Cisco Multi-Stream CableCARD 1.5.2.2401 Software Release Notes

Overview

Introduction

This is a release of Cisco® Multi-Stream CableCARD™ (M-Card™) software version 1.5.2.2401. These release notes contain the following information:

- Site requirements
- Software download information
- New feature descriptions
- A description of fixed Change Requests (CRs)
- General information on contacting Cisco Systems

New Features

Several new features were added in this release that were logged as CRs. See the respective CRs on pages (placeholder) for descriptions.

- CR109914: M-Card network logging support for ADSG transitioning in the field
- CR109915: Support for ADSG indirect socket mode
- CR112795: Support for EAS suppression
- CR112898: Support for DSG staging and DSG transitioning in the field

Known Issues

There are no known issues in this release.

Purpose

The purpose of this release is to distribute software fixes for issues found in the previous M-Card software release.

Scope

These release notes provide an executive overview of the M-Card 1.5.2.2401. If you have questions about this release or require more detailed information, refer to the documents listed in the **Related Publications** section of this Preface, or call Cisco Services at 1-866-787-3866.

Audience

These release notes are written for system operators, sales and program managers, Cisco® Services engineers, and field technicians.

Document Version

This is the second formal release of this document.

In This Document

Site Requirements

System Requirements

M-Card software release 1.5.2.2401 is compatible with all available system releases, though some M-Card features may not be supported in all instances. To learn which features are supported for your release, contact Cisco Services.

Important: To upgrade this product, settop.res version 112 or later is required.

Software Download from the FTP Server

If you are downloading this application from the FTP server maintained by Cisco Services, you will need the following information:

FTP site address:	**ftp.sciatl.com**
User Name:	**anonymous**
Password:	**email address of user logging in**
FTP Directory Path:	**/pub/scicare/RELEASED/MCard_1.5**
File Name:	**Mcard_Pkey_1.5.2_2401.tar.gz**

Note: If you are accessing the FTP server from a connection that is behind the Cisco Services network firewall, the FTP directory path is: /external_pub/scicare/RELEASED/MCard_1.5.

Important: The M-Card package must be extracted from the TAR file. Instructions for performing this task, as well as instructions for installing the package are found in **Chapter 2** of *Downloading New Client Application Platform Installation Instructions* (part number 4003052).

Tips:

- When installing the PowerKEY® M-Card software on the DNCS, look for the SAIcblcrd M-Card package instead of the SARA ResApp package as indicated in **Chapter 2** of *Downloading New Client Application Platform Installation Instructions* (part number 4003052).
- The file you will add is located in the /dvs/cablecard/directory. Please install the latest ROM image from your customer-specific FTP site.

What's Fixed

Introduction

This section provides a description of the CRs implemented since M-Card software version 1.5.2.2101 was released. CRs from internal releases 1.5.2.2201 and 1.5.2.2301 are represented as well as CRs from 1.5.2.2401.

1.5.2.2401

ID	Title	User Impact	Description
111474	Delete IP_U flow when the DAVIC connection is lost	INCORRECT BEHAVIOR	When the DAVIC 2-way connection is lost, there is a possibility that the M-Card module may get a different IP address after the next sign-on.
112236	"Commencing Pre-DSG" test message not always displayed.	INCORRECT BEHAVIOR	When running the pre-DSG test the message "Commencing Pre-DSG Test" is not always displayed via cmd2000.
112238	The cmd2000 response from the pre-DSG test should tell you where to find the log	ENHANCEMENT	Pre-DSG test cmd2000 should tell the operator where to find the logs for the results. Additional diagnostics were added based on internal feedback and customer input.
112239	Define the pre-DSG failure type better	ENHANCEMENT	The pre-DSG failure needs to include more details to better assist the operator in troubleshooting. Additional diagnostics were added based on internal feedback and customer input.
112795	M-Card should modify EAS table in order to support EAS suppression	FEATURE	M-Card modules are required to modify EAS packets by adding EAS suppression source IDs to suppress the EAS message. This feature was requested by the customer since he does not plan to upgrade the DNCS from SR 4.2, which does not support channel suppression (also called channel exception).

ID	Title	User Impact	Description
112796	M-Card should not send channel number of 0 for duplicated source	INCORRECT BEHAVIOR	The host will fail on cross-checking of SI tables, and may not go SI-ready.
112797	M-Card should use raw DCM to calculate total section count in raw VCMs	BLACK SCREEN	When the DNCS does not send out a complete set of VCMs during SI update, the M-Card module will send out an incomplete channel map to the host due to the wrong calculation of total VCM section count.
112898	OOB state operation changes for staging DSG and transitioning to DSG	FEATURE	Used for staging new boxes for DSG and for transitioning the QPSK boxes to DSG. Requested by customer to support their method of staging and managing a host to be QPSK or DSG.

1.5.2.2301

ID	Title	User Impact	Description
110680	Host DSG resource presence should be checked before trying to switch to DSG	INCORRECT BEHAVIOR	The M-Card module might enter continuous reboot cycle resulting in no video.
111392	M-Card should send HRV to the host if an OOB mode switch requires reboot	INCORRECT BEHAVIOR	Subscribers may not view any programs if the mode switch does not happen correctly.

1.5.2.2201

ID	Title	User Impact	Description
109914	M-Card Network Logging Support for ADSG transition in field	FEATURE	Requested by customer for their support of ADSG Indirect. The network logging feature will allow two things: ■ Test a group of set-tops to determine if they are able to transition to DSG. ■ Send the host IP, binding information, and other information to the DNCS.
109915	ADSG Indirect Socket mode support with DCM field of UNConfig	FEATURE	Additional diagnostics were added based on internal feedback and customer input. Support for ADSG Indirect Socket mode allows the customer to continue using SR 4.2 on the DNCS.

Known Issues

There are no known issues at the time of this release.

Glossary

Advanced DSG

Advanced DOCSIS Set-top Gateway. Operates with the DCD message. Address assignment is dynamic. The DSG tunnel address is determined by the DSG agent and learned by the DSG client through the DSG address table in the DCD message.

APDU

Application Protocol Data Unit. A common structure to send application data between the M-Card module and the host.

Bootloader

A factory program installed into the DHCTs to ensure reliable upgrades.

CableCARD

A device that plugs into a digital cable-ready TV or DHCT and allows the receipt of encrypted services.

CCCM

CPE Controlled Cable Modem.

CCI (Copy Control Information)

Copy Control Information defines a program's level of copy protection. There are currently three copy protection levels defined: *copy freely*, *copy once*, and *copy never* (*copy once* and *copy never* are known as *high-value copy protection*). The CCI is set for the program by the program originator.

The DNCS/ISDS sends the CCI information to the DHCT or CableCARD module in an Entitlement Control Message (ECM) that lets the DHCT or CableCARD module know whether the program is high-value or not.

CDL

Common Download.

CID

Client ID. A unique value that identifies a client.

Copy protection

A system for preventing the unauthorized reproduction of copyrighted media through setting the copy protection levels for a program or service. There are three types of copy protection settings:

- Copy freely
- Copy once (high-value)
- Copy never (high-value)

Copy-protected content

Video and/or audio content that is coded to prevent it from being copied by recording devices, such as digital video recorders or personal computers.

CPE Controlled Cable Modem

A cable modem in which a portion of the higher-layer processing is performed by an external device, in particular, by a PC.

CVT

Code Version Table. A method for staging DHCTs. The CVT is a table that contains information about download channels and information to map client release software versions to specific DHCT types. The Broadcast File Server (BFS) broadcasts this information once per second on every quadrature amplitude modulation (QAM) frequency and on the quadrature phase shift keying (QPSK) frequency. If a DHCT does not have valid client release software installed (such as new DHCTs), the DHCT searches QAM frequencies for software download information. When the DHCT finds this information, it can begin to download valid client release software.

DAVIC

Digital Audio Visual Council. DAVIC is becoming the industry standard for end-to-end interoperability of broadcast and interactive digital audio-visual information and of multimedia communication.

DCD

downstream channel descriptor. A DSG address table used within the DOCSIS MAC Management Message to manage the DSG tunnel.

DCM

digital content manager. An MPEG processing device that is capable of supporting extremely high numbers of video stream processing.

DCT

Display Channel Table.

DOCSIS®

Data over cable service interface specification. This specification defines interface requirements for cable modems involved in high-speed data distribution over cable television system networks. This standard was developed by CableLabs in North America and approved by the International Telecommunication Union (ITU).

DSG

DOCSIS set-top gateway.

ECM

Entitlement Control Message. System-wide information that "unlocks" an encrypted service by transmitting control words. Each ECM is unique for each service. An ECM enables cryptographic partitioning so that different Entitlement Agents (EAs) can selectively grant access to their own services.

EID

Entitlement ID. A 32-bit number that identifies a pay-per-view (PPV) event to the secure micro. Each package has an EID.

HID

Hub ID. A unique value that identifies individual hubs in a stack of hubs.

LUG

Line Up Group. A set of hubs that is assigned to the same display channel table (DCT).

M-Card Module

Multi-Stream CableCARD Module. The next generation CableCARD module that supports decryption of up to six programs and also provides two-way network access in both DAVIC and DOCSIS systems.

NVM

non-volatile memory. Memory that holds its content when the device it is associated with is turned off.

OCAP

OpenCable Application Platform. The US cable industry's middleware standard specified by CableLabs.

PAT

program association table. A second table in the transport stream which contains a list of all MPEG programs on the transport stream along with their associated program numbers.

PowerKEY® Conditional Access system

Our registered trademark name for the hardware and software encryption and decryption of digital signal. Uses secret key, public key, and private key data to secure the digital signal.

VCT

Virtual Channel Table. A data structure consisting of up to 4096 channel definition records in which the table associates a virtual channel record with a service defined in the Program Association Table (PAT) and transport stream program map.

WKMA

Well Known MAC Address

For Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

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