Introduction

Cisco Systems Inc. offers the Cisco 6400 SCM software, providing simplified Asynchronous Transfer Mode (ATM) and Layer 2 and 3 IP services to access servers and Digital Subscriber Line Access Multiplexers (DSLAMs) through network and service management of the Cisco 6400 Universal Access Concentrator (UAC) hardware.

The next generation internet access environment combines multiple forms of narrowband and broadband access with common core-services and deployment. Rapid deployment of these complex access networks to serve millions of subscribers is known as Telephony Scale Data Networking (TSDN). The Cisco 6400 SCM is the first of a new generation of products addressing the need for service aggregation in TSDN deployments. The Cisco 6400 SCM provides integrated management capabilities through a simplified, service-oriented user interface.

The Cisco 6400 UAC plays an integral part in the network architecture. It is located within the service provider's infrastructure and acts as a central point of control for Layer 2 and Layer 3 services. These services may include ATM Virtual Channel Connections (VCCs); Point to Point Protocol (PPP) tunneling via Layer 2 Tunneling Protocol (L2TP); or PPP termination into local routing and to local or cached content.

The Cisco 6400 SCM assists you in making network connections by eliminating the need to have Simple Network Management Protocol (SNMP) and Internet Operating System (IOS) technical knowledge of the commands required to establish these connections. It also streamlines the deployment process for the Cisco 6400 UAC. The Cisco 6400 SCM provides a service-oriented management view of the Cisco 6400 UACs inbound and outbound connections.

Key Features of the Cisco 6400 SCM

- Requires minimal user knowledge of the underlying IOS system and SNMP commands

- You can manually pre-provision the Cisco 6400 Chassis Node Switch Processor (NSP) module, Node Route Processor module (NRP) and DS3/OC3 Node Line Card (NLC) in the management system before actual installation and advise the system to automatically detect its presence and initiate management after physical installation and configuration.

- You can utilize the auto-discovery feature to identify new Cisco 6400s and view their detailed hardware configuration after physical installation.

- You can utilize automatically constructed maps that represent the Cisco 6400 components.

- You can configure the Cisco 6400 using service-oriented terms such as subscribers, services and connections, eliminating the need to understand the underlying network fabric.

- You can create and manage subscribers rather than Cisco 6400 ports and PVC.

- You can create and manage services.

- You can create connections through a service/subscriber-oriented user interface, eliminating the need for technical knowledge of IOS commands and SNMP/MIB variables that underlie the configuration of each connection.

- You can define Cisco 6400-based service profiles which can be applied to services.

- You can define Cisco 6400 subscriber QoS (Quality Of Service), which are assigned to subscribers and used when connecting subscribers to services.

- You can view alarms generated by the Cisco 6400 as color-coded icons on network maps.

- You can access FCAPS functionality (supported through SNMP) through tabbed windows within the Cisco 6400 SCM application.

- You can perform mass concurrent operations to any number of Cisco 6400 components (NSPs, NRPs, and NLCs), simplifying management of a large deployment of Cisco 6400s.

- You can access Cisco MIBs and element management functionality provided with the Cisco 6400 (such as the DSL deployment MIB).

- You can analyze historical information with the **Event Browser** or the **Performance Manager**.

- Provides simple, quick and flexible installation alternatives, including pre-deployment wizard and auto-discovery

- Supports configuration of QoS and service definitions in accordance with service provider policies and products

- Reduces the opportunity for error in establishing service parameters through the use of profiles

- Minimizes set up time and cost for each Cisco 6400

- Minimizes connection installation time providing rapid service availability to new subscribers

- Minimizes downtime through assurance tools for fault determination and pro-active troubleshooting

- Provides the capability to achieve Telephony Scale Data Networking (TSDN) deployments

New For Release 1.3

Release 1.3 of the Cisco 6400 SCM software provides the following additional features:

- Support for the global configuration of 6400 SSG (Vulcan) NRP card (an IOS 12.0(3) feature)

- Support for the RFC1483 routing service

- Support for the PPP Termination aggregation to Multiple Domains (PTA-MD) service

- Support for the Routed Bridged Encapsulation (RBE) service (an IOS 12.0(5) feature)

- Support for operator defined SNMP community names

Overview of the Cisco 6400 Chassis

The Cisco 6400 uses an eight-slot, modular chassis featuring the option of half-height and full-height card and slot redundancy along with dual, fault-tolerant, load-sharing AC or DC power supplies. The central slots (slot 0A and 0B) in the Cisco 6400 are dedicated to redundant, field-replaceable node switch processor (NSP) modules that support both the 5-Gbps shared memory and the fully non-blocking switch fabric. The NSP also supports the feature card and high performance Reduced Instruction Set (RISC) processor that provides the central intelligence for the device. The remaining slots support up to eight hot-swappable carrier modules (CMs) for node line cards (NLCs) or node

route processors (NRPs). NRPs, carrier modules, and half-height NLCs can be configured for redundant operation. As a result, you can have up to four redundant pairs of NRPs or any combination of NRPs and NLCs. The NRPs are fully functional router modules capable of terminating PPP sessions uploaded from your OC-3 or DS3 line cards. The NSP supports a wide variety of desktop, backbone, and wide-area interfaces.

This User Guide describes how you use the Cisco 6400 SCM software to manage the Cisco 6400 UAC range of features and components.

Accessing Online Help

Online help can be accessed at any time when the Cisco Element Management Framework (Cisco EMF) Launchpad is active. You can launch online help directly from the Cisco EMF Launchpad main window, or by clicking the **Help** button from any of the active applications.

When the online help is launched from the Cisco EMF Launchpad main window, all of the main help topics are displayed. Select the desired topic to have that topic's online help information displayed. At the end of each topic, a list of all other topics are displayed. When you want information about another topic, select the relevant topic.

When the **Help** button within an active application is clicked, the help topic relevant to the application is displayed. At the end of each topic, a list of all other topics is displayed. When you want information about another topic, select the relevant topic.

Customer Support

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