Tuesday, August 5, 2025 3:13 PM

🔍 What is VTP?

VTP (VLAN Trunking Protocol) is a Cisco proprietary protocol used to **distribute and synchronize VLAN information** across switches in the same **VTP domain**.
Instead of creating VLANs on each switch manually, you configure them **once on the VTP server**, and they automatically replicate to other switches.

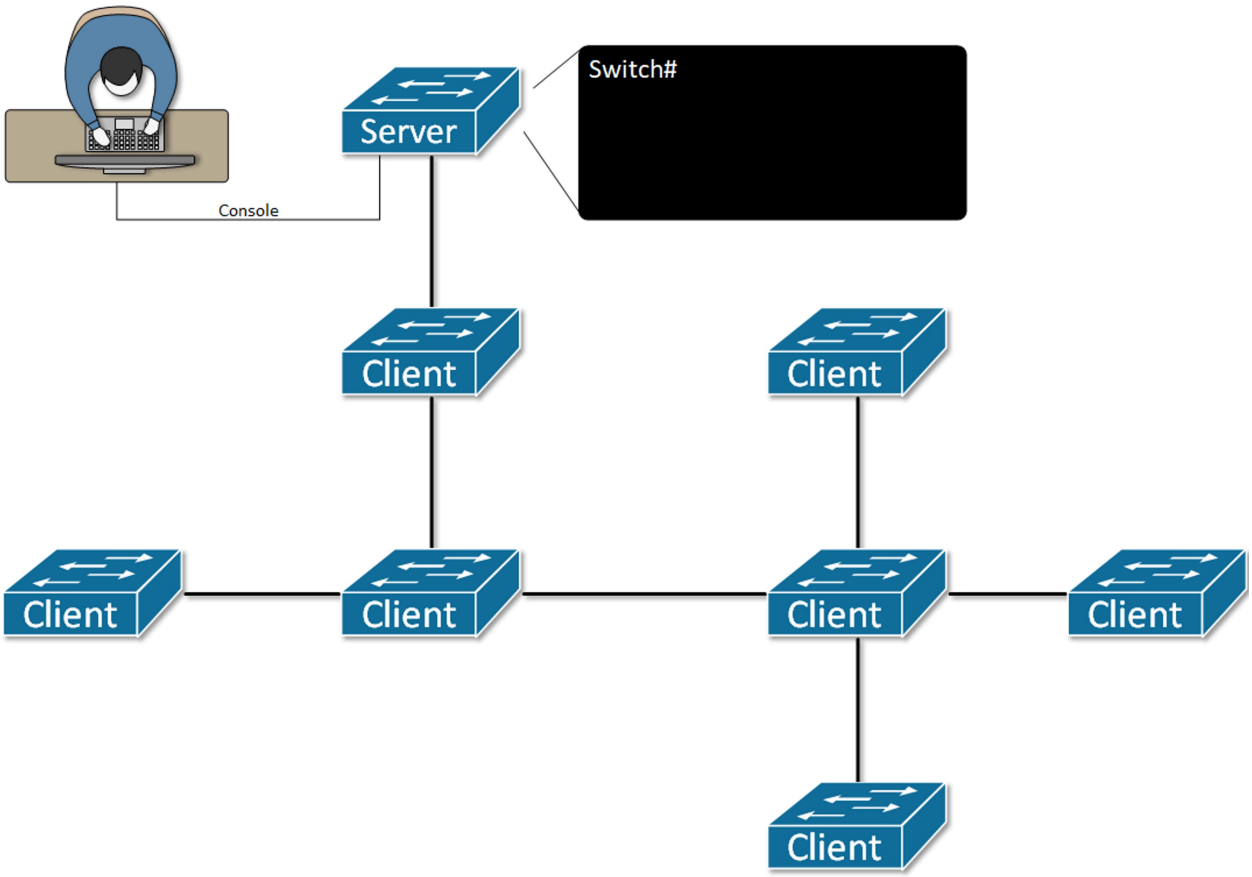
❓ Why is VTP Required?

Without VTP:

- You must manually create the same VLANs on every switch.
- Errors can happen if VLANs are inconsistent.
- Management becomes complex with many switches.

With VTP:

- VLANs are **centrally managed**.
- VLAN info is **automatically shared** across switches.
- Saves time and reduces **manual configuration errors**.



🧠 How VTP Works

VTP uses:

- **VTP domain name** – all switches must match.
- **VTP password (optional)** – for secure updates.
- **VTP mode** – determines the switch role.

VTP Modes:

Mode	Description
Server	Can create/modify VLANs; sends updates
Client	Receives VLANs from server; can't create
Transparent	Doesn't participate, but forwards VTP updates
Off (in newer IOS)	Ignores VTP completely

🛠️ Step-by-Step VTP Configuration

🔹 Step 1: Set VTP Domain and Mode

On the **Server Switch** (Main switch where VLANs will be created):

```
Switch(config)# vtp domain CodingSeekho
Switch(config)# vtp mode server
Switch(config)# vtp password secret123
```

On **Client Switches** (will receive VLANs):

```
Switch(config)# vtp domain CodingSeekho
Switch(config)# vtp mode client
Switch(config)# vtp password secret123
```

🔸 All switches in the domain must have the **same domain name** and **password**.

🔹 Step 2: Set a Trunk Link Between Switches

On both sides of a trunk connection:

```
Switch(config)# interface fa0/1
Switch(config-if)# switchport mode trunk
Switch(config-if)# switchport nonegotiate
```

🔗 Trunk links carry VLAN info and VTP updates.

🔹 Step 3: Create VLANs on Server

On the **Server switch**:

```
Switch(config)# vlan 10
Switch(config-vlan)# name HR
Switch(config)# vlan 20
Switch(config-vlan)# name IT
```

⏳ After a few seconds, these VLANs will **automatically appear on all client switches**.

🔎 Step 4: Verify VTP Status

```
Switch# show vtp status
```

Look for:

- VTP version (1, 2, or 3)
- Operating mode (Server/Client/Transparent)
- Domain name
- Configuration revision number (higher = newer info)

🔐 Extra: VTP Versions

Version	Feature
VTPv1	Basic version
VTPv2	Adds Token Ring, Transparent mode forwards VTP
VTPv3	Adds support for Extended VLANs, better security

⚠️ VTP Warning

If a **client switch** with **higher revision number** and **empty VLAN config** joins the network, it can **erase VLANs** from the server.

🔐 To prevent this:

- Erase VTP config on new switches using:

```
Switch# delete vlan.dat
Switch# reload
```