About this Guide

Revised: May 10, 2013, OL-26805-02

Introduction

This *Cisco Service Control for Managing Remote Cable MSO Links Solution Guide* describes the use of a Cisco Service Control solution in a cable environment to optimize traffic on remote links. It describes the setup of a solution that uses the Virtual Link Manager (VLM) to enable traffic optimization of remote links, and the monitoring of that solution after deployment.

This guide assumes a basic familiarity with the concept of the Cisco Service Control solution, the Cisco Service Control Engine (Cisco SCE) platforms, and related components.

Document Revision History

The following Document Revision History table records the changes made to this document.

Table 1   Document Revision History

Revision	Cisco Service Control Release and Date	Change Summary
OL-26805-02	Release 3.8.5 May 10, 2013	Updated "Configuring Virtual Link Global Controllers" section on page 4-5

OL-26805-02	Release 3.8.5
	December 21, 2012
		Release 3.8.5 updates:
		• Added the following section to the "DOCSIS 3.0 Support" chapter:
		   – "Prioritizing Subscriber Association to Bonding Groups" section on page 4
		• Added the following sections to the "Learning Interface Topology and Association" chapter:
		   – "Learning Cable Interfaces Associated Directly to a MAC Domain" section on page 5
		   – "Auto Convergence of Subscriber-GIADDR Association from the CMTS" section on page 5
		   – "Refreshing Vlinks on Receiving CPE Messages" section on page 5
		   – "Refreshing VLinks Periodically on Polling CMTS" section on page 5
		   – "Refreshing Subscribers with Default VLink IDs on Learning New Interfaces" section on page 6
		   – "VLink Association of Subscribers Introduced Through the DHCP Lease Query LEG" section on page 6
		   – "Ignoring IP Addresses Updated Through the IPDR LEG" section on page 7
		• Updated the "VLM Device Learning—Limitations" section on page 8.
		• Added the snmp_port parameter to the [Device.<device name>] section in the "Configuring the Virtual Links Manager" section on page 16.

Table 1   Document Revision History (continued)

Revision	Cisco Service Control Release and Date	Change Summary

		• Added the following parameters to the [General] section in the "Configuring the Virtual Links Manager" section on page 16:
		  – ignore_duplicate_ip
		  – import_subs_into_db_on_device_add
		  – time_interval_for_periodic_snmp_bg_query
		  – vlink_mode_for_periodic_snmp_bg_query
		  – subscriber_mode_for_periodic_snmp_bg_query
		• Added the following commands to the "Monitoring Using the p3vlink Utility" section on page 3:
		  – **--import-subs-into-db -d** *<device name>*
		  – **--import-subs-into-db -d** *<device name>* **-o** <file name>
		  – **--snmp-bg-query -d** *<device-name>* **-m** <mode>
		• Updated the following option in the "Monitoring Using the p3vlink Utility" section on page 3:
		  – **--file-name**

OL-26805-01	Release 3.8.x September 26, 2012	First version of this document (new for the Release 3.8.x train).

Organization

This guide contains the following sections.

Table 2   *Document Organization*

Section	Title	Description
Chapter 1	Remote Cable MSO Links Solution Overview	Provides an overview of the Remote Cable MSO Solution.
Chapter 2	DOCSIS 3.0 Support for Remote Cable MSO Links Solution	Describes the Cisco Service Control for Managing Remote Cable MSO Links Solution is enhanced with new features that are consistent with DOCSIS 3.0 specifications.
Chapter 3	Learning Interface Topology and Association	Describes learning of interface topology and association of the remote cable MSO links solution.
Chapter 4	Configuring the Remote Cable MSO Links Solution	Describes: • Basic topology for managing remote cable MSO links and the high-level steps to configure the solution • Prerequisites for configuring a solution that uses traffic optimization on remote links with the VLM • Configuring the VLM by using the configuration files contained in the Subscriber Manager installation
Chapter 5	Managing the Remote Cable MSO Links Solution	Describes the three monitoring mechanisms that you can use to monitor the traffic optimization on remote links solution.
Chapter 6	Troubleshooting the Remote Cable MSO Links Solution	Describes several problem scenarios that you may encounter when using the solution.

Conventions

This document uses the following conventions.

Table 3 *Conventions*

Convention	Indication
bold font	Commands and keywords and user-entered text appear in **bold** font.
italic font	Document titles, new or emphasized terms, and arguments for which you supply values are in *italic* font.
[ ]	Elements in square brackets are optional.
{x	y	z }	Required alternative keywords are grouped in braces and separated by vertical bars.
[x	y	z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	Nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
courier font	Terminal sessions and information the system displays appear in courier font.
< >	Nonprinting characters such as passwords are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

Note Means *reader take note*.

Tip Means *the following information will help you solve a problem*.

Caution Means *reader be careful*. In this situation, you might perform an action that could result in equipment damage or loss of data.

Timesaver Means *the described action saves time*. You can save time by performing the action described in the paragraph.

Warning **Means *reader be warned*. In this situation, you might perform an action that could result in bodily injury.**

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