Document Version	V 1.0

CCSP Switch Control Command Syntax Specification

Modification History

Revision	Date	Comments
V 1.0	06/23/2014	First Draft

Table of Contents

1 Introduction

Multi-LAN management requires extensive configuration of Ethernet switch in the system to organize different ports in the system, including but not limited to, Ethernet (external and internal), WiFi SSIDs, MoCA, into different VLANs.

Switch control command utility is provided as “swctl”. The command line utility is used by variant scripts. This specification defines the syntax of this command.

2 Design Considerations

This command is used by existing CCSP scripts. It was designed to address dual switches: internal and external. The internal switch connects two processors, network and application processors, in additional to MoCA port and external switch. The external switch is consisted of 4 external Ethernet ports and the port connecting to internal switch.

For a system not following this hardware architecture, the command should be implemented in the way to map the commands to fit the underlying architecture. For example, for a system with just a single switch, the commands of internal and external switches should be mapped to operate on the single switch and the commands of configuring External-to-Internal port/Internal-to-External port should take no effects.

The assigned ports of both switches are as follows:

External Switch

Ethernet Port 1:	0
Ethernet Port 2:	1
Ethernet Port 3:	2
Ethernet Port 4:	3
External-to-Internal port:	5

Internal Switch:

MoCA Port:	3
Application Processor Port:	0
Network Processor Port:	7
Internal-to-External port:	2

3 Command Syntax

3.1 General

The command syntax is:

swctl [-l<log level>] [-c<command>] [-p<port>] [-v<vid>] [-m<member tag >] [-a <mode>] [-q <mode>]

The arguments are:
-l log level
1 - error
2 - info
3 - verbose

-c command number: numeric commands. See the command section for details.

The following arguments are different based on the exact command issued.
-p Port number
-v VLAN number (1-4095)
-m Member port's egress VLAN tag processing:
0=UNMODIFIED, tag is intact
1=UNTAGGED, tag is stripped
2=TAGGED, tag is added
-a Admin Mode 1=UP/Enable, 2=DOWN/Disable
-q VLAN mode. Always use 1=FALLBACK

3.2 Commands

3.2.1 External Switch Add VLAN

The syntax is: -c 0 -p <port> -v <vid> -m <member tag> -q <mode>

3.2.2 External Switch Delete VLAN

The syntax is: -c 1 -p <port> -v <vid>

3.2.3 External Switch Enable VLAN

The syntax is: -c 4 -p <port>

3.2.4 External Switch Disable VLAN

The syntax is: -c 5 -p <port>

3.2.5 External Switch Enable Egress Flood Mitigation

The syntax is: -c 11 -p <port> -r 4 -b 0x007b.

This command prevents flooding of unknown MAC addresses. Note, "-r 4 -b 0x007b" is used as the magic number.

3.2.6 Internal Switch Add VLAN

The syntax is: -c 16 -p <port> -v <vid> -m <member tag> -q <mode>

3.2.7 Internal Switch Delete VLAN

The syntax is: -c 17 -p <port> -v <vid>

3.2.8 Internal Switch Enable VLAN

The syntax is: -c 20 -p <port>

3.2.9 Internal Switch Disable VLAN

The syntax is: -c 21 -p <port>

3.2.10 Internal Switch Set Static MAC Address

The syntax is: -c 23 -p <port> -s <mac address xx:xx:xx:xx:xx:xx>

This command add the specified MAC address into the MAC address learning table of the switch

3.2.11 External Switch Set Default VLAN

The syntax is: -c 34 -p <port> -v <vid> -f <force>

This command sets the default VLAN for external switch. “-f” indicates whether VLAN tags in all incoming packets are stripped and default VLAN tag is applied. The value for <force> is, 1 – true, 0 – false.

End of Document