

How to create **Static & Dynamic Link Aggregation Group** via NETSNMP in **DGS-3200 series?**

The OIDs are defined in **“L2MGMT-MIB”**.

[\[DGS-3200-10_F/W_R1.62.B021\]](#)

swL2TrunkCtrlTable

Object name	swL2TrunkCtrlTable
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.3
Module	DGS3200-L2MGMT-MIB
Base syntax	Sequence Of swL2TrunkCtrlEntry
Access	Not_Accessible
Status	Current
Sequence	1:swL2TrunkIndex - Integer 2:swL2TrunkMasterPort - Integer 3:swL2TrunkMember - Octet String 4:swL2TrunkType - Integer 5:swL2TrunkState - Integer 6:swL2TrunkActivePort - Octet String
Parent node	swL2TrunkMgmt
First child	swL2TrunkCtrlEntry
Description	This table specifies which ports group a set of ports(up to 8) into a single logical link.

swL2TrunkCtrlEntry

Object name	swL2TrunkCtrlEntry
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.3.1
Module	DGS3200-L2MGMT-MIB
Base syntax	Sequence
Access	Not_Accessible
Status	Current
Index	1:swL2TrunkIndex
Parent node	swL2TrunkCtrlTable
First child	swL2TrunkIndex
Description	A list of information that specifies which ports group a set of ports(up to 8) into a single logical link.

swL2TrunkIndex

Object name	swL2TrunkIndex
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.3.1.1
Module	DGS3200-L2MGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Current
Value list	1 : 0..5
Parent node	swL2TrunkCtrlEntry
First child	None
Description	The index number of the logical port trunk group. The trunk group number depends on the existence of unit and module.

swL2TrunkMasterPort

Object name	swL2TrunkMasterPort
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.3.1.3
Module	DGS3200-L2MGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : 1..65535
Parent node	swL2TrunkCtrlEntry
First child	None
Description	The object indicates the master port number of the port trunk entry. When using Port Trunk, you cannot configure the other ports of the group except the master port. Their configuration must be same as the master port (e.g. speed, duplex, enabled/disabled, flow control, and so on).

swL2TrunkMember

Object name	swL2TrunkMember
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.3.1.4
Module	DGS3200-L2MGMT-MIB
Base syntax	Octet String
Composed syntax	PortList
Access	Read-Create
Status	Current
Value list	1 : 0..127
Parent node	swL2TrunkCtrlEntry
First child	None
Description	Indicates the number of ports included in this Trunk group. The trunk port number depends on the existence of the module. The maximum number of ports is 8 for one trunk group.

swL2TrunkType

Object name	swL2TrunkType
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.3.1.6
Module	DGS3200-L2MGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : other(1) 2 : static(2) 3 : lacp(3)
Parent node	swL2TrunkCtrlEntry
First child	None
Description	This object indicates the type of trunk group. static : is static trunk group lacp : is LACP trunk group .

swL2TrunkState

Object name	swL2TrunkState
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.3.1.7
Module	DGS3200-L2MGMT-MIB
Base syntax	Integer
Composed syntax	RowStatus
Access	Read-Create
Status	Current
Value list	1 : active(1) 2 : notInService(2) 3 : notReady(3) 4 : createAndGo(4) 5 : createAndWait(5) 6 : destroy(6)
Parent node	swL2TrunkCtrlEntry
First child	None
Description	This object indicates the status of this entry.

swL2TrunkActivePort

Object name	swL2TrunkActivePort
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.3.1.8
Module	DGS3200-L2MGMT-MIB
Base syntax	Octet String
Composed syntax	PortList
Access	Read-Only
Status	Current
Value list	1 : 0..127
Parent node	swL2TrunkCtrlEntry
First child	None
Description	The object indicates the active port of a special trunk group.

swL2TrunkAlgorithm

Object name	swL2TrunkAlgorithm
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.4
Module	DGS3200-L2MGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : other(1) 2 : mac-source-dest(4) 3 : ip-source-dest(7)
Parent node	swL2TrunkMgmt
First child	None
Description	This object configures to part of the packet examined by the switch when selecting the egress port for transmitting load-sharing data.

Addition to Dynamic Link Aggregation

swL2TrunkLACPPortTable

Object name	swL2TrunkLACPPortTable
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.5
Module	DGS3200-L2MGMT-MIB
Base syntax	Sequence Of swL2TrunkLACPPortEntry
Access	Not_Accessible
Status	Current
Sequence	1:swL2TrunkLACPPortIndex - Integer 2:swL2TrunkLACPPortState - Integer
Parent node	swL2TrunkMgmt
First child	swL2TrunkLACPPortEntry
Description	This table specifies which ports group a set of ports(up to 8) into a single logical link.

swL2TrunkLACPPortEntry

Object name	swL2TrunkLACPPortEntry
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.5.1
Module	DGS3200-L2MGMT-MIB
Base syntax	Sequence
Access	Not_Accessible
Status	Current
Index	1.swL2TrunkLACPPortIndex
Parent node	swL2TrunkLACPPortTable
First child	swL2TrunkLACPPortIndex
Description	A list of information specifies which ports group a set of ports(up to 8) into a single logical link.

swL2TrunkLACPPortIndex

Object name	swL2TrunkLACPPortIndex
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.5.1.1
Module	DGS3200-L2MGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Current
Value list	1 : 0.65535
Parent node	swL2TrunkLACPPortEntry
First child	None
Description	The index of logical port LACP.

swL2TrunkLACPPortState

Object name	swL2TrunkLACPPortState
Object ID	1.3.6.1.4.1.171.11.101.1.2.9.5.1.2
Module	DGS3200-L2MGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : active(1) 2 : passive(2)
Parent node	swL2TrunkLACPPortEntry
First child	None
Description	The state of logical port LACP.

[Example for Static LAG]

CLI command :

Step1 =>

create link_aggregation **group_id 2 type static**

Step2 =>

config link_aggregation **group_id 2 master_port 1:3 ports 3-4 state enable**

Step3 =>

config link_aggregation **algorithm ip_destination**

NETSNMP :

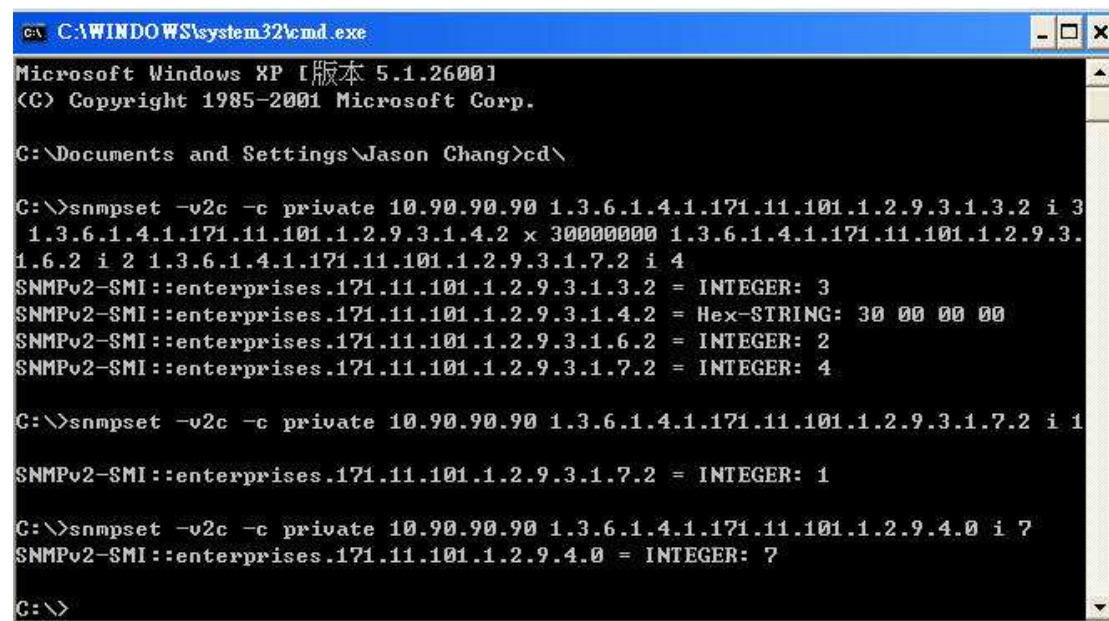
For CLI Step1 & Step2 =>

```
snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.101.1.2.9.3.1.3.2 i 3
1.3.6.1.4.1.171.11.101.1.2.9.3.1.4.2 x 30000000 1.3.6.1.4.1.171.11.101.1.2.9.3.1.6.2 i
2 1.3.6.1.4.1.171.11.101.1.2.9.3.1.7.2 i 4 => createAndGo (4)
```

```
snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.101.1.2.9.3.1.7.2 i 1 =>
active(1)
```

For CLI Step3 =>

```
snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.101.1.2.9.4.0 i 7 =>
ip-source-dest(7)
```



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [版本 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Jason Chang>cd\

C:\>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.101.1.2.9.3.1.3.2 i 3
1.3.6.1.4.1.171.11.101.1.2.9.3.1.4.2 x 30000000 1.3.6.1.4.1.171.11.101.1.2.9.3.
1.6.2 i 2 1.3.6.1.4.1.171.11.101.1.2.9.3.1.7.2 i 4
SNMPv2-SMI::enterprises.171.11.101.1.2.9.3.1.3.2 = INTEGER: 3
SNMPv2-SMI::enterprises.171.11.101.1.2.9.3.1.4.2 = Hex-STRING: 30 00 00 00
SNMPv2-SMI::enterprises.171.11.101.1.2.9.3.1.6.2 = INTEGER: 2
SNMPv2-SMI::enterprises.171.11.101.1.2.9.3.1.7.2 = INTEGER: 4

C:\>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.101.1.2.9.3.1.7.2 i 1
SNMPv2-SMI::enterprises.171.11.101.1.2.9.3.1.7.2 = INTEGER: 1

C:\>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.101.1.2.9.4.0 i 7
SNMPv2-SMI::enterprises.171.11.101.1.2.9.4.0 = INTEGER: 7

C:\>
```

DGS-3200-10 Gigabit Ethernet Switch
Command Line Interface

Firmware: Build 1.62.B021

Copyright(C) 2009 D-Link Corporation. All rights reserved.

UserName:

Password:

DGS-3200-10:4#reset config

Command: reset config

Are you sure you want to proceed with system reset?(y/n) y

Success.

DGS-3200-10:4#enable snmp

Command: enable snmp

Success.

DGS-3200-10:4#show link_aggregation

Command: show link_aggregation

Link Aggregation Algorithm = MAC-Source-Dest

There is no aggregated link created.

DGS-3200-10:4#

DGS-3200-10:4#show link_aggregation

Command: show link_aggregation

Link Aggregation Algorithm = IP-Source-Dest

Group ID	:	2
Type	:	TRUNK
Master Port	:	3
Member Port	:	3-4
Active Port	:	
Status	:	Enabled

Total Entries : 1

DGS-3200-10:4#

[Example for Dynamic LAG]

Just modify the parameter of **OID # swL2TrunkType 1.3.6.1.4.1.171.11.101.1.2.9.3.1.6** from **static(2)** to **lACP(3)**.

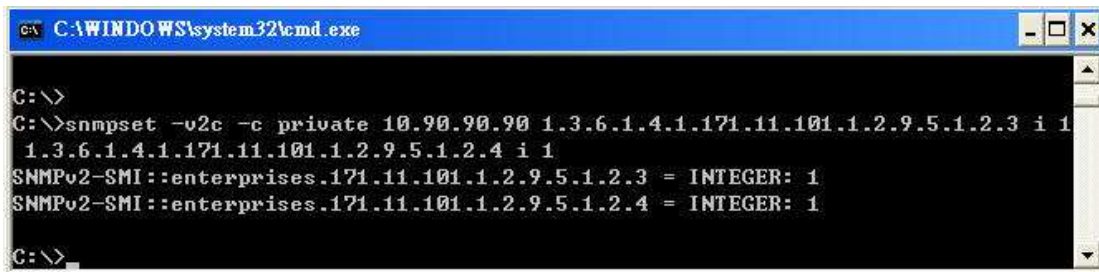
Configure LACP ports to be active

CLI command :

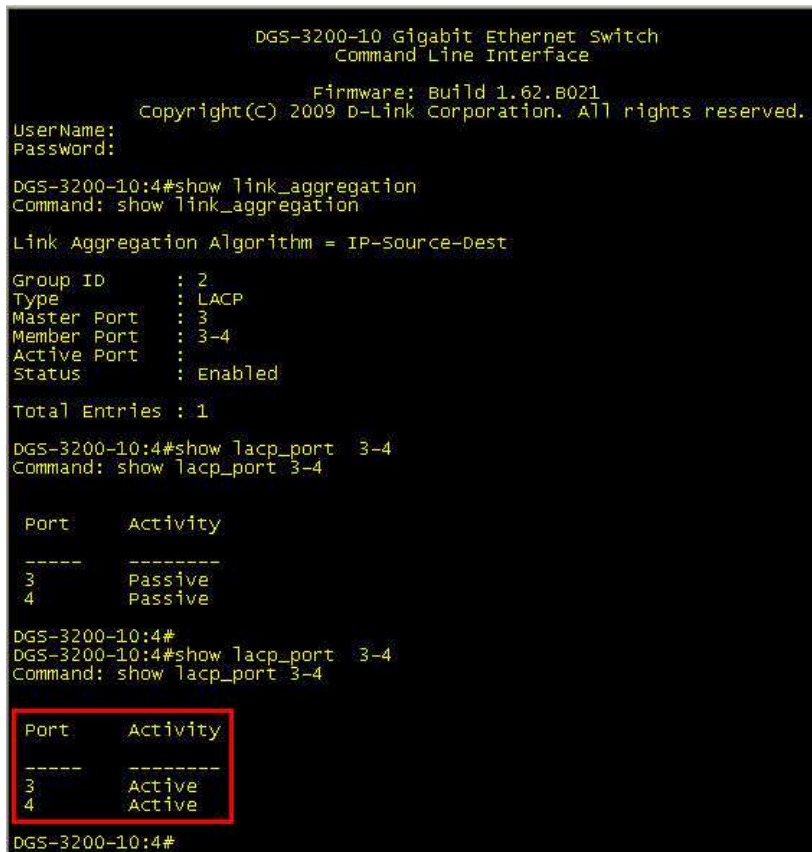
config lacp_port 3-4 mode **active**

NETSNMP :

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.101.1.2.9.5.1.2.3 **i 1**
1.3.6.1.4.1.171.11.101.1.2.9.5.1.2.4 **i 1**



```
C:\WINDOWS\system32\cmd.exe
C:\>
C:\>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.101.1.2.9.5.1.2.3 i 1
1.3.6.1.4.1.171.11.101.1.2.9.5.1.2.4 i 1
SNMPv2-SMI::enterprises.171.11.101.1.2.9.5.1.2.3 = INTEGER: 1
SNMPv2-SMI::enterprises.171.11.101.1.2.9.5.1.2.4 = INTEGER: 1
C:\>
```



```
DGS-3200-10 Gigabit Ethernet Switch
Command Line Interface

Firmware: Build 1.62.B021
Copyright(C) 2009 D-Link Corporation. All rights reserved.
UserName:
Password:

DGS-3200-10:4#show link_aggregation
Command: show link_aggregation

Link Aggregation Algorithm = IP-Source-Dest
Group ID      : 2
Type          : LACP
Master Port   : 3
Member Port   : 3-4
Active Port   :
Status        : Enabled

Total Entries : 1

DGS-3200-10:4#show lacp_port 3-4
Command: show lacp_port 3-4

Port    Activity
-----
3        Passive
4        Passive

DGS-3200-10:4#
DGS-3200-10:4#show lacp_port 3-4
Command: show lacp_port 3-4

Port    Activity
-----
3        Active
4        Active

DGS-3200-10:4#
```