udld through vtp transparent

udld

To enable aggressive or normal mode in UniDirectional Link Detection protocol (UDLD) and set the configurable message time, use the **udld** command in global configuration mode. To disable aggressive or normal mode in UDLD, use the **no** form of this command.

udld {**aggressive**| **enable**| **message time** *seconds*}

no udld {**aggressive**| **enable**| **message time** *seconds*}

Syntax Description

enable	Enables UDLD in normal mode by default on all fiber interfaces.
aggressive	Enables UDLD in aggressive mode by default on all fiber interfaces.
message time *seconds*	Sets the period of time between UDLD probe messages on ports that are in advertisement mode and are currently determined to be bidirectional; valid values are from 7 to 90 seconds.

Command Default

The defaults are as follows:

- UDLD is disabled on all fiber interfaces.
- *seconds* is 15 seconds.

Command Modes

Global configuration (config)

Command History

Release	Modification
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Release 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Usage Guidelines

Use the **no** form of this command to do the following:

- Disable normal-mode UDLD on all fiber ports by default.
- Disable aggressive-mode UDLD on all fiber ports by default.

- Disable the message timer.

If you enable aggressive mode, after all the neighbors of a port age out either in the advertisement or in the detection phase, UDLD restarts the linkup sequence to resynchronize with any potentially out-of-sync neighbor and shuts down the port if the message train from the link is still undetermined.

This command affects fiber interfaces only. Use the **udldport** command in interface-configuration mode to enable UDLD on other interface types.

Examples

This example shows how to enable UDLD on all fiber interfaces:

```
Router(config)#
udld enable
Router(config)#
```

Related Commands

Command	Description
show udld	Displays the administrative and operational UDLD status.
udld port	Enables UDLD on the interface or enables UDLD in aggressive mode on the interface.

udld port

To enable the Unidirectional Link Detection (UDLD) protocol on the interface or enable UDLD in aggressive mode on the interface, use the **udldport** command in interface configuration mode. To return to the default settings, use the **no** form of this command.

udld port [aggressive]

no udld port [aggressive]

Syntax Description

aggressive	(Optional) Enables UDLD in aggressive mode on this interface; see the "Usage Guidelines" section for additional information.

Command Default

The defaults are as follows:

- Fiber interfaces are in the state of the global **udld** (**enable** or **aggressive**) command.
- Nonfiber interfaces have UDLD disabled.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Release 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
15.1(2)SNG	This command was implemented on Cisco ASR 901Series Aggregation Service Routers.

Usage Guidelines

This command does not appear in the CLI unless a GBIC is in the port that you are trying to enable.

Use the **udldport** and **udldport** aggressive commands on fiber ports to override the setting of the global udld (enable or aggressive) command. Use the no form on fiber ports to remove this setting and return control of UDLD enabling back to the global **udld** command, or in the case of nonfiber ports, to disable UDLD.

If you enable aggressive mode, after all the neighbors of a port age out either in the advertisement or in the detection phase, UDLD restarts the linkup sequence to resynchronize with any potentially out-of-sync neighbor and shuts down the port if the message train from the link is still undetermined.

If the port changes from fiber to nonfiber or vice versa, all configurations are maintained because the platform software detects a change of module or a Gigabit Interface Converter (GBIC) change.

Examples

This example shows how to cause any port interface to enable UDLD regardless of the current global **udld** setting:

```
Router(config-if)#
udld port
Router(config-if)#
```

This example shows how to cause any port interface to enable UDLD in aggressive mode regardless of the current global **udld** (enable or aggressive) setting:

```
Router(config-if)#
udld port aggressive
Router(config-if)#
```

This example shows how to cause a fiber port interface to disable UDLD regardless of the current global **udld** setting:

```
Router(config-if)#
no udld port
Router(config-if)#
```

Related Commands

Command	Description
show udld	Displays the administrative and operational UDLD status.
udld	Enables aggressive or normal mode in UDLD and sets the configurable message time.

udld reset

To reset all the ports that are shut down by the Unidirectional Link Detection (UDLD) protocol and permit traffic to begin passing through them again (although other features, such as spanning tree, Port Aggregation Protocol [PAgP], and Dynamic Trunking Protocol [DTP], will behave normally if enabled), use the **udldreset** command, in privileged EXEC mode.

udld reset

Syntax Description

This command has no arguments or keywords.

Command Default

Ports shut down are not reset.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Release 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Usage Guidelines

If the interface configuration is still enabled for UDLD, these ports will begin to run UDLD again and may shut down for the same reason if the reason for the shutdown has not been corrected.

Examples

This example shows how to reset all ports that are shut down by UDLD:

```
Router#
udld reset
Router#
```

Related Commands

Command	Description
show udld	Displays the administrative and operational UDLD status.

vlan (global)

To add a VLAN and enter config-VLAN submode, use the **vlan** command in global configuration mode. To delete the VLAN, use the **no** form of this command.

vlan {*vlan-id*| *vlan-range*}

no vlan {*vlan-id*| *vlan-range*}

Syntax Description

vlan-id	Number of the VLAN; valid values are from 1 to 4094. See the "Usage Guidelines" section for details on configuring VLAN ID numbers.
vlan-range	Range of configured VLANs; see the "Usage Guidelines" section for details on configuring ranges of VLAN ID numbers.

Command Default

This command has no default settings.

Command Modes

Global configuration (config)

Command History

Release	Modification
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was integrated into Cisco IOS Release 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.4(15)T	This command was integrated into Cisco IOS Release 12.4(15)T.

Usage Guidelines

VLAN 1 parameters are factory configured and cannot be changed.

VLAN 1 and VLANs 1002-1005 are default VLANs. Default VLANs are created automatically and cannot be configured or deleted by users.

The specified VLAN is added or modified in the VLAN database when you exit config-VLAN submode.

When you enter the **vlan** vlan-id command, a new VLAN is created with all default parameters in a temporary buffer and causes the CLI to enter config-VLAN submode. If the vlan-id that you entered matches an existing VLAN, any configuration commands you enter in config-VLAN submode will apply to the existing VLAN. You will not create a new VLAN.

If you define a range of configured VLANS, you are not allowed to set the *vlan-name*argument in config-VLAN submode.

You can enter the *vlan-range* argument using a comma (,), a dash (-), and the number.

VLAN IDs in the range from 1006 to 4094 are considered "extended VLAN IDs." Beginning in Cisco IOS Release 12.4(15)T, you can configure extended VLAN IDs on the following routers:

- Cisco 800 series routers, including models 851, 857, 871, 876, 877, 878
- Cisco 1700 series routers, including models 1711, 1712, 1751, 1751V, 1760
- Cisco 1800 series routers, including models 1801, 1802, 1803, 1811, 1812, 1841
- Cisco 2600 series routers, including models 2610XM, 2611XM, 2620XM, 2621XM, 2650XM, 2651XM, 2691
- Cisco 2800 series routers, including models 2801, 2811, 2821, 2851
- Cisco 3600 series routers, including models 3620, 3640, 3640A, 3660
- Cisco 3700 series routers, including models 3725, 3745
- Cisco 3800 series routers, including models 3825, 3845

The reduced MAC address feature is required to support 4000 VLANs. Cisco IOS Release 12.1(14)E1 and later releases support chassis with 64 or 1024 MAC addresses. For chassis with 64 MAC addresses, Spanning Tree Protocol (STP) uses the extended system ID (which is the VLAN ID) plus a MAC address to make the bridge ID unique for each VLAN. (Without the reduced MAC address support, 4096 VLANs would require 4096 MAC addresses on the switch.)

If you configure extended VLANs, you must also enable the spanning-tree extended system-ID feature.

The legacy vlan database mode does not support extended VLAN configuration.

See the **vlan(config-VLAN)** command for information on the commands that are available under config-VLAN submode.

Examples

This example shows how to add a new VLAN and enter config-VLAN submode:

```
Router(config)#
vlan 2
Router(config-vlan)#
```

This example shows how to add a range of new VLANs and enter config-VLAN submode:

```
Router(config)#
 vlan 2,5,10-12,20,25,4000
Router(config-vlan)#
```

This example shows how to delete a VLAN:

```
Router(config)#
no vlan 2
Router(config)#
```

Related Commands

Command	Description
vlan (config-VLAN)	Configures a specific VLAN.

vlan access-map

To create a VLAN access map or enter VLAN access-map command mode, use the **vlanaccess-map** command in global configuration. To remove a mapping sequence or the entire map, use the **no** form of this command.

vlan access-map *name* [*seq-number*]

no vlan access-map *name* [*seq-number*]

Syntax Description

name	VLAN access-map tag.
seq-number	(Optional) Map sequence number; valid values are 0 to 65535.

Command Default

A VLAN access map is not created.

Command Modes

Global configuration (config)

Command History

Release	Modification
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Release 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Usage Guidelines

If you enter the sequence number of an existing map sequence, you enter VLAN access-map mode.

If you do not specify a sequence number, a number is automatically assigned. You can enter one match clause and one action clause per map sequence.

If you enter the **novlanaccess-mapname** [*seq-number*] command without entering a sequence number, the whole map is removed.

Once you enter VLAN access-map mode, the following commands are available:

- **action** -- Specifies the packet action clause; see the **action** command section.
- **default** -- Sets a command to its defaults.
- **end** -- Exits from configuration mode.
- **exit** -- Exits from VLAN access-map configuration mode.
- **match** -- Specifies the match clause; see the **match** command section.

- **no** -- Negates a command or sets its defaults.

Examples

This example shows how to enter VLAN access-map mode:

```
Router(config)# vlan access-map tagname1
Router(config-access-map)#
```

Related Commands

Command	Description
action	Sets the packet action clause.
match	Specifies the match clause by selecting one or more ACLs for a VLAN access-map sequence.
show vlan access-map	Displays the contents of a VLAN-access map.

vlan database

Note The **vlandatabase** command is not available in Cisco IOS Release 12.2(33)SXI5 and later Cisco IOS 12.2SX releases.

To enter VLAN configuration mode, use the**vlandatabase**command in privileged EXEC mode.

vlan database

Syntax Description

This command has no arguments or keywords.

Command Default

VLAN configuration mode is not entered.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.0(7)XE	This command was introduced on the Catalyst 6500 series switches.
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the E release.
12.2(2)XT	This command was implemented on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Usage Guidelin

Note If you are running in RPR+ mode on a Cisco 7600 series router or Catalyst 6500 series switch, do not configure a VLAN in VLAN-database mode. Performance problems might occur during configuration synchronization between the active and standby supervisor engines.

Once you are in VLAN configuration mode, you can access the VLAN database editing buffer manipulation commands, including:

- **abort** --Exits themode without applying the changes.
- **apply** --Applies current changes and increases the release number.
- **exit** --Applies changes, increases the release number, and exit mode.
- **no** --Negates a command or sets its defaults; valid values are **vlan** and **vtp**.
- **reset** --Abandons current changes and rereads the current database.
- **show** --Displays database information.
- **vlan** --Accesses subcommands to add, delete, or modify values associated with a single VLAN. For information about the **vlan** subcommands, see the **vlan** (VLAN) command.
- **vtp** --Accesses subcommands to perform Virtual Trunking Protocol (VTP) administrative functions. For information about the **vtp** subcommands, see the **vtpclient** command.

Examples

The following example shows how to enter VLAN configuration mode:

```
Router# vlan database
Router(vlan)#
```

The following example shows how to exit VLAN configuration mode without applying changes after you are in VLAN configuration mode:

```
Router(vlan)# abort
Aborting....
Router#
```

The following example shows how to delete a VLAN after you are in VLAN configuration mode:

```
Router(vlan)# no vlan 100
Deleting VLAN 100...
Router(vlan)#
```

This example shows how to delete a VLAN after you are in VLAN-configuration mode:

```
Router(vlan)# no vlan 100
Deleting VLAN 100...
Router(vlan)#
```

This example shows how to turn off pruning after you are in VLAN-configuration mode:

```
Router(vlan)# no vtp pruning
Pruning switched OFF
Router(vlan)#
```

Related Commands

Command	Description
show vlan	Displays VLAN information.

vlan filter

To apply a VLAN access map, use the **vlanfilter** command in global configuration mode. To clear the VLAN access maps from VLANs or interfaces, use the **no** form of this command.

vlan filter *map-name* {**vlan-list** *vlan-list*| **interface** *interface interface-number*}

no vlan filter *map-name* {**vlan-list** [*vlan-list*]| **interface** [*interface interface-number*]}

Syntax Description

map-name	VLAN access-map tag.
vlan-list	VLAN list; valid values are from 1 to 4094. See the "Usage Guidelines" section for additional information on the *vlan-list*argument.
interface *interface*	Specifies the interface type; valid values are **pos**, **atm**, or **serial**. See the "Usage Guidelines" section for additional information.
interface-number	Interface number; see the "Usage Guidelines" section for additional information.

Command Default

A VLAN access map is not applied.

Command Modes

Global configuration (config)

Command History

Release	Modification
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Release 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Usage Guidelines

When configuring an action clause in a VLAN access map, note the following:

- You can apply the VLAN access map to one or more VLANs or WAN interfaces.
- The *vlan-list* argument can be a single VLAN ID, a list of VLAN IDs, or VLAN ID ranges (*vlan-id-vlan-id*). Multiple entries are separated by a hyphen (-) or a comma (,).

- If you delete a WAN interface that has a VLAN access control list (VACL) applied, the VACL configuration on the interface is also removed.
- You can apply only one VLAN access map to each VLAN or WAN interface.
- VACLs that are applied to VLANs are active only for VLANs with a Layer 3-VLAN interface configured. VACLs that are applied to VLANs without a Layer 3-VLAN interface are inactive. Applying a VLAN access map to a VLAN without a Layer 3-VLAN interface creates an administratively down Layer 3-VLAN interface to support the VLAN access map. If creation of the Layer 3-VLAN interface fails, the VACL is inactive.

When entering the **no** form of this command, the *vlan-list* argument is optional (but the keyword **vlan-list** is required). If you do not enter the *vlan-list* argument, the VACL is removed from all VLANs where the *map-name* argument is applied.

When entering the **no** form of this command for WAN interfaces, the *interface* argument is optional (but the **interface** keyword is required). If you do not enter the *interface* argument, the VACL is removed from interfaces where the *map-name* is applied.

The **vlanfilter***map-name***interface** command accepts only ATM, POS, or serial interface types. If your Cisco 7600 series router is not configured with any of these interface types, the **interface***interfaceinterface-number* keyword and argument are not provided.

The *interface-number* format can be *mod*/*port* or *slot*/*port-adapter*/*port*; it can include a subinterface or channel-group descriptor.

Examples

This example shows how to apply a VLAN access map on VLANs 7 through 9:

```
Router(config)# vlan filter ganymede vlan-list 7-9
Router(config)#
```

Related Commands

Command	Description
action	Sets the packet action clause.
match	Specifies the match clause by selecting one or more ACLs for a VLAN access-map sequence.
show vlan filter	Displays information about the VLAN filter.

vtp (global)

To configure the global VLAN Trunking Protocol (VTP) state, use the **vtp** command in global configuration mode. To return to the default value, use the **no** form of this command.

vtp {**domain** *domain-name*| **file** *filename*| **interface** *interface-name* **[only]**| **mode** {**client**| **off**| **server**| **transparent**}| **password** *password-value*| **pruning**| **version** {**1**| **2**}}

no vtp

vtp {**domain** *domain-name*| **file** *filename*| **interface** *interface-name* **[only]**| **mode** {**client**| **off**| **server** [**mst**| **unknown**| **vlan**]| **transparent**}| **password** *password-value* [**hidden**| **secret**]| **pruning**| **version** {**1**| **2**| **3**}}

no vtp

Syntax Description

domain *domain-name*	Sets the VTP-administrative domain name.
file *filename*	Sets the ASCII name of the IFS-file system file where the VTP configuration is stored.
interface *interface-name*	Sets the name of the preferred source for the VTP-updater ID for this device.
only	(Optional) Specifies to use only this interface's IP address as the VTP-IP updater address.
mode client	Sets the type of VTP-device mode to client mode.
mode off	Sets the type of VTP-device mode to off mode.
mode server	Sets the type of VTP-device mode to server mode.
mode transparent	Sets the type of VTP-device mode to transparent mode.
password *password-value*	Specifies the administrative-domain password.
pruning	Enables the administrative domain to permit pruning.
Catalyst 6500 Series Switch	
hidden	(Optional) Configures the password with a secret key saved in hexadecimal format in the running configuration. Supported on the Catalyst 6500 series switch only.
secret	(Optional) Allows the password secret key to be directly configured. Supported on the Catalyst 6500 series switch only.

mst	Sets the mode for Multiple Spanning-Tree (MST) VTP instance.
unknown	Sets the mode for unknown VTP features.
vlan	Sets the mode for VLAN VTP instance.
version {1 | 2 | 3}	Specifies the administrative-domain VTP-version number.

Command Default

The defaults are as follows:

- **vtp domain** and **vtpinterface** co mmands have no default settings.
- *filename* is const-nvram:vlan.dat .
- VTP mode is **modeserver**.
- No password is configured.
- Pruning is disabled.
- Administrative-domain VTP-version number 1.

Command Modes

Global configuration (config)

Command History

Release	Modification
12.2(14)SX	This command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Cisco IOS Release 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(33)SXH	The **modeoff**keyword combination was added.
12.2(33)SXI	The following changes were made for the Catalyst 6500 series switch: • **vtp mode** {**client** | **off** | **server** [**mst** | **unknown** | **vlan**] | **transparent**]} • **vtp password** *password-value* [**hidden** | **secret** • **vtp version** {**1** | **2**|**3**}
15.0(1)M	This command was integrated into a release earlier than Cisco IOS Release 15.0(1)M.

Usage Guidelin

Note The **vtppruning**, **vtppassword**, and **vtpversion** commands are also available in privileged EXEC mode. We recommend that you use these commands in global configuration mode only; do not use these commands in privileged EXEC mode.

Extended-range VLANs are not supported by VTP version 1 and version 2. Extended range VLANs are supported in VTP version 3.

When you define the domain-name value , the dom ain name is case sensitive and can be from 1 to 32 characters.

The *filename* and *interface-name*values are ASCII strings from 1 to 255 characters.

You must configure a password on each network device in the management domain when the switch is in secure mode.

Caution If you configure VTP in secure mode, the management domain does not function properly if you do not assign a management domain password to each network device in the domain.

A VTP version 2-capable network device can operate in the same VTP domain as a network device running VTP version 1 if VTP version 2 is disabled on the VTP version 2-capable network device (VTP version 2 is disabled by default).

Do not enable VTP version 2 on a network device unless all of the network devices in the same VTP domain are version 2-capable. When you enable VTP version 2 on a network device, all of the version 2-capable network devices in the domain enable VTP version 2.

In a Token Ring environment, you must enable VTP version 2 for VLAN switching to function properly.

Enabling or disabling VTP pruning on a VTP server enables or disables VTP pruning for the entire management domain.

Configuring VLANs as pruning eligible or pruning ineligible on an applicable device affects pruning eligibility for those VLANs on that switch only; it does not affect pruning eligibility on all network devices in the VTP domain.

The **vtppassword**, **vtppruning**, and **vtpversion** commands are not placed in startup memory but are included in the VTP transparent-mode startup configuration file.

Extended-range VLANs are not supported by VTP.

You can configure the **pruning** keyword in VTP-server mode; the **version** keyword is configurable in VTP-server mode or VTP transparent mode.

The password-value argument is an ASCII string from 8 to 64 characters identifying the administrative domain for the device.

VTP pruning causes information about each pruning-eligible VLAN to be removed from VTP updates if there are no stations belonging to that VLAN.

All applicable devices in a VTP domain must run the same version of VTP. VTP version 1 and VTP version 2 do not operate on applicable devices in the same VTP domain.

If all applicable devices in a domain are VTP version 2-capable, you need only to enable VTP version 2 on one applicable devices; the version number is then propagated to the other version 2-capable applicable devices in the VTP domain.

If you toggle the version 2 mode, certain default VLAN parameters are modified.

If you enter the **vtpmodeoff** command, it sets the device to off. If you enter the **novtpmodeoff** command, it resets the device to the VTP server mode.

Catalyst 6500 Series Switch

VTP version 3 supports all the features in version 1 and version 2. VTP version 3 also supports the following features not supported in version 1 and version 2:

- Enhanced authentication--In VTP version 3, you can configure the authentication password to be hidden using the **vtppassword** command. When you configure the authentication password to be hidden, it does not appear in plain text in the configuration. Instead, the secret associated with the password is saved in hexadecimal format in the running configuration. The password-string argument is an ASCII string from 8 to 64 characters identifying the administrative domain for the device. The following syntax is available:

password *password-string* [**hidden** | **secret**]

password *password-string* --Specifies the administrative domain password.

hidden --(Optional) Configures the password with a secret key saved in hexadecimal format in the running configuration.

secret --(Optional) Allows the password secret key to be directly configured in hexadecimal format.

The **hidden** keyword for the VTP password is supported only in VTP version 3. If converting to VTP version 2 from VTP version 3, you must remove the **hidden** keyword prior to the conversion.

- Support for extended-range VLAN database propagation--VTP version 1 and version 2 support VLANs 1 to 1000 only. In VTP version 3, the entire VLAN range is supported (VLANs 1 to 4096). The pruning of VLANs still applies to VLANs 1 to 1000 only. Extended-range VLANs are supported in VTP version 3 only. If converting from VTP version 3 to VTP version 2, VLANs in the range 1006 to 4094 are removed from VTP control.
- Support for propagation of any database in a domain--In VTP version 1 and version 2, a VTP server is used to backup the database to the NVRAM and allows you to change the database information. In VTP version 3, there is a VTP-primary server and a VTP-secondary server. A primary server allows you to alter the database information, and the database updates sent out are honored by all the devices in the system. A secondary server can only back up the updated VTP configuration received from the primary server in the NVRAMs. The status of the primary and secondary servers is a runtime status and is not configurable.

By default, all devices come up as secondary servers. You can enter the **vtpprimary** privileged EXEC mode command to specify a primary server. The following syntax is available:

vtp primary [**vlan** | **mst**] [**force**

vlan --(Optional) Specifies this device as the primary server for the VTP VLAN feature.

mst-- (Optional) Specifies this device as the primary server for the VTP MST feature.

force-- (Optional) Forces this device to become the primary server.

The primary-server status is needed only when database changes have to be performed and is obtained when the administrator issues a takeover message in the domain. The primary-server status is lost when you reload, switch over, or the domain parameters change. The secondary servers back up the configuration and continue to propagate the database. You can have a working VTP domain without any primary servers.

In VTP version 3, there is no longer a restriction to propagate only VLAN database information. You can use VTP version 3 to propagate any database information across the VTP domain. A separate instance of the protocol is running for each application that uses VTP.

- CLI to turn off/on VTP on a per-trunk basis--You can disable VTP on a per-trunk basis using the **novtp**command in interface configuration mode . When you disable VTP on the trunking port, all the VTP instances for that port are disabled. You will not be provided with the option of setting VTP to OFF for the MST database and ON for the VLAN database. You can enable VTP on a per-trunk basis using the **vtp**command in interface configuration mode .

VTP on a global basis--When you set VTP mode to OFF globally, this applies to all the trunking ports in the system. Unlike the per-port configuration, you can specify the OFF option on a per-VTP instance basis. For example, the system could be configured as VTP-server for the VLAN database and as VTP-off for the MST database. In this case, VLAN databases are propagated by VTP, MST updates are sent out on the trunk ports in the system, and the MST updates received by the system are discarded.

Examples

The following example shows how to set the device's management domain:

```
Router(config)#
vtp domain DomainName1
```

The following example shows how to specify the file in the IFS-file system where the VTP configuration is stored:

```
Router(config)#
vtp file vtpconfig
Setting device to store VLAN database at filename vtpconfig.
```

The following example shows how to set the VTP mode to client:

```
Router(config)#
vtp mode client
Setting device to VTP CLIENT mode.
```

The following example shows how to disable VTP mode globally:

```
Router(config)# vtp mode off
Setting device to VTP OFF mode.
```

The following example shows how to reset the device to the VTP server mode:

```
Router(config)# no vtp mode off
Setting device to VTP OFF mode.
```

Related Commands

Command	Description
show vtp	Displays the VTP statistics and domain information.
vtp (interface)	Enables VTP on a per-port basis.

vtp (interface)

To enable VLAN Trunking Protocol (VTP) on a per-port basis, use the **vtp** command in interface configuration mode. To disable VTP on a per-port basis, use the **no** form of this command.

vtp

no vtp

Syntax Description

This command has no arguments or keywords.

Command Default

VTP on a per-port basis is not enabled.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
12.2(33)SXH	This command was introduced.

Usage Guidelines

The VTP enable value is applied only when a port becomes a switched port and is in trunk mode.

Examples

This example shows how to enable VTP on a per-port basis:

```
Router(config-if)# vtp
```

This example shows how to disable VTP on a per-port basis:

```
Router(config-if)# no vtp
```

Related Commands

Command	Description
vtp mode	Globally configures VTP mode.

vtp client

To place the device in Virtual Trunking Protocol (VTP) client mode, use the **vtpclient** command in VLAN configuration mode. To return to VTP server mode, use the **no** form of this command.

vtp client

no vtp client

Syntax Description

This command has no arguments or keywords.

Command Default

VLAN mode

Command Modes

VLAN configuration (vlan)

Command History

Release	Modification
12.0(7)XE	This command was introduced on the Catalyst 6000 series switches.
12.2(2)XT	This command was implemented on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Usage Guidelines

If the receiving switch is in client mode, the client switch changes its configuration to duplicate the configuration of the server. If you have switches in client mode, be sure to make all VTP or VLAN configuration changes on a switch in server mode.

The **vtpserver** command is the functional equivalent of **novtpclient**command except that it does not return an error if the device is not in client mode.

Examples

The following example shows how to place the device in VTP client mode:

```
Router(vlan)# vtp client
```

Related Commands

Command	Description
show vtp	Displays VTP statistics and domain information.
vtp (global)	Modifies the name of the VTP configuration storage file.
vtp server	Places a device in VTP server mode.
vtp transparent	Places a device in VTP transparent mode.

vtp domain

To create the administrative domain name for the device, use the **vtpdomain** command in VLAN configuration mode. To delete the administrative domain name, use the **no** form of this command.

vtp domain *domain-name*

no vtp domain

Syntax Description

domain -name	Domain name. Domain names can be a maximum of 32 characters.

Command Default

The administrative domain name is not created.

Command Modes

VLAN configuration (vlan)

Command History

Release	Modification
12.0(7)XE	This command was introduced on the Catalyst 6000 series switches.
12.2(2)XT	This command was implemented on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Usage Guidelines

When you define the *domainname* argument, the domain name is case-sensitive.

Until a domain name is set, the device is in the no-management-domain state. In this state, the device does not transmit any VLAN Trunking Protocol (VTP) advertisements regardless of changes to local VLAN configuration. The device leaves the no-management-domain state upon receiving the first VTP summary packet on any port that is currently trunking or when it receives a domain name configured by the **vtpdomain** command. If the device receives its domain from a summary packet, it resets its configuration revision number to 0.

When the device leaves the no-management-domain state, it can never be configured to reenter it, except by the cleaning of NVRAM and the reloading of the device.

Examples

The following example shows how to set the device's administrative domain to DomainChandon:

```
Router(vlan)# vtp domain DomainChandon
```

Related Commands

Command	Description
show vtp	Displays VTP statistics and domain information.
vtp (global)	Modifies the name of the VTP configuration storage file.

vtp password

To create a Virtual Trunking Protocol (VTP) domain password, use the **vtppassword**command in VLAN configuration mode. To delete the password, use the **no** form of this command.

vtp password *password-value*

no vtp password

Syntax Description

password value	The password. The value is an ASCII string from 1 to 32 characters.

Command Default

The default is no password.

Command Modes

VLAN configuration (vlan)

Command History

Release	Modification
12.0(7)XE	This command was introduced on the Catalyst 6000 series switches.
12.1(1)E	Support for this command on the Catalyst 6000 series switches was extended to the E train.
12.2(2)XT	This command was implemented on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Usage Guidelines

The value of the *passwordvalue* argument is an ASCII string from 1 to 32 characters.

Examples

The following example shows how to create the VTP domain password for DomainChandon:

```
Router(vlan)# vtp password DomainChandon
```

The following example shows how to delete the VTP domain password:

```
Router(vlan)# no vtp password
Clearing device VLAN database password.
```

Related Commands

Command	Description
show vtp	Displays VTP statistics and domain information.
vtp (global)	Modifies the name of the VTP configuration storage file.

vtp server

To place the device in Virtual Trunking Protocol (VTP) server mode, use the **vtpserver** command in VLAN configuration mode.

vtp server

Syntax Description

This command has no arguments or keywords.

Command Default

The default is VTP server mode.

Command Modes

VLAN configuration (vlan)

Command History

Release	Modification
12.0(7)XE	This command was introduced on the Catalyst 6000 series switches.
12.1(1)E	Support for this command on the Catalyst 6000 series switches was extended to the E train.
12.2(2)XT	This command was implemented on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Usage Guidelines

If you make a change to the VTP or VLAN configuration on a switch in server mode, that change is propagated to all the switches in the same VTP domain.

VTP can be set to either server or client mode only when dynamic VLAN creation is disabled.

If the receiving switch is in server mode, the configuration is not changed.

The **vtpserver** command is the functional equivalent of the **novtpclient** command, except that it does not return an error if the device is not in client mode.

Examples

The following example shows how to place the device in VTP server mode:

```
Router(vlan)# vtp server
```

Related Commands

Command	Description
show vtp	Displays VTP statistics and domain information.
vtp (global)	Modifies the name of the VTP configuration storage file.
vtp client	Places a device in VTP client mode.
vtp transparent	Places a device in VTP transparent mode.

vtp transparent

To place the device in Virtual Trunking Protocol (VTP) transparent mode, use the **vtptransparent** command in VLAN configuration mode. To return to VTP server mode, use the **no** form of this command.

vtp transparent

no vtp transparent

Syntax Description

This command has no arguments or keywords.

Command Default

The default is VTP server mode.

Command Modes

VLAN configuration (vlan)

Command History

Release	Modification
12.0(7)XE	This command was introduced on the Catalyst 6000 series switches.
12.1(1)E	Support for this command on the Catalyst 6000 series switches was extended to the E train.
12.2(2)XT	This command was implemented on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Usage Guidelines

The**vtptransparent**command disables VTP from the domain but does not remove the domain from the switch.

If the receiving switch is in transparent mode, the configuration is not changed. Switches in transparent mode do not participate in VTP. If you make VTP or VLAN configuration changes on a switch in transparent mode, the changes are not propagated to the other switches in the network.

The **vtpserver** command is similar to the **novtptransparent**command, except that it does not return an error if the device is not in transparent mode.

Examples

The following example shows how to place the device in VTP transparent mode:

```
Router(vlan)# vtp transparent
```

The following example shows how to return the device to VTP server mode:

```
Router(vlan)# no vtp transparent
```

Related Commands

Command	Description
show vtp	Displays VTP statistics and domain information.
vtp (global)	Modifies the name of the VTP configuration storage file.
vtp client	Places a device in VTP client mode.
vtp server	Places a device in VTP server mode.