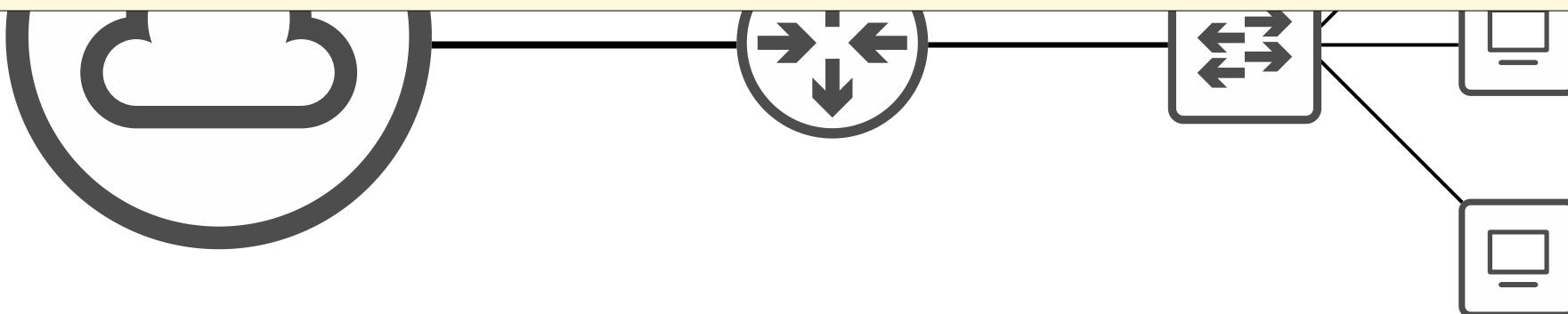


# CCNA 200-301 Day 19

## DTP (Dynamic Trunking Protocol, VTP (VLAN Trunking Protocol))

DTP and VTP were removed from the CCNA exam topics list for the new exam (200-301). However, it's important to know their function, and you may still get questions about them on the exam even though they are not on the topics list.



# Things we'll cover

- DTP (Dynamic Trunking Protocol)
- VTP (VLAN Trunking Protocol)

# DTP (Dynamic Trunking Protocol)

- DTP is a Cisco proprietary protocol that allows Cisco switches to dynamically determine their interface status (**access** or **trunk**) without manual configuration.
- DTP is enabled by default on all Cisco switch interfaces.
- So far, we have been manually configuring switchports using these commands:  
**switchport mode access**  
OR  
**switchport mode trunk**
- For security purposes, manual configuration is recommended. DTP should be disabled on all switchports.

# DTP (Dynamic Trunking Protocol)

```
SW2(config-if)#switchport mode ?
access      Set trunking mode to ACCESS unconditionally
dot1q-tunnel set trunking mode to TUNNEL unconditionally
dynamic     Set trunking mode to dynamically negotiate access or trunk mode
private-vlan Set private-vlan mode
trunk       Set trunking mode to TRUNK unconditionally
```

```
SW2(config-if)#switchport mode dynamic ?
auto        Set trunking mode dynamic negotiation parameter to AUTO
desirable   Set trunking mode dynamic negotiation parameter to DESIRABLE
```

# DTP (Dynamic Trunking Protocol)

- A switchport in **dynamic desirable** mode will actively try to form a trunk with other Cisco switches. It will form a trunk if connected to another switchport in the following modes:

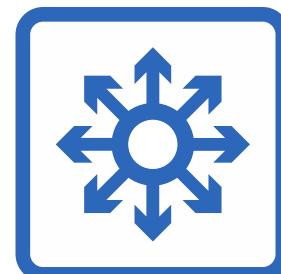
**switchport mode trunk**

**switchport mode dynamic desirable**

**switchport mode dynamic auto**

```
SW1#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: dynamic desirable
Operational Mode: trunk
```

**switchport mode dynamic desirable**



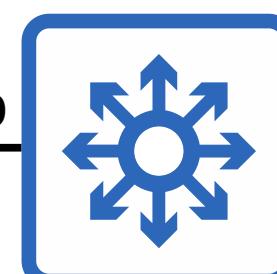
G0/0

**TRUNK**

SW1

```
SW2#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
```

**switchport mode trunk**



G0/0

**TRUNK**

SW2

# DTP (Dynamic Trunking Protocol)

- A switchport in **dynamic desirable** mode will actively try to form a trunk with other Cisco switches. It will form a trunk if connected to another switchport in the following modes:

**switchport mode trunk**

**switchport mode dynamic desirable**

**switchport mode dynamic auto**

```
SW1#show interfaces g0/0 switchport
```

Name: Gi0/0

Switchport: Enabled

Administrative Mode: dynamic desirable

Operational Mode: trunk

```
SW2#show interfaces g0/0 switchport
```

Name: Gi0/0

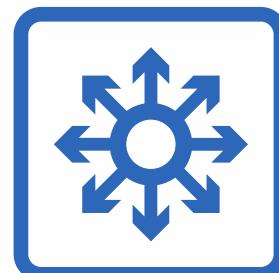
Switchport: Enabled

Administrative Mode: dynamic desirable

Operational Mode: trunk

**switchport mode dynamic desirable**

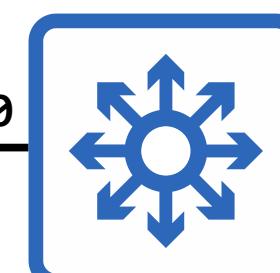
**switchport mode dynamic desirable**



G0/0

**TRUNK**

SW1



G0/0

**TRUNK**

SW2

# DTP (Dynamic Trunking Protocol)

- A switchport in **dynamic desirable** mode will actively try to form a trunk with other Cisco switches. It will form a trunk if connected to another switchport in the following modes:

**switchport mode trunk**

**switchport mode dynamic desirable**

**switchport mode dynamic auto**

```
SW1#show interfaces g0/0 switchport
```

Name: Gi0/0

Switchport: Enabled

Administrative Mode: dynamic desirable

Operational Mode: trunk

```
SW2#show interfaces g0/0 switchport
```

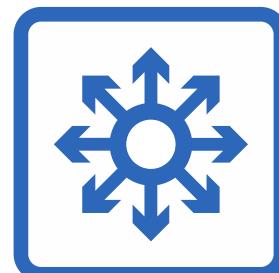
Name: Gi0/0

Switchport: Enabled

Administrative Mode: dynamic auto

Operational Mode: trunk

**switchport mode dynamic desirable**

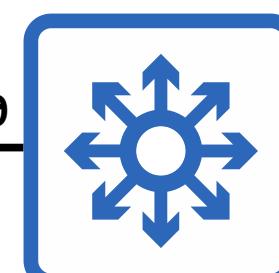


G0/0

**TRUNK**

SW1

**switchport mode dynamic auto**



G0/0

**TRUNK**

SW2

# DTP (Dynamic Trunking Protocol)

- A switchport in **dynamic desirable** mode with other Cisco switches will become a trunk port in the following cases:
  - switchport mode trunk**
  - switchport mode dynamic auto**
  - switchport mode dynamic desirable**

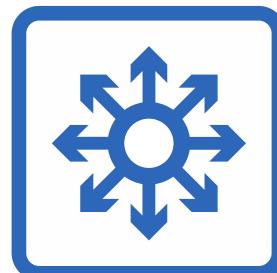
'static access' means an access port that belongs to a single VLAN that doesn't change (unless you configure a different VLAN).

There are also 'dynamic access' ports, in which a server automatically assigns the VLAN depending on the MAC address of the connected device.

(this is out of the scope of the CCNA)

```
SW1#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: dynamic desirable
Operational Mode: static access
```

switchport mode dynamic desirable



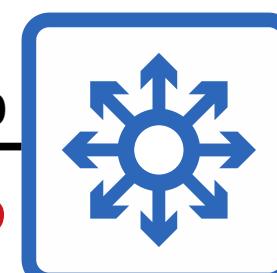
G0/0

**ACCESS**

SW1

```
SW2#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: static access
Operational Mode: static access
```

switchport mode access



G0/0

**ACCESS**

SW2

# DTP (Dynamic Trunking Protocol)

- A switchport in **dynamic desirable** mode will actively try to form a trunk with other Cisco switches. It will form a trunk if connected to another switchport in the following modes:

**switchport mode trunk**

**switchport mode dynamic desirable**

**switchport mode dynamic auto**

- A switchport in **dynamic auto** mode will NOT actively try to form a trunk with other Cisco switches, however it will form a trunk if the switch connected to it is actively trying to form a trunk. It will form a trunk with a switchport in the following modes:

**switchport mode trunk**

**switchport mode dynamic desirable**

# DTP (Dynamic Trunking Protocol)

- A switchport in **dynamic auto** mode will NOT actively try to form a trunk with other Cisco switches, however it will form a trunk if the switch connected to it is actively trying to form a trunk. It will form a trunk with a switchport in the following modes:

**switchport mode trunk**

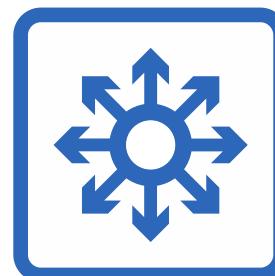
**switchport mode dynamic desirable**

```
SW1#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: trunk
```

**switchport mode dynamic auto**

```
SW2#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
```

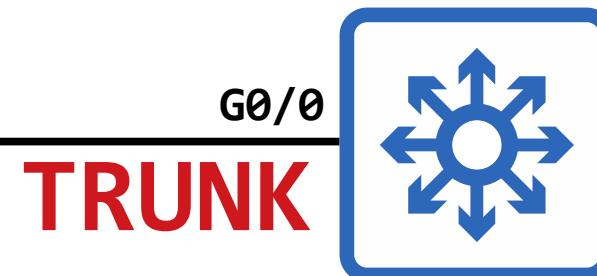
**switchport mode trunk**



G0/0

**TRUNK**

SW1



SW2

# DTP (Dynamic Trunking Protocol)

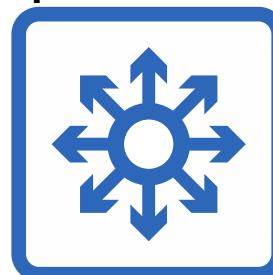
- A switchport in **dynamic auto** mode will NOT actively try to form a trunk with other Cisco switches, however it will form a trunk if the switch connected to it is actively trying to form a trunk. It will form a trunk with a switchport in the following modes:

**switchport mode trunk**

**switchport mode dynamic desirable**

```
SW1#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: static access
```

**switchport mode dynamic auto**



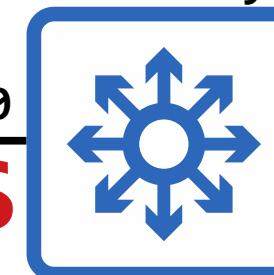
G0/0

**ACCESS**

SW1

```
SW2#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: static access
```

**switchport mode dynamic auto**



G0/0

**ACCESS**

SW2

# DTP (Dynamic Trunking Protocol)

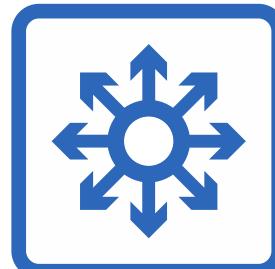
- A switchport in **dynamic auto** mode will NOT actively try to form a trunk with other Cisco switches, however it will form a trunk if the switch connected to it is actively trying to form a trunk. It will form a trunk with a switchport in the following modes:

**switchport mode trunk**

**switchport mode dynamic desirable**

```
SW1#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: static access
```

**switchport mode dynamic auto**



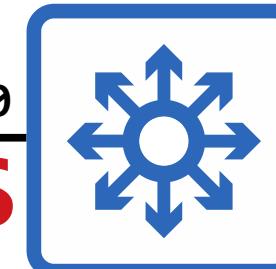
G0/0

**ACCESS**

SW1

```
SW2#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: static access
Operational Mode: static access
```

**switchport mode access**



G0/0

**ACCESS**

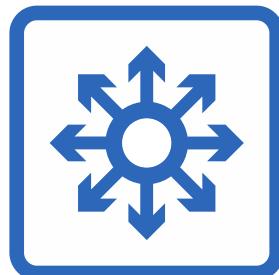
SW2

# DTP (Dynamic Trunking Protocol)

```
SW1#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
```

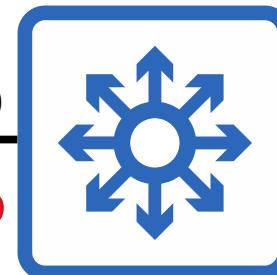
```
SW2#show interfaces g0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: static access
Operational Mode: static access
```

switchport mode trunk



SW1

switchport mode access



SW2

# DTP (D)

DTP will not form a trunk with a router, PC, etc.  
The switchport will be in access mode.

Administrative Mode	Trunk	Dynamic Desirable	Access	Dynamic Auto
Trunk	Trunk	Trunk	X	Trunk
Dynamic Desirable	Trunk	Trunk	Access	Trunk
Access	X	Access	Access	Access
Dynamic Auto	Trunk	Trunk	Access	Access

# DTP (Dynamic Trunking Protocol)

- On older switches, **switchport mode dynamic desirable** is the default administrative mode.
- On newer switches, **switchport mode dynamic auto** is the default administrative mode.
- You can disable DTP negotiation on an interface with this command:  
**switchport nonegotiate**
- Configuring an access port with **switchport mode access** also disables DTP negotiation on an interface.
- It is recommended that you disable DTP on all switchports and manually configure them as access or trunk ports.

# DTP (Dynamic Trunking Protocol)

- Switches that support both **802.1Q** and **ISL** trunk encapsulations can use DTP to negotiate the encapsulation they will use.
- This negotiation is enabled by default, as the default trunk encapsulation mode is: **switchport trunk encapsulation negotiate**
- **ISL** is favored over **802.1Q**, so if both switches support ISL it will be selected.
- DTP frames are sent in VLAN1 when using **ISL**, or in the native VLAN when using **802.1Q** (the default native VLAN is VLAN1, however).

# DTP (Dynamic Trunking Protocol)

```
|SW1(config-if)#switchport mode dynamic desirable
|SW1(config-if)#do show interfaces g0/0 switchport
|Name: Gi0/0
|Switchport: Enabled
|Administrative Mode: dynamic desirable
|Operational Mode: trunk
|Administrative Trunking Encapsulation: negotiate
|Operational Trunking Encapsulation: isl
|Negotiation of Trunking: On
```

```
|SW2(config-if)#switchport mode dynamic desirable
|SW2(config-if)#do show interfaces g0/0 switchport
|Name: Gi0/0
|Switchport: Enabled
|Administrative Mode: dynamic desirable
|Operational Mode: trunk
|Administrative Trunking Encapsulation: negotiate
|Operational Trunking Encapsulation: isl
|Negotiation of Trunking: On
```

# VTP (VLAN Trunking Protocol)

- VTP allows you to configure VLANs on a central VTP server switch, and other switches (VTP clients) will synchronize their VLAN database to the server.
- It is designed for large networks with many VLANs, so that you don't have to configure each VLAN on every switch.
- It is rarely used, and it is recommended that you do not use it.
- There are three VTP versions: 1, 2, and 3.
- There are three VTP modes: **server**, **client**, and **transparent**.
- Cisco switches operate in VTP server mode by default.

# VTP (VLAN Trunking Protocol)

- VTP Servers:

Can add/modify/delete VLANs.

Store the VLAN database in non-volatile RAM (NVRAM).

Will increase the **revision number** every time a VLAN is added/modified/deleted.

Will advertise the latest version of the VLAN database on trunk interfaces, and the VTP clients will synchronize their VLAN database to it.

**VTP servers also function as VTP clients**

**Therefore, a VTP server will synchronize to another VTP server with a higher revision number.**

- VTP clients:

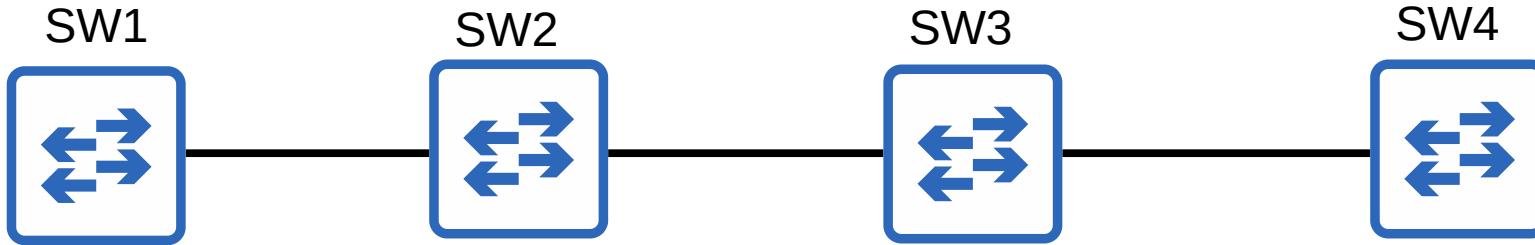
Cannot add/modify/delete VLANs.

Do not store the VLAN database in NVRAM. (**in VTPv3, they do**)

Will synchronize their VLAN database to the server with the highest revision number in their VTP domain.

Will advertise their VLAN database, and forward VTP advertisements to other clients over their trunk ports.

# VTP (VLAN Trunking Protocol)



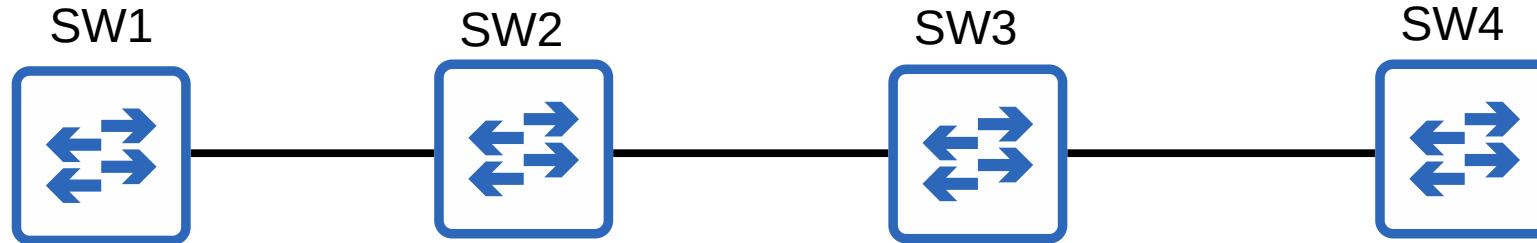
```
SW1#show vtp status
VTP Version capable      : 1 to 3
VTP version running      : 1
VTP Domain Name          :
VTP Pruning Mode         : Disabled
VTP Traps Generation     : Disabled
Device ID                 : 0c09.f956.1300
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00
Local updater ID is 0.0.0.0 (no valid interface found)
```

## Feature VLAN:

```
-----
VTP Operating Mode        : Server
Maximum VLANs supported locally : 1005
Number of existing VLANs   : 5
Configuration Revision    : 0
MD5 digest                : 0x57 0xCD 0x40 0x65 0x63 0x59 0x47 0xBD
                             0x56 0x9D 0x4A 0x3E 0xA5 0x69 0x35 0xBC
```

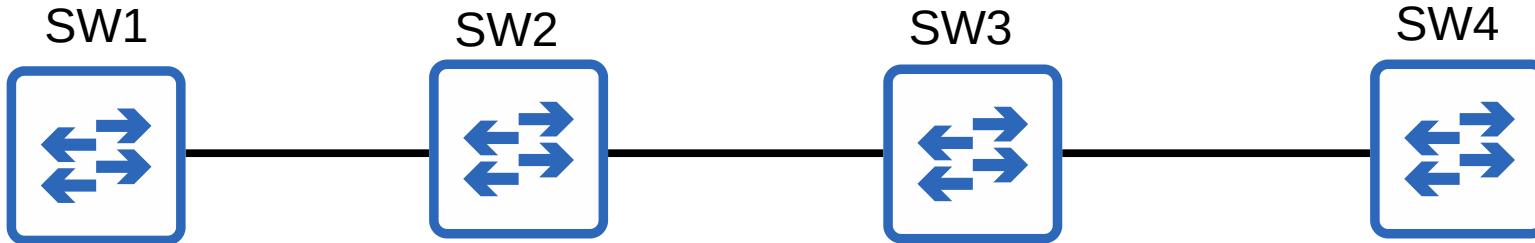
VTPv1/v2 do not support the extended VLAN range (1006-4094). Only VTPv3 supports them.

# VTP (VLAN Trunking Protocol)



```
SW1(config)#vtp domain cisco
Changing VTP domain name from NULL to cisco
SW1(config)#
*May  4 02:14:47.276: %SW_VLAN-6-VTP_DOMAIN_NAME_CHG: VTP domain name changed to cisco.
SW1(config)#vlan 10
SW1(config-vlan)#name engineering
SW1(config-vlan)#exit
```

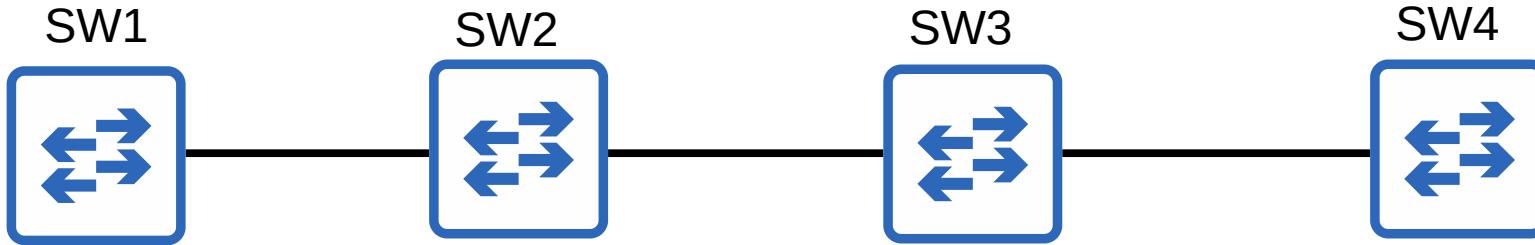
# VTP (VLAN Trunking Protocol)



```
SW1#show vtp status
VTP Version capable      : 1 to 3
VTP version running      : 1
VTP Domain Name          : cisco
VTP Pruning Mode         : Disabled
VTP Traps Generation     : Disabled
Device ID                : 0c09.f956.1300
Configuration last modified by 0.0.0.0 at 5-4-20 02:18:27
Local updater ID is 0.0.0.0 (no valid interface found)

Feature VLAN:
-----
VTP Operating Mode       : Server
Maximum VLANs supported locally : 1005
Number of existing VLANs   : 6
Configuration Revision    : 1
MD5 digest               : 0x9F 0xE0 0xAB 0x7A 0x78 0x62 0x68 0x70
                           0x2D 0xD5 0x5A 0xBE 0x21 0x5D 0x56 0x49
SW1#
```

# VTP (VLAN Trunking Protocol)



```
SW2#show vtp status
VTP Version capable      : 1 to 3
VTP version running     : 1
VTP Domain Name          : cisco
VTP Pruning Mode         : Disabled
VTP Traps Generation    : Disabled
Device ID                : 0c09.f9ab.0800
Configuration last modified by 0.0.0.0 at 5-4-20 02:18:27
Local updater ID is 0.0.0.0 (no valid interface found)

Feature VLAN:
-----
VTP Operating Mode       : Server
Maximum VLANs supported locally : 1005
Number of existing VLANs   : 6
Configuration Revision    : 1
MD5 digest               : 0x9F 0xE0 0xAB 0x7A 0x78 0x62 0x68 0x70
                           0x2D 0xD5 0x5A 0xBE 0x21 0x5D 0x56 0x49
```

SW2#

```
SW2#show vlan brief
VLAN Name
-----
1 default
10 engineering
1002 fddi-default
1003 token-ring-default
1004 fddinet-default
1005 trnet-default
SW2#
```

# VTP (VLAN Trunking Protocol)

SW1



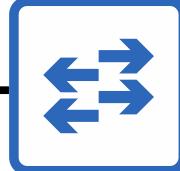
SW2



SW3



SW4



If a switch with no VTP domain (domain NULL) receives a VTP advertisement with a VTP domain name, it will automatically join that VTP domain.

```
VTP Version Capable          : 1.1.0-5
VTP version running         : 1
VTP Domain Name            : cisco
VTP Pruning Mode            : Disabled
VTP Traps Generation        : Disabled
Device ID                   : 0c09.f9ab.0800
Configuration last modified by 0.0.0.0 at 5-4-20 02:18:27
Local update ID is 0 0 0 0 (no valid interface found)
```

If a switch receives a VTP advertisement in the same VTP domain with a higher revision number, it will update its VLAN database to match.

```
Maximum VLANs supported locally : 1005
Number of existing VLANs       : 6
Configuration Revision        : 1
MD5 digest                    : 0x9F 0xE0 0xAB 0x7A 0x78 0x62 0x68 0x70
                                0x2D 0xD5 0x5A 0xBE 0x21 0x5D 0x56 0x49
SW2#
```

```
SW2#show vlan brief
```

```
VLAN Name
```

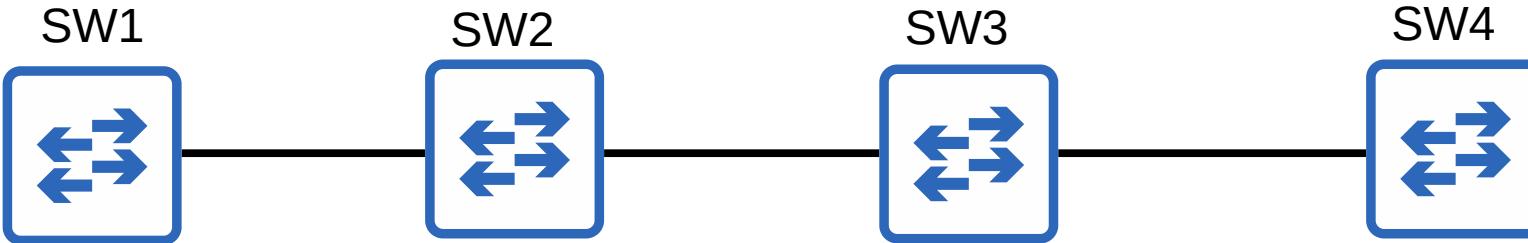
```
-----  
1 default
```

```
10 engineering
```

```
1002 fddi-default
1003 token-ring-default
1004 fddinet-default
1005 trnet-default
```

```
SW2#
```

# VTP (VLAN Trunking Protocol)



```
SW3#show vtp status
VTP Version capable      : 1 to 3
VTP version running       : 1
VTP Domain Name           : cisco
VTP Pruning Mode          : Disabled
VTP Traps Generation      : Disabled
Device ID                 : 0c09.f9fa.e700
Configuration last modified by 0.0.0.0 at 5-4-20 02:1
Local updater ID is 0.0.0.0 (no valid interface found)
```

#### Feature VLAN:

```
-----
VTP Operating Mode        : Server
Maximum VLANs supported locally : 1005
Number of existing VLANs   : 6
Configuration Revision     : 1
MD5 digest                : 0x9F 0xE0 0xAB 0;
                             0x2D 0xD5 0x5A 0;
```

```
SW3#
```

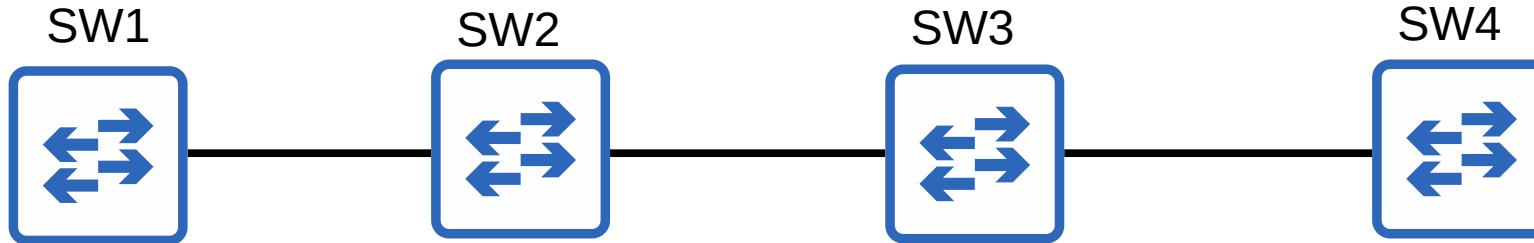
```
SW4#show vtp status
VTP Version capable      : 1 to 3
VTP version running       : 1
VTP Domain Name           : cisco
VTP Pruning Mode          : Disabled
VTP Traps Generation      : Disabled
Device ID                 : 0c09.f972.8700
Configuration last modified by 0.0.0.0 at 5-4-20 02:1
Local updater ID is 0.0.0.0 (no valid interface found)
```

#### Feature VLAN:

```
-----
VTP Operating Mode        : Server
Maximum VLANs supported locally : 1005
Number of existing VLANs   : 6
Configuration Revision     : 1
MD5 digest                : 0x9F 0xE0 0xAB 0;
                             0x2D 0xD5 0x5A 0;
```

```
SW4#
```

# VTP (VLAN Trunking Protocol)



```
SW3#show vtp status  
VTP Version capable : 1 to 3
```

```
SW4#show vtp status  
VTP Version capable : 1 to 3
```

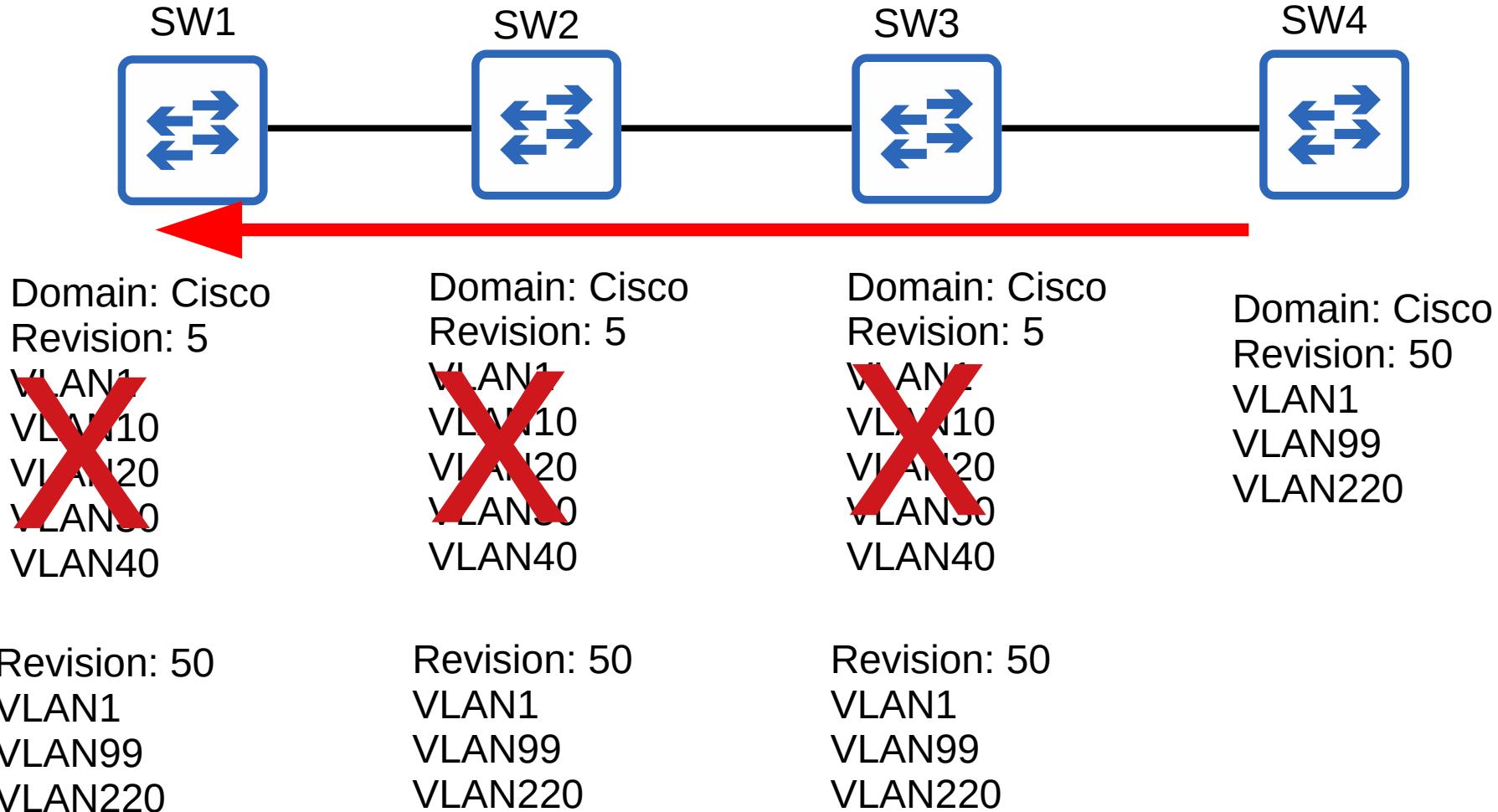
## One danger of VTP:

If you connect an old switch with a higher revision number to your network (and the VTP domain name matches), all switches in the domain will sync their VLAN database to that switch.

```
Feature VLAN.  
-----  
VTP Operating Mode : Server  
Maximum VLANs supported locally : 1005  
Number of existing VLANs : 6  
Configuration Revision : 1  
MD5 digest : 0x9F 0xE0 0xAB 0;  
               0x2D 0xD5 0x5A 0;  
SW3#
```

```
Feature VLAN.  
-----  
VTP Operating Mode : Server  
Maximum VLANs supported locally : 1005  
Number of existing VLANs : 6  
Configuration Revision : 1  
MD5 digest : 0x9F 0xE0 0xAB 0;  
               0x2D 0xD5 0x5A 0;  
SW4#
```

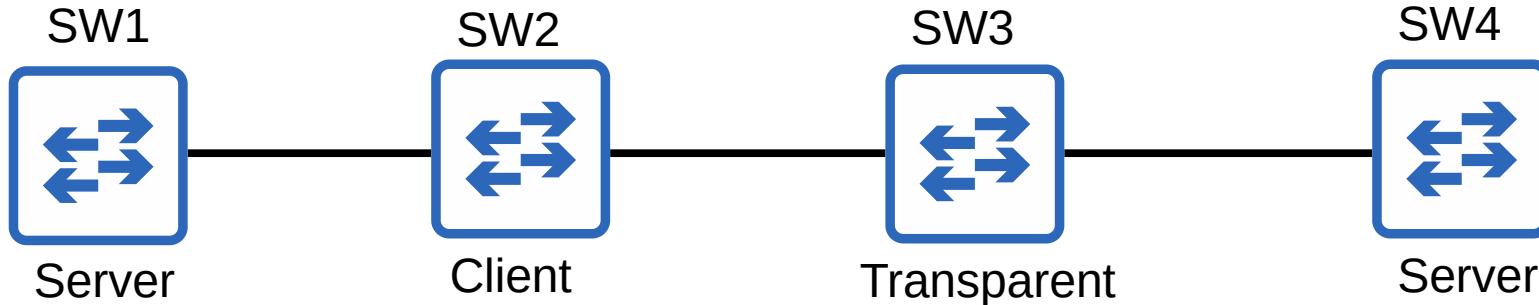
# VTP (VLAN Trunking Protocol)



# VTP (VLAN Trunking Protocol)

- VTP Transparent mode:
  - Does not participate in the VTP domain (does not sync its VLAN database).
  - Maintains its own VLAN database in NVRAM. It can add/modify/delete VLANs, but they won't be advertised to other switches.
  - Will forward VTP advertisements that are in the same domain as it.

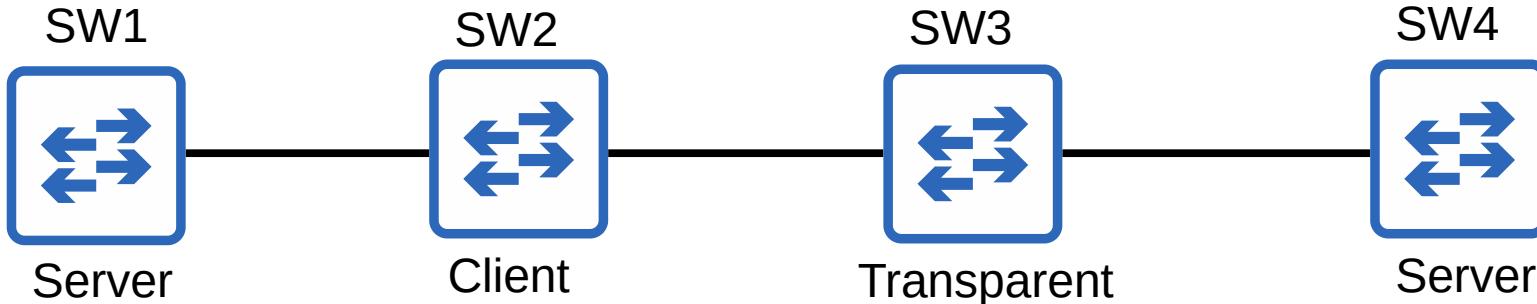
# VTP (VLAN Trunking Protocol)



```
SW2(config)#vtp mode client
Setting device to VTP Client mode for VLANS.
SW2(config)#vlan 20
VTP VLAN configuration not allowed when device is in CLIENT mode.
SW2(config)#[REDACTED]
```

```
SW3(config)#vtp mode transparent
Setting device to VTP Transparent mode for VLANS.
SW3(config)#vtp domain juniper
Changing VTP domain name from cisco to juniper
SW3(config)#[REDACTED]
```

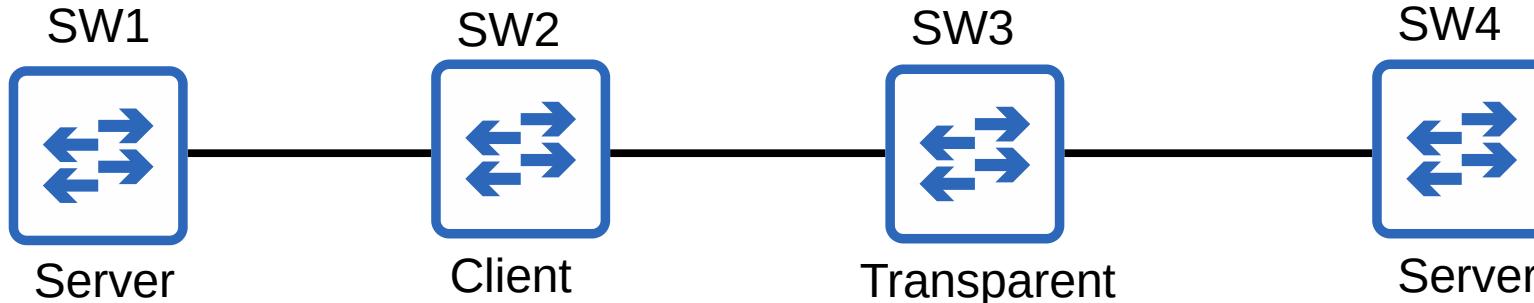
# VTP (VLAN Trunking Protocol)



```
SW1(config)#vlan 20
SW1(config-vlan)#name sales
SW1(config-vlan)#exit
SW1(config)#do show vlan brief
```

VLAN	Name	Status	Po
1	default	active	Gi
10	engineering	active	Gi
20	sales	active	Gi
1002	fdmi-default	act/unsup	
1003	token-ring-default	act/unsup	
1004	fddinet-default	act/unsup	
1005	trnet-default	act/unsup	

# VTP (VLAN Trunking Protocol)



```
SW2#show vlan brief
```

VLAN Name	Status	Po
1 default	active	G1
10 engineering	active	G1
20 sales	active	G1
1002 fddi-default	act/unsup	G1
1003 token-ring-default	act/unsup	G1
1004 fddinet-default	act/unsup	G1
1005 trnet-default	act/unsup	G1

```
SW2#show vtp status
VTP Version capable : 1 to 3
VTP version running : 1
VTP Domain Name : cisco
VTP Pruning Mode : Disabled
VTP Traps Generation : Disabled
Device ID : 0c09.f9ab.0800
Configuration last modified by 0.0.0.0 at 5-4-20 03:40:01
```

#### Feature VLAN:

```
VTP Operating Mode : Client
Maximum VLANs supported locally : 1005
Number of existing VLANs : 7
Configuration Revision : 4
MD5 digest : 0x8F 0x9C 0x81 0x4B 0x
                           0xE8 0xA3 0x98 0xFD 0x
```

```
SW2#
```

# VTP (VLAN Trunking Protocol)



Server  
Changing the VTP domain to an unused domain will reset the revision number to 0.

```
SW3#show vlan br
```

VLAN Name

1 default

10 engineering

1002 fddi-default

1003 token-ring-default

1004 fddinet-default

1005 trnet-default

SW3#

active

active

act/unsup

act/unsup

act/unsup

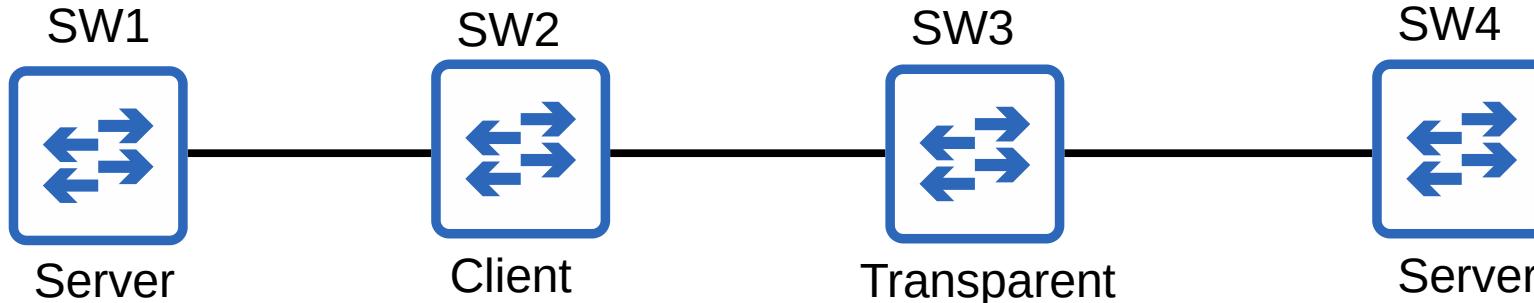
act/unsup

VTP Traps Generation : Disabled  
Device ID : 0c09.f9fa.e700  
Configuration last modified by 0.0.0.0 at 5-4-20 03:33:08

Feature VLAN:

VTP Operating Mode : Transparent  
Maximum VLANs supported locally : 1005  
Number of existing VLANs : 6  
Configuration Revision : 0  
MD5 digest : 0xDB 0x6A 0xDB 0x61 0xA  
0x59 0x73 0x4E 0xF4 0x2  
SW3#

# VTP (VLAN Trunking Protocol)



```
SW4#show vlan brief
```

VLAN Name	Status	P
1 default	active	G
10 engineering	active	G
1002 fddi-default	act/unsup	G
1003 token-ring-default	act/unsup	G
1004 fddinet-default	act/unsup	G
1005 trnet-default	act/unsup	G

```
SW4#
```

```
SW4#show vtp status
VTP Version capable : 1 to 3
VTP version running : 1
VTP Domain Name : cisco
VTP Pruning Mode : Disabled
VTP Traps Generation : Disabled
Device ID : 0c09.f972.8700
Configuration last modified by 0.0.0.0 at 5-4-20 03:33:08
Local updater ID is 0.0.0.0 (no valid interface found)

Feature VLAN:
-----
VTP Operating Mode : Server
Maximum VLANs supported locally : 1005
Number of existing VLANs : 6
Configuration Revision : 3
MD5 digest : 0xF0 0x05 0xC0 0x82 0x
              0xF4 0x35 0x5D 0x76 0x
SW4#
```





# VTP (VLAN Trunking Protocol)

- VTP allows you to configure VLANs on a central VTP server switch, and other switches (VTP clients) will synchronize their VLAN database to the server.
- It is designed for large networks with many VLANs, so that you don't have to configure each VLAN on every switch.
- It is rarely used, and it is recommended that you do not use it.
- There are three VTP versions: 1, 2, and 3.
- There are three VTP modes: **server**, **client**, and **transparent**.
- Cisco switches operate in VTP server mode by default.

# Things we covered

- DTP (Dynamic Trunking Protocol)
- VTP (VLAN Trunking Protocol)

# QUIZ

# Quiz Question 1

SW1 and SW2 are connected, are both new switches, and the connected interfaces are operating as access ports. However, SW2's power supply fails so you temporarily replace SW2 with an old spare switch. You reset the configuration before connecting it to SW1, but when you connect it you notice that a trunk is formed between the two switches. What could be the cause?

- a) Interfaces on old switches default to **switchport mode trunk**
- b) Interfaces on old switches default to **switchport mode dynamic desirable**
- c) Access ports are a feature of newer switches.

## Quiz Question 2

SW1 is connected to SW2, and SW2 is connected to SW3. You want SW2 to forward SW1's VLAN database information to SW3, but you don't want SW2 to synchronize its VLAN database to SW1. Which command should you use on SW2?

- a) **vtp mode transparent**
- b) **vtp transparent mode**
- c) **vlan mode transparent**
- d) **vtp mode client**

## Quiz Question 3

What are two methods to reset a switch's VTP revision number to 0?  
(Choose two. Each answer is a complete solution).

- a) Change the VTP domain to an unused domain name.
- b) Change the switch to VTP server mode.
- c) Change the switch to VTP transparent mode.
- d) Use the **vtp reset** command.