



## Release Notes for Cisco ONS 15305 Release 2.0

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### January 2005

Release notes address closed (maintenance) issues, caveats, and new features for the Cisco ONS 15305. For detailed information regarding features, capabilities, hardware, and software introduced with this release, refer to Release 2.0 of the Cisco ONS 15305 Installation and Operations Guide. For the most current version of the Release Notes for Cisco ONS 15305 Release 2.0, visit the following URL:

[http://www.cisco.com/en/US/products/hw/optical/ps2001/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/hw/optical/ps2001/prod_release_notes_list.html)

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Corporate Headquarters:  
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

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# Changes to the Release Notes

This section documents supplemental changes that have been added to the *Release Notes for Cisco ONS 15305 Release 2.0* since the production of the Cisco ONS 15305 System Software CD for Release 2.0.

No changes have been added to the release notes for Release 2.0.

## Caveats

Review the notes listed below before deploying the ONS 15305. Caveats with DDTS tracking numbers are known system limitations that are scheduled to be addressed in a subsequent release. Caveats without DDTS tracking numbers are provided to point out procedural or situational considerations when deploying the product.

### DDTS # CSCeg61386

FE port blocked when a port configuration is changed. The port does not forward traffic, but port status is reported as up.

This issue can occur when the FE port has been configured for L1 and a bandwidth larger than 0 has been allocated. If the port is reconfigured to L2, the port will not forward traffic when there is an alarm on the vgroup connected to the port, in L1 mode, prior to the reconfiguration to L2.

**Workaround:**

Ensure that on a port running in L1 mode, with an administrative capacity larger than 0, your operational capacity downstream is larger than 0, then reduce the administrative bandwidth of the port to 0 before switching over to L2 configuration.

If a reconfiguration of the port has occurred without following the above procedure, the module must be restarted. A reconfiguration back to L1 operation will not be sufficient unless an operational capacity greater than zero is restored and the procedure described above is repeated. This issue will be resolved in the next release.

### DDTS # CSCea33337

Port priority is not strictly enforced when flow control is on. This can occur under the following conditions.

The four input ports are set for 100 MB (64 bytes).

Port 1 priority is set for 6

Port 2 priority is set for 4

Port 3 priority is set for 0

Port 4 priority is set for 1

VLAN tagging is turned off for all of the FE ports while VLAN tagging is turned on for the STM1 trunk port. (This adds an additional 4 bytes to each stream.) Flow control is turned on for all the FE ports. When all the ports are turned on, only Port 1 should have priority. Instead, traffic is received on both Ports 1 and 2 at almost 60/40% on each port (81,168 versus 60,876). This issue will be resolved in a future release.

## DDTS # CSCeb22543

The failure is present in different corners and at different temperatures. We have Errors (#14 B3 errors in 24 hour of test, #1 Loss of Pattern) on a STM-1 link with #3 8xSTM-1 modules. We records also packet lost on a FE link mapped into STM-1 optical path. When these errors / packet lost happens, we record from Cisco Craft a lot of “DXC inlet bit error” alarms. No other type of alarms has been recorded from the Cisco-Craft. All these 3 event happens at the same time, so the root cause should be the same.

## DDTS # CSCea71600

The fail is related on module 8xSTM-1. During EDVT corner 5 & corner 7:

Corner 5: power supplies on the modules at -5% except power supply DC-DC module at +5%, Temperature= +50°C

Corner 7: each power supplies at -5%, Temperature= +50°C this module does not starts. This cause fail on the traffic path related to this modules.

The number of fails is:

- C5:board\_3 module 8xSTM-1 SN0307008095, 2 times / 10 tests
- C7:board\_3 module 8xSTM-1 SN0307008095, 1 time / 10 tests
- C7:board\_4 module 8xSTM-1 SN0303006397, 1 time / 10 tests

When this fail happens, record the following alarm from the Cisco EdgeCraft:

“slot3 inlet Fail DXC inlet failure”.

64 byte packets are lost when testing flow control

## DDTS # CSCea31245

### Conditions:

When sending 100 Mb from two ports to a single port, the packets are lost when the size is 64 byte. When the size is increased to 75 byte, the packet loss goes away

### Workaround:

This type of traffic is not typical for a device in normal operation but it can occur in a lab test setup

### Resolution:

None

## DDTS # CSCea33354

No pause packets received on ports sending traffic to a congested mirrored port.

### Conditions:

If a mirrored port becomes congested and flow control is enabled, no pause packets are generated toward ports belonging to other modules. Flow control is not working properly if ports used for mirroring become congested. If traffic to a mirrored port is sent from a LAN port situated in a different module than the mirrored port pause packets are not received and mirrored packets are lost. The real traffic flow is not disturbed by the mirrored port flow control problem, and the copy port traffic handling is working fine.

**Workaround:**

None

**DDTS # CSCeg58254**

When operating in L2 mode, Ethernet frames with MAC destination address in the range 01:80:C2:00:00:10 to 01:80:C2:00:00:FF are not correctly filtered due to limitations in the switch ASIC. Special steps are taken to forward 0 1:80:C2:00:00:14 and:15 (IS hello).

01:80:C2:00:00:14 and:15 are not forwarded if one is employing Provider VLAN by using Ethertype 0xFFFF (legacy provider VLAN).

**Conditions:**

Legacy VLAN tunneling in use.

**Workaround:**

Use protocol tunneling supported by 2xGE + SMAP and 8xFE + SMAP to provide transparent Ethernet (with or without provider VLAN).

**DDTS # CSCea33042**

Same priority and same packet size yields different traffic flows.

**Conditions:**

There are 4 streams setup each has the same packet size (64 byte) going across 100 Mb STM-1 path to another ONS15305. Each of the streams can be off as much as 50%. This is not always the case, sometimes the traffic can be equally distributed. However, using random packet sizes, the distribution seems to be more equal.

**Workaround:**

This type of traffic is not typical for a device in normal operation, but it can occur in a lab test setup.

**Resolution:**

None

**DDTS # CSCea33196**

Unfair distribution of intermodular traffic with flow control can occur. If traffic is sent from several ports in different modules and flow control is active, traffic throughput is less for ports belonging to same module as the congested.

Typical scenario:

Port 2 module 1, port 1 module 2 and port 1 module 3 send 100Mb traffic streams to port 1 module 1. All ports have flow control enabled. The result is that more traffic is sent from the ports in module 2 and 3 compared to what is sent from the port in module 1. No packet loss from any module occurs. This issue will be resolved in a future release.

**DDTS # CSCeg58260**

System-up-time should be able to store up-time up to approximately 497 days. Experience shows this counters wraps around well before (appr. 40 days).

**Workaround:**

None

**Resolution:**

Ongoing investigation.

**DDTS # CSCeg58273**

AbortTftp events reported on unsuccessful ping.

**Conditions:**

When using \223ping utility\224 from AXXCRAFT, and the ping is not successful, abortTftp events are reported. Tftp events are not relevant in this context.

**Workaround:**

None.

**DDTS # CSCeg58278**

802.1p does not work satisfactorily for WAN ports on 4xFE+4xMAP, 8xSTM-1+8xMAP and 8xMAP modules.

**Symptom:**

In some cases the different priority tags of frames going out on WAN ports are ignored.

**Conditions:**

The number of VC-12s allocated to a WAN port is less than 47 (i.e. the capacity of the WAN link is less than 100M it/s). The switch sees the wan port as an FE port, and will not see the need for prioritizing between the frames. Thus adapting the traffic to the actual bandwidth is handed over to the FPGA mapping the frames into SDH.

**Workaround:**

Solved for 2xGE + SMAP and 8xFE + SMAP modules.

**Resolution:**

Ongoing investigation.

**DDTS # CSCeg58295**

Disabling OSPF causes device-restart if Stub area exists (IP-Numbered mode only).

**Symptom:**

Device restarts when disabling OSPF if stub area exists.

**Workaround:**

None

**Resolution:**

Ongoing investigation.

**DDTS # CSCeg58300**

Static Unicast Table (number of entries) causes device-restart.

**Symptom:**

Administratively set a value for Unicast-Global-Forwarding Table causes device restart.

**Conditions:**

If configuring a value for Unicast-Global-Forwarding table \223AfterReset\224 lower than the number of static entries in the table, and then select software reset for the device, a device restart will be experienced.

**Workaround:**

Avoid configuring a lower number than statically configured in the Unicast-Global-Forwarding table.

**Resolution:**

Ongoing investigation.

**DDTS # CSCeg58312**

Max aging time is 650 sec.

**Symptom:**

When the setting for aging time is set above 650 seconds, aging still starts at 650 seconds.

**Conditions:**

1. Fill the forwarding table using SmartBits to generate different source addresses (default forwarding table size is 8192).
2. The default aging time is 3600, but still the number of entries in the table starts to reduce at approximately 650 seconds.

**Workaround:**

None.

**DDTS # CSCeg58361**

Unnecessary LINK\_DOWN events reported in history after boot/restart.

**Symptom:**

DCC Link “down” events reported in “notification history” after boot.

**Conditions:**

All DCC channels, even if not represented by DCC applicable HW, reports LINK “DOWN” in notification history after device power up (restart).

**Workaround:**

None

**Resolution:**

Ongoing investigation.

**DDTS # CSCeg58364**

Auto negotiation for Flow control on LANx-ports does not work (2xGE\_SMAP only).

**Symptom:**

The PAUSE-capable bit is not announced during auto negotiation when Flow Control is set to AutoNeg. Only for 2xGE\_SMAP.

**Workaround:**

None.

**Resolution:**

Ongoing investigation.

## DDTS # CSCeg58372

There is an RSTP and GVRP conflict.

**Symptom:**

If both RSTP and GVRP run simultaneously, a device-restart may be experienced when disabling GVRP.

**Workaround:**

RSTP must be disabled before disabling GVRP.

**Resolution:**

Ongoing investigation.

## DDTS # CSCeg58380

SNC Protected unidirectional cross-connection not supported. When one direction of a path forms part of an SNC protected unidirectional cross-connection, the other direction can not form part of a different SNC protected unidirectional cross-connection. But the two directions can form part of two different unidirectional un-protected cross-connections. This applies to unidirectional cross-connections on all path layers.

For example, suppose the unidirectional VC-12 cross-connection from 1/1/1.1.1.1 (input) to 1/2/1.1.1.1 (output) is SNC protected by 1/3/1.1.1.1 (input). In this case, the output direction of 1/1/1.1.1.1 and 1/3/1.1.1.1, and the input direction of 1/2/1.1.1.1 are un-used. However, due to the above mentioned limitation, they can not be part of a new SNC protected unidirectional cross-connection, e.g. from 1/2/1.1.1.1 (input) to 1/1/1.1.1.1 (output) protected by 1/14/1.1.1.1. They may however form part of un-protected unidirectional cross-connections.

**Workaround:**

None.

**Resolution:**

Release R3.0

## DDTS # CSCeg58388

Device reboots if switching OSPF InterfaceType from “point-to-point” to “broadcast”, or if disabling OSPF while InterfaceType is “point-to-point”. This issue is observed when OSPF is enabled, the OSPF Interface table is populated and the InterfaceType of an entry in the OSPF Interface table is changed to “point-to-point”.

**Workaround**

Restore a CDB-backup without the incorrect interface type configured. If you don't have such a CDB-backup, SUPPORT can assist in modifying the CDB-backup of your current configuration.

## DDTS # CSCeg58398

Device initiates an additional boot sequence when restarted after CDB-restoration, to clean up invalid configuration data, after which the ProviderTags parameter is set to “disabled”.

VLAN membership or tag status of an Ethernet port has been changed after the parameter ProviderTags has been enabled, and the device has been rebooted (due to software/firmware upgrade, or restore of configuration database).

**Workaround:**

Disable ProviderTags parameter when removing the port from the VLAN or changing its tag status.

## DDTS # CSCef88892

When first configuring IP numbered DCN management link between ONS15305 and ONS15454SDH, the link may not come up.

**Workaround:**

For the DCN link to come up, one must toggle the mode field, on ONS15305, from “IpOverDcc” to “Not Used” then back to “IpOverDcc”.

## DDTS # CSCeg11010

Some dccR and dccM Mode field may reset to “Not Used” after upgrade to R2.0.0 in IP numbered mode.

**Workaround:**

Mode fields for all pre-provisioned dccR and dccM must be revisited and reconfigured for “Poverty”.

## DDTS # CSCeg11478

Reverting from R2.0.0 back to R1.1.1 will fail.

**Workaround:**

The following procedure must be used to successfully revert back to Release 1.1.1, after upgrading to release 2.0.0:

1. Main card firmware, 45004-70AA\_PM\_ED05.bin, must be uploaded first.
2. Software file, 45004-77AB\_PM\_ED06.bin, must be uploaded.
3. Definition file, 55004-01AB\_PM\_ED06.def, must be uploaded.

## DDTS # CSCeg45943

The Mac table overflow “Duration Timer” does not increment.

After overloading the forwarding database a “bridge table overflow” occurs, but the duration of the condition stays at 0h 0m 0s.

## Resolved Caveats for Release 2.0

- Back pressure with 64 bytes packets causes loss and uneven distribution
- GigE port does not handle traffic in fiber w/auto Gen enabled



- Restart triggered when receiving a specific frame (Bootp)
- GigE port/Incorrect media/connection
- Mismatch between 'Running SW Revision' presented during start-up and the actual software in the equipment.

## New Features and Functionality

This section highlights new features and functionality for Release 2.0. For an overview of features of the 15305, consult the Cisco ONS 15305 Installation and Operations Guide, Release 2.0.

The following new module types have added for Release 2.0.0.

- 2-port Gigabit Ethernet module with WAN mapper (Configurable modes; 2xLANx+0xWANx or 2xLANx+2xWANx).
- 8-port Fast Ethernet module with WAN mapper (Configurable modes; 14xLANx+2xWANx or 8xLANx+8xWANx).

The following additional features have added for Release 2.0.0.

- Contiguous concatenation according to G.707, for STM-4 and STM-16: VC-4-4c.
- SNC/n (Sub Network Connection Protection with non-intrusive monitoring).
- IPPM (Intermediate path performance monitoring) for up to 63 paths'.
- VCAT on VC-12, VC-3 and VC-4.
- GFP-F on new Ethernet modules.
- Soft LCAS bidirectional on new Ethernet modules.
- Standard LCAS on new Ethernet modules.
- IP In-band solution for management connectivity when L1 mode is used for Ethernet transport. Configurable modes: 192kbit/s or 512kbit/s.
- Rapid Spanning Tree Protocol (RSTP) per device.
- IP unnumbered for management connectivity. Introduced as System mode for MCN configuration. Needs to be set in ONSCLI since:
  - It is a strategic choice for IP configuration
  - Planning of MCN.
- OSPF interoperable with ONS15454 SDH on DCN architectures.
- L1 Ethernet transport on new Ethernet modules.
- Support for frame size up to 9,216 octets for L1 services
- Provider VLAN (QinQ), Ether type 8100, is supported on new Ethernet modules.
- Protocol Tunnelling. All MAC addresses in range; 0180C2000000 to 0180C20000FF, except for 0180C2000001, is transported transparently, including the following protocols:
  - RSTP, MSTP, STP, GVRP, GMRP, LACP and 802.1x

The following miscellaneous features have added for Release 2.0.0.

- Bulk transfer - CXC tables, Alarm history and PM data (PM data just applicable for higher level management solution).
- Complete Network Release Download including “update policy”.

- E1 Performance Monitoring
- E1 Fixed pointer support for synchronization of e.g. base stations
- DCC transparency (Cisco Edge Craft will now handle this feature).
- NE “running status” commands added in ONSCLI.
- SNCP Switch Event.
- WAN Port “down” alarm
- DCC Termination Failure. CSF alarm is now supported for all DCC encapsulations supported.
- SNCP Performance parameters (Non-intrusive monitors).
- Telmon debug counter visibility in ONSCLI.
- Configurable CRC 16/32 in DCC for PPP encapsulation.
- Pointer adjustment notification (Excessive Pointer justification alarm). Configurable threshold levels Introduced to discover synchronization problems in network.

#### General improvements/enhancements

- Improved Password Recovery routine, generated based upon the overall serial number of NE.
- Feature licenses will from now on be generated based upon the overall serial number of NE.
- Improved optical level presentation when LOS. Displays now ---
- Optimized buffer handling in NE for sending traps to manager.
- Alarm log increased from 1000 to 500.

## Related Documentation

### Release-Specific Documents

- *Release Notes for Cisco ONS 15302 Release 2.0*
- *Release Notes for Cisco ONS 15305 Release 2.0*
- *Release Notes for Cisco Edge Craft Release 2.0*

### Platform-Specific Documents

- *Cisco ONS 15305 Quick Installation Guide, Release 2.0*
- *Cisco ONS 15305 Installation and Operations Guide, Release 2.0*

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You can access the most current Cisco documentation at this URL:

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<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553 2447

For a complete list of Cisco TAC contacts, go to this URL:

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## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

**Severity 1 (S1)**—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

**Severity 2 (S2)**—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

**Severity 3 (S3)**—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

**Severity 4 (S4)**—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

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