LLDP CLI Reference Guide

Model: S3700-24T4F

Contents

FS

Chapter 1 LLDP Configuration Commands

1.1 LLDP Commands

1.1.1 lldp run

Syntax

To enable LLDP, run lldp run; to disable LLDP, run no lldp run.

lldp   run

no   lldp   run

Parameters

None

Default Value

The debugging switch is disabled.

Usage Guidelines

The port will send lldp packets after the lldp function is enabled.

Command Mode

Global configuration mode

Example

The following command is used to enable LLDP.

switch_config# lldp   run

1.1.2 lldp holdtime

Syntax

To configure the ttl value of LLDP, run lldp holdtime time. To resume the default transmission delay, run no lldp holdtime.

lldp   holdtime   *time*

no   lldp   holdtime

Parameters

Parameters	Description
time	Holdtime of the to-be-transmitted packet Range: 0-65535 seconds

Default Value

120s

Usage Guidelines

In normal condition, the remote information stored in MIB will update before aging. But the frame may loss in sending and causes the information ages. For avoiding this, you need to set the value of TTL and ensure the update LLDP frame is forwarded time after time.

Command Mode

Global configuration mode

Example

The following example shows how to set the ttl value of LLDP to 100 seconds.

```
switch_config# lldp    holdtime 100
switch_config#
```

1.1.3 lldp timer

Syntax

To configure the transmission delay of LLDP, run lldp timer time. To resume the default transmission delay, run no lldptimer.

lldp   timer *time*

no lldp   timer

Parameters

Parameters	Description
time	Interval for LLDP to transmit the packets Range: 5-65534 seconds

Default Value

30s

Usage Guidelines

The transmission interval of the LLDP message must be shorter than its storage time, ensuring multiple updates in the storage time and preventing error which is led by packet loss.

Command Mode

Global configuration mode

Example

The following example shows how to configure the transmission interval of LLDP to 24 seconds.

```
switch_config# lldp    timer    24
switch_config#
```

1.1.4 lldp reinit

Syntax

To configure the transmission delay of LLDP, run lldp reinit time. To resume the default transmission delay, run no lldp reinit.

lldp   reinit   *time*

no lldp   reinit

Parameters

Parameters	Description
time	Transmission delay of LLDP, whose values range from two to five seconds Range: 2-5 seconds

Default Value

2s

Usage Guidelines

LLDP information will be forwarded automatically in two conditions: first, the status or value of one or more information elements (management objects) change; second, the sending timer timeouts. A single information change cause the LLDP packet is forwarded and a series of information change may cause many LLDP frames forwarded, but a frame can only report one change. For avoiding this, the web management defines the interval of two continuous LLDP frames.

Command Mode

Global configuration mode

Example

The following example shows how to set the transmission delay of LLDP to five seconds.

```
switch_config# lldp    reinit    5
switch_config#
```

1.1.5 lldp tlv-select

Syntax

To add TLV which is transmitted by the LLDP message, run lldp med-tlv-select tlv-type. To delete TLV which is transmitted by the LLDP message, run no lldp med-tlv-select tlv-type.

lldp   tlv-select   *tlv-type*

no lldp   tlv-select   *tlv-type*

Parameters

Parameters	Description
tlv-type	Stands for TLV that are available for selective transmission. Its values are:
	management-address management address TLV
	port-description port description TLV
	system-capabilities system-capabilities TLV
	system-description system description TLV
	system-name system name TLV

Default Value

All TLVs are sent.

Usage Guidelines

Three mandatory TLVs must be sent.

Command Mode

Global configuration mode

Example

The following example shows how to enable the port description not to be transmitted in the message.

```
switch_config#no  lldp  tlv-select  port-description
switch_config#
```

1.1.6 lldp dot1-tlv-select

Syntax

To add TLV which is transmitted by the LLDP message, run lldp med-tlv-select tlv-type. To delete TLV which is transmitted by the LLDP message, run no lldp med-tlv-select tlv-type.

lldp dot1-tlv-select *tlv-type*

no lldp dot1-tlv-select *tlv-type*

Parameters

Parameters	Description
tlv-type	Stands for TLV that are available for selective transmission. Its values are:
	port-vlan-id port vlan address TLV
	protocol-vlan-id port and protocol VLAN ID TLV
	vlan-name vlan name TLV

Default Value

> All TLVs are sent.

Usage Guidelines

> The TLV of the protocol identity does not support transmission but supports reception.

Command Mode

> Port configuration mode

Example

> The following example shows how to enable the TLV not to be transmitted by deletion of the VLAN address of a port in the transmitted packet.

> switch_config#int g0/1
> switch_config_g0/1#no   lldp   dot1-tlv-select   port-vlan-id
> switch_config_g0/1#

1.1.7 lldp dot3-tlv-select

Syntax

> To add TLV which is transmitted by the LLDP message, run lldp med-tlv-select tlv-type. To delete TLV which is transmitted by the LLDP message, run no lldp med-tlv-select tlv-type.

> **lldp   dot3-tlv-select**   *tlv-type*

> **no lldp   dot3-tlv-select**   *tlv-type*

Parameters

Parameters	Description
tlv-type	Stands for TLV that are available for selective transmission. Its values are: link-aggregation link aggregation TLV macphy-confg MAC/Phy configuration/status TLV max-frame-size max frame size TLV power Power Via MDI TLV

Default Value

> All TLVs are sent.

Usage Guidelines

> None

Command Mode

> Port configuration mode

Example

The following example shows how to enable the TLV not to be transmitted by deletion of the MAC/Phy configuration/status of a port in the transmitted packet.

switch_config#int g0/1
switch_config_g0/1#no lldp dot3-tlv-select macphy-confg
switch_config_g0/1#

1.1.8 lldp med-tlv-select

Syntax

To add TLV which is transmitted by the LLDP message, run lldp med-tlv-select tlv-type. To delete TLV which is transmitted by the LLDP message, run no lldp med-tlv-select tlv-type.

lldp med-tlv-select *tlv-type*

no lldp med-tlv-select *tlv-type*

Parameters

Parameters	Description
tlv-type	Stands for TLV that are available for selective transmission. Its values are:
	network-policy network policy TLV
	inventory inventory management TLV
	location location identification TLV
	power-management expand Power Via MDI TLV

Default Value

All TLVs are sent.

Usage Guidelines

By default, the TLV of MED cannot be transmitted. When the TLV of MED need be transmitted, the MED capability TLV must be transmitted. Hence it does not fall into the choice.

Command Mode

Port configuration mode

Example

The following example shows how to enable the TLV not to be transmitted by deletion of the detailed list management in a transmitted packet.

switch_config#int g0/1
switch_config_g0/1#no lldp med-tlv-select inventory
switch_config_g0/1#

1.1.9 lldp   transmit

Syntax

lldp   transmit

no lldp   transmit

To set the port to send the LLDP message, run lldp transmit. To forbid receiving the LLDP message, run no lldp transmit.

Parameters

None

Default Value

Transmittable LLDP message mode

Usage Guidelines

Only after the LLDP module is enabled can the command be valid.

Command Mode

Port configuration mode

Example

The following example shows how to set port g0/1 not to send the LLDP message.

switch_config_g0/1# no lldp   transmit
switch_config_g0/1#

1.1.10 lldp receive

Syntax

lldp   receive

no lldp   receive

To set the port to the receivable LLDP message mode, run lldp receive. To forbid receiving the LLDP message, run no lldp receive.

Parameters

None

Default Value

Receivable LLDP message mode

Usage Guidelines

Only after the LLDP module is enabled can the configuration be valid.

Command Mode

Port configuration mode

Example

The following example shows how to set port g0/1 not to receive the LLDP message.

switch_config_g0/1# no lldp   receive
switch_config_g0/1#

1.1.11   lldp management-ip

Syntax

lldp management-ip   *A.B.C.D*

no lldp management-ip

To configure the management address of the LLDP port, run lldp management-ip A.B.C.D. To resume the default transmission delay, run no lldp management-ip.

Parameters

Parameters	Description
A.B.C.D	Stands for the management IP address that will be specified.

Default Value

The default management address is the IP address of the VLAN interface that pvid corresponds to; if this IP address does not exist, the default management address is 0.0.0.0.

Usage Guidelines

The configured management IP address should be the IP address related with a port.

Command Mode

Port configuration mode

Example

The following example shows how to set the management IP address of port g0/1 to 90.0.0.99.

switch_config_g0/1# lldp   management-ip 90.0.0.99
switch_config_g0/1#

1.1.12   lldp trap-send

Syntax

lldp   tranp-send lldp-mib

To forward trap notification to lldp mib, run this command.

lldp   tranp-send   ptopo-mib

To forward trap notification to ptopo mib, run this command.

Parameters

None

Default Value

None

Usage Guidelines

None

Command Mode

Global configuration mode

Example

The following example shows how to send trap notification to lldp mib.

switch_config#lldp trap-send lldp-mib

switch_config#

The following example shows how to send trap notification to ptopo mib.

switch_config#lldp trap-send ptopo-mib

switch_config#

1.1.13 location elin identifier id WORD

Syntax

location elin identifier *id WORD*

no location elin identifier *id*

To add the elin information, run location elin identifier id WORD; to delete the elin information, run no location elin identifier id.

Parameters

Parameters	Description
id	Stands for the ID of the to-be-set elin, which ranges from 1 to 65535.
WORD	Stands for the content of the configured elin, which ranges from 10 to 25 bytes.

Default Value

None

Usage Guidelines

None

Command Mode

Global configuration mode

Example

The following example shows how to set the identifier to 1 and the content of elin to 1234567890.

switch_config# location elin identifier 1 1234567890
switch_config#

1.1.14 location civic identifier id

Syntax

location civic identifier *id*

no location civic identifier *id*

To enter the location configuration mode and set the civic information, run location civic identifier id. To delete the civic information, run no location civic identifier id.

Parameters

Parameters	Description
id	Stands for the ID of the to-be-set civic, which ranges from 1 to 65535.

Default Value

None

Usage Guidelines

After the system enters the location configuration mode, you can run the following commands to conduct the corresponding configuration to the civic of the ID.

Command	Purpose
(no) language WORD	Sets the language.
(no) state WORD	Sets the state's (provincial) name, such as shanghai.
(no) county WORD	Sets the name of a county.
(no) city WORD	Sets the name of a city.
(no) division WORD	Sets the name of a division.
(no) neighborhood WORD	Sets the name of neighborhood.
(no) street WORD	Sets the name of a street.

(no) leading-street-dir WORD	Sets the direction of a main street, such as N (north).
(no) trailing-street-suffix WORD	Sets the suffix of a small street, such as SW.
(no) street-suffix WORD	Sets the suffix of a street, such as platz.
(no) number WORD	Sets the street number, such as number 123.
(no) street-number-suffix WORD	Sets the suffix of the street number, such as number 1/2 of A road.
(no) landmark WORD	Sets the landmark, such as Colombia University.
(no) additional-location WORD	Sets the additional location.
(no) name WORD	Sets the information about a resident, such as Joe's haircut shop.
(no) postal-code WORD	Sets the postal code.
(no) building WORD	Sets the information about a building.
(no) unit WORD	Sets the information about a unit.
(no) floor WORD	Sets the information about a floor.
(no) room WORD	Sets the information about a room.
(no) type-of-place WORD	Sets the type of a place, such as office.
(no) postal-community WORD	Sets the name of a postal office.
(no) post-office-box WORD	Sets the name of a postal box, such as 12345.
(no) additional-code WORD	Sets the additional code.
(no) country WORD	Sets the name of a country.
(no) script WORD	Sets the script.

Command Mode

Global configuration mode

Example

The following example shows how to set the civic information of identifier 1.

Switch_config#location civic identifier 1
Switch_config_civic#language English
Switch_config_civic#city Shanghai
Switch_config_civic#street Curie
Switch_config_civic#script EN
Switch_config_civic#quit
Switch_config#

1.1.15 location elin/civic id

Syntax

location elin/civic *id*

no location elin/civic

To set the location for a port, run location elin/civic id. To delete the location of a port, run no location elin/civic id.

Parameters

Parameters	Description
id	Stands for the ID of the to-be-set elin/civic, which ranges from 1 to 65535.

Default Value

None

Usage Guidelines

None

Command Mode

Port configuration mode

Example

The following example shows how to set the elin and the civic for a port.

Switch_config#int g0/8
Switch_config_g0/8#location elin 1
Switch_config_g0/8#location civic 1

1.1.16 show lldp errors

Syntax

show lldp errors

To display the error information about the LLDP module, run this command.

Parameters

None

Default Value

None

Usage Guidelines

None

Command Mode

EXEC/global configuration mode

Example

The following example shows how to check the error information of lldp module.

switch_config#show lldp errors
LLDP errors/overflows:
      Total memory allocation failures: 0
      Total encapsulation failures: 0
      Total table overflows: 0
switch_config#

1.1.17   show lldp interface

Syntax

show   lldp   interface   *interface-name*

To check the transmission and reception mode, run show lldp interface interface name.

Parameters

Parameters	Description
interface-name	The interrface name, for instance, "G0/1", "GigaEthernet0/1".

Default Value

None

Usage Guidelines

Only when lldp is enabled can the state of the port, the transmission and reception mode of lldp packets can be checked.

Command Mode

EXEC/global configuration mode

Example

The following example shows how to check the transmission and reception mode of port g0/1.

switch_config#show lldp interface g0/1
GigaEthernet0/1:
Rx: enabled

Tx: enabled
switch_config#

1.1.18　show lldp neighbors

Syntax

show lldp neighbors

To display the simple information about neighbors, run this command.

Parameters

None

Default Value

None

Usage Guidelines

The command is used to display the simple information about neighbor list, including Device-ID, Local-Intf, Hldtme, Port-ID and Capability.

Command Mode

EXEC/global configuration mode

Example

```
switch_config#show lldp neighbors
Capability Codes:
        (R)Router,(B)Bridge,(C)DOCsls Cable Device,(T)Telephone
        (W)WLAN Access Point, (P)Repeater,(s)station,(O)Other

Device-ID       Local-Intf      Hldtme      Port-ID     Capability
switch          Gig0/2          115         Gig0/32     B
switch          Gig0/32         114         Gig0/2      B

Total entries dispalyed: 2
switch_config#
```

1.1.19　show lldp neighbors detail

Syntax

show lldp neighbors detail

It is used to display the detailed information about the neighbor.

Parameters

None

Default Value

None

Usage Guidelines

None

Command Mode

EXEC/global configuration mode

Example

switch_config#show lldp neighbors detail

chassis id: 00e0.0f61.ca53
port id: Gig0/32
port description: GigaEthernet0/32
system name: switch

system description: s3448 software, Version 2.0.1K
serial: s35000456
Compiled: 2008-11-13 13:33:36 by 16170F032B9F

Time remaining: 98
system capabilities: R B
enabled capabilities: B
Managment Address:
    IP: 192.168.213.62

Auto Negotiation -- supported,enabled
Physical media capabilitise:
    100baseTX(FD)
    100baseTX(HD)
    10baseT(FD)
    10baseT(HD)
Media Attachment Unit type: 16

----

chassis id: 00e0.0f61.ca35
port id: Gig0/2
port description: GigaEthernet0/2
system name: switch

system description: s3448 software, Version 2.0.1K
serial: s35000456
Compiled: 2008-11-13 13:33:36 by 16170F032B9F

Time remaining: 95
system capabilities: R B
enabled capabilities: B
Managment Address:
    IP: 90.0.0.66

Auto Negotiation -- supported,enabled
Physical media capabilitise:
    100baseTX(FD)
    100baseTX(HD)
    10baseT(FD)
    10baseT(HD)
Media Attachment Unit type: 16

Total entries dispalyed: 2
switch#

1.1.20   show lldp traffic

Syntax

show lldp traffic

To display all statistics information about LLDP, run show lldp traffic.

Parameters

None

Default Value

None

Usage Guidelines

None

Command Mode

EXEC/global configuration mode

Example

switch_config#show lldp traffic
LLDP traffic statistics:
    Total frames out: 1599
    Total entries aged: 0
    Total frames in: 624
    Total frames received in error: 0
    Total frames discarded: 0
    Total TLVs unrecognized: 0
switch_config#

1.1.21 show location elin

Syntax

Show location elin

To display the elin configuration of the location, run the previous command.

Parameters

None

Default Value

None

Usage Guidelines

None

Command Mode

EXEC/global configuration mode

Example

Switch_config#show location elin
elin information:
   elin 2: 0987654321
   elin 1: 1234567890
total: 2
Switch_config#

1.1.22 show location civic [identifier *id*]

Syntax

show   location   civic   [identifier   *id*]

To display the civic information of the location, run the previous command.

Parameters

Parameters	Description
id	Stands for the ID of the to-be-set civic, which ranges from 1 to 65535.

Default Value

None

Usage Guidelines

None

Command Mode

EXEC/global configuration mode

Example

```
Switch_config#show location civic
civic address information:
    identifier: 2
    Language: Chinese
    Script: CN
------------------------------------
    identifier: 1
    City: Shanghai
    Language: English
    Script: EN
------------------------------------
total: 2
Switch_config#
```

1.1.23 clear lldp counters

Syntax

clear lldp counters

To clear the statistics information, run clear lldp counters.

Parameters

None

Default Value

None

Usage Guidelines

None

Command Mode

EXEC

Example

```
switch#clear lldp counters
switch#
switch#show lldp traffic
LLDP traffic statistics:
        Total frames out: 0
        Total entries aged: 0
        Total frames in: 0
        Total frames received in error: 0
        Total frames discarded: 0
        Total TLVs unrecognized: 0
```

switch#

switch#show lldp errors

LLDP errors/overflows:

    Total memory allocation failures: 0

    Total encapsulation failures: 0

    Total table overflows: 0

switch#

1.1.24　clear lldp table

Syntax

clear　lldp　table

To remove the neighbor list, run cleas lldp table.

Parameters

None

Default Value

None

Usage Guidelines

None

Command Mode

EXEC

Example

switch#clear lldp table
switch#
switch#show lldp neighbors
Capability Codes:
    (R)Router,(B)Bridge,(C)DOCsIs Cable Device,(T)Telephone
    (W)WLAN Access Point, (P)Repeater,(s)station,(O)Other

Device-ID   Local-Intf   HIdtme   Port-ID   Capability

Total entries displayed: 0

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