Netcrypt Bulk Encryptor Software Version 1.3.9 Release Note

Overview

Introduction

This release note contains the following information:

- Descriptions of the new features introduced with this software release
- Information you need to prepare for an upgrade to Netcrypt software version 1.3.9
- The list of software applications that make up Netcrypt software version 1.3.9
- General information on contacting us for technical support

Scope

This release note provides an executive overview of software release 1.3.9. If you have questions about this release or require more detailed information, contact Cisco Services.

Audience

This release note is written for system operators, sales and program managers, and field technicians.

Document Version

This is the third formal release of this document. In addition to minor text changes, the release version has been changed to 1.3.9. This version contains the addition of the Manual CBR/VBR Mode Control feature.

About This Software Version

Netcrypt software version 1.3.9 includes features and enhancements implemented at the request of our customers. Review this section to learn more about these changes.

Note: For more information about a Netcrypt, such as theory of operation, instructions for hardware installation, provisioning, or operation, refer to *Netcrypt Bulk Encryptor for Explorer Controller Hardware Installation and Configuration Guide* (part number OL-28808).

What's New in this Release?

Setting PSI Rates for Netcrypt Ports

You can use the psi_rate craft command to override the provisioned PAT and PMT rates for each port on the Netcrypt.

The 'help psi_rate' craft command returns:

```
NC_HOST>help psi_rate


Description:

   Set/Display the PSI override rate value for a port
Command Parameter Entry:

   Parameters listed with hex_ are hexadecimal, and are
entered like 0x1f.

   Parameters listed with dec_ are decimal and are entered
like 105.
Usage:

   psi_rate [port_or_all rate] [port_or_all rate] ...
port is 0 to 3 or all, and rate is 1000 to 15000 or 0 for
provisioned value
```

PSI Rate Examples

```
psi_rate 0 3000
```
   This sets only port 0 to 3000.

```
psi_rate all 2000
```
   This sets all ports to 2000.

```
psi_rate all 2500 3 4000
```
   This sets ports 0, 1, and 2 to 2500, and port 3 to 4000.

Notes:

- All [port rate] pairs are processed left to right.

- The port settings are lost on a reboot or power cycle, unless set by the Autoexec feature.

Manual CBR/VBR Mode Control

Netcrypt code replaces Null and PSI packets from the input with its own PSI and ECM packets on the output. This is done to minimize the MPEG PCR jitter introduced by the Netcrypt. This mode is called *CBR mode* because it is used with CBR streams.

However, if there are insufficient input Null and PSI packets on any stream on a given input port, the Netcrypt code automatically falls back to the Netcrypt 1.2.12 *VBR mode* for all streams on the entire port. This behavior, along with the periodic attempts to transition back to CBR mode, can cause spikes in PCR jitter on the Netcrypt output port.

Netcrypt release 1.3.9 provides manual control over the Netcrypt CBR/VBR mode. The Netcrypt can run in CBR mode, VBR mode, or continue to use the automatic fall-back behavior described previously. The feature is set using the command line interface of the Netcrypt and can be stored in NVRAM using the *e2prom_settings* to be preserved across Netcrypt reboots.

The available choices are:

- **Automatic (default):** The Netcrypt attempts to run in CBR Mode, and automatically reverts all streams on a port to VBR Mode if any stream on the port does not meet input Null and PSI requirements. It also attempts to change back to CBR Mode periodically. This is the same behavior as the previous Netcrypt and is the default setting for this feature.

- **Manual CBR:** The Netcrypt remains in CBR mode regardless of whether all of the streams on each input port meet the Null and PSI requirements for this mode. In the event that a particular stream does not meet the input Null and PSI requirements, the Netcrypt continues to insert PSI and ECMs, but may be forced to insert at at a rate less than the provisioned rates. This may have an effect on PCR jitter in the output stream, but the effect should not be as abrupt as the effect observed when toggling between CBR and VBR modes. To select this behavior, log into the Netcrypt and enter a command on the CLI to select *manual CBR mode*.

- **Manual VBR:** The Netcrypt drops input Null and PSI packets and inserts its own output PSI and ECM packets at the provisioned rates. This behavior mimics the Netcrypt 1.2.12 code's handling of Nulls, PSI, and ECMs. To select this behavior, log into the Netcrypt and enter a command on the CLI to select *manual VBR mode*.

Applications Included in this Release

Netcrypt software version 1.3.9 includes the following software applications:

- Netcrypt Host Application code 1.3.9
- Netcrypt Host Boot code 1.3.9
- Netcrypt Input Application code 1.3.9
- Netcrypt Input Boot code 1.3.9
- Netcrypt Output Application code 1.3.9
- Netcrypt Output Boot code 1.3.9
- Field Programmable Gate Array (FPGA) code 16.8

Compatible Tools

To install and maintain Netcrypt software version 1.3.9, use the tools included in *DBDS Utilities Version 6.5 Installation Instructions and User Guide* (part number OL-27820).

Installation Media

Netcrypt software version 1.3.9 can be obtained from Cisco.com.

For instructions on downloading software from Cisco.com, refer to *Netcrypt Bulk Encryptor for Explorer Controller Hardware Installation and Configuration Guide* (part number OL-28808).

What Are the Site Requirements?

This section includes important information to help you ensure that your site is prepared to upgrade to this software version. Please read this entire section before you upgrade to Netcrypt software version 1.3.9.

System Release Compatibility and Prerequisites

Netcrypt software version 1.3.9 has been tested with the following DNCS/EC system releases:

- SR 5.0
- SR 5.1
- Explorer Controller 6.0 and later

For a complete configuration listing, or to upgrade your system, contact Cisco Services.

Software Requirements

To upgrade a Netcrypt Bulk Encryptor with this software version, Netcrypt software version 1.2.12 or greater must be installed on the Netcrypt Bulk Encryptor.

Hardware Requirements

Install Netcrypt software version 1.3.9 on only a Netcrypt Bulk Encryptor chassis (part number 800-4007553-001-01).

Known Issues

This software product currently has no known issues.

Bug Search Tool

The Bug Search Tool is an online tool that allows registered users to search for bugs by release or by a bug number.

To log on to the Bug Search Tool, go to **https://tools.cisco.com/bugsearch** and log on with your user name and password. The Bug Search Tool page opens.

Note: If you have not set up an account on www.cisco.com, click **Register Now** and follow the on-screen instructions to register.

Search for Bugs in This Release

1   In the product type-in field (to the right of the product drop-down list), type **Netcrypt**. Then choose **Netcrypt** from the list that appears. (Do *not* press **Enter**.)

2   In the Releases field, type **1.3.9** and press **Enter**. The Bug Search Tool displays the list of bugs for this release. You can use the filters to restrict the bugs that you want to view.

3   If you want to view a specific bug, enter the ID of the bug that you want to view in the **Search For** field and press **Enter**.

For Information

If You Have Questions

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