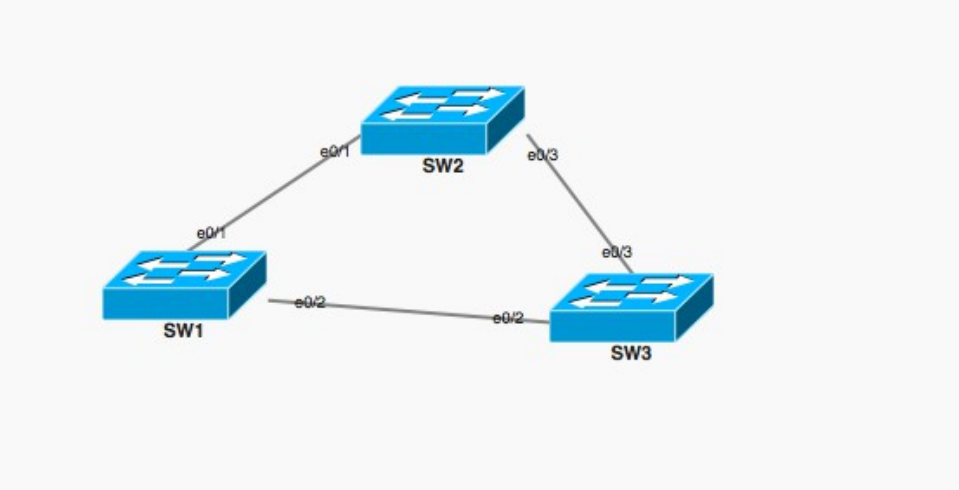
VTP V3 study

Topology:



VTP3 domain-name : CCNP
VTP3 password: cisco123

SW2 = VTP3 Primay server
SW3 = VTP3 Secondary server

SW1 = "testbed switch", and initially switched off.

NOTE 1; Only a PRIMARY server can alter the VTP3 VLAN DB!
NOTE 2; If the PRIMARY server becomes unavailable, the secondary does NOT automatically become the Primary server. It can be MANUALLY promoted from Secondary to Primary however.
NOTE 3; There is no "SECONDARY" keyword shown in "show vtp status" that denotes the Secondary server role.

Make SW2, Primary VTP 3 server:

```
SW2(config)#vtp version 3
SW2(config)#vtp mode server
SW2(config)#vtp domain CCNP
SW2(config)#vtp password cisco123
SW2(config)#do vtp primary
This system is becoming primary server for feature vlan
No conflicting VTP3 devices found.
Do you want to continue? [confirm]y

*Dec  7 21:18:01.123: %SW_VLAN-4-VTP_PRIMARY_SERVER_CHG: aabb.cc00.0200 has
become the primary server for the VLAN VTP feature
```

Create a VLAN:

```
SW2(config)# vlan 30
SW2(config-vlan)#name testvlan

SW2(config-vlan)#do sh vtp statu
VTP Version capable             : 1 to 3
VTP version running             : 3                          !!!!!!
VTP Domain Name                 : CCNP
```

```
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Disabled
Device ID                       : aabb.cc00.0200

Feature VLAN:
--------------
VTP Operating Mode                : Primary Server
Number of existing VLANs          : 16
Number of existing extended VLANs : 0
Maximum VLANs supported locally   : 4096
Configuration Revision            : 1                       !!!!!!
Primary ID                        : aabb.cc00.0200          !!!!!!!!
Primary Description               : SW2
```

Make SW3 Secondary Server:

```
SW3(config)#vtp version 3
SW3(config)#vtp mode server
SW3(config)#vtp domain CCNP
SW3(config)#vtp password cisco123
SW3(config)#do sh vtp status
VTP Version capable             : 1 to 3
VTP version running             : 3                       !!!!!
VTP Domain Name                 : CCNP
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Disabled
Device ID                       : aabb.cc00.0300

Feature VLAN:
--------------
VTP Operating Mode                : Server
Number of existing VLANs          : 16
Number of existing extended VLANs : 0
Maximum VLANs supported locally   : 4096
Configuration Revision            : 1                       !!!!!
Primary ID                        : aabb.cc00.0200          !!!!!!!
Primary Description               : SW2


Try to create a VLAN on SW3 (secondary):
SW3(config)# vlan 40
VTP VLAN configuration not allowed when device is not the primary server for
vlan database.
```

Now create the 'TESTBED' switch SW1 with a simular domain:

```
SW1(config)#vtp mode server
SW1(config)#no vlan 2-60
SW1(config)#vtp version 3
SW1(config)#

*Dec  7 21:31:34.952: %SW_VLAN-6-OLD_CONFIG_FILE_READ: Old version 2 VLAN
configuration file detected and read OK.  Version 3
    files will be written in the future.

SW1(config)#vtp domain CCNP
```

Create a few dummy VLANs:

```
SW1(config)#do vtp primary

This system is becoming primary server for feature vlan
No conflicting VTP3 devices found.
Do you want to continue? [confirm]y

*Dec  7 21:34:01.434: %SW_VLAN-4-VTP_PRIMARY_SERVER_CHG: aabb.cc00.0100 has
become the primary server for the VLAN VTP feature
```

```
SW1(config)#vtp domain CCNP
SW1(config)#vtp password cisco123
```

Create a few dummry VLANs:

```
SW1(config)#vlan 8-10
SW1(config)#vlan 11-13
SW1(config)#vlan 14-15
```

```
SW1(config)#do sh vtp status
VTP Version capable             : 1 to 3
VTP version running             : 3
VTP Domain Name                 : CCNP
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Enabled
Device ID                       : aabb.cc00.0100

Feature VLAN:
--------------
VTP Operating Mode                : Primary Server
Number of existing VLANs          : 5
Number of existing extended VLANs : 0
Maximum VLANs supported locally   : 4096
Configuration Revision            : 3
Primary ID                        : aabb.cc00.0100
```

Now let's enable the LINKS from SW1 to SW2 (Primary) and SW3 and see whether SW1 will overwrite the VTP database for SW2 and SW3:

```
SW1(config)#int range e0/1-2
SW1(config-if-range)#no sh
```

On SW1:

```
SW1(config)#do sh vtp stat
VTP Version capable             : 1 to 3
VTP version running             : 3
VTP Domain Name                 : CCNP
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Enabled
Device ID                       : aabb.cc00.0100

Feature VLAN:
--------------
VTP Operating Mode                : Primary Server
Number of existing VLANs          : 13
Number of existing extended VLANs : 0
Maximum VLANs supported locally   : 4096
Configuration Revision            : 4              !!! remains as is !!!!
```

Secondary Switch SW3:

```
SW3(config)#do sh vtp statu
VTP Version capable             : 1 to 3
VTP version running             : 3
VTP Domain Name                 : CCNP
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Disabled
Device ID                       : aabb.cc00.0300

Feature VLAN:
--------------
VTP Operating Mode                : Server
Number of existing VLANs          : 16
Number of existing extended VLANs : 0
Maximum VLANs supported locally   : 4096
```

```
Configuration Revision           : 1
Primary ID                       : aabb.cc00.0200
Primary Description              : SW2
```

Remains as is as well.

Conclusion: a rogue VTP client OR (primary) server switch that is introduced in the network can not simply overwrite a VTP VLAN database accidently.

In order to make SW1 truly the new Primary server, you have to promote it:

```
SW1(config)# do vtp primary
This system is becoming primary server for feature vlan
VTP Feature  Conf Revision Primary Server Device ID      Device Description
------------ ---- -------- -------------- -------------- ----------------------
VLAN         Yes  1        aabb.cc00.0200=aabb.cc00.0200 SW2
VLAN         Yes  1        aabb.cc00.0200 aabb.cc00.0300 SW3

Do you want to continue? [confirm] y

*Dec  7 21:49:29.442: %SW_VLAN-4-VTP_PRIMARY_SERVER_CHG: aabb.cc00.0100 has
become the primary server for the VLAN VTP feature
```

The effect on SW2, the former Primary server is:

```
*Dec  7 21:49:30.045: %SW_VLAN-4-VTP_PRIMARY_SERVER_CHG: aabb.cc00.0100 has
become the primary server for the VLAN VTP feature
```

By NOW SW1 has overwritten the VTP VLAN databases on SW2 (former Primary) and SW3 (former Secondary).