



2022

Enabling VDOM

Step by Step Configuration Guide





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1. Version Control

Version	Date	Notes	Created By	Release
1.0	15/03/2019	Initial Draft	Mazhar Minhas	Draft
1.1	21/06/2020	LAB Diagram and Document Layout Update	Farooq Zafar	Initial Release
1.2	31/03/2022	Workbook design and screenshots update	Farooq Zafar	V 2.0

2. Reference Document

Click for the Reference document

3. Assumption

- ✓ We understand that delegate already understand L2/L3, Routing.
- ✓ The delegate already knows the "*Fortray Networks FortiGate NG Firewall*" physical and logical connection.
- \checkmark The delegate already has a basis Troubleshooting skill, such as ping and trace.
- ✓ The delegate already has access to the "Fortray Networks FortiGate NG Firewall" Spreadsheet encompassing the Basic Layer, 2, 3 and allocated subnet information. For more details refer to the "Student Folder".
- This document is created to show an example for one topology only. The candidate needs to refer to his own topology and follow this step-by-step guide.
- ✓ We assume that delegate already has installed the VPN software and him/she have VPN user / Password. If any issue, contact our technical team.
- ✓ Our VPN software is supported by PC, MAC, Android, and IOS devices.
- \checkmark $\,$ It's also assumed that delegate has access to PC/Laptop i5 with 4GB RAM.
- \checkmark $\,$ For optimal connectivity, we recommend at least 10MB internet connection.
- \checkmark $\,$ We assume that we already have INTERNAL, DMZ, OUTISE interfaces that are already configured.





4. Fortray - Fortinet NSE4 - NOTE About Configuration Example



The configuration example is based in the "VLAN-1".

Please refer to "**Student Spread Sheet**" and complete your task based on your Network Topology, & Task list assigned.







Fortray - Fortinet NSE4 - LAB Network Topology 5.

The below network topology is just for information purpose only. Please refer to your student folder and your designated topology.

If any doubt, please ask your instructor.



6. Fortray - Fortinet NSE4 - LAB MGMT Access

Refer to the below table and login to Fortinet NG Firewall, and Test machine.



Each delegate has his /her own test machine, refer to the spreadsheet provided in the student shared folder

Device Name	Туре	IP	Access Method	Default User	Password	New Password
FN-FORTI-PRIM-100	M-100 NG Firewall 10.205.1.100 HTTPS/SSH admin		admin	admin	AD/user	
FN-FORTI-BACK-101	NG Firewall	10.205.1.101	HTTPS/SSH	admin	admin	AD/user
FN-FORTI-PC-01	TEST PC	10.205.1.1	RDP	administrator	cisco	N/A
FN-LAB-AD	Certificate Server Active Directory	10.205.0.253	HTTP/LDAP	<your user="" vpn="">@fortraylab.com Password is emailed</your>		aylab.com iled
Remote-PC	Remote-PC	10.205.0.113	RDP	Re	fer to Spreadsl	neet









7. Fortray - Fortinet NSE4 - LAB Spreadsheet

Refer to below table and login to NG Firewall, LAN, DMZ and WAN Interfaces:

				Foi	rtine	et FW - S	Students		Ms,	VLANs 8	k Interf	aces				
V	DOM / V	LAN		TRUST Ne	twork			DMZ Ne		UNTRUST Network				INTERNET		
NO	VDOM	VLAN	Physical INT	INT Name	VLAN	IP Address	Physical INT	INT Name	VLAN	IP Address	Physical INT	INT Name	VLAN	IP Address	PAT IP	
1	root	1	Internal1	LAN-1	1	10.1.1.254/24	dmz	DMZ-1	101	172.16.1.254/24	wan1	WAN-1	201	200.1.1.254/24	200.1.1.254/24	
2	VDOM-2	2	Internal1	LAN-2	2	10.1.2.254/24	dmz	DMZ-2	102	172.16.2.254/24	wan1	WAN-2	202	200.1.2.254/24	200.1.2.254/24	
3	VDOM-3	3	Internal1	LAN-3	3	10.1.3.254/24	dmz	DMZ-3	103	172.16.3.254/24	wan1	WAN-3	203	200.1.3.254/24	200.1.3.254/24	
4	VDOM-4	4	Internal1	LAN-4	4	10.1.4.254/24	dmz	DMZ-4	104	172.16.4.254/24	wan1	WAN-4	204	200.1.4.254/24	200.1.4.254/24	
5	VDOM-5	5	Internal1	LAN-5	5	10.1.5.254/24	dmz	DMZ-5	105	172.16.5.254/24	wan1	WAN-5	205	200.1.5.254/24	200.1.5.254/24	
6	VDOM-6	6	Internal1	LAN-6	6	10.1.6.254/24	dmz	DMZ-6	106	172.16.6.254/24	wan1	WAN-6	206	200.1.6.254/24	200.1.6.254/24	
7	VDOM-7	7	Internal1	LAN-7	7	10.1.7.254/24	dmz	DMZ-7	107	172.16.7.254/24	wan1	WAN-7	207	200.1.7.254/24	200.1.7.254/24	
8	VDOM-8	8	Internal1	LAN-8	8	10.1.8.254/24	dmz	DMZ-8	108	172.16.8.254/24	wan1	WAN-8	208	200.1.8.254/24	200.1.8.254/24	
9	VDOM-9	9	Internal1	LAN-9	9	10.1.9.254/24	dmz	DMZ-9	109	172.16.9.254/24	wan1	WAN-9	209	200.1.9.254/24	200.1.9.254/24	
10	VDOM-10	10	Internal1	LAN-10	10	10.1.10.254/24	dmz	DMZ-10	110	172.16.10.254/24	wan1	WAN-10	210	200.1.10.254/24	200.1.10.254/24	



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8. Fortray - Fortinet NSE4 - LAB Task: Enabling VDOM



Fortray Networks head office "Security Consultant" asked to create VDOM for some client. Please follow spreadsheet.

In the activity, we are going to learn, how to create a user account.



In this example, we are creating admin user on the primary Fortinet NG Firewall. Each delegate is required to create his/her own user.

Summary steps to be done by the network administrator are mentioned below: -

Steps needed to be done to accomplish this task is

- Connecting to Fortinet Primary Firewall <u>https://10.205.1.100/login</u>
- Enable a VDOM Feature on the Firewall
- Verification





9. Fortray - Fortinet NSE4 - LAB Configuration: Enabling VDOM

In this section, we will create admin user.

9.1 Step 1: Login to Fortinet Firewall

Use any browser and type <u>https://10.205.1.100/login</u> use the default user /password provided by the trainer. In this example, we are using Google Chrome Browser. Here is screenshot of web browser, the login page of Fortinet NG Firewall.

$\leftarrow \rightarrow G$	A Not secure	https://10.205.1.100/login	٢œ	٩	(3 €	Ē	www. astec	
		admin						
		••••						
		Login						
			Note:	Plea: spre	se use default adsheet.	usernan	ne / pas	sword a



FortiGate Firewall Pre VDOM-Status:





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9.2 Step 2: Enable a VDOM Feature on the Firewall

In Fortinet Firewall, follow these steps to upgrade firmware. Connect FortiGate Firewall CLI:

Issue following Commands hilighted in blue color.

Connected						
FGT60E4Q16019400 # config system global						
FGT60E4Q16019400 (global) # set vdom-mode ?no-vdomDisable split/multiple VDOMs mode.split-vdomEnable split VDOMs mode.multi-vdomEnable multiple VDOMs mode.						
FGT60E4Q16019400 (global) # <mark>set vdom-mode multi-vdom</mark>						
FGT60E4Q16019400 (global) $\#$ end You will be logged out for the operation to take effect. Do you want to continue? $(y/n)y$						
0:Unable to connect. Please login						

At this point VDOM enabling task is completed.



Note: The configuration will not save until we type "end" hit enter. Do you want to continue? (y/n) here press "y" and hit enter After this firewall management session will be logout.







10. Fortray - Fortinet NSE4 - LAB Verification

In this section, we will verify upgraded firmware.

10.1 Step 1: Login to Fortinet NG Firewall

Open the page <u>https://10.205.1.100</u> in web browser. And login using your own user/password created in previous step.

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	farooq	- 1	
	•••••		\bigcirc
		Login	2





10.2 Step 2: Multi-VDOM mode Verification

After login you can see following:







And following:





Thanks, and Good Luck



