

VLAN & INTER-VLAN ROUTING

A FortiGate and Switch-Based Network Segmentation Project

ONL3_ISS8_S3

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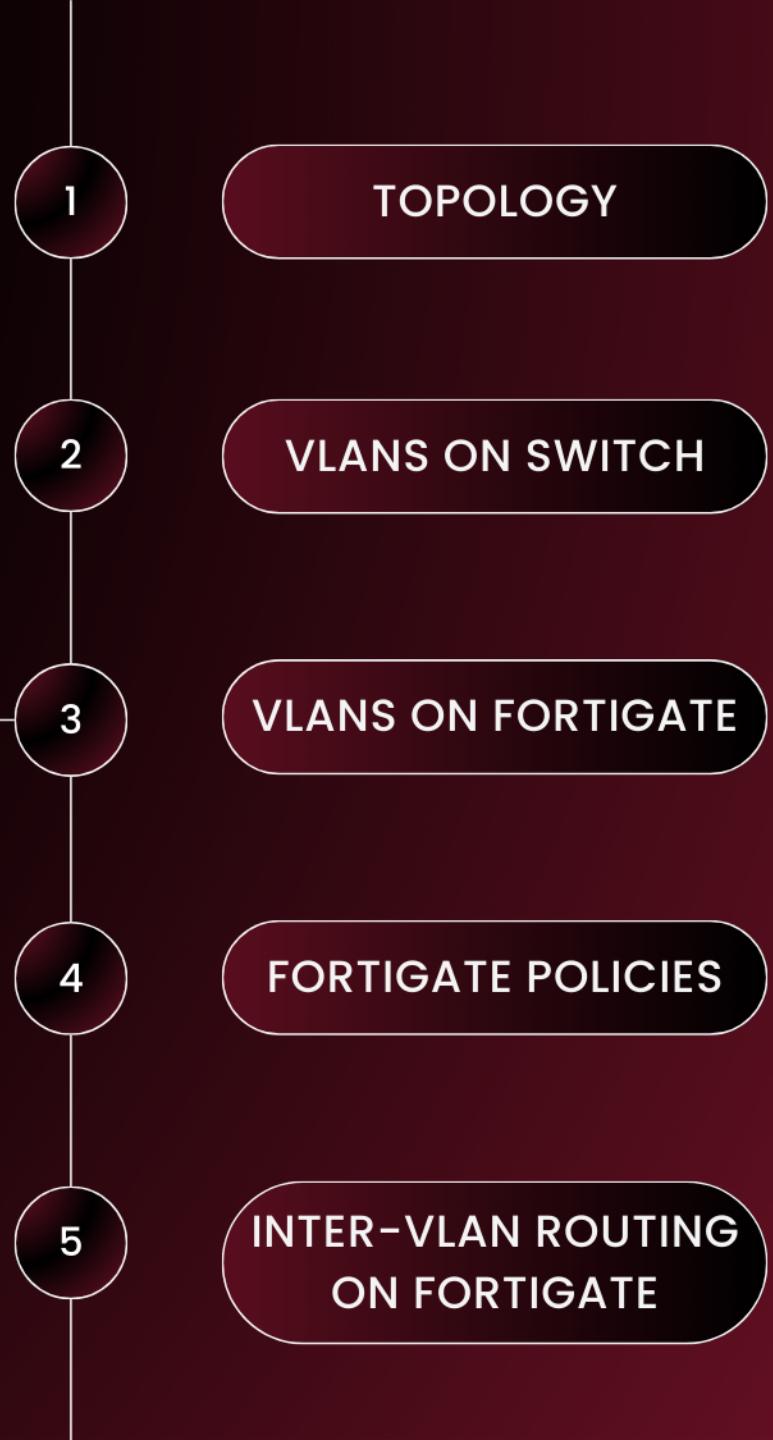
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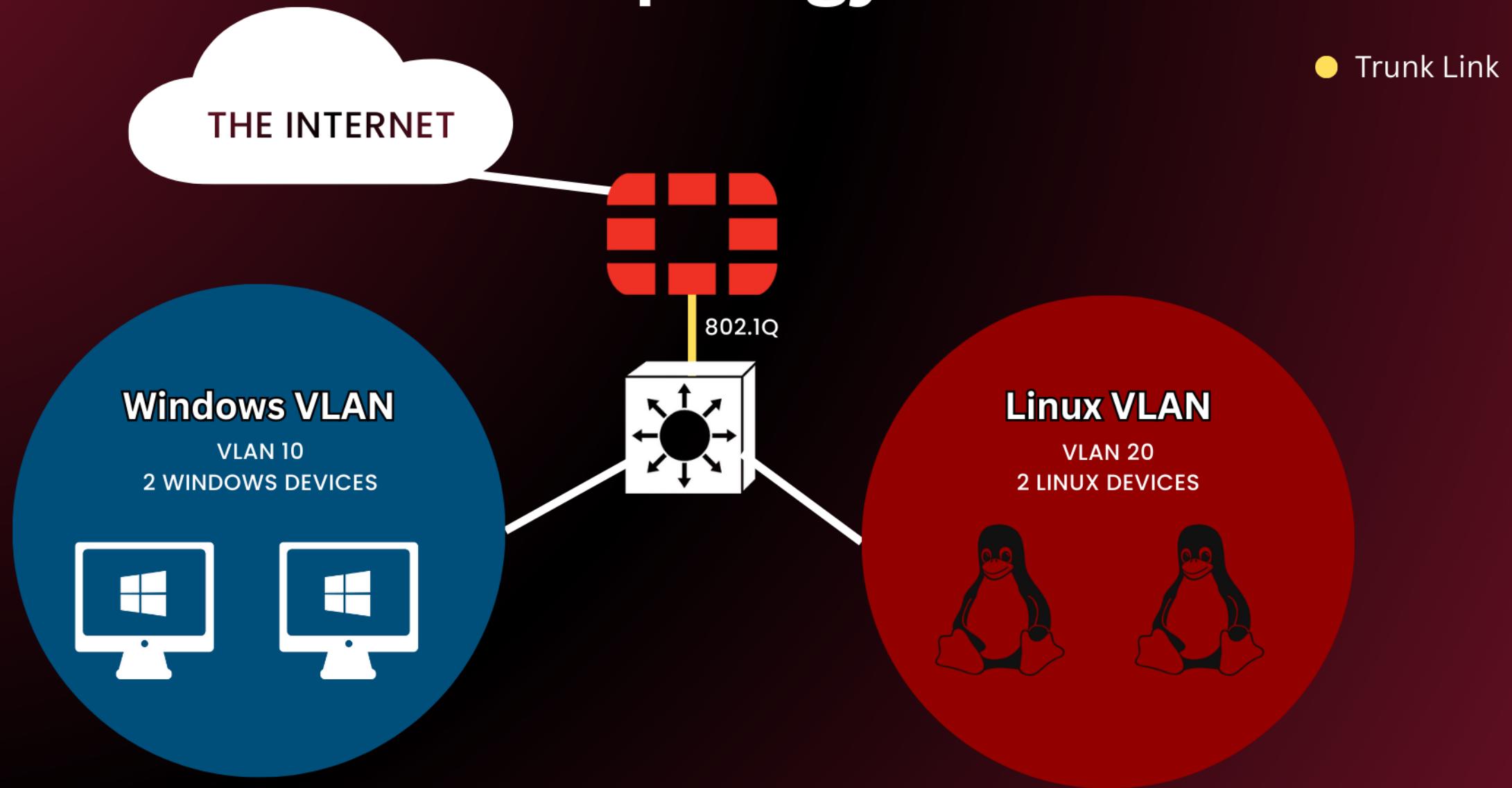
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Overview



Topology



VLANs on Switch

1. VLAN CREATION

- VLAN 10
- VLAN 20

2. ACCESS PORTS

Assign ports
to each VLAN

3. TRUNK LINK

- e0/0 → Trunk
- ONLY VLANs
10 & 20
allowed

VLANs on FortiGate

VLAN 10

NAME: Windows

ID: 10

SUBNET: 192.168.10.0/24

DHCP: Enabled



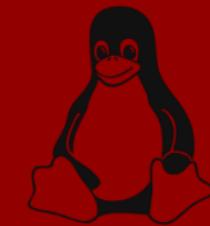
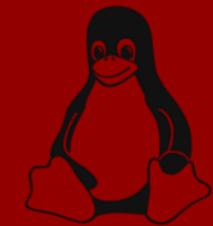
VLAN 20

NAME: Linux

ID: 20

SUBNET: 192.168.20.0/24

DHCP: Enabled



FortiGate Policies



Policy Components:

1. **Source**
2. **Destination**
3. **Interface**
4. **Service**

FortiGate Policies

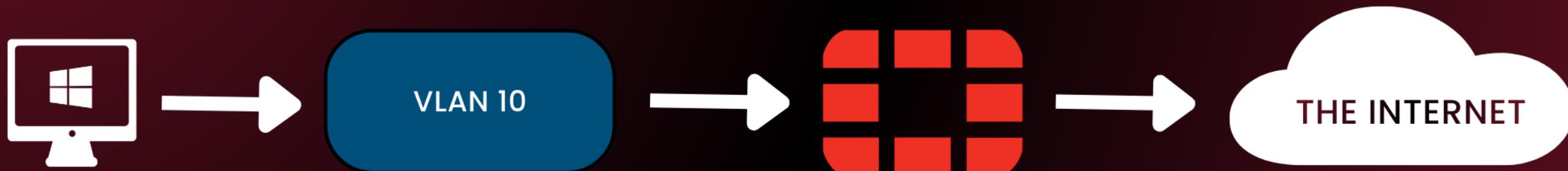
Before Policy:



After Policy:



FortiGate Policies



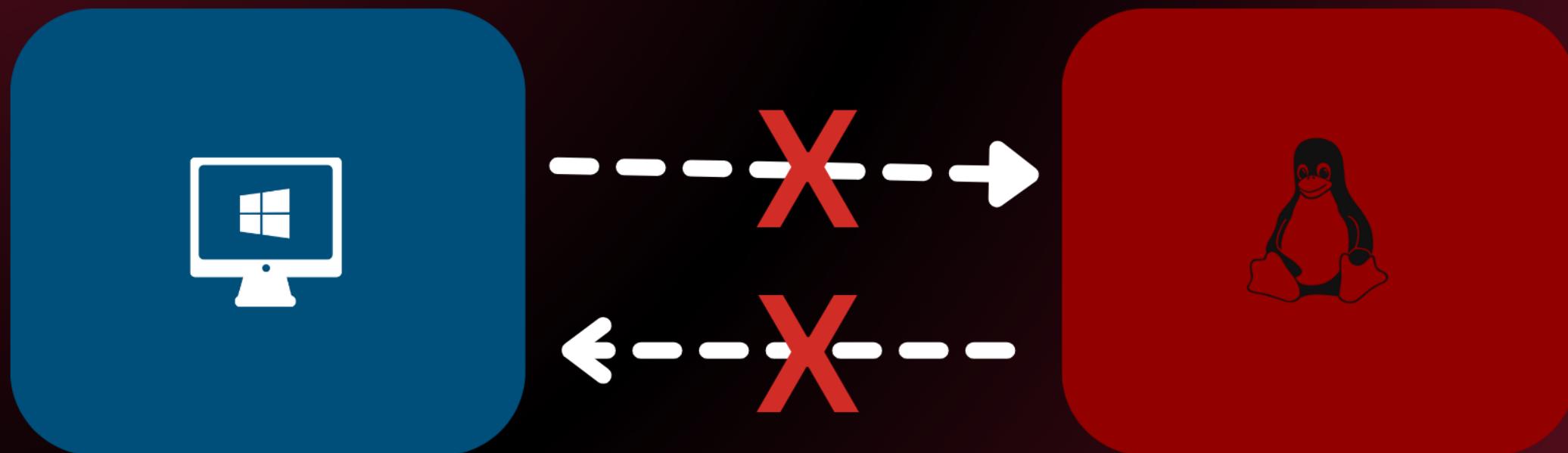
Allow outbound traffic only



Allow outbound traffic only

Inter-VLAN Routing on FortiGate

Before Policy:

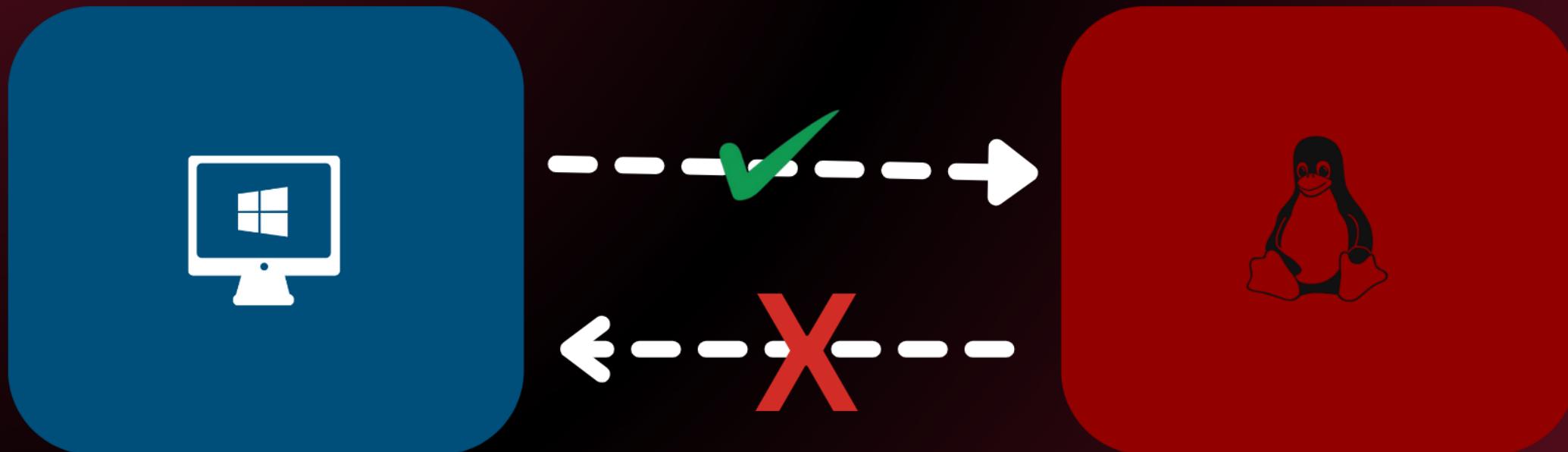


Inter-VLAN Routing on FortiGate

After

VLAN 10 → VLAN 20

Policy:

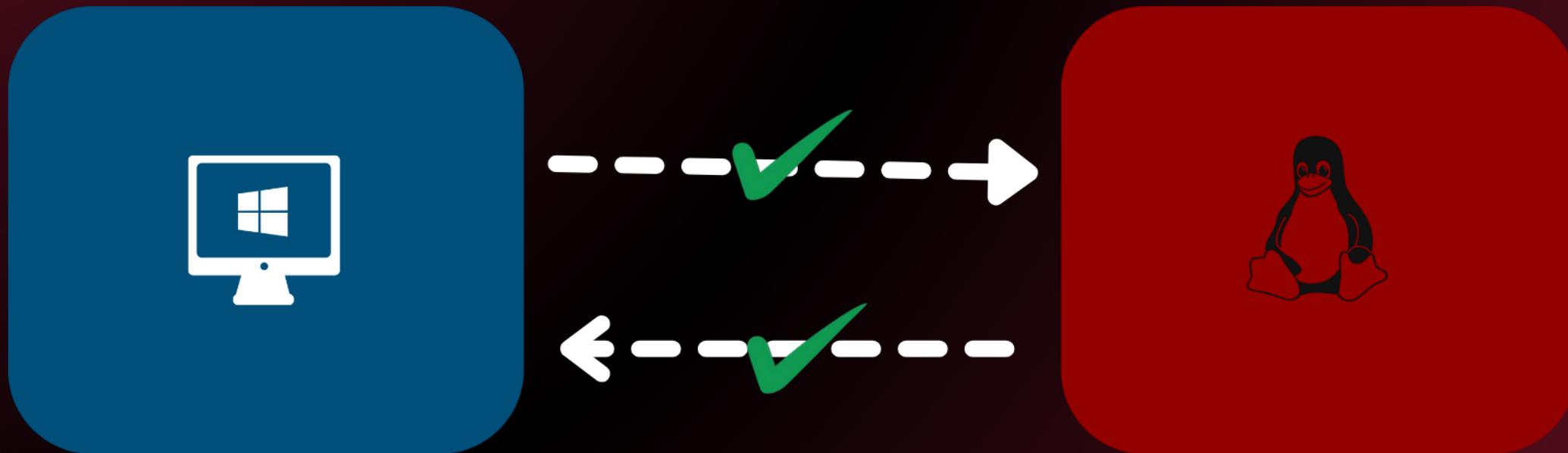


Inter-VLAN Routing on FortiGate

After

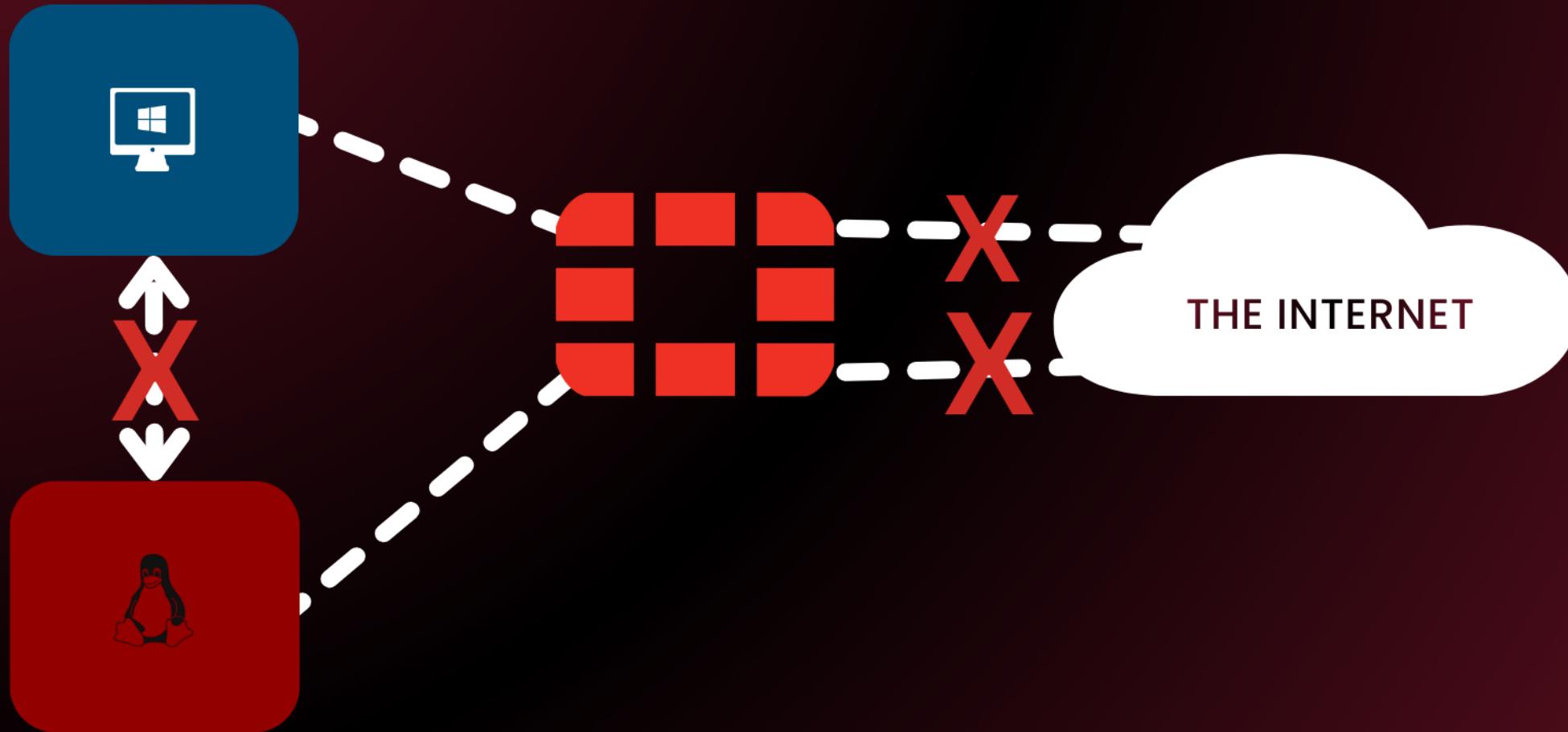
VLAN 20 → VLAN 10

Policy:



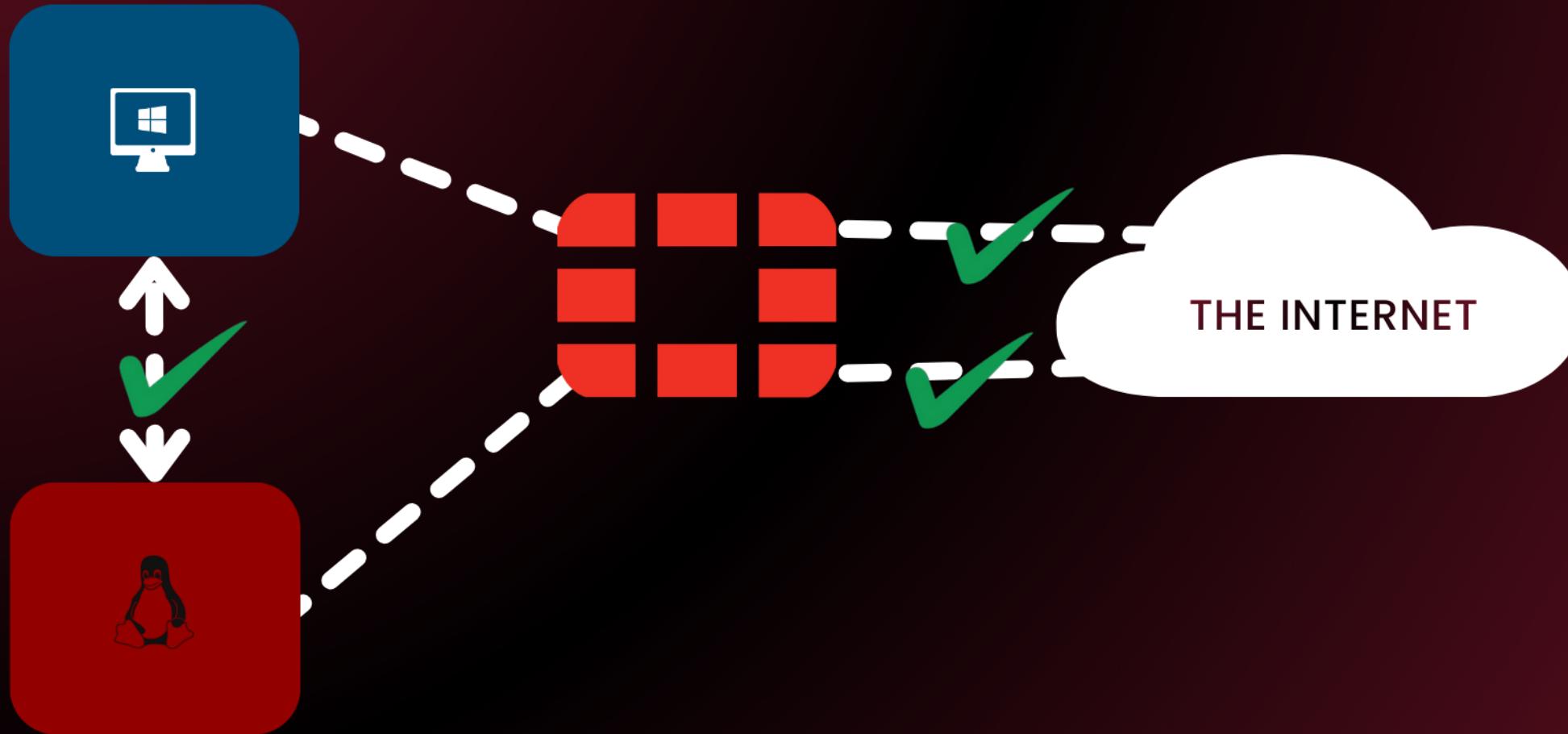
Conclusion

Before All Policies:



Conclusion

After All Policies:



Conclusion

- Segmented the network using VLANs
- Configured switch ports and a trunk
- Created FortiGate VLAN interfaces + DHCP
- Implemented internet access + inter-VLAN routing