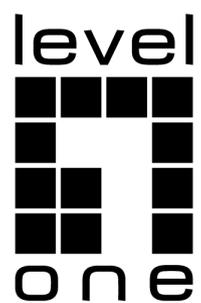


# STP Optional Characteristic Configuration Commands



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# Chapter 1 STP Optional Characteristic Configuration Commands

## 1.1 STP Optional Characteristic Configuration Commands

### 1.1.1 spanning-tree portfast

#### Syntax

To enable Port Fast features, use the **spanning-tree portfast** command in global configuration mode. To return to the default settings, use the no form of this command.

**spanning-tree portfast** {bpdufilter | bpduguard | default}

**no spanning-tree portfast** {bpdufilter | bpduguard | default}

To enable Port Fast features, use the s **spanning-tree portfast** command in interface configuration mode. To return to the default settings, use the no form of this command.

**spanning-tree portfast** [disable]

**no spanning-tree portfast**

#### Parameter

Parameter	Description
bpdufilter	Enables bpdu filter.
bpduguard	Enables bpdu guard.
default	Specifies the default method.

#### Default

Disabled

#### Usage Guidelines

In SSTP/PVST mode, the Port Fast characteristic makes a port immediately enter Forwarding state without experiencing any status change process. This configuration is invalid in RSTP/MSTP mode.

After configuring Port Fast, BPDU Guard or BPDU Filter needs to be configured for protection.

## Command Mode

Global and interface configuration mode

## Example

This example shows how to enable PortFast mode globally:

```
Switch(config)# spanning-tree portfast default
Switch(config)#
```

This example shows how to enable PortFast mode on the interface g0/1:

```
Switch_config_g0/1# spanning-tree portfast
Switch_config_g0/1#
```

### 1.1.2 spanning-tree bpduguard

#### Syntax

To enable bridge protocol data unit (BPDU) guard on the interface, use the **spanning-tree bpduguard** command in interface configuration mode. To return to the default settings, use the no form of this command.

**spanning-tree bpduguard {disable | enable}**

**no spanning-tree bpduguard**

#### Parameter

None

#### Default

Disabled

#### Usage Guidelines

In SSTP/PVST mode, if a port that configured BPDU Guard and Port Fast receives BPDU, this port will be forced to shutdown. User can restore it by the manual configuration. In RSTP/MSTP mode, if a port that configured BPDU Guard receives BPDU, this port will be configured to Blocking state for a period of time.

## Command Mode

Interface configuration

## Example

This example shows how to enable BPDU guard on the interface G0/1:

```
Switch_config_g0/1# spanning-tree bpduguard enable
Switch_config_g0/1#
```

### 1.1.3 spanning-tree bpdudfilter

#### Syntax

To enable bridge protocol data unit (BPDU) filtering on the interface, use the **spanning-tree bpdudfilter** command in interface configuration mode. To return to the default settings, use the **no** form of this command.

**spanning-tree bpdudfilter {disable | enable}**

**no spanning-tree bpdudfilter**

#### Parameter

None

#### Default

Disabled

#### Usage Guidelines

In SSTP/PVST mode, if a port that configured BPDU Filter and Port Fast receives BPDU, the BPDU Filter and Port Fast characteristics on that port will be disabled automatically to restore the port to an ordinary port. Then this port must endure the wait from Listening to Learning before entering Forwarding state.

This feature is invalid in RSTP/MSTP mode.

#### Command Mode

Interface configuration

## Example

This example shows how to enable BPDU filtering on the interface G0/1:

```
Switch_config_g0/1# spanning-tree bpdudfilter enable
Switch_config_g0/1#
```

### 1.1.4 spanning-tree uplinkfast

#### Syntax

To enable the debugging of the spanning-tree UplinkFast events, use the **spanning-tree uplinkfast** command. To disable the debugging output, use the no form of this command.

**spanning-tree uplinkfast**

**no spanning-tree uplinkfast**

#### Parameter

None

#### Default

Disabled

#### Usage Guidelines

Uplink Fast characteristic is only valid in SSTP/PVST mode.

#### Command Mode

Global configuration mode

#### Example

The following example enables uplinkfast characteristic:

```
Switch(config)# spanning-tree uplinkfast
Switch(config)#
```

### 1.1.5 spanning-tree backbonefast

#### Syntax

To enable debugging of the spanning-tree BackboneFast events, use the **spanning-tree backbonefast** command. To disable the debugging output, use the no form of this command.

**spanning-tree backbonefast**

**no spanning-tree backbonefast**

**Parameter**

None

**Default**

Disabled

**Usage Guidelines**

Backbone Fast characteristic is only valid in SSTP/PVST mode.

**Command Mode**

Global configuration mode

**Example**

The following command enables backbonefast characteristic:

```
Switch(config)# spanning-tree backbonefast
Switch(config)#
```

**1.1.6 spanning-tree guard****Syntax**

To enable or disable the guard mode, use the `spanning-tree guard` command in interface configuration mode. To return to the default settings, use the `no` form of this command.

**spanning-tree guard** {loop | none | root}

**no spanning-tree guard**

**Parameter**

Parameter	Description
<i>loop</i>	Guard loop.
<i>none</i>	Guard none.
<i>root</i>	Guard root.

**Default**

Disabled

## Usage Guidelines

Root Guard characteristic can prevent a port from becoming Root port due to receiving high priority BPDU.

Loop Guard characteristic can protect a Root Port or a Alternate Port when it becomes the Designated Port. This function can prevent a port from occurring the loop when it cannot continuously receive BPDU.

## Command Mode

Interface configuration

## Example

This example shows how to enable G0/1 to root guard:

```
Switch_config_g0/1# spanning-tree guard root
Switch_config_g0/1#
```

### 1.1.7 spanning-tree loopguard

## Syntax

To enable loop guard as a default on all ports of a given bridge, use the **spanning-tree loopguard default** command in global configuration mode. To disable loop guard, use the **no** form of this command.

```
spanning-tree loopguard default
```

## Default

None

## Usage Guidelines

None

## Command Mode

Global configuration

## Example

The following command enables loopguard function:

```
Switch(config)# spanning-tree loopguard default
```

Switch(config)#

### 1.1.8 spanning-tree loopfast

#### Syntax

##### **spanning-tree loopfast**

To configure Loop Fast, run **spanning-tree loopfast** in the global configuration mode. To return to the default setting, use the no form of this command.

##### **spanning-tree loopfast**

##### **spanning-tree loopfast disable**

To configure Loop Fast, run **spanning-tree loopfast**. To return to the default setting, use the no form of this command.

#### Parameter

None

#### Default

None

#### Usage Guidelines

Please configure this command under the guide of LEVELONE's technical engineers.

#### Command Mode

Global configuration and interface configuration

#### Example

The following example shows how to enable loopfast on the interface G0/1 in the global configuration mode and disable the function.

```
Switch_config#spanning-tree loopfast
Switch_config#int g0/1
Switch_config_g0/1#spanning-tree loopfast disable
Switch_config_g0/1#exit
Switch_config#
```

### 1.1.9 spanning-tree fast-aging

#### Syntax

**spanning-tree fast-aging**

**no spanning-tree fast-aging**

The commands are used to enable/disable address table fast aging.

**spanning-tree fast-aging protection**

**no spanning-tree fast-aging protection**

The commands are used to enable/disable address table fast aging protection.

**spanning-tree fast-aging protection time *value***

**no spanning-tree fast-aging protection time**

The commands are used to configure address table aging protection time.

#### Parameter

Parameter	ParameterDescription
<i>value</i>	Aging protection time. The default is 15 seconds. The range is 10 to 60 seconds.

#### Default

Enable **fast-aging** and disable **protection** by default.

#### Usage Guidelines

None

#### Command Mode

Global configuration mode

#### Example

The following example shows how to enable fast aging protection and configure the protection time to 30s.

```
Switch_config#spanning-tree fast-aging protection
Switch_config#spanning-tree fast-aging protection time 30
```

### 1.1.10 spanning-tree fast-aging flush-fdb

#### Syntax

**spanning-tree fast-aging flush-fdb**

**no spanning-tree fast-aging flush-fdb**

Enable/disable FDB-Flush.

#### Parameter

None

#### Default

Enable FDB-Flush by default.

#### Usage Guidelines

Please configure this command under the guide of LEVELONE's technical engineers.

FDB-Flush is independent of fast aging. FDB-Flush can be configured while **no spanning-tree fast-aging** is configured. Fast aging protection is invalid to FDB-Flush.

#### Command Mode

Global configuration

#### Example

The following example shows how to disable fast-aging and enable FDB-Flush:

```
Switch_config#no spanning-tree fast-aging
```

```
Switch_config#spanning-tree fast-aging flush-fdb
```

### 1.1.1 spanning-tree bpdu-terminal

#### Syntax

**spanning-tree bpdu-terminal**

**no spanning-tree bpdu-terminal**

Enable/disable BPDU Terminal.

## Parameter

None

## Default

Disable BPDU Terminal by default.

## Usage Guidelines

BPDU Terminal function can disable the forwarding of BPDU when no spanning tree is running.

## Command Mode

Global configuration mode

## Example

The following example shows how to enable BPDU Terminal:

```
Switch_config#spanning-tree bpdu-terminal
```