



SIMULATION/LAB FORTIGATE FUNDAMENTAL

Configure VLAN Interfaces for Segmentation LAN

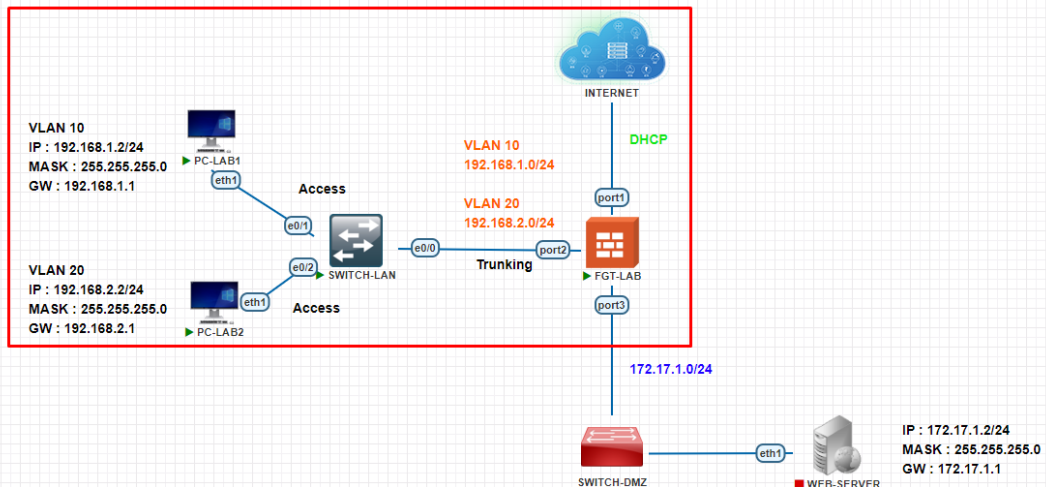
- ✓ Interface VLAN
- ✓ Default Route
- ✓ Firewall Policy

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1. Topology

FTAP BATCH #3 SIMULATION/LAB FORTIGATE FUNDAMENTAL



2. Task

Lab kedua membuat VLAN di perangkat FortiGate, VLAN ini memungkinkan satu port memiliki dua segmen jaringan yang berbeda. VLAN dikonfigurasi pada port yang terhubung ke switch sebagai Trunk. PC-LAB1 akan diberi tag sebagai VLAN 10 untuk komunikasinya dan PC-LAB2 akan diberi tag sebagai VLAN 20 untuk komunikasinya.

#Configure Interface VLAN melalui CLI

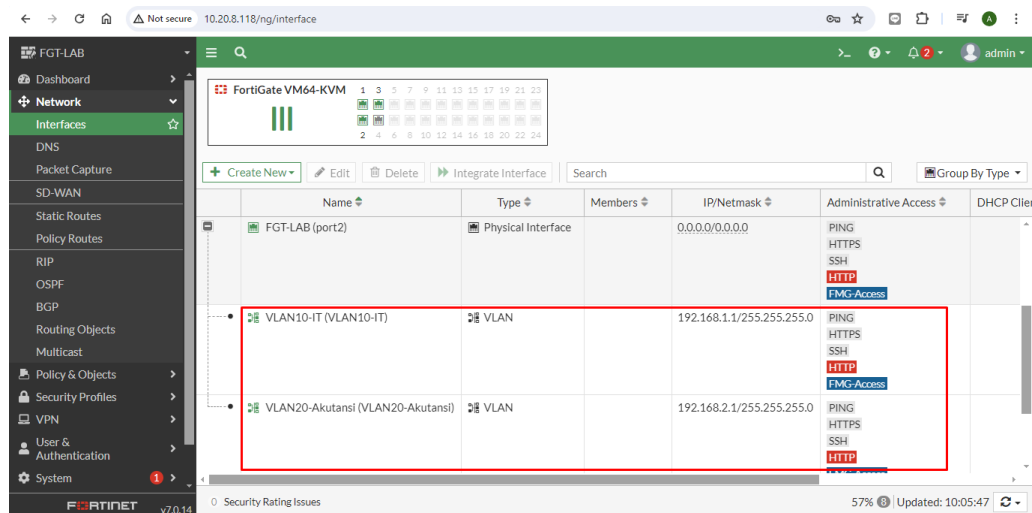
Konfigurasi ini dilakukan untuk mengatur VLAN 10 dan VLAN 20 pada interface port2 di FortiGate dan mengizinkan akses administratif melalui berbagai protokol (ping, HTTPS, SSH, HTTP, FGFM).

```
VLAN 10
edit VLAN10-IT
set vdom root
set ip 192.168.1.1 255.255.255.0
set allowaccess ping https ssh http fgfm
set alias VLAN10-IT
set device-identification enable
set role lan
set snmp-index 9
set interface port2
set vlandid 10

VLAN 20
edit VLAN20-Akutansi
set vdom root
```

```
set ip 192.168.2.1 255.255.255.0
set allowaccess ping https ssh http fgfm
set alias VLAN20-Akutansi
set device-identification enable
set role lan
set snmp-index 10
set interface port2
set vlanid 20
```

#Configure Interface VLAN melalui GUI FortiGate



#Configure Switch

Konfigurasi ini dilakukan sebagai trunk port yang menghubungkan switch ke perangkat lain (FortiGate) dan meneruskan traffic untuk VLAN 10 dan VLAN 20.

```
interface Ethernet0/0
switchport trunk allowed vlan 10,20
switchport trunk encapsulation dot1q
switchport mode trunk
!
interface Ethernet0/1
switchport access vlan 10
switchport mode access
!
interface Ethernet0/2
switchport access vlan 20
switchport mode access
!
```

#Configure Firewall Policy melalui GUI FortiGate

Konfigurasi ini dilakukan untuk membuat dua aturan firewall pada perangkat FortiGate yang memungkinkan traffic dari dua VLAN yang berbeda (VLAN 10 dan VLAN 20), serta mengaktifkan logging dan NAT untuk keamanan agar PC-LAB1 dan PC-LAB2 dapat mengakses internet melalui port1.

VLAN 10

The screenshot shows the FortiGate GUI with the Firewall Policy configuration page for 'VLAN10 TO INTERNET'. The configuration is as follows:

Field	Value
Name	VLAN10 TO INTERNET
Incoming Interface	VLAN10-IT (VLAN10-IT)
Outgoing Interface	FGT-LAB (port1)
Source	all
Destination	all
Schedule	always
Service	ALL
Action	ACCEPT (checked), DENY (unchecked)

Statistics (since last reset):

Field	Value
ID	2
Last used	2 minute(s) ago
First used	11 hour(s) ago
Active sessions	2
Hit count	597
Total bytes	37.62 MB
Current bandwidth	0 bps

Inspection Mode: Flow-based (selected), Proxy-based

Firewall / Network Options:

- NAT: ☒ NAT
- IP Pool Configuration: Use Outgoing Interface Address (selected), Use Dynamic IP Pool
- Preserve Source Port: ☐

Buttons: OK, Cancel

VLAN 20

The screenshot shows the FortiGate GUI with the Firewall Policy configuration page for 'VLAN20 TO INTERNET'. The configuration is as follows:

Field	Value
Name	VLAN20 TO INTERNET
Incoming Interface	VLAN20-Akutansi (VLAN20-Aku)
Outgoing Interface	FGT-LAB (port1)
Source	all
Destination	all
Schedule	always
Service	ALL
Action	ACCEPT (checked), DENY (unchecked)

Statistics (since last reset):

Field	Value
ID	3
Last used	10 hour(s) ago
First used	17 hour(s) ago
Active sessions	0
Hit count	701
Total bytes	37.42 MB
Current bandwidth	0 bps

Inspection Mode: Flow-based (selected), Proxy-based

Firewall / Network Options:

- NAT: ☒ NAT
- IP Pool Configuration: Use Outgoing Interface Address (selected), Use Dynamic IP Pool
- Preserve Source Port: ☐

Buttons: OK, Cancel

#Configure Default Route melalui GUI FortiGate

Konfigurasi ini dilakukan untuk mengatur FortiGate mengarahkan traffic yang tidak terarah ke internet melalui interface port1, menggunakan gateway dinamis yang diperoleh dari DHCP. Jadi, perangkat di LAN dapat mengakses internet dengan benar.

The screenshot displays the FortiGate GUI's DNS Settings page. The left sidebar shows the navigation menu with 'DNS' selected under the 'Network' section. The main content area is titled 'DNS Settings' and includes the following sections:

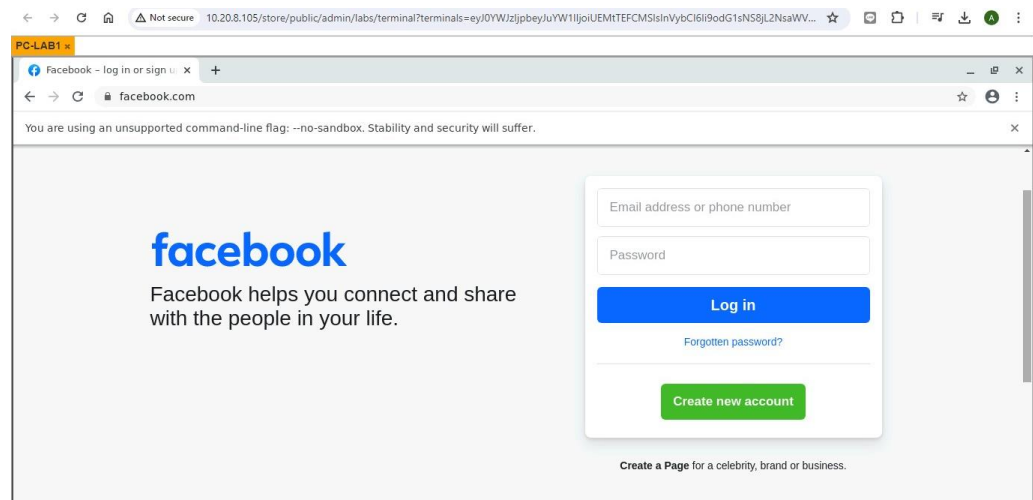
- DNS servers:** A table with two rows: 'Primary DNS server' (8.8.8.8, 50 ms) and 'Secondary DNS server' (8.8.4.4, 2,170 ms). A red box highlights these two rows.
- Local domain name:** A text input field with a plus icon.
- DNS Protocols:** A section with three rows: 'DNS (UDP/53)' (enabled), 'TLS (TCP/853)' (disabled), and 'HTTPS (TCP/443)' (disabled).
- Dynamically Obtained DNS Servers:** A table with two columns: 'Interface' and 'DNS Server'. It shows two entries for the 'FGT-LAB (port1)' interface: '8.8.8.8' (50 ms) and '1.1.1.1' (14,540 ms).
- DNS Filter Rating Servers:** A table with one row: '208.91.112.220' (Unreachable).
- Additional Information:** A section with links for 'API Preview', 'Edit In CLI', 'Setup guides', 'DNS Local Domain List', 'Using FortiGate as a DNS Server', and 'FortiGuard DDNS'.
- Documentation:** A section with links for 'Online Help' and 'Video Tutorials'.

An 'Apply' button is located at the bottom right of the page.

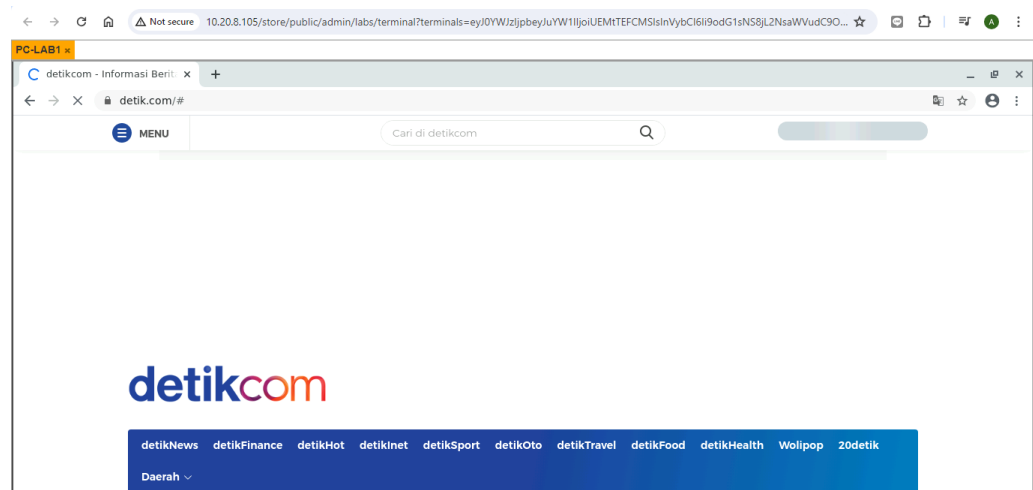
3. Pengujian

- Testing akses internet dari PC-LAB1 menggunakan google chrome

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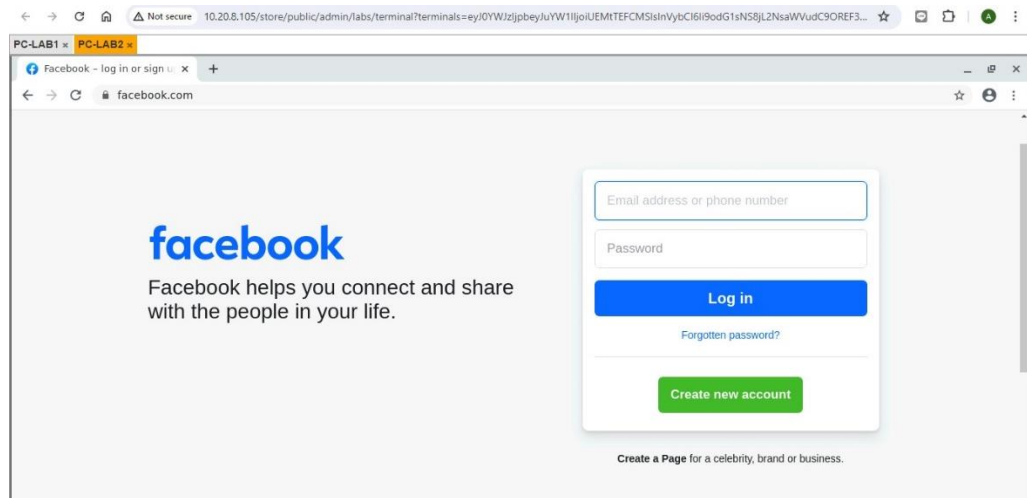


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- **Testing akses internet dari PC-LAB2 menggunakan google chrome**

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