



Release Notes for Cisco ONS 15540 ESP for Cisco IOS Release 12.1(12c)EV

This document describes caveats for Cisco IOS Release 12.1(12c)EV for the Cisco ONS 15540 ESP (Extended Services Platform).

Date: January 27, 2003

Text Part Number: OL-3341-03

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Introduction

The Cisco ONS 15540 ESP is an optical transport platform that employs DWDM (dense wavelength division multiplexing) technology. With the Cisco ONS 15540 ESP, users can take advantage of the availability of dark fiber to build a common infrastructure that supports data, SAN (storage area networking), and TDM (time-division multiplexing) traffic. For more information about DWDM technology and applications, refer to the [Introduction to DWDM Technology](#) publication and the [Cisco ONS 15540 ESP Planning and Design Guide](#).



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System Requirements

This section describes the system requirements for Cisco IOS Release 12.1(12c)EV and includes the following sections:

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Memory Requirements

The DRAM memory configuration is 128 MB, which is the default for the Cisco ONS 15540 ESP.

Hardware Supported

[Table 1](#) lists the hardware components supported on the Cisco ONS 15540 ESP and the minimum software version required. See the [“Determining the Software Version”](#) section on [page 7](#) for information on determining your software version.

Table 1 Cisco ONS 15540 ESP Supported Hardware Modules and Minimum Software Requirements

Component	Part Number	Description	Minimum Software Version Required
Chassis	15540-CHSA		12.1(7a)EY2
Power supplies	15540-PWR-AC	120 to 240 VAC power supply	12.1(7a)EY2
	15540-CAB-AC	Custom AC-input power entry cable	12.1(7a)EY2
	15540-CAB-AC	North America	12.1(7a)EY2
	15540-CAB-ACA	Australia	12.1(7a)EY2
	15540-CAB-ACE	Europe	12.1(7a)EY2
	15540-CAB-CU	UK	12.1(7a)EY2
	15540-CAB-ACI	Italy	12.1(7a)EY2
	15540-CAB-ACR	Argentina	12.1(7a)EY2
Filler motherboards and filler modules	15540-COV-01	Mux/demux motherboard blank panel	12.1(7a)EY2
	15540-COV-02	Mux/demux module	12.1(7a)EY2
	15540-COV-03	Line card motherboard blank panel	12.1(7a)EY2
	15540-COV-04	Transponder module blank panel	12.1(7a)EY2
	15540-COV-06	Processor card cover panel	12.1(7a)EY2
Fans	15540-FTMP	Fan tray module populated with eight fans	12.1(7a)EY2
Processor cards	15540-CPU	Processor card without switch fabric	12.1(7a)EY2

Table 1 Cisco ONS 15540 ESP Supported Hardware Modules and Minimum Software Requirements (continued)

Component	Part Number	Description	Minimum Software Version Required
Mux/demux motherboards	15540-MMMB-0100	Supports Mux/demux modules with OSC	12.1(7a)EY2
	15540-MMMB-0200	Supports Mux/demux modules without OSC	12.1(7a)EY2
Mux/demux modules without OSC	15540-MDXA-04A0	4-channel Band A	12.1(7a)EY2
	15540-MDXA-04B0	4-channel Band B	12.1(7a)EY2
	15540-MDXA-04C0	4-channel Band C	12.1(7a)EY2
	15540-MDXA-04D0	4-channel Band D	12.1(7a)EY2
	15540-MDXA-04E0	4-channel Band E	12.1(7a)EY2
	15540-MDXA-04F0	4-channel Band F	12.1(7a)EY2
	15540-MDXA-04G0	4-channel Band G	12.1(7a)EY2
	15540-MDXA-04H0	4-channel Band H	12.1(7a)EY2
	15540-MDXA-08A0	8-channel Band AB	12.1(7a)EY2
	15540-MDXA-08B0	8-channel Band CD	12.1(7a)EY2
	15540-MDXA-08C0	8-channel Band EF	12.1(7a)EY2
	15540-MDXA-08D0	8-channel Band GH	12.1(7a)EY2
	15540-MDXA-16EH	16-channel Band EH	12.1(7a)EY2
Mux/demux modules with OSC	15540-MDXA-04A0	4-channel Band A	12.1(7a)EY2
	15540-MDXB-04B0	4-channel Band B	12.1(7a)EY2
	15540-MDXB-04C0	4-channel Band C	12.1(7a)EY2
	15540-MDXB-04D0	4-channel Band D	12.1(7a)EY2
	15540-MDXB-04E0	4-channel Band E	12.1(7a)EY2
	15540-MDXB-04F0	4-channel Band F	12.1(7a)EY2
	15540-MDXB-04G0	4-channel Band G	12.1(7a)EY2
Mux/demux modules with OSC	15540-MDXB-04H0	4-channel Band H	12.1(7a)EY2
	15540-MDXB-08A0	8-channel Band AB	12.1(7a)EY2
	15540-MDXB-08B0	8-channel Band CD	12.1(7a)EY2
	15540-MDXB-08C0	8-channel Band EF	12.1(7a)EY2
	15540-MDXB-08D0	8-channel Band GH	12.1(7a)EY2
Mux/demux modules with OSC	15540-MDXB-16AD	16-channel Band AD	12.1(7a)EY2
Line card motherboards	15540-LCMB-0100	Supports four transponders with protection	12.1(7a)EY2
	15540-LCMB-0200	Supports four transponders -East	12.1(7a)EY2
	15540-LCMB-0201	Supports four transponders -West	12.1(7a)EY2
	15540-LCMB-0401	Supports 2 10-GE modules w/o splitter	12.1(10)EV3

Table 1 Cisco ONS 15540 ESP Supported Hardware Modules and Minimum Software Requirements (continued)

Component	Part Number	Description	Minimum Software Version Required
MM transponder modules	15540-TSP1-01A3	Ch 1-2 —1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-03A3	Ch 3-4 — 1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-05A3	Ch 5-6 —1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-07A3	Ch 7-8 — 1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-09A3	Ch 9-10 — 1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-11A3	Ch 11-12 — 1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-13A3	Ch 13-14 — 1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-15A3	Ch 15-16 — 1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-17A3	Ch 17-18 — 1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-19A3	Ch 19-20 — 1310nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-21A3	Ch 21-22 — 1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-23A3	Ch 23- 24—1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-25A3	Ch 25-26—1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-27A3	Ch 27-28—1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
	15540-TSP1-29A3	Ch 29-30—1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2
15540-TSP1-31A3	Ch 31-32—1310-nm MM 16 to 622 Mbps with SC	12.1(7a)EY2	
SM transponder modules	15540-TSP1-01B3	Ch 1-2—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-03B3	Ch 3-4—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-05B3	Ch 5-6—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-07B3	Ch 7-8—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-09B3	Ch 9-10—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-11B3	Ch 11-12—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-13B3	Ch 13-14— 1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-15B3	Ch 15-16—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-17B3	Ch 17-18—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-19B3	Ch 19-20—1310nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-21B3	Ch 21-22—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-23B3	Ch 23- 24—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-23B3	Ch 23- 24—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-25B3	Ch 25-26—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
	15540-TSP1-27B3	Ch 27-28—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2
15540-TSP1-29B3	Ch 29-30 —1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2	
15540-TSP1-31B3	Ch 31-32—1310-nm SM 16 Mbps to 2.5 Gbps with SC	12.1(7a)EY2	

Table 1 Cisco ONS 15540 ESP Supported Hardware Modules and Minimum Software Requirements (continued)

Component	Part Number	Description	Minimum Software Version Required
Extended range transponder modules	15540-TSP2-0100	Ch 1-2	12.1(11b)E
	15540-TSP2-0300	Ch 3-4	12.1(11b)E
	15540-TSP2-0500	Ch 5-6	12.1(11b)E
	15540-TSP2-0700	Ch 7-8	12.1(11b)E
	15540-TSP2-0900	Ch 9-10	12.1(11b)E
	15540-TSP2-1100	Ch 11-12	12.1(11b)E
	15540-TSP2-1300	Ch 13-14	12.1(11b)E
	15540-TSP2-1500	Ch 15-16	12.1(11b)E
	15540-TSP2-1700	Ch 17-18	12.1(11b)E
	15540-TSP2-1900	Ch 19-20	12.1(11b)E
	15540-TSP2-2100	Ch 21-22	12.1(11b)E
	15540-TSP2-2300	Ch 23-24	12.1(11b)E
	15540-TSP2-2500	Ch 25-26	12.1(11b)E
	15540-TSP2-2700	Ch 27-28	12.1(11b)E
	15540-TSP2-2900	Ch 29-30	12.1(11b)E
15540-TSP2-3100	Ch 31-32	12.1(11b)E	
Pluggable transceivers for extended range transponder modules	15500-XVRA-01A2	ESCON/SONET OC-3/SDH STM-1 Transceiver - 1310-nm MTRJ	12.1(11b)E
	15500-XVRA-03B1	Gigabit Ethernet and Fibre Channel (1 Gbps) 1310-nm SM MTLC	12.1(11b)E
	15500-XVRA-03B2	1 Gbps Fibre Channel and 2 Gbps Fibre Channel 1310-nm SM MTLC	12.1(11b)E
	15500-XVRA-02C1	Gigabit Ethernet and Fibre Channel (1 Gbps) 850-nm MM MTLC	12.1(11b)E
	15500-XVRA-02C2	Fibre Channel (2 Gbps) 850-nm MM MTLC	12.1(11b)E
	15500-XVRA-07B1	SONET OC-12 1310-nm SM MTLC	12.1(11b)E
	15500-XVRA-07B1	SONET OC-48 1310-nm SM MTLC	12.1(11b)E
ITU direct insertion module	15540-LCDC-10G	ITU direct insertion module	12.1(10)EV3

Table 1 Cisco ONS 15540 ESP Supported Hardware Modules and Minimum Software Requirements (continued)

Component	Part Number	Description	Minimum Software Version Required
Single port 10-Gigabit Ethernet transponder	15540-10GE-03B301	10-GE 1310nm SM Client with SC and ITU Laser Ch 1	12.1(10)EV3
	15540-10GE-03B302	10-GE 1310nm SM Client with SC and ITU Laser Ch 2	12.1(10)EV3
	15540-10GE-03B303	10-GE 1310nm SM Client with SC and ITU Laser Ch 3	12.1(10)EV3
	15540-10GE-03B304	10-GE 1310nm SM Client with SC and ITU Laser Ch 4	12.1(10)EV3
	15540-10GE-03B305	10-GE 1310nm SM Client with SC and ITU Laser Ch 5	12.1(10)EV3
	15540-10GE-03B306	10-GE 1310nm SM Client with SC and ITU Laser Ch 6	12.1(10)EV3
	15540-10GE-03B307	10-GE 1310nm SM Client with SC and ITU Laser Ch 7	12.1(10)EV3
	15540-10GE-03B308	10-GE 1310nm SM Client with SC and ITU Laser Ch8	12.1(10)EV3
	15540-10GE-03B309	10-GE 1310nm SM Client with SC and ITU Laser Ch 9	12.1(10)EV3
	15540-10GE-03B3010	10-GE 1310nm SM Client with SC and ITU Laser Ch 10	12.1(10)EV3
	15540-10GE-03B3011	10-GE 1310nm SM Client with SC and ITU Laser Ch 11	12.1(10)EV3
	15540-10GE-03B3012	10-GE 1310nm SM Client with SC and ITU Laser Ch 12	12.1(10)EV3
	15540-10GE-03B3013	10-GE 1310nm SM Client with SC and ITU Laser Ch 13	12.1(10)EV3
	15540-10GE-03B3014	10-GE 1310nm SM Client with SC and ITU Laser Ch 14	12.1(10)EV3
	15540-10GE-03B3015	10-GE 1310nm SM Client with SC and ITU Laser Ch 15	12.1(10)EV3
	15540-10GE-03B3016	10-GE 1310nm SM Client with SC and ITU Laser Ch 16	12.1(10)EV3
	15540-10GE-03B3017	10-GE 1310nm SM Client with SC and ITU Laser Ch 17	12.1(10)EV3
	15540-10GE-03B3018	10-GE 1310nm SM Client with SC and ITU Laser Ch 18	12.1(10)EV3
	15540-10GE-03B3019	10-GE 1310nm SM Client with SC and ITU Laser Ch 19	12.1(10)EV3
	15540-10GE-03B3020	10-GE 1310nm SM Client with SC and ITU Laser Ch 20	12.1(10)EV3
	15540-10GE-03B3021	10-GE 1310nm SM Client with SC and ITU Laser Ch 21	12.1(10)EV3
	15540-10GE-03B3022	10-GE 1310nm SM Client with SC and ITU Laser Ch 22	12.1(10)EV3
	15540-10GE-03B3023	10-GE 1310nm SM Client with SC and ITU Laser Ch 23	12.1(10)EV3
	15540-10GE-03B3024	10-GE 1310nm SM Client with SC and ITU Laser Ch 24	12.1(10)EV3
	15540-10GE-03B3025	10-GE 1310nm SM Client with SC and ITU Laser Ch 25	12.1(10)EV3
	15540-10GE-03B3026	10-GE 1310nm SM Client with SC and ITU Laser Ch 26	12.1(10)EV3
	15540-10GE-03B3027	10-GE 1310nm SM Client with SC and ITU Laser Ch 27	12.1(10)EV3
	15540-10GE-03B3028	10-GE 1310nm SM Client with SC and ITU Laser Ch 28	12.1(10)EV3
	15540-10GE-03B3029	10-GE 1310nm SM Client with SC and ITU Laser Ch 29	12.1(10)EV3
	15540-10GE-03B3030	10-GE 1310nm SM Client with SC and ITU Laser Ch 30	12.1(10)EV3
	15540-10GE-03B3031	10-GE 1310nm SM Client with SC and ITU Laser Ch 31	12.1(10)EV3
	15540-10GE-03B3032	10-GE 1310nm SM Client with SC and ITU Laser Ch 32	12.1(10)EV3

Determining the Software Version



Note

We strongly recommend that you use the latest available software release for all Cisco ONS 15540 ESP hardware.

To determine the version of Cisco IOS software currently running on a Cisco ONS 15540 ESP system, log in to the system and enter the **show version EXEC** command. The following sample output is from the **show version** command. The software version number is shown on the second line of the sample output.

```
Switch# show version
Cisco Internetwork Operating System Software
IOS (tm) ONS-15540 Software (ONS15540-I-M), Version 12.1(12c)EV
<Information deleted>
```

Upgrading the System Image

To ensure proper system functioning, follow the system image upgrading procedure described in the *Cisco ONS 15540 ESP Configuration Guide and Command Reference*.



Note

Always set the configuration register to 0x2102 when upgrading the system image using the **config-reg 0x2102** command in configuration mode.



Caution

Improper system image upgrades can affect system functioning and redundancy. Always follow the recommended upgrade procedures.

Feature Set Table

The Cisco IOS Release software is packaged in feature sets (also called software images) depending on the platform. Each feature set contains a specific set of Cisco IOS features. [Table 2](#) lists the Cisco IOS software feature sets available for the Cisco ONS 15540 ESP.

Table 2 Feature Sets Supported by the Cisco ONS 15540 ESP

Feature Set	12.1(12c)EV	12.1(10)EV2 & 12.1(10)EV3	12.1(12c)E & 12.1(12c)E1	12.1(11b)E & 12.1(11b)E1	12.1(7a)EY2 & 12.1(7a)EY3
Gigabit Ethernet	X	X	X	X	X
Fast Ethernet	X	X	X	X	X
Ethernet	X	X	X	X	X
ATM OC-3/STM-1, OC-12/STM-4, and OC-48/STM-16	X	X	X	X	X

Table 2 Feature Sets Supported by the Cisco ONS 15540 ESP (continued)

Feature Set	12.1(12c)EV	12.1(10)EV2 & 12.1(10)EV3	12.1(12c)E & 12.1(12c)E1	12.1(11b)E & 12.1(11b)E1	12.1(7a)EV2 & 12.1(7a)EV3
SONET ¹ /SDH ²	X	X	X	X	X
POS ³	X	X	X	X	X
Coupling link	X	X	X	X	X
Fibre Channel (1 Gbps)	X	X	X	X	X
Fibre Channel (2 Gbps)	X	X	X	X	X
FDDI ⁴	X	X	X	X	X
ESCON ⁵ SM (200 Mbps)	X	X	X	X	X
FICON ⁶ (800 Mbps)	X	X	X	X	X
Token Ring	X	X	X	X	X
SNMP	X	X	X	X	X
CiscoView	X	X	X	X	X
Cisco Transport Manager	X	X	X	X	X
IP packets	X	X	X	X	X
OSCP ⁷	X	X	X	X	X
APS ⁸ protocol packets	X	X	X	X	X
Point-to-point	X	X	X	X	X
Hubbed ring	X	X	X	X	X
Meshed ring	X	X	X	X	X
IBM GDPS ⁹ ETR/CLO	X	X	X	X	X
IBM GDPS ⁹ coupling link	X	X	X	X	X
CDL over 10-GE	X	X			

1. SONET = Synchronous Optical Networking
2. SDH = Synchronous Digital Hierarchy
3. POS = Packet over SONET
4. FDDI = Fiber Distributed Data Interface
5. ESCON = Enterprise Systems Connection
6. FICON = Fiber Connection
7. OSCP = Optical Supervisory Channel Protocol
8. APS = Automatic Protection Switching
9. GDPS = Geographically Dispersed Parallel Sysplex

New and Changed Information

This section lists new features that appear in this and previous releases of Cisco IOS Release 12.1. The new features are sorted by release number.

New Features in Release 12.1(12c)EV

No new features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(12c)EV.

New Features in Release 12.1(10)EV3

No new features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(10)EV3.

New Features in Release 12.1(10)EV2

The following new features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(10)EV2:

- Hardware:
 - Non-protected dual subslot motherboard for Cisco ONS 15540 ESP
 - 10-GE transponder module
 - ITU direct insertion module
- Software:
 - CDL over 10-GE

New Features in Release 12.1(12c)E1

No new features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(12c)E1.

New Features in Release 12.1(12c)E

No new features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(12c)E.

New Features in Release 12.1(11b)E1

No new features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(11b)E1.

New Features in Release 12.1(11b)E

The following new features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(11b)E:

- Extended range transponder modules supporting the following transceivers:
 - ESCON and SONET OC-3 MM (1310 nm)
 - Gigabit Ethernet and Fibre Channel (1 Gbps) MM (850 nm)
 - Gigabit Ethernet and Fibre Channel (1 Gbps) SM (1310 nm)
 - Fibre Channel (2 Gbps) MM (850 nm)
 - Fibre Channel (2 Gbps) SM (1310 nm)
 - SONET OC-12 SM (1310 nm)
 - SONET OC-48 SM (1310 nm)

New Features in Release 12.1(7a)EY3

The following new software features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(7a)EY3:

- Cisco IOS software on the processor.
- Autoconfiguration at startup.
- Autodiscovery of network neighbors.
- Online diagnostics.
- Processor redundancy provided by arbitrations of processor status and switchover in case of failure without loss of connections.
- Autosynchronization of startup and running configurations.
- Support for in-service software upgrades.
- Support for per-channel APS (Automatic Protection Switching) in point-to-point and ring topologies using redundant subsystems that monitor link integrity and signal quality.
- Unidirectional and bidirectional 1+1 path switching.
- System configuration and management through the CLI (command-line interface), accessible through an Ethernet connection or console terminal.
- Optical power monitoring on the transport side, digital monitoring on both client and transport side, and per-channel transponder in-service and out-of-service loopback (client and transport sides).
- Optional out-of-band management of other Cisco ONS 15540 ESP systems on the network through the OSC (optical supervisory channel).
- Support for network management systems that use SNMP. Its capabilities include configuration management, fault isolation, topology discovery, and path trace.

New Features in Release 12.1(7a)EY2

The following new features are available for the Cisco ONS 15540 ESP in Cisco IOS Release 12.1(7a)EY2:

- Cisco IOS software on the processor.
- Autoconfiguration at startup.
- Autodiscovery of network neighbors.

- Online diagnostics.
- Processor redundancy provided by arbitrations of processor status and switchover in case of failure without loss of connections.
- Autosynchronization of startup and running configurations.
- Support for in-service software upgrades.
- Support for per-channel APS (Automatic Protection Switching) in point-to-point and ring topologies using redundant subsystems that monitor link integrity and signal quality.
- Unidirectional and bidirectional 1+1 path switching.
- System configuration and management through the CLI (command-line interface), accessible through an Ethernet connection or console terminal.
- Optical power monitoring on the transport side, digital monitoring on both client and transport side, and per-channel transponder in-service and out-of-service loopback (client and transport sides).
- Optional out-of-band management of other Cisco ONS 15540 ESP systems on the network through the OSC (optical supervisory channel).
- Support for network management systems that use SNMP. Its capabilities include configuration management, fault isolation, topology discovery, and path trace.

Caveats

This section lists the caveats and corrected caveats for each release. Use [Table 3](#) and [Table 4](#) to determine the status of a particular caveat. In the tables, “C” indicates a corrected caveat, and “O” indicates an open caveat.

Table 3 *Caveat Matrix for the Cisco ONS 15540 ESP*

DDTS Number	12.1(12c)EV	12.1(10)EV3
CSCdv33165	C	O
CSCdv37024	C	C
CSCdv90351	O	O
CSCdw26675	C	C
CSCdw32072	C	C
CSCdw49750	C	C
CSCdw65903	C	C
CSCdw66715	C	C
CSCdw71880	C	C
CSCdw80987	C	C
CSCdw82701	C	C
CSCdw87421	C	C
CSCdx07666	C	O
CSCdx09167	C	C
CSCdx27201	C	C

Table 3 Caveat Matrix for the Cisco ONS 15540 ESP (continued)

DDTS Number	12.1(12c)EV	12.1(10)EV3
CSCdx31068	C	C
CSCdx32408	C	C
CSCdx32438	C	C
CSCdx37144	C	C
CSCdx42595	C	C
CSCdx70683	O	O
CSCdx77331	C	C
CSCdx80804	C	C
CSCdx81765	C	C
CSCdx82558	C	C
CSCdx85761	C	C
CSCdy03245	C	C
CSCdy08228	C	C
CSCdy10401	C	C
CSCdy20002	C	C
CSCdy20010	C	C
CSCdy20022	C	C
CSCdy20792	C	C
CSCdy23001	C	C
CSCdy23025	C	C
CSCdy23325	C	C
CSCdy30497	C	C
CSCdy40429	C	C
CSCdy40864	C	C
CSCdy40882	C	C
CSCdy44129	O	O
CSCdy49146	C	C
CSCdy49249	C	C
CSCdy53288	C	C
CSCdy58197	C	O
CSCdy61641	C	C
CSCdy62752	C	C
CSCdy63359	C	C
CSCdy65411	C	C
CSCdy78546	C	C
CSCdy79161	C	C

Table 3 *Caveat Matrix for the Cisco ONS 15540 ESP (continued)*

DDTS Number	12.1(12c)EV	12.1(10)EV3
CSCdy79659	C	C
CSCdy79812	C	C
CSCdy81888	C	C
CSCdy83757	C	C
CSCdy85563	C	C
CSCdy87237	C	C
CSCdy88154	C	C
CSCdz00116	C	C
CSCdz02296	C	C
CSCdz02340	C	C
CSCdz03989	C	C
CSCdz06004	C	C
CSCdz06602	C	C
CSCdz08774	C	C
CSCdz12919	C	C
CSCdz13538	C	C
CSCdz13673	C	C
CSCdz14420	C	C
CSCdz18757	C	C
CSCdz18815	C	C
CSCdz19099	C	C
CSCdz20508	C	C
CSCdz22455	C	C
CSCdz25739	C	O
CSCdz28582	C	C
CSCdz28903	C	C
CSCdz29723	O	O
CSCdz31593	O	O
CSCdz33752	C	C
CSCdz36420	C	C
CSCdz36424	C	O
CSCdz36823	C	C
CSCdz37698	C	C
CSCdz38075	C	C
CSCdz38448	C	O
CSCdz39112	C	O

Table 3 Caveat Matrix for the Cisco ONS 15540 ESP (continued)

DDTS Number	12.1(12c)EV	12.1(10)EV3
CSCdz39793	C	O
CSCdz40675	C	
CSCdz41160	C	O
CSCdz58866	C	O
CSCdz62553	C	
CSCdz66609	O	O
CSCdz75109	C	
CSCdz79336	O	
CSCdz80042	O	
CSCdz83169	O	
CSCdz85458	O	

Table 4 Caveat Matrix for the Cisco ONS 15540 ESP

DDTS Number	12.1(10)EV2	12.1(10)EV1	12.1(13)E1	12.1(12c)E3	12.1(12c)E1	12.1(11b)E1	12.1(7a)EY3	12.1(7a)EY2
CSCdv33165	O	O	O	O	O	O	O	O
CSCdv37024	C	C	C	C	C	C	O	O
CSCdv90351	O	O	O	O	O	O	O	O
CSCdw26675	C	C	C	C	C	C	O	O
CSCdw32072	C	C	C	C	C	C	O	O
CSCdw49750	C	C	C	C	C	C	O	O
CSCdw65903	C	C	C	C	C	C	C	
CSCdw66715	C	C	C	C	C	C	O	O
CSCdw71880	C	C	C	C	C	C	O	O
CSCdw80987	C	C	C	C	C	C		
CSCdw82701	C	C	C	C	C	O		
CSCdw87421	C	C	C	C	C	O		
CSCdx07666	O	O	O	O	O			
CSCdx09167	C	C	C	C	C	O		
CSCdx27201	C	C	C	C	C	C		
CSCdx31068	C	C	C	C	C	O		
CSCdx32408	C	C	C	C	C	O		
CSCdx32438	C							
CSCdx37144	C							
CSCdx42595	C	C						
CSCdx70683	O	O	O	O	O			

Table 4 Caveat Matrix for the Cisco ONS 15540 ESP (continued)

DDTS Number	12.1(10)EV2	12.1(10)EV1	12.1(13)E1	12.1(12c)E3	12.1(12c)E1	12.1(11b)E1	12.1(7a)EY3	12.1(7a)EY2
CSCdx77331	C	C	C	C	C	O		
CSCdx80804	C	C	C	C	C	O		
CSCdx81765	C	C	C	C	C	O		
CSCdx82558	C	C	C	C	C	O		
CSCdy10401	C	O	C	O	O			
CSCdy20002	O	O	O	O	O			
CSCdy20010	O	O	O	O	O			
CSCdy23001	O	O	O	C	O			
CSCdy23025	O	O	O	O	O			
CSCdy23325	O	O	O	O	O			
CSCdy40429	C	C	C	C				
CSCdy40864	O	O						
CSCdy40882	O	O						
CSCdy44129	O	O						
CSCdy49146	C	C	C	C				
CSCdy49249	O	O						
CSCdy53288	O	O						
CSCdy58197	O	O						
CSCdy61641	O	O						
CSCdy62752	O	O						
CSCdy63359	O	O						
CSCdy65411	O	O						
CSCdy78546	O	O						
CSCdy79161	O	O						
CSCdy79659	O	O						
CSCdy79812	O	O						
CSCdy81888	O	O						
CSCdy83757	O	O						
CSCdy85563	O	O						
CSCdy87237	O	O						
CSCdy88154	O	O						
CSCdz00116	O	O						
CSCdz02296	O	O						
CSCdz02340	O	O						
CSCdz03989	O	O						
CSCdz06004	O	O						

Table 4 Caveat Matrix for the Cisco ONS 15540 ESP (continued)

DDTS Number	12.1(10)EV2	12.1(10)EV1	12.1(13)E1	12.1(12c)E3	12.1(12c)E1	12.1(11b)E1	12.1(7a)EY3	12.1(7a)EY2
CSCdz06602	O	O						
CSCdz08774	O	O						
CSCdz12919	O	O						
CSCdz13538	O	O						
CSCdz13673	O	O						
CSCdz14420	O	O						
CSCdz18757	O	O						
CSCdz18815	O	O						
CSCdz19099	O	O						
CSCdz20508	O	O						
CSCdz22455	O	O						
CSCdz28582	O	O						
CSCdz33752	O	O						
CSCdz36420	O	O						
CSCdz36823	O	O						
CSCdz37698	O	O						
CSCdz38075	O	O						

This section describes the caveats in the Cisco ONS 15540 ESP.

- [CSCdv33165](#)

Symptom: If you attempt to change or edit a threshold in the threshold list that is already associated with an interface, the threshold is applied to that interface even when no changes are made to it. Usually the change in error counts are more important than the error counters themselves.

Workaround: Issue the **clear counters** command.

- [CSCdv37024](#)

Symptom: If CiscoView files are extracted on a Flash disk (disk0: or disk1:), the package does not work.

Workaround: Install CiscoView on a Flash PC Card (slot0: or slot1:).

- [CSCdv90351](#)

Symptom: When there is a constant stream of loss of sync alarms, a port fail notification is not generated.

Although both signal failure and signal degrade thresholds are applied, only signal degrade is observed. The signal failure threshold is monitored by hardware registers. When the signal failure threshold is exceeded, the hardware normally generates a port fail notification. Because the loss of sync alarms are constant, the threshold exceeded cannot generate a port fail notification. The signal degrade is reported because it is monitored by software and does not need any notifications from hardware.

Workaround: Disable and reenabling monitoring once with the **no monitor/monitor enable** command sequence to generate the port fail notification.

- [CSCdw26675](#)

Symptom: Upon switchover, the active processor card can become nonresponsive. The processor card Active LED remains on, even though it is no longer actively controlling the system.

Workaround: None

Remove and reinsert the processor card to correct the fault.

- [CSCdw32072](#)

Symptom: The ROMMON might continuously loop in an attempt to autoboot a missing system image.

Continuous looping happens when autoboot is configured in the configuration register (0x2102), but the system image corresponding to the **system boot filename** command in the startup configuration is missing and no alternate **system boot filename** command is configured for an existing system image.

During normal system functioning, the system first checks for system image file names in the startup configuration **system boot filename** commands. If there are none, or the images are not valid, the system checks the Flash device in slot0: and then bootflash for loadable images before stopping its attempts to autoboot.

Workaround: Configure at least one **system boot filename** command for an existing system image on both processor cards before reloading either processor card.

If autoboot looping occurs, issue a console **send break** command during the first few seconds of a reload attempt to stop autobooting. Then manually boot the system using a valid system image in Flash memory or on the network.

Upgrade the processor card ROMMON image to release 12.1(11r)E3 or later.

- [CSCdw49750](#)

Symptom: If during a netboot attempt the processor card fails to netboot or the peer processor card changes its Active/Standby state, any further changes to the peer processor card Active/Standby state are ignored until a **reset** command is issued at the processor card ROMMON prompt.

Workaround: Issue a **reset** command at the ROMMON prompt after failing to netboot.

Upgrade the processor card ROMMON image to release 12.1(11r)E3 or later.

- [CSCdw65903](#)

Symptom: An error can occur with management protocol processing. Please see the following URL for more information:

<http://www.cisco.com/cgi-bin/bugtool/onebug.pl?bugid=CSCdw65903>

Workaround: None

- [CSCdw66715](#)

Symptom: Following a Cisco IOS software crash, a second ROMMON exception might cause the original stack trace to be lost. This happens if a pending PCI (peripheral component interconnect) bus interrupt was in progress but was not handled before the IOS crash.

Workaround: Upgrade the processor card ROMMON image to release 12.1(11r)E3 or later.

- [CSCdw71880](#)

Symptom: The following errors might occur:

- The 100 Mbps LED for the NME (Network Management Ethernet) port might be on even if the port is connected to an 10 Mbps source. This LED should be on only when connected to a 100 Mbps source.
- The full duplex LED might not stay on even when the port is connected to a full duplex source.
- Auto negotiation of speed and duplex mode might not work when switched from a 10 Mbps source to 100 Mbps source.
- Auto negotiation of speed and duplex mode might not work when switched from a 100 Mbps source to a 10 Mbps source.

Workaround: None.

- [CSCdw80987](#)

Symptom: The system power cycles and the standby processor card startup configuration is not synchronized with the active processor card startup configuration. If this occurs, then the previous standby processor card might become the active processor card and a different set of connections might be set up.

The standby processor card startup configuration can become outdated when it is in maintenance mode.

Workaround: Remove the standby processor card from the shelf when it is not in use.

Upgrade the processor card ROMMON image to release 12.1(11r)E3 or later.

- [CSCdw82701](#)

Symptom: Loopback cannot be configured on the wave interface of an extended range transponder module if no transceiver is present. The **loopback** command is accepted but the loopback is not configured.

Workaround: Insert a transceiver before configuring the loopback on the wave interface.

- [CSCdw87421](#)

Symptom: When laser safety control is enabled on the OSC wave 0 interface or wave 1 interface, the OSC trunk laser does not shut down when a fiber cut occurs.

Workaround: None

- [CSCdx07666](#)

Symptom: Loss of Signal may be encountered before SD (signal degrade) and SF (signal failure) thresholds are exceeded and traffic may still continue to pass transparently.

The loss of signal detection is taken from the OE conversion subsystem which is different from the source of the SD and SF counters. The OE conversion is not gated by its loss of light indication so the data and clock extraction continues and the signal is regenerated transparently. The loss of light sensitivity is a characteristic of the OE conversion unit and it may vary from unit to unit but is always < -30dBm.

Workaround: None.

- [CSCdx09167](#)

Symptom: The alarm LED is not raised or cleared by SD/SF indications.

Workaround: None.

- [CSCdx27201](#)
Symptom: If the configuration register autoboot field is set to either 0x1 or 0x2 and the first file in bootflash memory is not a loadable system image, then the system continues to try to reboot.
Workaround: Use the **send break** command on the console CLI to stop the autoboot cycling, and then manually boot a loadable system image. Make sure the first image in bootflash memory is a valid system image.
Upgrade the processor card ROMMON image to release 12.1(11r)E3 or later.
- [CSCdx31068](#)
Symptom: With APS Y-cable, SD condition on the working channel does not clear the lower priority manual-switch condition on the protection channel. This caused manual-switch to persist after the SD condition was removed and APS to switch back to the working channel.
Workaround: None.
- [CSCdx32408](#)
Symptom: Customer installed mismatching wavelength transponders and did not receive a wavelength mismatch alarm. The Cisco ONS 15540 ESP does not report this condition.
Workaround: None.
- [CSCdx32438](#)
Symptom: When the Rx port fiber is removed, ingress alarms are reported and cleared repeatedly. The alarm should not clear and the alarm should be reported only once.
Workaround: None.
- [CSCdx37144](#)
Symptom: Processor card gets into a nonresponsive state.
Workaround: None.
- [CSCdx42595](#)
Symptom: No alarm is raised when the transponder channel does not match the channels supported by the mux/demux module.
Workaround: None.
- [CSCdx70683](#)
Symptom: The reprogram for the standby processor card fails.
Workaround: Run the reprogram on the active processor card, enable the processor switchover after switchover, and then run the reprogram on the new active processor card. Remove and reinsert the processor card for the new FPGA to become effective.
- [CSCdx77331](#)
Symptom: CTM is flooded with traps every second when hardware port flap alarms occur.
Workaround: None.
- [CSCdx80804](#)
Symptom: The **encapsulation fastethernet** command fails on multimode transponders. The **clock rate 100000** command succeeds but then pings over the signal fail intermittently.
Workaround: None.

- [CSCdx81765](#)

Symptom: The OSC intermittently drops IP packets because of an erroneous calculation of the FCS-16 (frame check sequence 16).

Workaround: None.
- [CSCdx82558](#)

Symptom: The system image on the standby processor card cannot be upgraded to a new system image because the format of the redundancy messages from the active processor card are not recognized on the standby processor card. The standby processor card fails to boot and returns to ROMMON mode.

Workaround: None.
- [CSCdx85761](#)

Symptom: Multiple %METOPT-2-PORTFAIL messages are seen when using the y-cable aps configuration with single AFOV. However, this does not affect the functionality.

Workaround: None.
- [CSCdy03245](#)

Symptom: Topology Neighbour configuration is lost on mux-demux motherboard OIR.

Workaround:The topology neighbour is viewable after reconfiguring the wdm interface.
- [CSCdy08228](#)

Symptom:Interface reports up/up even when there is no light source connected.

Workaround: Perform a shut and then a no shut on the interface.
- [CSCdy10401](#)

Symptom: The transparent interface of an extended range transponder module continues to report good signal quality even after the transceiver is removed and reinserted.

Workaround: Perform a **shutdown/no shutdown** command sequence on the transparent interface.
- [CSCdy20002](#)

Symptom: A transparent interface carrying Gigabit Ethernet traffic and configured with gigabit Fibre Channel encapsulation shows good quality signal on the **show interfaces transparent** command output and does not assert any ingress alarms. The wave interface assert loss of lock and loss of sync alarms.

Workaround: Remove and reinsert the transponder module to bring it to the correct state.
- [CSCdy20010](#)

Symptom: LoF (loss of frame) alarms are not reasserted after a **shutdown/no shutdown** command sequence on both the transparent and wave interfaces on the transponder module.

Workaround: Disable and reenale monitoring on the transparent interface to reassert the alarms.
- [CSCdy20022](#)

Symptom: The **show facility-alarm** status does not report existing LoF/LoSync/LoLock alarms after OIR/hw-mod power off/on.

Workaround: Disable and enable monitoring will reassert existing alarms in the show facility-alarm status.

- [CSCdy20792](#)

Symptom: After removing and reinserting (OIR) of a transponder, the laser frequency is not programmed to the transponder correctly, which results in a wavelength filter mismatch and the wavelength not coming out of the filter.

Workaround: Configure the Wave interface for the alternate frequency and then program it back to the desired frequency using the **laser frequency <value in MHz>** command.

- [CSCdy23001](#)

Symptom: A line laser failure alarm is asserted but not cleared when an extended range transponder module is removed and reinserted. The **show facility-alarm status** command output shows a message similar to the following:

```
Source: TranspdrSC 2/3 Severity: MAJOR Description: 2 Line laser failure detected
```

Workaround: None.

- [CSCdy23025](#)

Symptom: The SF (signal failure) alarms are not cleared from the **show facility-alarm status** command output after monitoring is disabled.

Workaround: None.

- [CSCdy23325](#)

Symptom: An ingress LoF alarm on a transparent interface is not asserted when an SEF (severely errored frames) alarm is present due to the alarm priority handling error in the driver.

Workaround: A **shutdown/no shutdown** command sequence on the transparent interface will reassert the ingress LoF alarm.

- [CSCdy30497](#)

Symptom: Line card function version in Cisco IOS software should return the hex value.

Workaround: None.

- [CSCdy40429](#)

Symptom: Under some situations the erratas of the system controller used on the processor card (GT64120A) can cause:

- A software forced crash due to memory ECC errors
- A bus error exception
- Corruption of data

Workaround: None.

- [CSCdy40864](#)

Symptom: A compatibility problem was detected in the released images that caused them to reject communication with the new images with a different `cpu_red` client version. This will cause the Active cpu to reset the Peer cpu.

Workaround: Since this problem comes into existence only if the `cpu_red` client version is different between 2 images, this problem does not exist in the old released images. Since the new images with the incremented `cpu_red` client version contains the fix for compatibility as well, this bug should not cause any impact in the field.

- [CSCdy40882](#)
Symptom: CPU information shows up in **show hardware** command output, even after removing.
Workaround: None.
- [CSCdy44129](#)
Symptom: If a Downlink Client interface is configured for CDL but is connected to a non-CDL device, the CDL message channel is down.
Workaround: Ensure Downlink Client interface is configured correctly.
- [CSCdy49146](#)
Symptom: Under some circumstances, single bit ECC errors occur and are corrected by the system controller, but are not recorded; the user is unaware of these occurrences.
Workaround: None.
- [CSCdy49249](#)
Symptom: If a line card that was earlier removed or never inserted before switchover gets inserted while a switchover is happening, then the line card and its interfaces may not come up properly.
Workaround: Re-insert line card after switchover is complete.
- [CSCdy53288](#)
Symptom: The Cisco ONS 15540 might crash when using the **is_optical_ifstatus_up** command; this is an intermittent problem.
Workaround: None.
- [CSCdy58197](#)
Symptom: In a configuration where two Cisco ONS 15530 systems are linked to a Cisco ONS 15540 ESP through 10-GE connections, the tengigethernetphy interface on one side is administratively shut down and the ESCON ports are down. However, the ESCON ports associated with the other Cisco ONS 15530 are still up.
Workaround: Shut down the tengigethernetphy interface associated with the second Cisco ONS 15530.
- [CSCdy61641](#)
Symptom: Following a CPU crash and switchover, if a **show redundancy** command is issued on the new Active CPU, it currently shows "Reported Switchover Reason" as "Not known". If a **show version** is issued on the Standby CPU that crashed, it shows additional troubleshooting information.
Workaround: None.
- [CSCdy62752](#)
Symptom: A few kinds of software exceptions on the Active CPU can disable the ability for the standby CPU to reset the Active CPU if the Active CPU becomes nonresponsive.
Workaround: None.
- [CSCdy63359](#)
Symptom: The **getmany on ifMIB** command causes the system to hang in a loop.
Workaround: None.

- [CSCdy65411](#)
Symptom: It takes about 15 minutes for a mode-mismatch event/trap to be set/generated after the misconfiguration that causes it is reconfigured on the system.
Workaround: None.
- [CSCdy78546](#)
Symptom: From snmp, **ptopoConnEntry** can be created with **entPhysicalIndex**, which does not correspond to any valid interface on the box.
Workaround: None.
- [CSCdy79161](#)
Symptom: Configuring both line and trunk side loopback on the 10-GE trunk card affects the traffic flow.
Workaround: Reconfigure the 10-GE trunk card with loopback on only the line or trunk side, not both. OIR the 10-GE card to restore traffic.
- [CSCdy79659](#)
Symptom: Incorrect OPM behavior.
Workaround: None.
- [CSCdy79812](#)
Symptom: CDL hec counters are displayed in the show interface tengigetheretnphy when CDL is disabled.
Workaround: None.
- [CSCdy81888](#)
Symptom: Traffic is disrupted on bootup and switchover when the client side of the 10-GE trunk card has CDL disabled and both the client side and the trunk side are configured for **cdl force hop..**
Workaround: Use the **no cdl defect-indication force hop** command on the client side.
- [CSCdy83757](#)
Symptom: Unable to manage box configured with eigrp after a CPU switchover.
Workaround: Connect to the console port and remove the passive-interface configuration in eigrp configuration.
- [CSCdy85563](#)
Symptom: The DI error message does not indicate DI bit status.
Workaround: None.
- [CSCdy87237](#)
Symptom: Line laser failure not reported in the **show facility status** command output at TSP2 XCVR OIR.
Workaround: None.
- [CSCdy88154](#)
Symptom: Some interfaces will not be available to the NMS station since the agent does not create them on OIR.
Workaround: Reload the box after removal/insertion of the cards.

- [CSCdz00116](#)

Symptom: APS message channel configured for UDP/IP does not work over more than 2 IP hops. The UDP/IP packet gets dropped at the end of the second hop.

Workaround: None.
- [CSCdz02296](#)

Symptom: OIR of SFA does not reflect correct patch status for pom and mux.

Workaround: None.
- [CSCdz02340](#)

Symptom: Traceback @optical_idb_wave_ethernet_phy_report.

Workaround: None.
- [CSCdz03989](#)

Symptom: Both active and standby lasers in a bidirectional y-cable APS configuration on modules in subslot 0 turn on erroneously.

Workaround: This bug has been fixed by using the correct format for programming the switchover-command register.
- [CSCdz06004](#)

Symptom: The **redundancy reload shelf** command on the active processor can cause a switchover if the peer cpu is in Rommon.

Workaround: Use the **reload** command to reload the active processor, if the peer processor is in Rommon.
- [CSCdz06602](#)

Symptom: All interval entries of OPM are not returned by getnext.

Workaround: None.
- [CSCdz08774](#)

Symptom: ciscoFlashDeviceChangeTrap should be supported on ONS155xx platforms since it is a basic operation. Whenever a removable flash device is removed or inserted, this trap should be generated.

Workaround: None.
- [CSCdz12919](#)

Symptom: When the forward laser control feature is enabled in hardware (either due to user configuration or due to Y-cable configuration), and the waveEthernet interface laser is shut by this safety feature, the laser soft-start procedure has to be followed when the laser is enabled again.

Workaround: None.
- [CSCdz13538](#)

Symptom: The egress Loss of Signal alarm is not reasserted in the show facility status after hw-module power is turned off or on.

Workaround: None.
- [CSCdz13673](#)

Symptom: The wave i/f remains down when the signal quality is GOOD and after the hw-module power is turned off or on.

Workaround: None.

- [CSCdz14420](#)
Symptom: The Rx Power display in some cases is off by +/-4dBm in comparison with the real reading using power meter.
Workaround: Use a calibrated transponder.
- [CSCdz18757](#)
Symptom: The default laser frequencies of the transponders in an odd subslots (for example, x/1 or x/3) are not restored correctly after the second OIR. The laser frequencies are stored correctly for the first OIR only.
For example, when inserting a transponder (channel n and channel n+1) to subslot x/1 the first time, the default laser frequency is n+1 (correct). Remove this transponder and insert another (channel m and channel m+1), the default laser frequency becomes m (incorrect; it should be m+1).
Workaround: OIR the transponder module.
- [CSCdz18815](#)
Symptom: False alarm goes off LCMDC-3-OPT-SWITCH-FAIL when forcing APS switchover.
Workaround: None.
- [CSCdz19099](#)
Symptom: Not obvious. The optical receive power level displayed on the show interface is not very accurate. It may be off as much as +/-4dBm in some cases, but in most of the cases it is OK.
Workaround: None.
- [CSCdz20508](#)
Symptom: The wavepatches are stuck in the down state after using the **sh/no sh of wave interface** command with splitter APS after the trunk fiber has been cut.
Workaround: None.
- [CSCdz22455](#)
Symptom: System crashes due to PCI Master abort while doing Sandisk OIR.
Workaround: None.
- [CSCdz25739](#)
Symptom: The low warning threshold alarm is not cleared in the **show facility** command output.
Workaround: None.
- [CSCdz28582](#)
Symptom: After a fiber cut, the OSC interface remains up with the signal quality good.
Workaround: Do a shut/no shut.
- [CSCdz28903](#)
Symptom: For the sysplex protocol, forward laser control does not work after the OIR/FPGA has been reprogrammed.
Workaround: Using the **no encap** and **encap sysplex etr** commands on the transparent interface will program it correctly.

- [CSCdz29723](#)

Symptom: When APS communication goes down, and an APS failure is subsequently detected, APS may switch over even though the communication is down. Based on this type of failure, there may be a unidirectional switchover. For IBM sysplex CLO/ETR applications, a unidirectional switchover may lead to data corruption.

Workaround: None.

- [CSCdz31593](#)

Symptom: In a point-to-point bidirectional situation, when the trunk Rx on both NEs are pulled and one of them is later replaced, APS may fluctuate between Working and Protection. Under certain conditions the driver declares both Working and Protection as down when the wave interface goes down. In bidirectional APS this essentially means that the local side may inform the remote side that Working/Protection is down when it is not really down. APS has the ability to settle down on the good side; however, due to the bidirectional message (DO-NOT-REVERT in this case) from the far side; the local side switches away from the good side, and the cycle repeats. Note that this problem does not always happen, and requires certain timing in order for it to happen.

Workaround:

1. Use force switch or lockout to peg the receive to the good side.
2. Temporarily change the direction from bidirectional to unidirectional. This requires disabling the group.

- [CSCdz33752](#)

Symptom: In bidirectional APS, if both NEs have the same priority request, the master/slave determination fails, leading to both claiming the control and resulting in not sending a REVERSE-REQUEST.

Workaround: None.

- [CSCdz36420](#)

Symptom: In a preconfigured APS group (when the interfaces do not exist), if the group is configured for revertive mode, it cannot be enabled.

Workaround: None.

- [CSCdz36424](#)

Symptom: Attempting to read a flash card formatted on another system causes advisory messages to be continuously printed to the console.

Workaround: None.

- [CSCdz36823](#)

Symptom: The processor crashes after midnight with optical performance monitoring on when an interface capable of performance monitoring is shutdown before 00-00hrs and unshut after midnight.

Workaround:None.

- [CSCdz37698](#)

Symptom: Both working and protection client tx active in y-cable APS.

Workaround: None.

- [CSCdz38075](#)

Symptom:Data traffic is hit during the CPU switchover when the splitter APS is configured.

Workaround: None.

- [CSCdz38448](#)

Symptom: In 10G Y-cable bidirectional APS configuration, whenever many CVRD errors are received on the standby trunk due to a bad signal, (but still signal quality is GOOD in **show interface** command output) all four FDI-H/E and BDI-H/E bits in the DECCSR register MIGHT get latched. This generates interrupts and the console is flooded with a similar message for that interface:

```
00:15:17: %APS-3-PORT_FAIL: External Port Fail On WaveEthernetPhy10/1
```

Workaround: Improve the quality of the signal by removing some attenuation and/or cleaning the optical connectors so that CVRD errors are not seen.
- [CSCdz39112](#)

Symptom: When an invalid channel number is detected by the OSCP client while it processes the client message received from a peer, OSCP does not free the message buffer. This results in buffer starvation over a period of time and connectivity via Network Management interface and Back Plane ethernet(IPC and OSCP) interface are lost.

Workaround: None.
- [CSCdz39793](#)

Symptom: The optical alarms are not asserted/cleared correctly when the wave is in the administrative down state.

Workaround: Perform a **shut/no shut** on the Active wavepatch, or perform a the **no shut** on wave to clear the false alarms.
- [CSCdz40675](#)

Symptom: Receiver power low alarm and warning are not asserted on the wavepatch interface after switchover, from active wavepatch to standby wavepatch.

Workaround: None.
- [CSCdz41160](#)

Symptom: Continuous “SRC poll failure” exists after removing the calibrated transponder and inserting a noncalibrated transponder or ITU direct insertion card.

Workaround: None.
- [CSCdz58866](#)

Symptom: Threshold group line is missing in the **show interface waveethernetphy** command output.

Workaround: None.
- [CSCdz62553](#)

Symptom: The tengigEthernetPhy interface is getting BDIH while the in-band message channel is disabled.

Workaround: None.
- [CSCdz66609](#)

Symptom: Traffic loss of 30-45 sec might occur when a y-cable APS configuration with protection switchover is used with the Catalyst 6000 family.

Workaround: Disable autonegotiation and enable debounce timer with 100 ms delay on Catalyst 6000 family using the **set port debounce mod/port enable** command sequence.

- [CSCdz75109](#)
Symptom: When y- cable APS is configured, shutting off the power to the transponder using the **hw-mod power off** command brings the power back on again immediately.
Workaround: Remove the APS configuration and perform power off.
- [CSCdz79336](#)
Symptom: APS switchover time (50ms) is not guaranteed for loss of lock, loss of sync, or loss of frame. It is only guaranteed for loss of light.
Workaround: None.
- [CSCdz80042](#)
Symptom: The output of the **show interface waveethernetphy** command sometimes shows a high receiver power value when there is no input signal connected to the card.
Workaround: OIR the card.
- [CSCdz83169](#)
Symptom: Could not get a wave power reading graph with CiscoView 2.0/2.1 for an uncalibrated transponder.
Workaround: Use a calibrated transponder.
- [CSCdz85458](#)
Symptom: When the 10-GE ITU trunk (waveethernetphy) laser is down due to the FLC (forward laser control) action, removing the FLC configuration does not turn the laser back on.
Workaround: None.

Limitations and Restrictions

This section provides limitations and restrictions for Cisco ONS 15540 ESP hardware and software.

Transponder Modules

This section contains limitations and restrictions that apply to transponder modules.

- When you insert the standby transponder module in a y-cable protected configuration, remove the cable from the transponder module before inserting the transponder module into the shelf. Failure to remove the cable might result in errors that can affect the performance of the active signal received by the client equipment.
- CRC errors may occur with 2-Gbps Fibre Channel on single-mode transponders when high input power levels are received from the client laser sources.

Data errors or link-down conditions for 2-Gbps Fibre Channel might occur when used with certain client laser sources. Transmitters in some client GBIC and SFP transceiver units might send large overshoots in optical power with signal bit transitions, causing momentary overload conditions on the transponder client side receiver. The average transmitted power level from the GBIC does not violate the overload specification of the transponder client side receiver, so a power meter does not detect the overload.

The workaround is to attenuate the signal from the client equipment to a recommended level of -12 dBm when transmitting 2-Gbps Fibre Channel services.

Related Documentation

Refer to the following documents for more information about the Cisco ONS 15540 ESP:

- [Cisco ONS 15540 ESP Planning and Design Guide](#)
- [Regulatory Compliance and Safety Information for the Cisco ONS 15540 ESP](#)
- [Cisco ONS 15540 ESP Hardware Installation Guide](#)
- [Cisco ONS 15540 ESP Configuration Guide and Command Reference](#)
- [Cisco ONS 15540 ESP Troubleshooting Guide](#)
- [Cisco ONS 15540 ESP MIB Quick Reference](#)
- [Glossary of Optical Networking Terms](#)

Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco web sites can be accessed from this URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

Registered Cisco.com users can order the Documentation CD-ROM (product number DOC-CONDOCCD=) through the online Subscription Store:

<http://www.cisco.com/go/subscription>

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You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

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<http://www.cisco.com/en/US/partner/ordering/index.shtml>
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Obtaining Technical Assistance

Cisco provides Cisco.com, which includes the Cisco Technical Assistance Center (TAC) Website, as a starting point for all technical assistance. Customers and partners can obtain online documentation, troubleshooting tips, and sample configurations from the Cisco TAC website. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC website, including TAC tools and utilities.

Cisco.com

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Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two levels of support are available: the Cisco TAC website and the Cisco TAC Escalation Center. The avenue of support that you choose depends on the priority of the problem and the conditions stated in service contracts, when applicable.

We categorize Cisco TAC inquiries according to urgency:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

Cisco TAC Website

You can use the Cisco TAC website to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC website, go to this URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC website. Some services on the Cisco TAC website require a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

<http://tools.cisco.com/RPF/register/register.do>

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC website, you can open a case online at this URL:

<http://www.cisco.com/en/US/support/index.html>

If you have Internet access, we recommend that you open P3 and P4 cases through the Cisco TAC website so that you can describe the situation in your own words and attach any necessary files.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

Obtaining Additional Publications and Information

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- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems as well as ordering and customer support services. Access the *Cisco Product Catalog* at this URL:
http://www.cisco.com/en/US/products/products_catalog_links_launch.html
- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: *Internetworking Terms and Acronyms Dictionary*, *Internetworking Technology Handbook*, *Internetworking Troubleshooting Guide*, and the *Internetworking Design Guide*. For current Cisco Press titles and other information, go to Cisco Press online at this URL:
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco monthly periodical that provides industry professionals with the latest information about the field of networking. You can access *Packet* magazine at this URL:
http://www.cisco.com/en/US/about/ac123/ac114/about_cisco_packet_magazine.html
- *iQ Magazine* is the Cisco monthly periodical that provides business leaders and decision makers with the latest information about the networking industry. You can access *iQ Magazine* at this URL:
http://business.cisco.com/prod/tree.taf%3fasset_id=44699&public_view=true&kbns=1.html
- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in the design, development, and operation of public and private internets and intranets. You can access the *Internet Protocol Journal* at this URL:
http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html
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http://www.cisco.com/en/US/learning/le31/learning_recommended_training_list.html

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