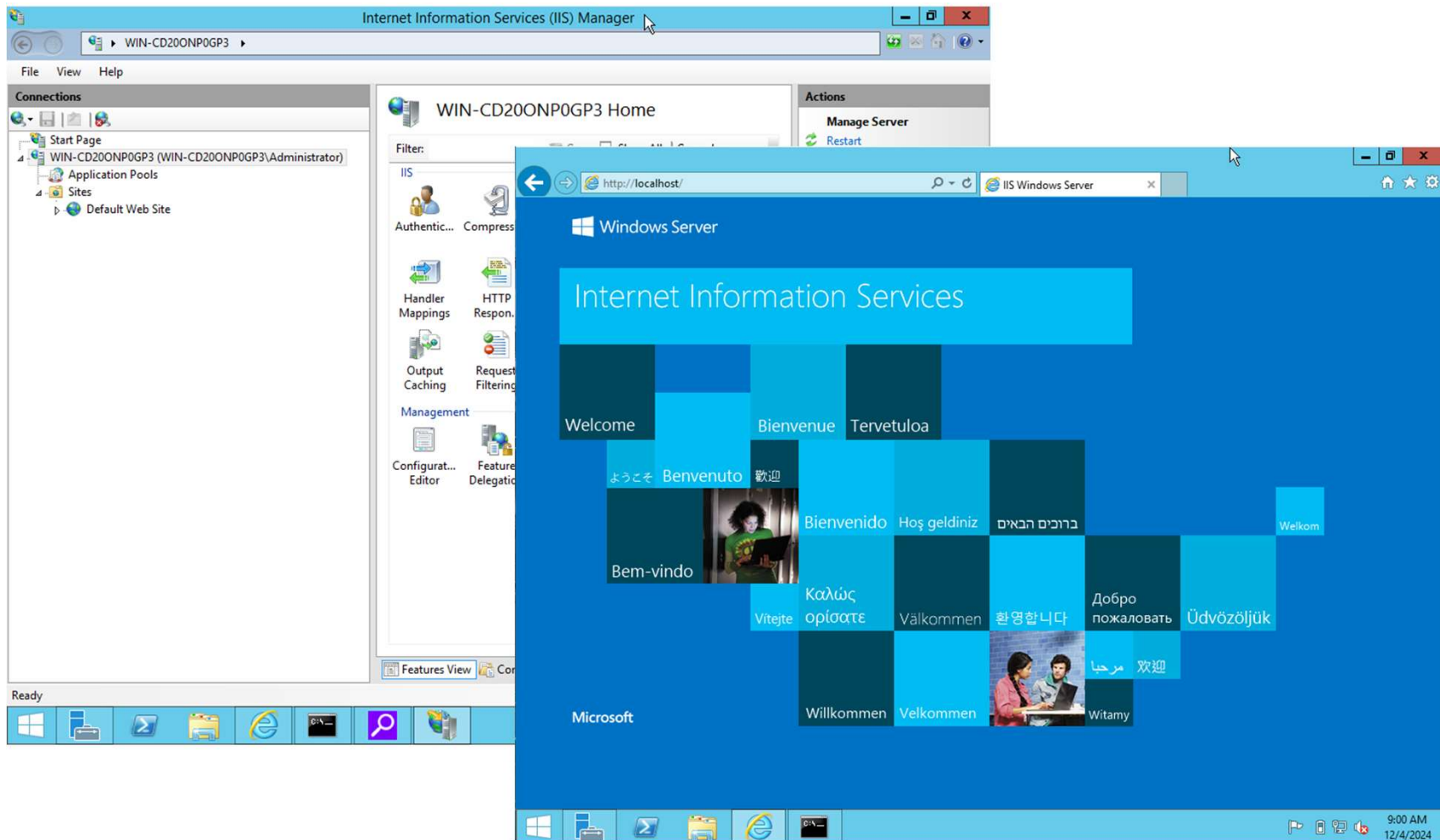
CREATING WEB SERVER

10. Install Web Server,



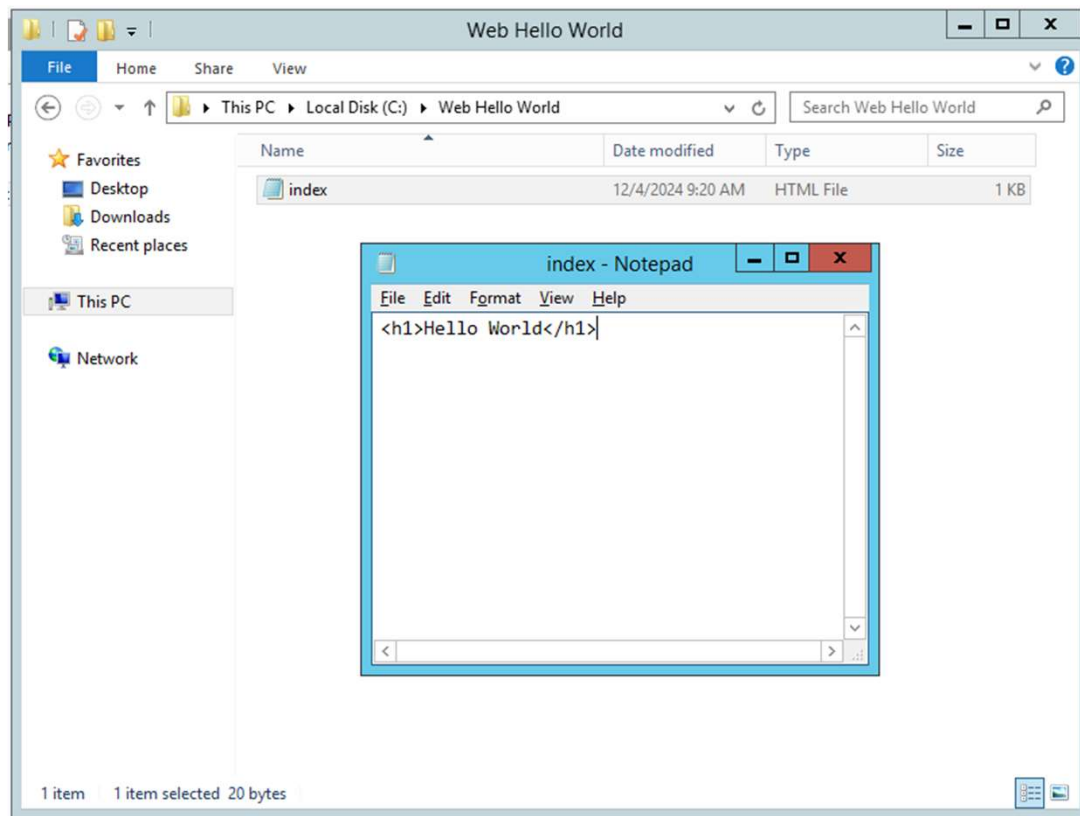
CREATING WEB SERVER

11. Buka localhost untuk memastikan web server sudah berjalan atau bukalah IIS Manager.



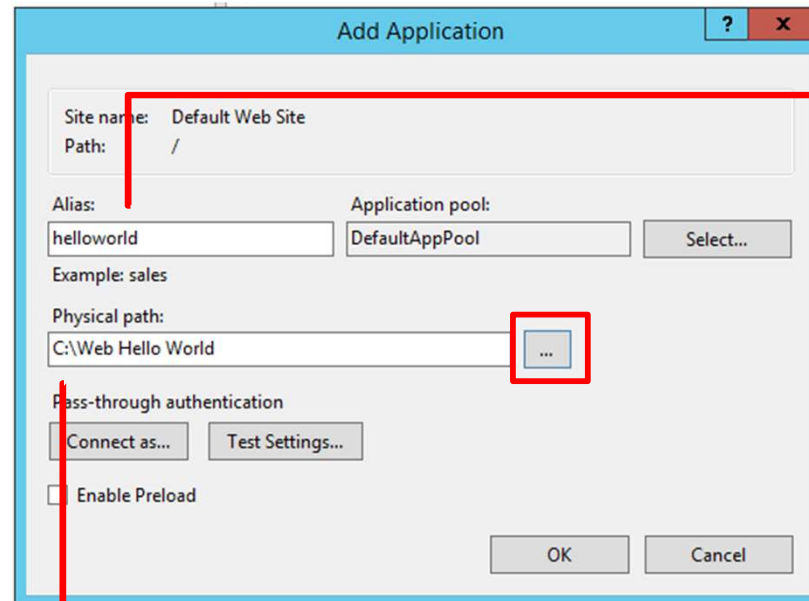
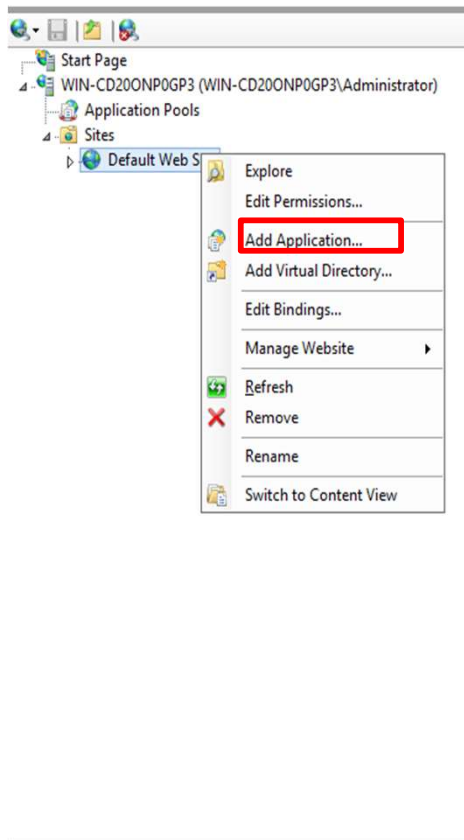
ADD AN APPLICATION

1. Buatlah sebuah folder baru di drive C dengan nama “Web Hello World”, kemudian tambahkan halaman html yang berisikan “Hello World”



ADD AN APPLICATION

2. Buka IIS Manager, kemudian klik kanan "Default Web Site", Pilih "Add Application"

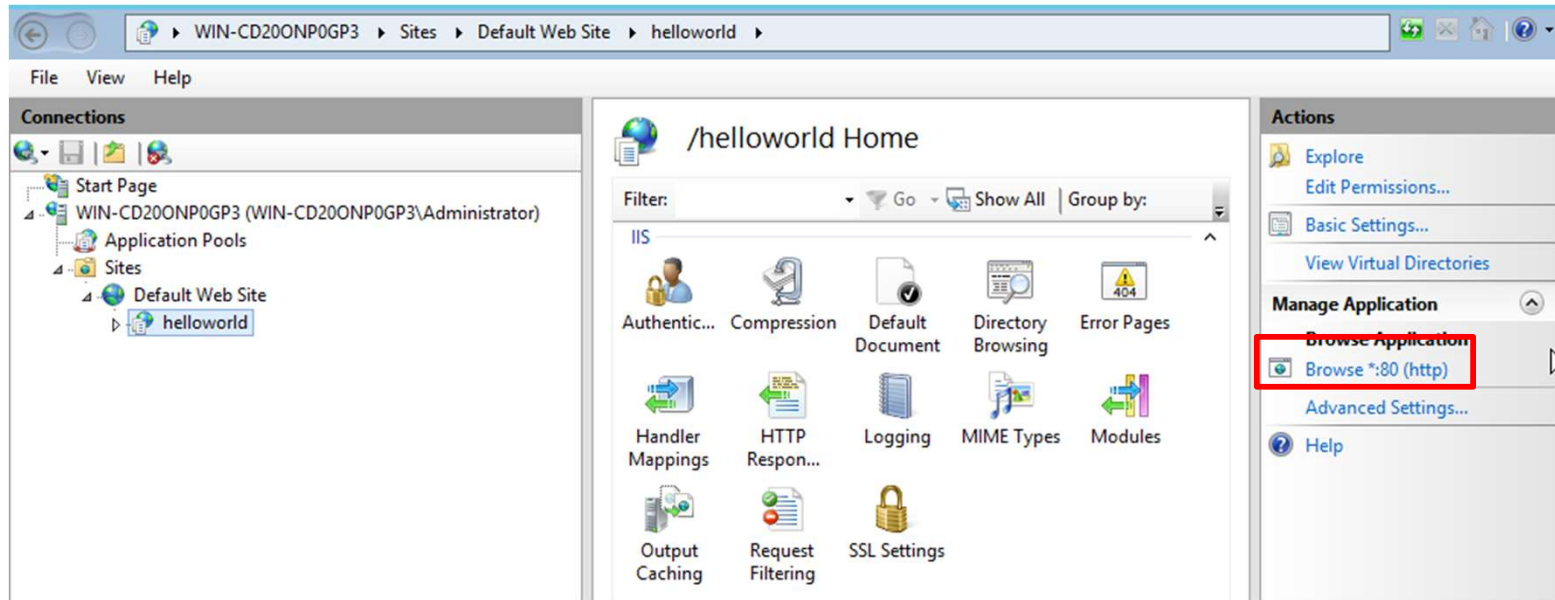


3. Berikan nama alias, pastikan nama alias bersifat unik!

4. Pilih folder aplikasi!

ADD AN APPLICATION

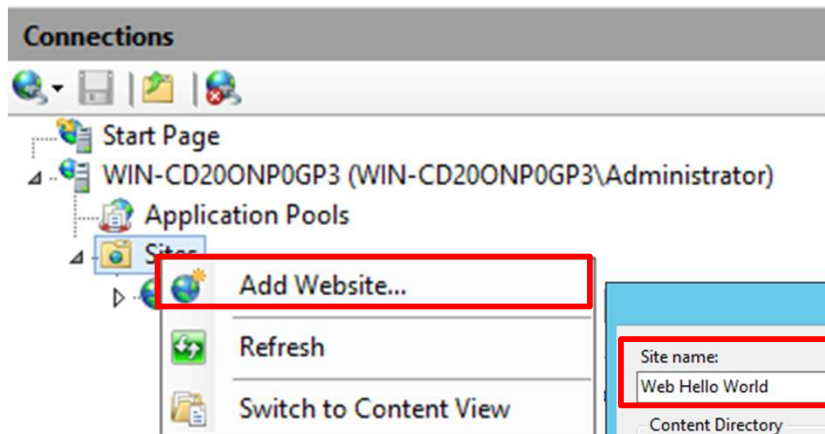
3. Akses aplikasi yang sudah dibuat!



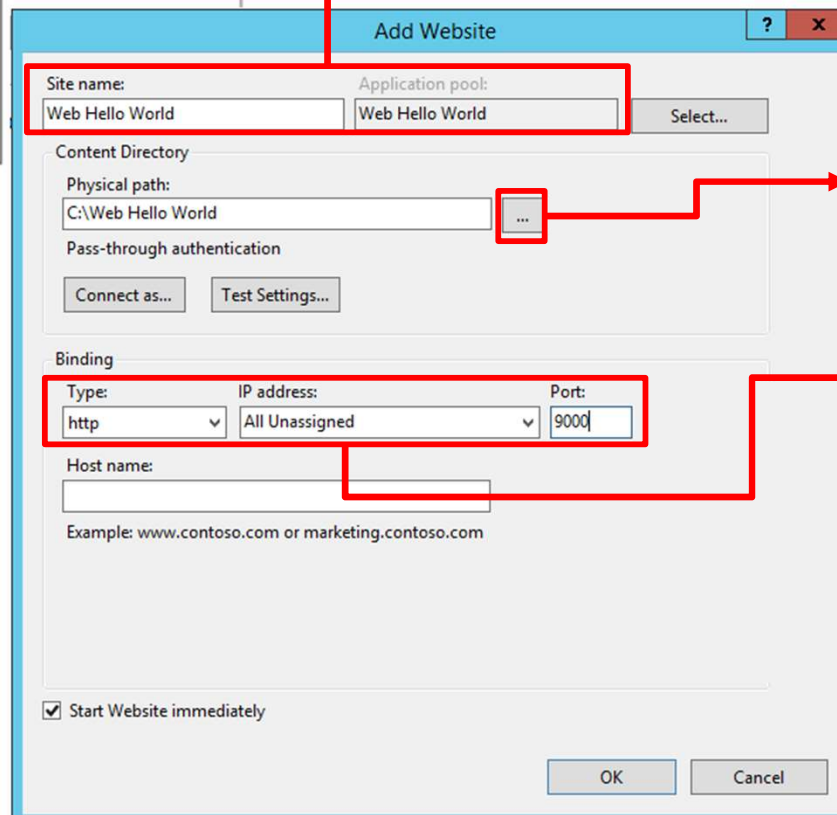
Hello World

CREATING NEW SITES

1. Buka IIS Manager, kemudian klik kanan "Sites", Pilih "Add Websites"



2. Berikan nama site name, dan pilih application pool!



3. Pilih folder aplikasi!

4. Jenis protocol, ip dan port yang akan digunakan pada site tersebut!



Praktikum

FTP Server



LATIHAN 1

Modem : 10.12.0.1/16

MikroTik : DHCP Client

WLAN 1 Access Point

SSID : NAMA_ANDA
Pass : 12345678
IP : 10.10.100.1/24
DHCP : 10.10.100.2 - 5

FIREWALL

[1] setiap client dengan network 10.10.100.0/24 tidak bisa terhubung ke web server
[2] setiap client dengan network 10.10.11.0/24 tidak bisa ngeping ke router

Eth1

R1

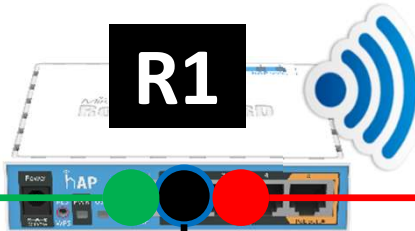
Eth2 :
10.10.11.1/24

Eth2 :
10.10.10.1/30

Web Server

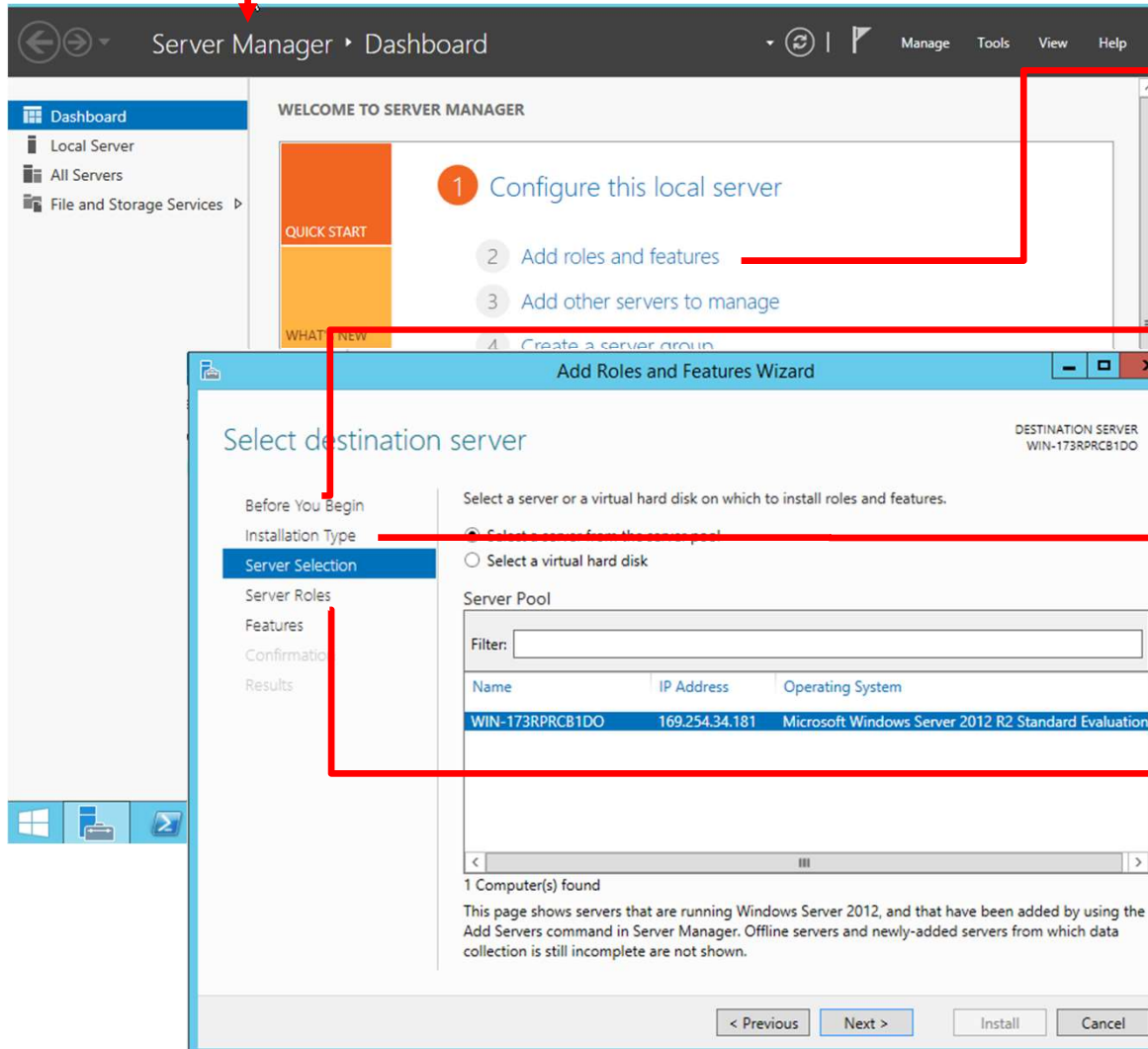
OS : Win Server 2012
Network : Bridge Adapter
Web Server : IIS port 80,443
Apache port 8080

VB



CREATING FTP SERVER

1. Bukalah Server Manager



2. Add roles and features.

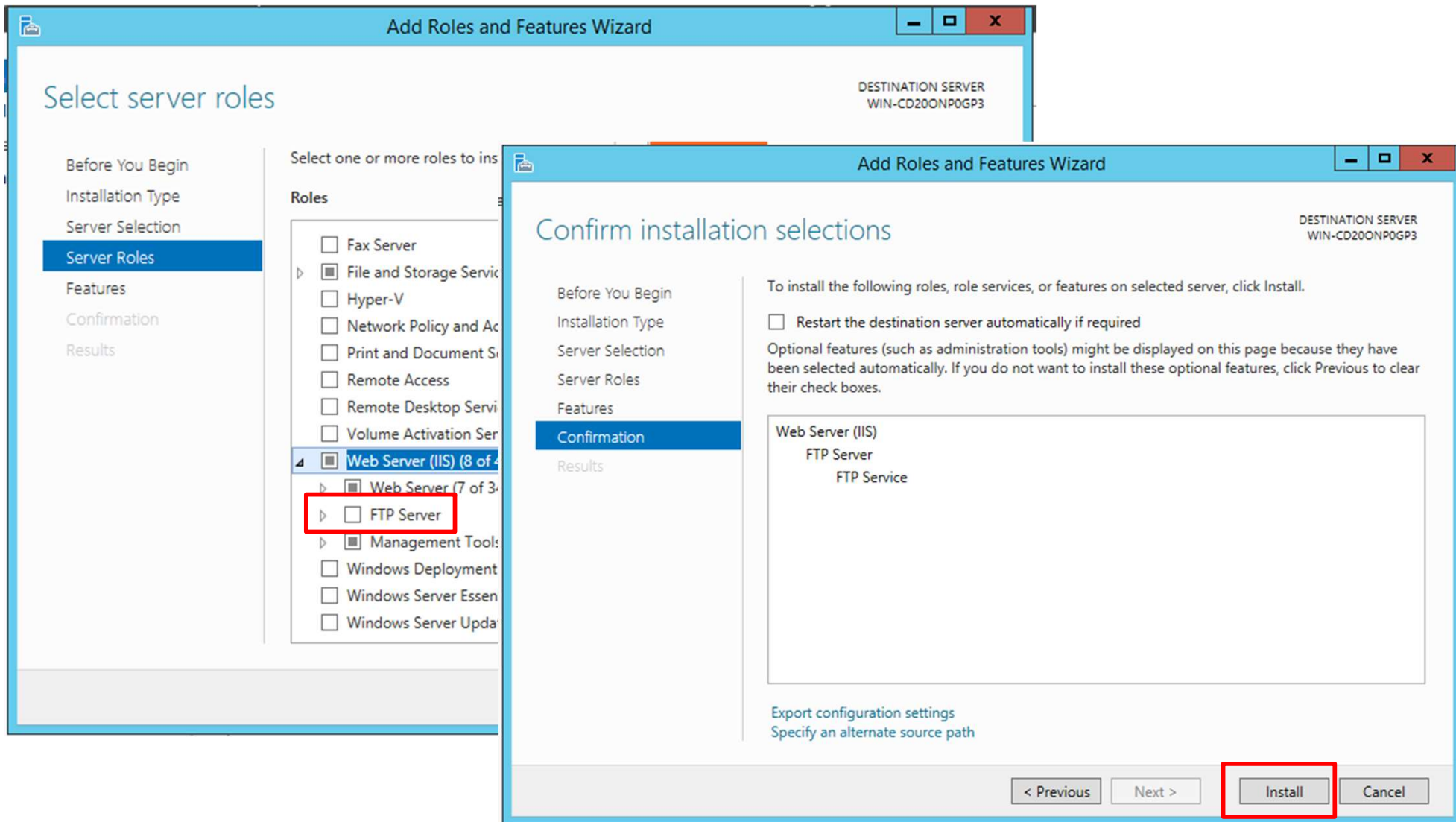
3. Pilih "Next".

4. Role-Based or Feature-Base installation

5. Pilih name server

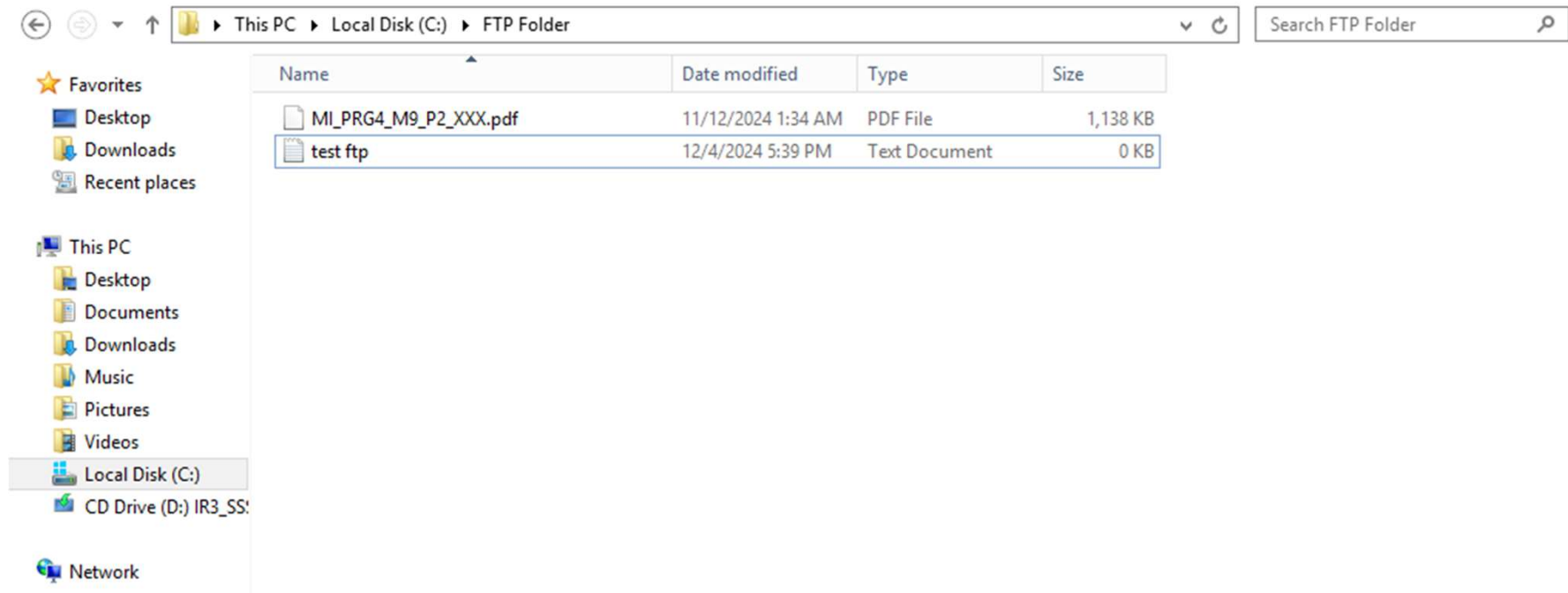
CREATING FTP SERVER

6. Pilih Web Server (IIS), Kemudian centang FTP Server, Pilih Next kemudian install



ADD FTP SERVER

1. Buatlah folder untuk FTP Server pada disk C, kemudian tambahkan beberapa notepad ataupun file apapun dari laptop anda!



ADD FTP SERVER

2. Buka IIS Manager, kemudian klik kanan sites, pilih Add FTP Server!

The screenshot shows the IIS Manager interface. In the 'Connections' pane on the left, the 'Sites' folder is selected, and a context menu is open with 'Add FTP Site...' highlighted. The 'Add FTP Site' wizard is displayed in the center. The 'Site Information' section shows the 'FTP site name' as 'FTP Site' and the 'Physical path' as 'C:\FTP Folder'. Red arrows point from the text instructions to these fields.

3. Beri nama FTP Site

4. Pilih folder FTP

ADD FTP SERVER

5. Tambahkan IP address dan sertifikat ssl

The screenshot shows the 'Add FTP Site' dialog box with the 'Binding and SSL Settings' tab selected. The 'IP Address' dropdown is set to 'All Unassigned' and the 'Port' is '21'. The 'Start FTP site automatically' checkbox is checked. Under the 'SSL' section, 'No SSL' is selected. The 'SSL Certificate' dropdown is set to 'Not Selected'. A red box highlights the 'IP Address' and 'Port' fields. Another red box highlights the 'No SSL' radio button. A red arrow points from the 'Authentication and Authorization Information' tab to the 'Basic' authentication option.

6. Atur autentikasi dan authorisasi FTP

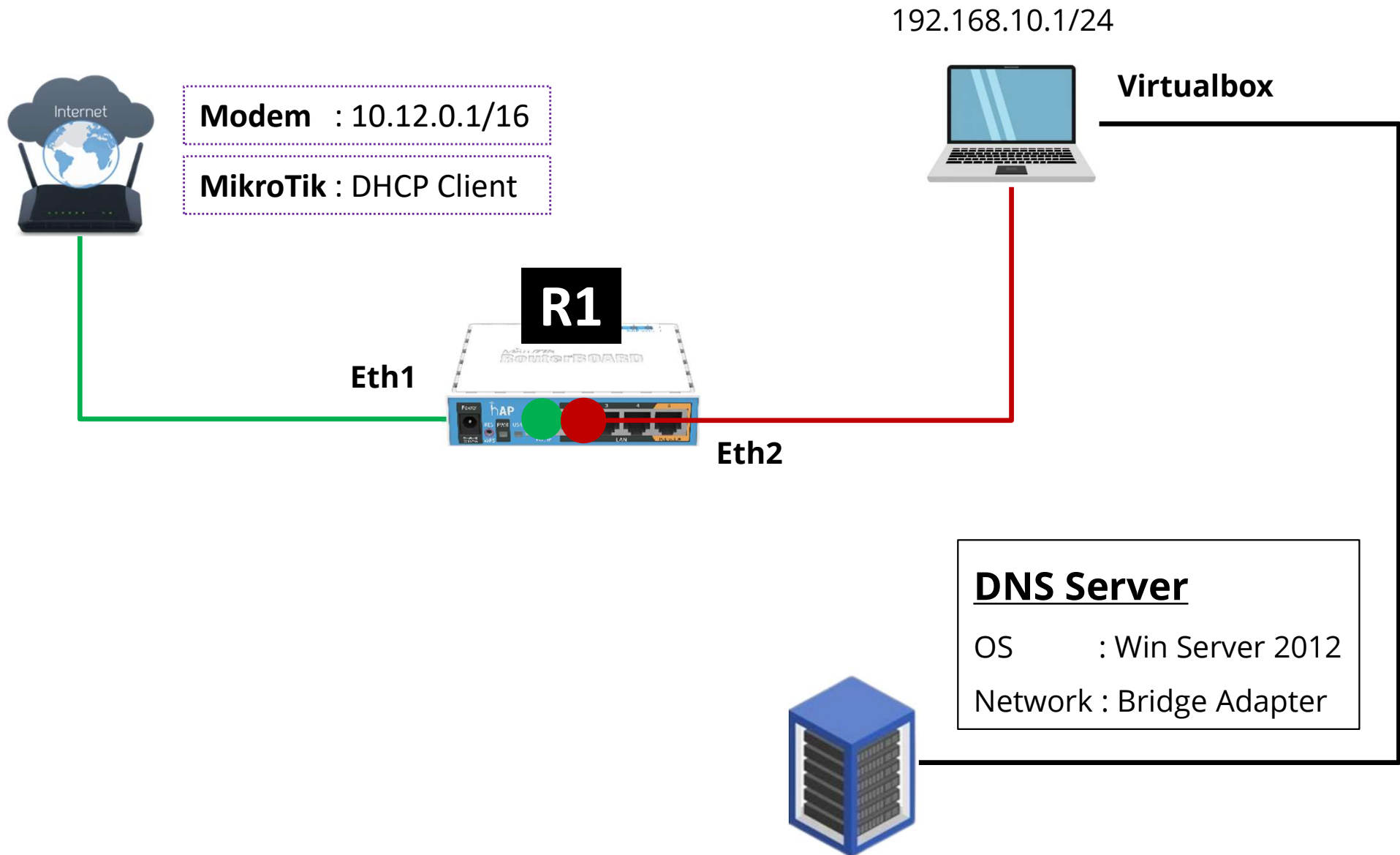
The screenshot shows the 'Add FTP Site' dialog box with the 'Authentication and Authorization Information' tab selected. Under the 'Authentication' section, 'Basic' is selected. Under the 'Authorization' section, 'All users' is selected in the 'Allow access to:' dropdown. Under the 'Permissions' section, both 'Read' and 'Write' checkboxes are checked. A red box highlights the 'Basic' authentication option. Another red box highlights the 'All users' dropdown and the 'Read' and 'Write' checkboxes. A red box highlights the 'Finish' button at the bottom right.



Praktikum DNS Server

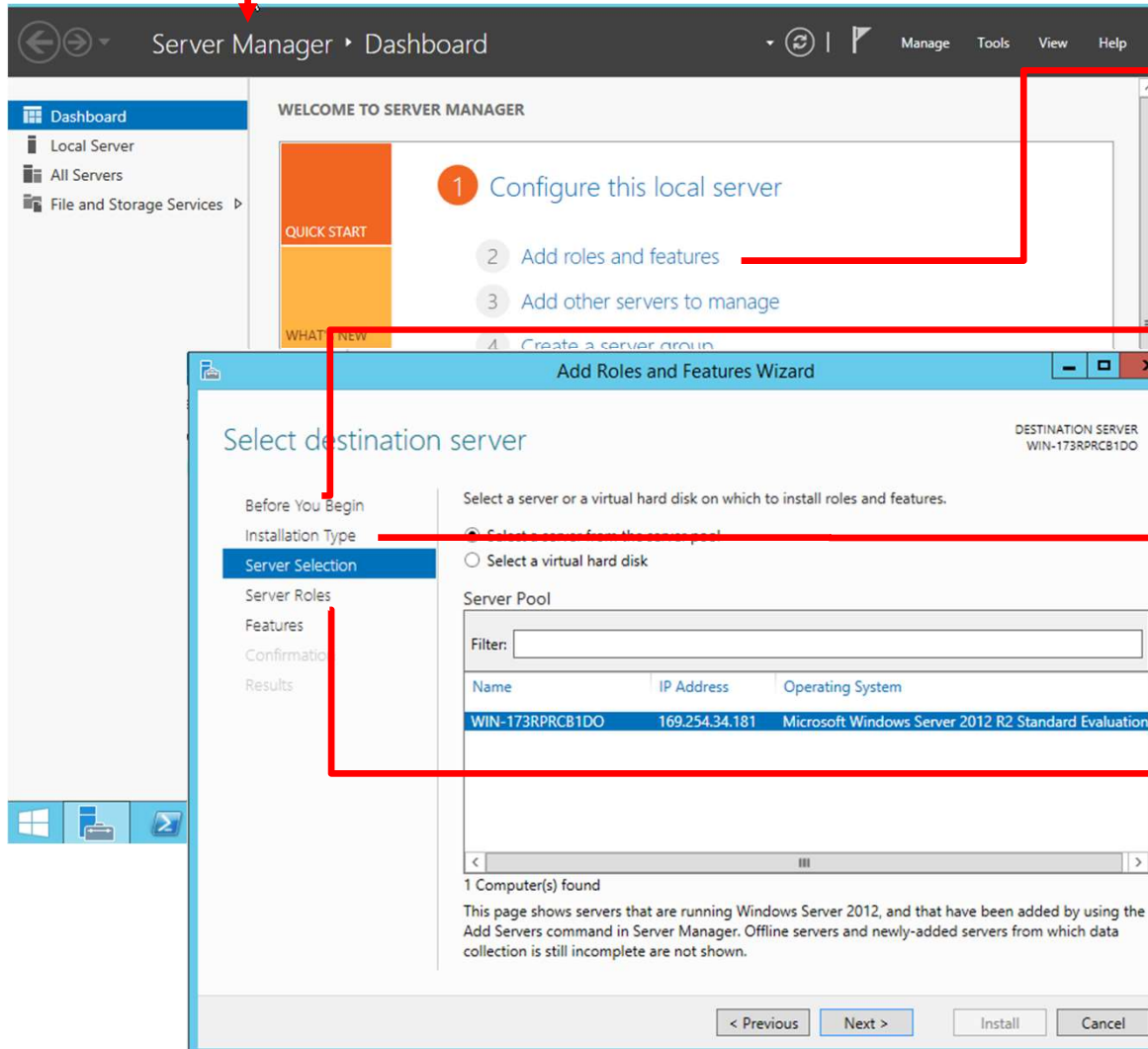


TOPOLOGI DNS SERVER



CREATING DNS SERVER

1. Membuka Server Manager



2. Add roles and features.

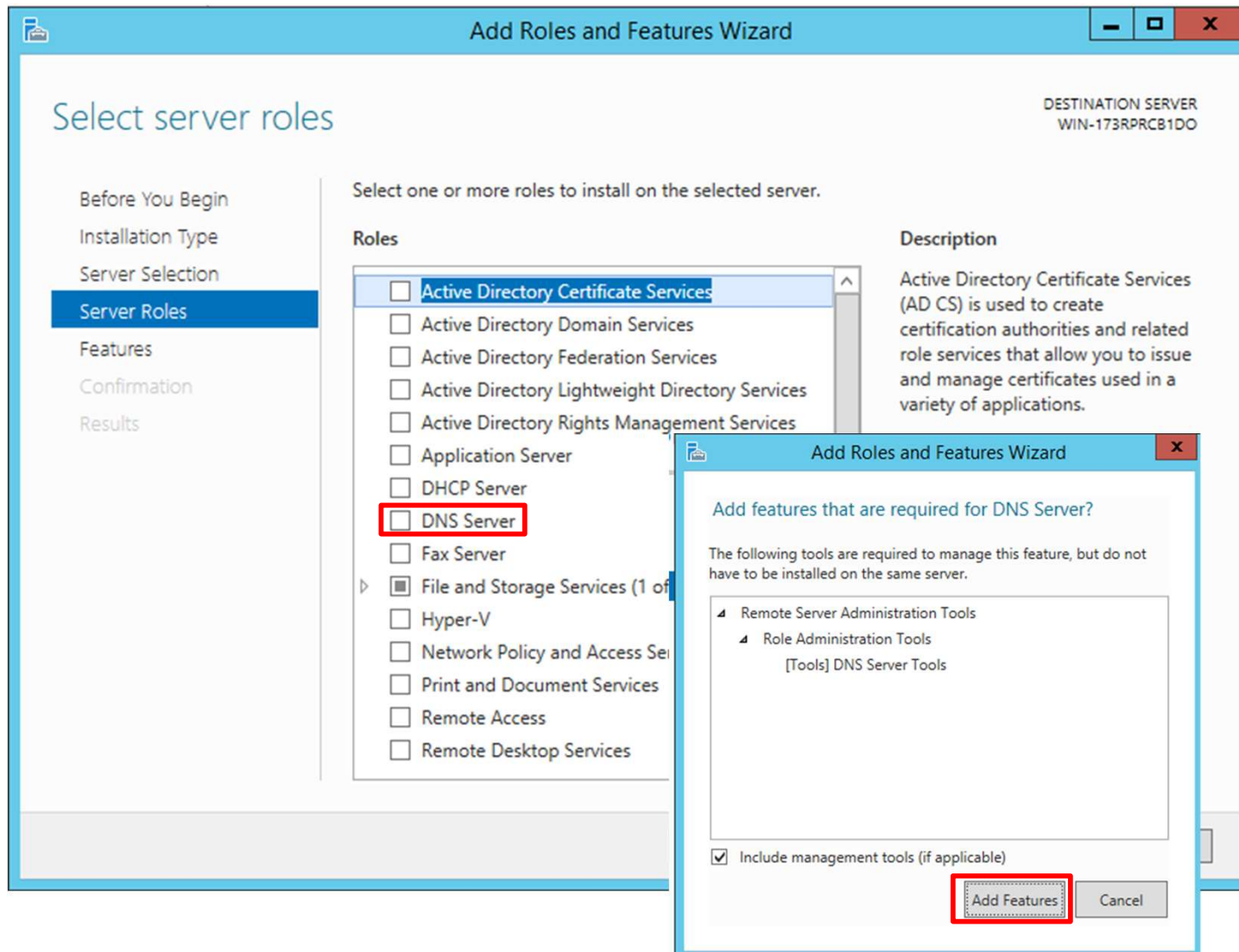
3. Pilih "Next".

4. Role-Based or Feature-Base installation

5. Pilih name server

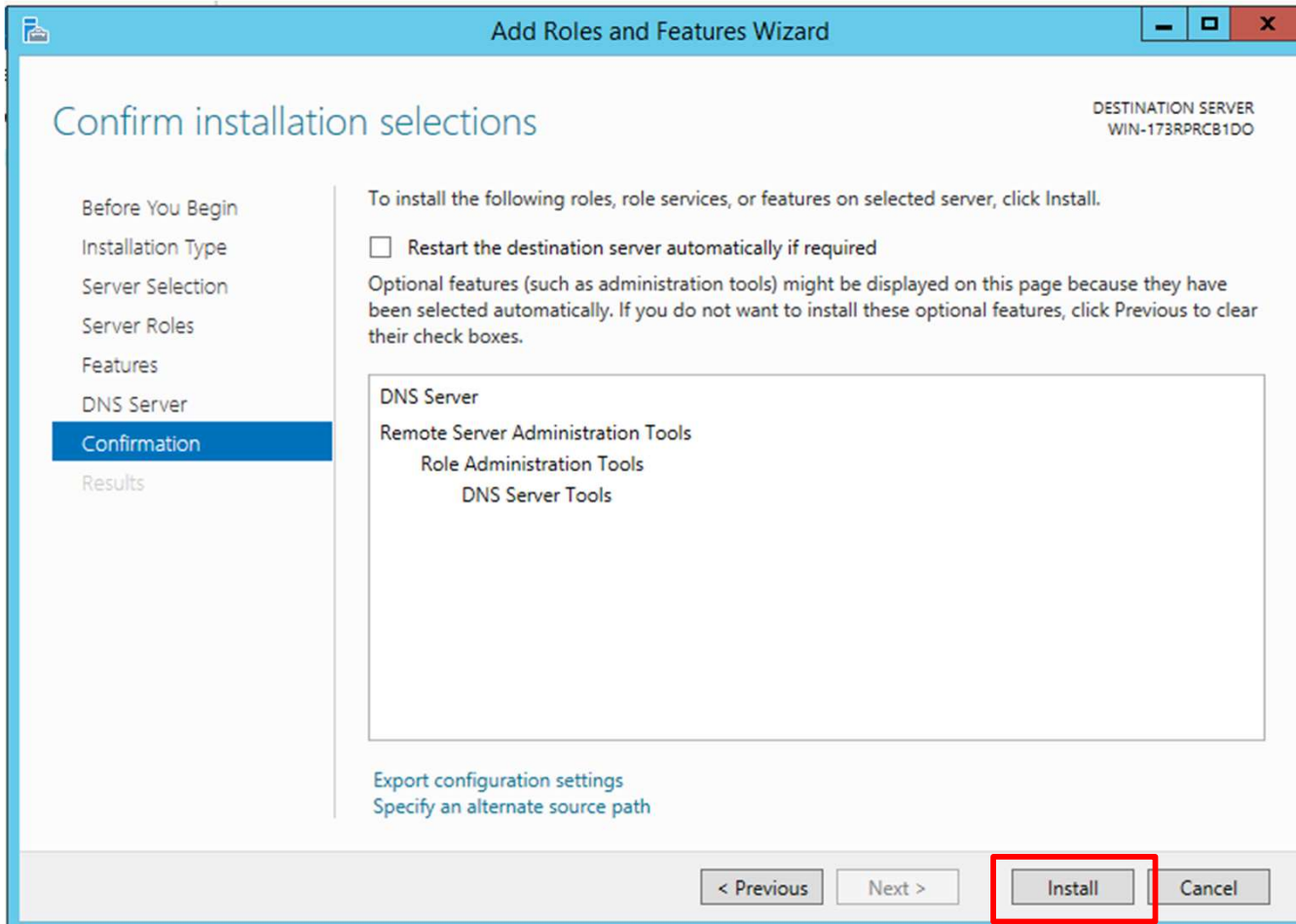
CREATING DNS SERVER

6. Centang DNS Server



CREATING DNS SERVER

7. Lanjutkan tahapan, kemudian install



The screenshot shows the 'Add Roles and Features Wizard' window. The title bar reads 'Add Roles and Features Wizard'. The main heading is 'Confirm installation selections'. In the top right corner, it says 'DESTINATION SERVER WIN-173RPRCB1DO'.

On the left side, there is a navigation pane with the following items: 'Before You Begin', 'Installation Type', 'Server Selection', 'Server Roles', 'Features', 'DNS Server', 'Confirmation' (which is highlighted with a blue bar), and 'Results'.

The main content area contains the following text:

To install the following roles, role services, or features on selected server, click Install.

☐ Restart the destination server automatically if required

Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.

A list box contains the following items:

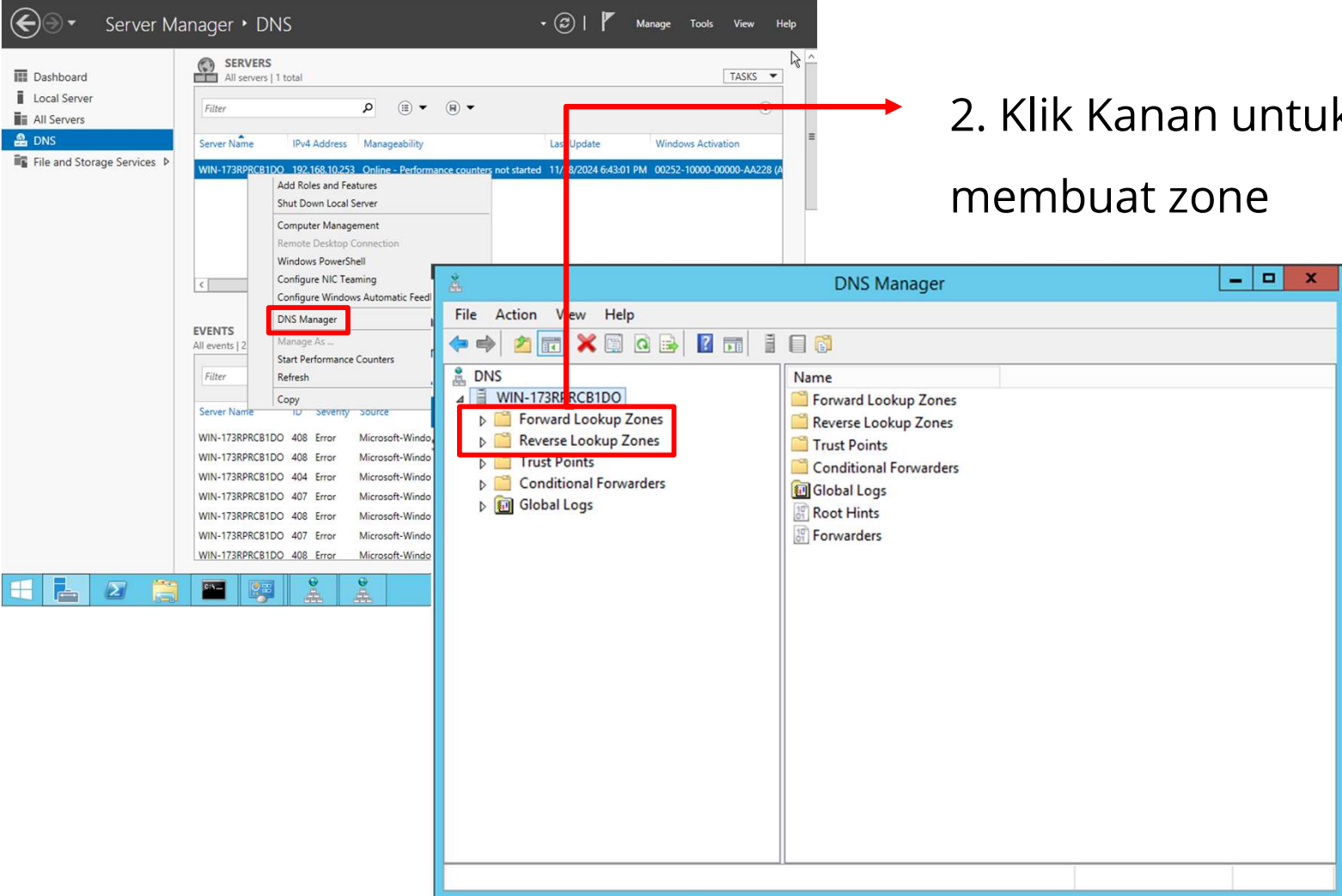
- DNS Server
- Remote Server Administration Tools
- Role Administration Tools
- DNS Server Tools

At the bottom of the main content area, there are two links: 'Export configuration settings' and 'Specify an alternate source path'.

At the bottom of the window, there are four buttons: '< Previous', 'Next >', 'Install' (which is highlighted with a red box), and 'Cancel'.

CREATING DNS SERVER

8. Buka Server Manager, Pilih DNS Manager

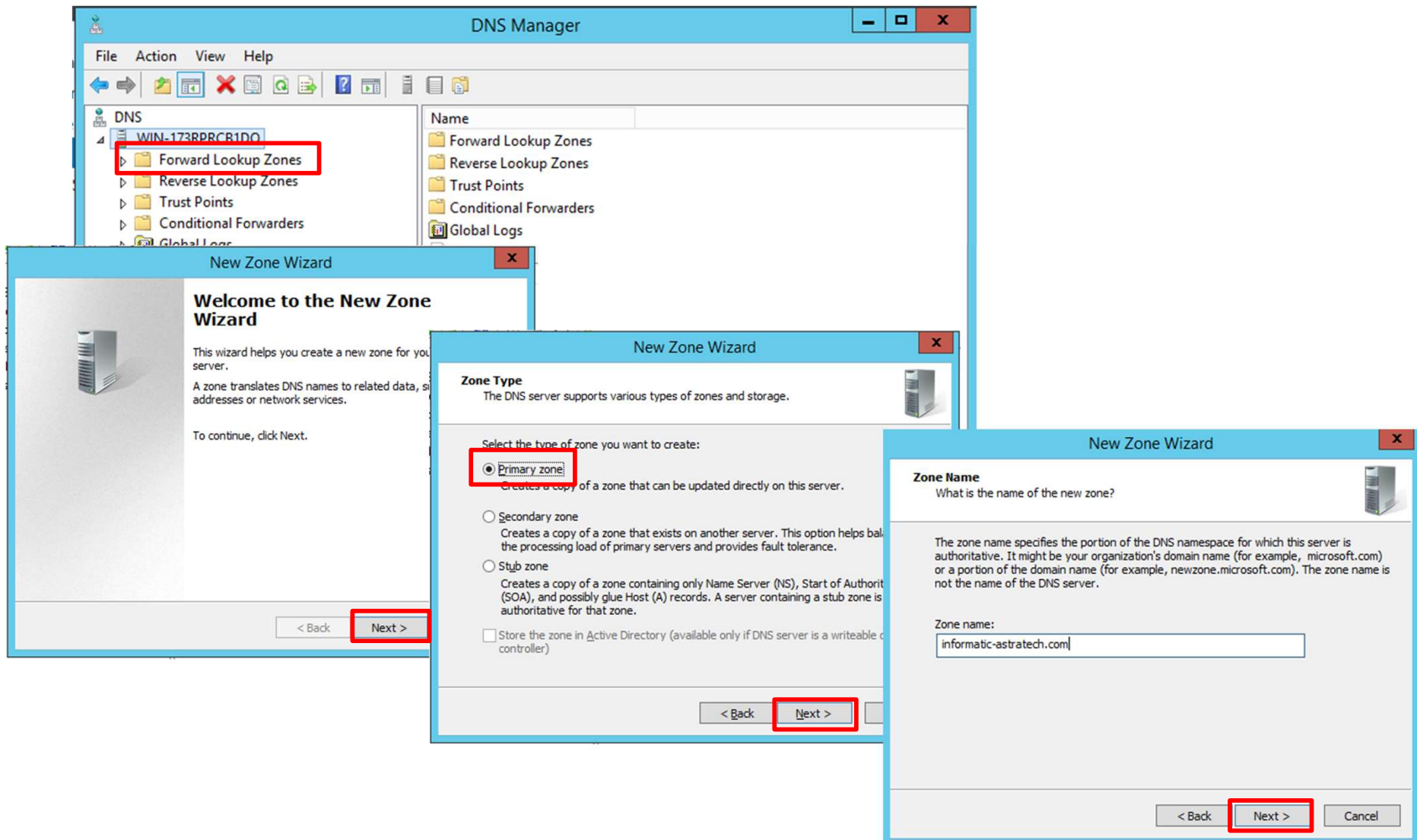


The image shows two overlapping windows from a Windows Server environment. The background window is the 'Server Manager' console, displaying a list of servers under the 'SERVERS' tab. A red rectangle highlights the 'DNS Manager' link in the left-hand navigation pane. A red arrow points from this link to the foreground window. The foreground window is the 'DNS Manager' console, which shows a tree view of DNS resources for the server 'WIN-173RPRCB1DO'. A red rectangle highlights the 'Reverse Lookup Zones' folder in this tree view. To the right of the 'DNS Manager' window, there is a text label: '2. Klik Kanan untuk membuat zone'.

2. Klik Kanan untuk membuat zone

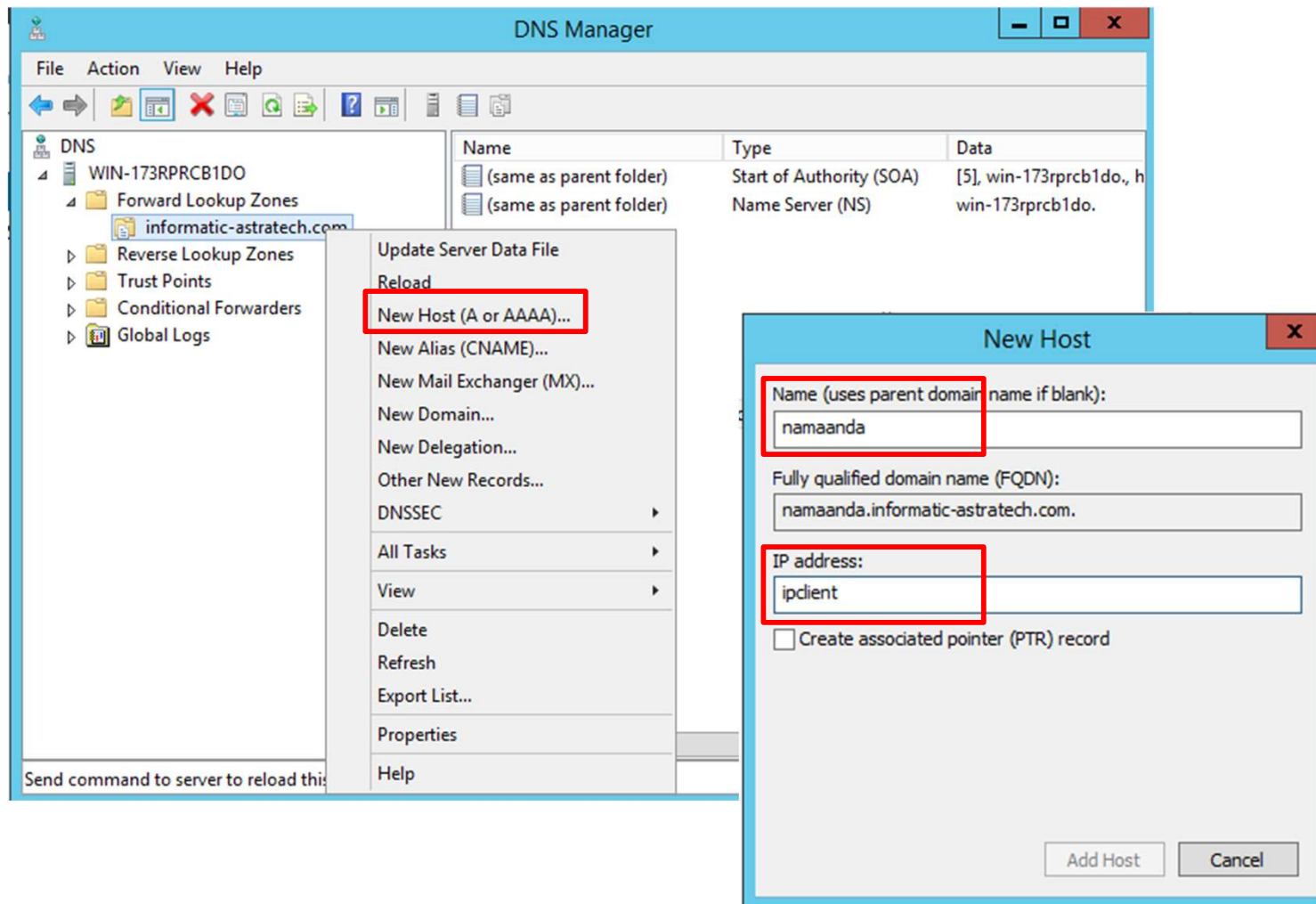
FORWARD LOOKUP ZONE

1. Klik Kanan, kemudian Pilih New Zone



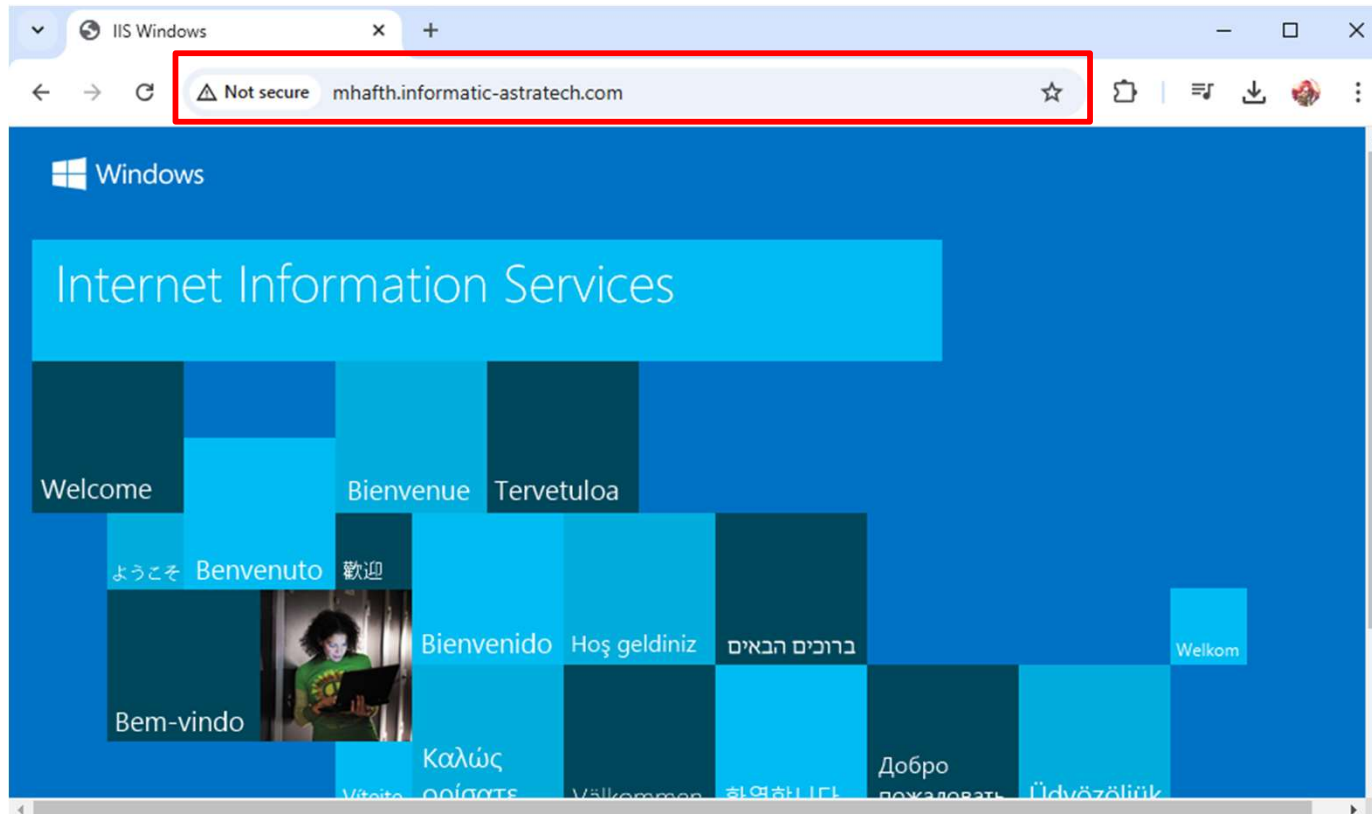
FORWARD LOOKUP ZONE

2. Klik Kanan, kemudian Pilih New Host



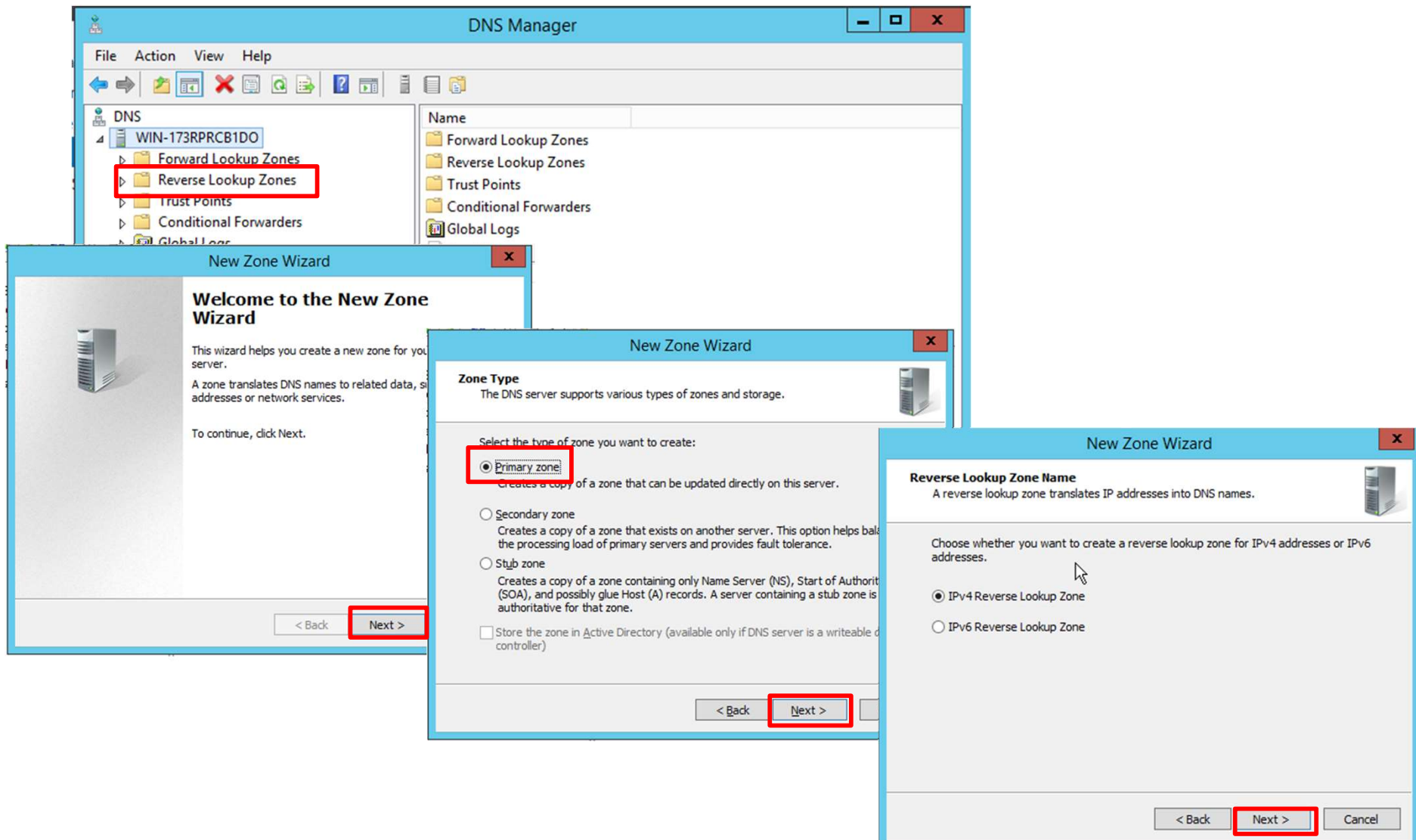
FORWARD LOOKUP ZONE

3. Buka browser pada client, kemudian cari nama domain anda!



REVERSE LOOKUP ZONE

1. Klik Kanan, kemudian Pilih New Zone



REVERSE LOOKUP ZONE

2. Masukkan Netowrk ID, kemudian create file

The image displays three sequential screenshots of the 'New Zone Wizard' in Windows, illustrating the process of creating a reverse lookup zone.

First Screenshot: Reverse Lookup Zone Name
This window prompts the user to 'type the network ID or the name of the zone.' The 'Network ID' radio button is selected, and the text '192.168.10' is entered in the adjacent field. Below, the 'Reverse lookup zone name' is shown as '10.168.192.in-addr.arpa'.

Second Screenshot: Zone File
This window asks, 'Do you want to create a new zone file or use an existing file that you have copied from another DNS server?'. The 'Create a new file with this file name:' radio button is selected, and the file name '10.168.192.in-addr.arpa.dns' is entered in the text box.

Third Screenshot: Completing the New Zone Wizard
This final window summarizes the settings: Name: 10.168.192.in-addr.arpa, Type: Standard Primary, Lookup type: Reverse, and File name: 10.168.192.in-. The 'Finish' button is highlighted, indicating the completion of the wizard.

REVERSE LOOKUP ZONE

3. Buka command prompt, kemudian lookup ipnya

Command Prompt

```
C:\Users\MHAbd>nslookup 192.168.10.254
Server: UnKnown
Address: 192.168.10.253

Name: mhafth.informatic-astratech.com
Address: 192.168.10.254

C:\Users\MHAbd>
```

LATIHAN 1

Modem : 10.12.0.1/16

MikroTik : DHCP Client

WLAN 1 Access Point

SSID : NAMA_ANDA

Pass : 12345678

IP : 10.10.100.1/24

DHCP : 10.10.100.2 - 5

DNS Server

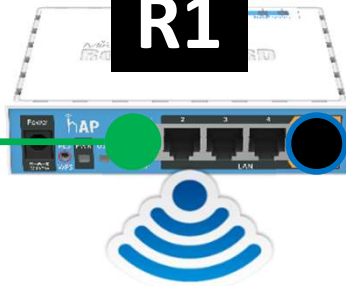
OS : Win Server 2012

Network : Bridge Adapter



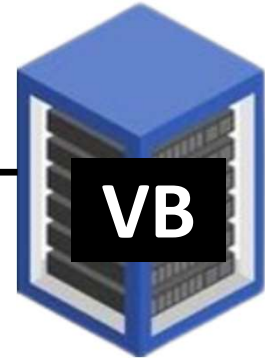
Eth1

R1



Eth4 :
10.10.10.1/30

VB



KELAS_ANDA.INFORMATICS-ASTRATECH.COM



KELAS_LAIN.INFORMATICS-ASTRATECH.COM

LATIHAN 2

Modem : 10.12.0.1/16

MikroTik : DHCP Client

DNS Server

OS : Win Server 2012

Network : Bridge Adapter



Eth1

R1

Eth4 :
192.168.10.1/30

VB

Eth2 :
192.168.20.1/24

Eth3 :
192.168.70.1/30

Static Routing

Eth1 :
192.168.70.2/30

R2

192.168.20.254 - UIN.ASTRATECH.COM

192.168.30.254 - TRPL.ASTRATECH.COM

Eth2 :
192.168.30.1/24





TERIMA KASIH



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