Release Notes for Cisco LocalDirector Version 3.2

10 July 2000

These release notes support Cisco LocalDirector Version 3.2.3.

Contents

These release notes describe the following topics:

Introduction

The primary purpose of Version 3.2.3 is to introduce a flash card from Productivity Enhancement Products (PEP). The PEP flash card is a half-size card that fits in an ISA connector on LocalDirector Model 416 and Model 430. All future LocalDirector Models 416 and 430 will use this new flash card.

The new flash card plugs into the LocalDirector motherboard by its 16-bit ISA connector. The new flash card is pre-assembled in the front, right-hand slot of LocalDirector.

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Hardware Supported in Version 3.2.3

The PEP flash card contains 4 megabytes of nonvolatile memory (Read-Only Memory or ROM) referred to as Type AMD Am29F016.

The PEP flash card also contains a BIOS Flash Memory Chip that serves as the BIOS ROM and uses 32 Kilobytes of memory. This 32 Kilobyte block of the memory map is located within the address range of 0xD8000 to 0xDFFFF. The BIOS ROM chip is referred to as Type AMD Am29F010.

The PEP flash card contains one 5-position dipswitch. The settings for the 5-position dipswitch to access the 32Kbytes of memory are:

Switch 1 **ON**

Switch 2 **OFF**

Switch 3 **ON**

Switch 4 **OFF**

Switch 5 **OFF**

Software Compatibility

Use the following table to confirm which LocalDirector software version is compatible with the new flash card.

Software Version Number	New Flash Card
3.3.2, 3.3.1, 3.2.2 and lower	Not compatible
3.2.3, 3.3.3 and greater	Compatible

Upgrading to a New Software Release

Read Appendix B in the *Cisco LocalDirector Installation and Configuration Guide*.

New Hardware Feature in Release 3.2.3

The new PEP flash card is compatible with LocalDirector software versions 3.2.3, 3.3.3, and greater. The boot sequence with the new flash card displays two important differences. The first difference is the `Finesse Bios V4.0,` and the second difference is the `Flash=Am29F016B @ 0x300 bank 0`.

The following is an example of the LocalDirector boot sequence with the new flash card. The important differences in the display are highlighted in **`bold font`**.

```
Finesse Bios V4.0

Booting Floppy

.................................Execing flop
LocalDirector Floppy loader version 4.00

Flash=Am29F016B @ 0x300 bank 0
Reading floppy image....
.......................
Installing to flash

Erasing flash...
Burning image into flash...
128MB RAM
Flash=Am29F016B @ 0x300 bank 0
 i82557 rev 5 Ethernet @ irq10 dev 0 index  0 MAC:00e0.b601.1056
 i82557 rev 5 Ethernet @ irq11 dev 1 index  1 MAC:00e0.b601.1055
 i82557 rev 5 Ethernet @ irq11 dev 2 index  2 MAC:00e0.b601.1054
 i82557 rev 5 Ethernet @ irq 9 dev 3 index  3 MAC:00e0.b601.1053

LocalDirector 430 Version 3.2.3.102  Initialization.....done.
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        Cisco Systems, Inc.
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localdirector>
```

New Software Feature in Release 3.2.1 - Revised Command Description

Accelerated Server Load Balancing

Support for Accelerated Server Load Balancing (ASLB) uses the Cisco Catalyst® 6000 and Catalyst 6500 switches to accelerate Transmission Control Protocol (TCP) or User Datagram Protocol (UDP) sessions that are load balanced by LocalDirector. LocalDirector makes the load balancing decisions and the Catalyst switch performs packet forwarding. Once packet forwarding begins on the Catalyst switch, traffic bypasses the LocalDirector and the Catalyst central processor. The ASLB feature uses the wire-speed capabilities of the Catalyst switch to deliver Server Load Balancing performance at speeds of more than 800 Mbps with up to 15 million packets per second.

Note Traffic containing data packets are transparently passed by LocalDirector with the ASLB feature and there is no incrementing of DataIn counters. The **data** command is used to limit the number of connections to a real server that is not sending data packets. LocalDirector can fail a real server based on DataIn counters. You cannot use the **data** command to fail real servers that are not sending data packets with an ASLB configuration.

To enable ASLB, use the **dispatched assisted** mode with the **redirection** command. The syntax is:

redirection *virtual_id* **dispatched assisted**

Syntax Description

virtual_id	The IP address or name, port (if a port-bound server), bind-id, and protocol of a virtual server.
dispatched assisted	LocalDirector replaces the MAC with the IP address of the real server. An aliased IP address on the real server matches the virtual IP address on LocalDirector. Address translation is not used. Dispatched mode supports UPD and TCP sessions without any change to the IP address information.

Caveats

Open Caveats - Releases 3.2.1, 3.2.2, and 3.2.3

This section describes possible unexpected behavior in Cisco LocalDirector Release 3.2.3

- CSCdm4441

  LocalDirector does not correctly rotor or bridge UDP traffic with a source port of 0.

- CSCdm76995

  At the conclusion of a typical HTML session, LocalDirector fails to forward the last ACK from the server. The client retransmits the final FIN, and LocalDirector forwards that FIN to another server based on the load-balancing decision.

- CSCdp37906

  Add a new command for internal technical support functions.

- CSCdp55116

  The **show real** command does not work with a full virtual server address.

- CSCdm27328

  Using the **no fail active** command on the active LocalDirector configured with FDDI starts the failover sequence, and incorrectly causes the standby LocalDirector to fail.

- CSCdk91215

  The MIB-II field Interfaces.ifSpecific should contain only 00.

- CSCdk06918

  The **boot image** command does not accept a name defined with the **name** command as the IP address value.

- CSCdp65797

  During an snmpwalk request with the IP address of LocalDirector, the IP address is returned twice from the ipAdEntAddr.

- CSCdp65813

  An error message is returned as a result of an snmpwalk request for the IP group with the IP address of LocalDirector.

- CSCdp39460

  FDDI configuration with mismatched A/B connections in LocalDirector does not appear as a wrong neighbor.

- CSCdp06331

  Attempts to open a telnet session to a secondary LocalDirector over an FDDI interface will fail.

Resolved Caveats - Release 3.2.3

- CSCdm63195 duplicated in CSCdp55991

  CASA: LocalDirector reloads when sending fragmented CASA messages.
- CSCdr07354

  Proxy traffic causing a crash?
- CSCdr30147

  Packet buffers consumed by Proxy services in FDDI.
- CSCdr30150

  Proxy connections not cleared for timed-out connections.
- CSCdr75318

  The Internet Control Message Protocol (ICMP) checksum was incorrect on message Code 4, Fragmentation needed but Don't Fragment flag is on. Real server discarded the datagram. This message is used to determine the maximum transmission unit (MTU).
- CSCdp94228

  Add note to documentation do not use **data** command with ASLB configuration to fail real server.

Troubleshooting

The following display is the result of starting the boot sequence with the new flash card and LocalDirector software version number 3.2.2. This is an example of an incompatible software version with the new flash card.

```
Finesse Bios V4.0

Booting Floppy

.................................Execing flop
LocalDirector Floppy loader version 3.00

Error:no flash card!
```

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