Introduction

This section introduces the SPECTRUM Device Management documentation for the Cisco Service Level Agreement Manager (SLAM).

This introduction contains the following topics:

- **Purpose and Scope**
- **Required Reading**
- **Supported Devices** (Page 5)
- **The SPECTRUM Model** (Page 5)

**Purpose and Scope**

Use this document as a guide for managing the Cisco SLAM devices described on Page 5 with SPECTRUM management module SM-CIS1013. This document describes the icons, menus, and views that enable you to remotely monitor, configure, and troubleshoot Cisco SLAM devices through software models in your SPECTRUM database.

Information specific to SM-CIS1013 is what is primarily included in this document. For general information about device management using SPECTRUM and explanations of SPECTRUM functionality and navigation techniques, refer to the topics listed under **Required Reading**.

**Required Reading**

To use this documentation effectively, you must be familiar with the information covered by the other SPECTRUM online documents listed below.

- **Getting Started with SPECTRUM for Operators**
- **Getting Started with SPECTRUM for Administrators**
- **How to Manage Your Network with SPECTRUM**
- **SPECTRUM Views**
- **SPECTRUM Menus**
- **SPECTRUM Icons**
- **SPECTRUM Software Release Notice**
Supported Devices
SPECTRUM management module SM-CIS1013 currently lets you model the Cisco SLAM.
This software application allows you to access the services and features of the Cisco Service Level Agreement Manager (SLAM) through a Cisco-written XML (Extensible Markup Language) interface.

The SPECTRUM Model
The model type for the Cisco SLAM devices is CiscoSLM.
Modeling results in the creation of Device icons that represent the device inside of SPECTRUM.
Figure 1 shows the appearance of the Device icon.

**Note:** Alarms for models of CiscoSLM are Disabled by default. When alarms are disabled, loss of contact results in the model transitioning to a suppressed state which is reflected by the icon turning gray. This alarm functionality can be enabled globally by setting the Enable_Alarms attribute to TRUE in the database.
This section provides a brief description of the SLC List view.

Access: From the Icon Subviews menu for the Device icon, select SLC List.

The Service Level Contract List view (SLC) provides specific information on each of the service contract agreements. Figure 2 displays an example of the SLC List view.

This view provides the following information:

SLC Handle
A number assigned to each service contract.

Name
The name of each service contract. Double-click an entry in this column to launch the SLC Contract view.

Last Modified Time
The last time a service contract was modified.

Figure 2: Cisco SLAM SLC View
Service Level Contract View

Access: From the SLC List view, double-click any entry in the Name field.

This view contains the following information.

SLA Handle
The number of the Service Level Agreement associated with the SLC.

Name
The name of the Service Level Agreement.

Last Modified Time
the ddmmmy that this field was updated.

Apply Times
The days of the week and time that the SLA apply. For example, you can have the SLA apply Monday through Friday 9:00 a.m. to 5:00 p.m.

Each entry in the name field will launch one of these five views:

- DNS Metric View
- UDP Metric View (Page 8)
- HTTP Metric View (Page 10)
- ICMP Metric View (Page 11)
- VOIP Metric View (Page 12)

These views are described in the rest of this section.

DNS Metric View

Access: Double-click any entry in the Name field of the Service Level Contract View.

The DNS Metric measures the response time of a DNS server. A DNS request is sent from the SAA device to a specific DNS server to resolve the user specified IP address.

This view provides the following information.

Metric Values

Sampling Interval
An interval that a DNS probe should be sent in minutes. Allowed values are: 1, 5, 10, 15, or 30 minutes. The default is 5 minutes.

Test IP Address
The address to use in the DNS reverse name lookup test. If not included, the address of the SLM server host will be used.

Avg. Hourly Latency
The threshold value for the average hourly latency. The number should be a whole number representing latency in milliseconds.

Avg. Daily Latency
The threshold value for the average daily latency. The number should be a whole number representing latency in milliseconds.
**Daily Availability**
The expected availability percentage for any given day. The number should be a floating point number such as 99.9 or 92.50. The possible range is 0.00 to 100.00.

**Monthly Availability**
The expected availability percentage for any given month. The number should be a floating point number such as 99.9 or 92.50. The possible range is 0.00 to 100.00.

**Device Spec. List**

**Source Device**
This is the SAA compatible device that will send a DNS probe to the DNS server. The DNS Source Device must already be in existence in the RME inventory database and supported by the SAA.

**Target Device**
The domain name of the DNS server to test.

**Create Time**
The time the server pair was add to the Service Level Agreement. The SLM will fill in the field. This field helps the reporting framework know how much historical data is available.

**UDP Metric View**

**Access:** Double-click on any entry in the Name field for the Service Level Contract View.

This metric is primarily used to measure the UDP latency between two devices. It differs from the ICMP Metric in that it is using the UDP Protocol rather than IP. In addition to latency, this metric allows users to monitor availability, MTBF, and MTTR of the path between two devices.

This view contains the following information.

**Metric Values**

**Sampling Interval**
An interval that an UDP probe should be sent in minutes. Allowed values are: 1, 5, 10, 15, or 30 minutes. The default is 5 minutes.

**Payload Size**
The number of bytes to include in the data section of the UDP packet. This must be between 28 and 1500 octets. The default is 64.

**Type of Service (TOS)**
The type of Service value for the UDP probe packet. This can be a number from 0 to 63. The default is 0.
**UDP Port**
The port number on the target device to which the packets will be sent. The default is 7.

**Avg. Hourly Latency**
The threshold value for the average hourly latency. The number should be a whole number representing latency in milliseconds.

**Avg. Daily Latency**
The threshold value for the average daily latency. The number should be a whole number representing latency in milliseconds.

**Daily Availability**
The expected availability percentage for any given day. The number should be a floating point number such as 99.9 or 92.50. The possible range is 0.00 to 100.00.

**Monthly Availability**
The expected availability percentage for any given month. The number should be a floating point number such as 99.9 or 92.50. The possible range is 0.00 to 100.00.

**Device Spec. List**

**Source Device**
This is the SAA compatible device that will send a probe to the server. The device must already be in existence in the RME inventory database and supported by the SAA.

**Target Device**
The fully qualified domain name of the target device.

**Create Time**
The time the server pair was added to the Service Level Agreement. The SLM will fill in the field. This field helps the reporting framework know how much historical data is available.
HTTP Metric View

Access: Double-click any entry in the Name field for the Service Level Contract View.

The HTTP Metric is used to measure the response time of the web server. An HTTP request is sent from the SAA device to a specified web server to retrieve a user specific response time, the HTTP metric allows the user to monitor availability of the web server.

This view contains the following information.

Metric Values

Sampling Interval
An interval that an HTTP probe should be sent in minutes. Allowed values are: 1, 5, 10, 15, or 30 minutes. The default is 5 minutes.

Proxy Server
The hostname of the proxy server to be used for the target device. If the element is blank, then no proxy server is used.

Name Server
The name of the server that the SAA source device should use to resolve the HTTP server’s hostname. If this field is blank, then no proxy server is used.

Type of Service (TOS)
The type of Service value for the HTTP probe packet. This can be a number from 0 to 63. The default is 0.

Cache Enabled
Defines whether the HTTP Server should use its cache. Possible values are True or False. The default is False.

Avg. Hourly Latency
The threshold value for the average hourly latency. The number should be a whole number representing latency in milliseconds.

Avg. Daily Latency
The threshold value for the average daily latency. The number should be a whole number representing latency in milliseconds.

Daily Availability
The expected availability percentage for any given day. The number should be a floating point number such as 99.9 or 92.50. The possible range is 0.00 to 100.00.

Monthly Availability
The expected availability percentage for any given month. The number should be a floating point number such as 99.9 or 92.50. The possible range is 0.00 to 100.00.
Device Spec. List

Source Device
This is the SAA compatible device that will send a probe to the server. The device must already be in existence in the RME inventory database and supported by the SAA.

Target Device
The domain name of the HTTP server to test.

Create Time
The time the server pair was added to the Service Level Agreement. The SLM will fill in the field. This field helps the reporting framework to know how much historical data is available.

ICMP Metric View

Access: Double-click any entry in the Name field for the Service Level Contract view.

The metric is used to define the source and destination of devices with ICMP.

This view contains the following information.

Metric Values

Type of Service (TOS)
The type of Service value for the ICMP probe packet. This can be a number from 0 to 63. The default is 0.

Sampling Interval
An interval that an ICMP probe should be sent in minutes. Allowed values are: 1, 5, 10, 15, or 30 minutes.

Payload Size
The number of bytes to include in the data section of the ICMP packet. This must be between 28 and 1500 octets. The default is 64.

Avg. Hourly Latency
The threshold value for the average hourly latency. The number should be a whole number representing latency in milliseconds.
Avg. Daily Latency
The threshold value for the average daily latency. The number should be a whole number representing latency in milliseconds.

Daily Availability
The expected availability percentage for any given day. The number should be a floating point number such as 99.9 or 92.50. The possible range is 0.00 to 100.00.

Monthly Availability
The expected availability percentage for any given month. The number should be a floating point number such as 99.9 or 92.50. The possible range is 0.00 to 100.00.

Device Spec. List
Source Device
This is the SAA compatible device that will send a probe to the server. The device must already be in existence in the RME inventory database and supported by the SAA.

Target Date
The fully qualified domain name of the target device server.

Create Time
The time the server pair was added to the Service Level Agreement. The SLM will fill in this field.

VOIP Metric View
Access: Double-click any entry in the Name field for the Service Level Contract View.

This metric is used to measure the jitter between two SAA devices.

This view contains the following information.

Metric Values
Sampling Interval
An interval that the jitter probe should be sent in minutes. Allowed values are: 1, 5, 10, 15, or 30 minutes.

Inter-Packet Interval
The time in milliseconds between each packet (this is called Inter-Packet Delay in GUI). This value must be between 1 and 6000 milliseconds. The default is 20 milliseconds.

Packets Per Sample
The number of packets to send each interval. The default is 10 packets.
**Type of Service (TOS)**
The type of Service value for the VOIP probe packet. This can be a number from 0 to 63.

**Source Port**
The port number to send the packets out of on the Source Device. The typical address range shown is 8020-8050. The default is 8020.

**Target Port**
The port number to send the packets to on the Target Device. The typical address range used by SLM is 8020-8050. The default is 8020.

**Payload Size**
The size of the data portion of each packet (in octets). This must be between 16 and 1500. The default is 64.

**Enable Control**
Allows the SAA control packets to enable the desired listening port on the target SAA device. If the port has already been enabled via the SAA control, this is not required. The default is True.

**Jitter**
The threshold for positive and (absolute) negative jitter in milliseconds. The default is 75 milliseconds. This is a positive integer.

**Packet Loss**
Maximum packet loss as a percentage of traffic, averaged over an hour. The default value is 2.50%. The number should be a floating point number like 1.9 or 2.50. The valid range is 0.00 to 100.00.

**Round Trip Latency**
The threshold value of the average hourly latency. The number should be a whole number representing latency in milliseconds. (e.g 60, 1000).

**Device Spec. List**

**Source Device**
This is the SAA compatible device that will send a probe to the server. The device must already be in existence in the RME inventory database and supported by the SAA.

**Target Device**
The fully qualified domain name of the target device.

**Create Time**
The time the server pair was added to the Service Level Agreement. The SLM will fill in the field.
This section provides a brief overview of the Model Information view.

This view displays administrative information about the device and its applications and lets you set thresholds and alarm severity for the device.

Figure 3 shows a CiscoSLM Model Information view. For models of Cisco SLAM devices, this view contains the additional device-specific information described under SLAM Administration (Page 15). Refer to the SPECTRUM Views documentation for a complete description of this view.

Figure 3: Cisco_SLM Model Information View
SLAM Administration

SLAM User Name
The SLM server login user name.

SLAM Port
The port number (if applicable) of the machine on which the SLM server is installed.

SLAM Password
The SLM server login password.

Base64 Encoded Pass.
The SLM server login password encoded using BASE64 encoding.
Index

A
Alarms for CMs 5
Apply Times 7
Avg. Daily Latency 7, 9, 10, 12
Avg. Hourly Latency 7, 9, 10, 11

C
Cache Enabled 10
Cisco Service Level Agreement Manager (SLAM) 5
CiscoSLM 5
Create Time 8, 9, 11, 12, 13

D
Daily Availability 8, 9, 10, 12
DNS Metric 7
Documentation 4

E
Enable Control 13
Enable_Alarms, attribute 5

H
Hardware 5

I
Icons
Device 5
Inter-Packet Interval 12

J
Jitter 13

L
Last Modified Time 6, 7

M
Metric Values
DNS 7
HTTP 10
ICMP 11

N
Name 6, 7
Name Server 10

P
Packet Loss 13
Packets Per Sample 12
Payload Size 8, 11, 13
Proxy Server 10

R
Round Trip Latency 13