

ASSIGNMENT-3

21ITE32 - VIRTUALIZATION

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26.09.2023

Creating VLAN Using Cisco Packet Tracer.

To create VLAN on the cisco area, we need VLAN name - office expansion and VLAN Id - 20 and also the ports

Steps to create VLAN in cisco packet tracer:

Step 1: To create VLAN, download and install cisco packet tracer execution file.

Step 2: In execution file, we can download cisco packet tracer by create an account by filling the necessary details.

Step 3: Launch the cisco packet tracer, and create any kind of topology along with the cisco switch.

Step 4: Thus we create a star topology, we connect the laptop, PC and server to the cisco switch.

Step 5: To configure VLAN, click cisco switch and select cli.

Step 6: Write the command for configure VLAN

Step 7: Give the command for enabling,


```
switch >en
```

```
switch #
```

Step 8: Use the command for showing the VLAN configuration:

```
switch # show vlan brief.
```

Step 9: Create an ID and name for our VLAN by using the command,

```
switch # vlan 20
```

```
switch # name officeExpansion.
```

Step 10: Write the code for VLAN configuration,

```
switch >en
```

```
switch # config
```

```
switch (config) # vlan 20
```

```
switch (config-vlan) # name officeExpansion
```

```
switch (config-vlan) # exit
```

```
switch (config) # int fa0/1
```

```
switch (config-if) # switchport mode access
```

```
switch (config-if) # switchport access vlan 20
```

```
switch (config-if) # exit
```

```
switch # show vlan brief.
```

Step 11: Then console the commands and now we created the VLAN which name is office expansion by using cisco packet tracer.

Rationale:

* By creating a VLAN for the new office Expansion, you are logically segregating the network.

* This enhances security by limiting broadcast domains and reduces the risk of unauthorized access to sensitive data.



Considerations:

* Ensure that the ports on 'Expansion Switch' are only accessible to authorized devices use proper security measures like strong password / 802.1X authentication.

* Implement appropriate firewall rules and access control lists between VLANs to control inter-VLAN traffic and maintain security.

* Monitor the network performance regularly to ensure that the segmentation doesn't lead to bottleneck or congestion adjust bandwidth allocation if necessary.