



Preface



Note

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

This section explains the objectives, intended audience, and organization of this publication and describes the conventions that convey instructions and other information.

This section provides the following information:

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Revision History

Date	Notes
April 2008	<ul style="list-style-type: none">• Changed the minute range for REPTINVL from 1-1440 min to 5-1440 min for SCHED-PMREPT command in the SCHED Commands chapter.• Replaced PACKAGE_PATH with CONFIG_FILE_PATH in the COPY-IOSCFG section.• Added description in the FTPSERVER sections of the ED, ENT, DLT, and RTRV commands.• Added a note to the Usage Guidelines for the ED-FAC command.

May 2008	<ul style="list-style-type: none"> • Added LINEWL AIDs for 40-WX-C cards. • Updated shelf ID range to 1-12 from 1-8 for multi-shelf AIDs. • Updated the <SRC1> input parameter for the COPY-RFILE command.
June 2008	Added a note to the RTRV-FAC command.
July 2008	Updated the CHANNEL and LINEWL AIDs in the Access Identifiers chapter.
September 2008	Added the table “CTC Port Numbers and TL1 Aids” in the chapter, Access Identifiers.
November 2008	<p>Updated Fan Tray AID description in EQPT AIDs table in Chapter 26, Access Identifiers.</p> <p>Updated the Usage Guidelines section for RTRV-CRS command.</p> <p>Added a note for CRSTYPE parameter in the Output Parameters table.</p> <p>Added a note for SRC1 parameter.</p> <p>Updated the Usage Guidelines section for ENT-FTPSEVER command.</p>
December 2008	Updated the ED-EQPT command in the chapter, ED commands.
January 2009	<ul style="list-style-type: none"> • Updated input parameter description for ED-<OCN_TYPE> command in Chapter 11, ED Commands. • Added Facility AID format for CE-100T-8 and MS-ISC-100T cards in Chapter 25, Access Identifiers.
February 2009	<ul style="list-style-type: none"> • Updated the input example, for the ENT-LNK command in the chapter, ENT commands. • Added prerequisites to COPY-RFILE command.
March 2009	Updated the input parameters for the ENT-OCHNC command in the chapter, ENT Commands.
April 2009	<ul style="list-style-type: none"> • Updated the following: <ul style="list-style-type: none"> – The input format, input example and input parameters for the OPR-APC command in the chapter, OPR Commands. – The WDMANS AID in the chapter, Access Identifiers.
May 2009	Updated the supported platforms in Chapter 24, SW Commands.
June 2009	<ul style="list-style-type: none"> • Updated the input parameters for the APPLY command in Chapter 3, APPLY Commands. • Updated the input parameter for the INIT-SYS command in Chapter 15, INIT Commands. • Updated the output parameter for the RTRV-FAC command in Chapter 21, RTRV Commands. • Updated the following: <ul style="list-style-type: none"> – The output example and output parameters for the RTRV-CMD-SECU command in Chapter 21, RTRV Commands. – The input example and input parameters for the ED-CMD-SECU command in Chapter 11, ED Commands.
July 2009	<ul style="list-style-type: none"> • Added a note in the section “RTRV-FAC” in Chapter 21, RTRV Commands.

August 2009	Updated the input parameter description for APPLY command in Chapter 3, APPLY Commands.
September 2009	Updated the PH parameter description in Chapter 15, INIT Commands.
November 2009	<ul style="list-style-type: none"> • Updated “OPR-PROTNSW-OCH” command description in the chapter “OPR Commands”. • Updated the <PJMON> parameter description in the chapter “ED Commands”. • Updated the <PJMON> parameter description in the chapter 21 “RTRV Commands”.
January 2010	Updated the input format, input example, and added a new parameter <OPRNOMINAL> for ED-<OCN_TYPE> command in the chapter “ED Commands”.
February 2010	Updated Input Parameters table in the chapter “INIT Commands”.
June 2010	Updated the input example and input parameters for the ENT-LNK command in the chapter, ENT commands.
July 2010	<ul style="list-style-type: none"> • Updated the “RTRV-AUDIT-LOG” command in the chapter “RTRV Commands”. • Updated the input parameter for the INIT-SYS command in the chapter, INIT Commands.
September 2010	Updated the table RFILE in the chapter “Access Identifiers”.
April 2011	Updated the input parameter description for the ED-<OCN_TYPE> command in the chapter, ED Commands.
May 2011	Updated the output parameter description for the RTRV-<OCN_TYPE> command in the chapter, RTRV Commands.
July 2011	Updated the description for RFILE-DB in “RFILE” section in the chapter, “Access Identifiers”
September 2011	<ul style="list-style-type: none"> • Added a note to RTRV-PM-<MOD2> section. • Modified “Mode” description in ED-<OCN_TYPE> section.
February 2012	<ul style="list-style-type: none"> • Added “MS-ISC-100T” parameter to the ENT-EQPT command and removed “XCVXC-2.5G” parameter from the ENT-EQPT command in the chapter “ENT Commands”.
March 2012	Added Facility AID for CE1000 cards in the chapter “Access Identifiers”.
August 2012	The full length book-PDF was generated.
October 2012	Updated the input example for the ED-<MOD1FCPAYLOAD> command in the chapter, ED Commands.
February 2013	<ul style="list-style-type: none"> • Updated the section, “ENT-LNKTERM” in the chapter “ENT Commands”. • Added a new section “Important Notes about TL1 Commands” in the “Preface” chapter. • Added “BIT-EC” counter in the output parameters table for “MONTYPE” parameter in the chapters “INIT Commands”, “RTRV Commands”, and “SET Commands”

Document Objectives

This guide explains the use of Transaction Language 1 (TL1) for the Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, and ONS 15600 systems. Use this guide in conjunction with the appropriate publications listed in the [Related Documentation](#) section.

Audience

To use this publication, you should be familiar with Cisco or equivalent optical transmission hardware and cabling, telecommunications hardware and cabling, electronic circuitry and wiring practices, and preferably have experience as a telecommunications technician.

Important Notes about TL1 Commands

TL1 commands can be executed manually or through the use of scripts.

When commands are executed manually, there is a delay of few seconds before the next command can be executed. This gives the Network Elements (NE) sufficient time to perform most of the database (DB) operations.

However, when commands are executed using scripts, the functioning of the NE differs. The NE has insufficient time to perform all the database operations and may cause the NE to malfunction. This in turn causes the controller card to reboot. To prevent this, it is recommended that a delay of 3 to 5 seconds be added between the commands that require DB updates in the script.

Related Documentation

Use the *Cisco ONS SONET TL1 Command Guide, Release 8.5.1* in conjunction with the following referenced publications:

- *Cisco ONS SONET TL1 Reference Guide, Release 8.5*
Provides general information, procedures, and errors related to using TL1 in the Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, and ONS 15600.
- *Cisco ONS SONET TL1 Command Quick Reference Guide, Release 8.5*
Provides input formats and output formats (where applicable) for all R8.5 TL1 commands and autonomous messages.
- *Cisco ONS SONET TL1 for Beginners, Release 8.5*
Provides basic beginning instruction for using TL1.
- *Cisco ONS 15454 Procedure Guide, Release 8.5*
Cisco ONS 15310-CL and Cisco ONS 15310-MA Procedure Guide, Release 8.5
Cisco ONS 15600 Procedure Guide, Release 8.5
Provides procedures and tasks for the corresponding Cisco ONS node and network.
- *Cisco ONS 15454 Reference Manual, Release 8.5*
Cisco ONS 15310-CL and Cisco ONS 15310-MA Reference Manual, Release 8.5
Cisco ONS 15600 Reference Manual, Release 8.5
Provides reference material for the corresponding Cisco ONS node and network.

- *Cisco ONS 15454 Troubleshooting Guide, Release 8.5*
Cisco ONS 15310-CL and Cisco ONS 15310-MA Troubleshooting Guide, Release 8.5
Cisco ONS 15600 Troubleshooting Guide, Release 8.5
Provides general troubleshooting procedures, alarm descriptions, performance monitoring parameters, and Simple Network Management Protocol (SNMP) parameters for the corresponding Cisco ONS node and network.
- *Cisco ONS 15454 DWDM Procedure Guide, Release 8.5*
Explains installation, turn up, provisioning, and maintenance for Cisco ONS 15454 dense wavelength division (DWDM) systems.
- *Cisco ONS 15454 DWDM Reference Manual, Release 8.5*
Explains installation, turn up, provisioning, and maintenance for Cisco ONS 15454 dense wavelength division (DWDM) systems.
- *Cisco ONS 15454 DWDM Troubleshooting Guide, Release 8.5*
Provides troubleshooting information and troubleshooting-related parameters for the Cisco ONS 15454 (ANSI) and Cisco ONS 15454 SDH (ETSI) platforms, specifically the dense wavelength division multiplexing (DWDM) application that can operate on either platform.
- *Cisco ONS 15454 and Cisco ONS 15454 SDH Ethernet Card Software Feature and Configuration Guide, Release 8.5*
Provides software features for all Ethernet cards and configuration information for Cisco IOS on ML-Series cards.
- *Cisco ONS 15310-CL and Cisco ONS 15310-MA Ethernet Card Software Feature and Configuration Guide, Release 8.5*
Provides software features and operations of the ML-100T-8 and the CE-100T-8 Ethernet cards for the Cisco ONS 15310-CL and the Cisco ONS 15310-MA.
- *Release Notes for the Cisco ONS 15454 Release 8.5*
Release Notes for the Cisco ONS 15310-CL Release 8.5
Release Notes for the Cisco ONS 15310-MA Release 8.5
Release Notes for the Cisco ONS 15600 Release 8.5
Provides caveats, closed issues, and new feature and functionality information.

For an update on End-of-Life and End-of-Sale notices, refer to

http://cisco.com/en/US/products/hw/optical/ps2001/prod_eol_notices_list.html

Document Conventions

This publication uses the following conventions:

Convention	Application
[]	Keywords or arguments that appear within square brackets are optional.
{ x x x }	A choice of keywords (represented by x) appears in braces separated by vertical bars. The user must select one.
Ctrl	The control key. For example, where Ctrl + D is written, hold down the Control key while pressing the D key.

Convention	Application
screen font	Examples of information displayed on the screen.
< >	Command parameters that must be replaced by module-specific codes.

**Note**

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the document.

**Caution**

Means *reader be careful*. In this situation, the user might do something that could result in equipment damage or loss of data.

**Warning****IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS**Waarschuwing****BELANGRIJKE VEILIGHEIDSINSTRUCTIES**

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES**Varoitus****TÄRKEITÄ TURVALLISUUSOHJEITA**

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention IMPORTANTES INFORMATIONS DE SÉCURITÉ

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS**Warnung WICHTIGE SICHERHEITSHINWEISE**

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.**Avvertenza IMPORTANTI ISTRUZIONI SULLA SICUREZZA**

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI**Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER**

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE**Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES**Varning! VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR**Figyelem FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmeztető jel veszélyre utal. Sérülésveszélyt rejtő helyzetben van. Mielőtt bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplő figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján kereshető meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!**Предупреждение ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ**警告 重要的安全性说明**

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

주의 중요 안전 지침

이 경고 기호는 위험을 나타냅니다. 작업자가 신체 부상을 일으킬 수 있는 위험한 환경에 있습니다. 장비에 작업을 수행하기 전에 전기 회로와 관련된 위험을 숙지하고 표준 작업 관례를 숙지하여 사고를 방지하십시오. 각 경고의 마지막 부분에 있는 경고문 번호를 참조하여 이 장치와 함께 제공되는 번역된 안전 경고문에서 해당 번역문을 찾으십시오.

이 지시 사항을 보관하십시오.

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. Você se encontra em uma situação em que há risco de lesões corporais. Antes de trabalhar com qualquer equipamento, esteja ciente dos riscos que envolvem os circuitos elétricos e familiarize-se com as práticas padrão de prevenção de acidentes. Use o número da declaração fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham o dispositivo.

GUARDE ESTAS INSTRUÇÕES**Advarsel** VIGTIGE SIKKERHEDSANVISNINGER

Dette advarselssymbol betyder fare. Du befinder dig i en situation med risiko for legemeskadedigelse. Før du begynder arbejde på udstyr, skal du være opmærksom på de involverede risici, der er ved elektriske kredsløb, og du skal sætte dig ind i standardprocedurer til undgåelse af ulykker. Brug erklæringsnummeret efter hver advarsel for at finde oversættelsen i de oversatte advarsler, der fulgte med denne enhed.

GEM DISSE ANVISNINGER**تحذير****إرشادات الأمان الهامة**

يوضح رمز التحذير هذا وجود خطر. وهذا يعني أنك متواجد في مكان قد ينتج عنه التعرض لإصابات. قبل بدء العمل، احذر مخاطر التعرض للصدمات الكهربائية وكن على علم بالإجراءات القياسية للحيولة دون وقوع أي حوادث. استخدم رقم البيان الموجود في آخر كل تحذير لتحديد مكان ترجمته داخل تحذيرات الأمان المترجمة التي تأتي مع الجهاز. قم بحفظ هذه الإرشادات

Upozorenje VAŽNE SIGURNOSNE NAPOMENE

Ovaj simbol upozorenja predstavlja opasnost. Nalazite se u situaciji koja može prouzročiti tjelesne ozljede. Prije rada s bilo kojim uređajem, morate razumjeti opasnosti vezane uz električne sklopove, te biti upoznati sa standardnim načinima izbjegavanja nesreća. U prevedenim sigurnosnim upozorenjima, priloženima uz uređaj, možete prema broju koji se nalazi uz pojedino upozorenje pronaći i njegov prijevod.

SAČUVAJTE OVE UPUTE**Upozornění DŮLEŽITÉ BEZPEČNOSTNÍ POKYNY**

Tento upozorňující symbol označuje nebezpečí. Jste v situaci, která by mohla způsobit nebezpečí úrazu. Před prací na jakémkoliv vybavení si uvědomte nebezpečí související s elektrickými obvody a seznamte se se standardními opatřeními pro předcházení úrazům. Podle čísla na konci každého upozornění vyhledejte jeho překlad v přeložených bezpečnostních upozorněních, která jsou přiložena k zařízení.

USCHOVEJTE TYTO POKYNY**Προειδοποίηση ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ**

Αυτό το προειδοποιητικό σύμβολο σημαίνει κίνδυνο. Βρίσκεστε σε κατάσταση που μπορεί να προκαλέσει τραυματισμό. Πριν εργαστείτε σε οποιοδήποτε εξοπλισμό, να έχετε υπόψη σας τους κινδύνους που σχετίζονται με τα ηλεκτρικά κυκλώματα και να έχετε εξοικειωθεί με τις συνήθειες πρακτικές για την αποφυγή ατυχημάτων. Χρησιμοποιήστε τον αριθμό δήλωσης που παρέχεται στο τέλος κάθε προειδοποίησης, για να εντοπίσετε τη μετάφρασή της στις μεταφρασμένες προειδοποιήσεις ασφαλείας που συνοδεύουν τη συσκευή.

ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ**אזהרה****הוראות בטיחות חשובות**

סימן אזהרה זה מסמל סכנה. אתה נמצא במצב העלול לגרום לפציעה. לפני שתעבוד עם ציוד כלשהו, עליך להיות מודע לסכנות הכרוכות במעגלים חשמליים ולהכיר את הנהלים המקובלים למניעת תאונות. השתמש במספר ההוראה המסופק בסופה של כל אזהרה כדי לאתר את התרגום באזהרות הבטיחות המתורגמות שמצורפות להתקן.

שמור הוראות אלה**Opomena VAŽNI BEZBEDNOSNI NAPATSTVIJA**

Симболот за предупредување значи опасност. Се наоѓате во ситуација што може да предизвика телесни повреди. Пред да работите со опремата, бидете свесни за ризикот што постои кај електричните кола и треба да ги познавате стандардните постапки за спречување на несреќни случаи. Искористете го бројот на изјавата што се наоѓа на крајот на секое предупредување за да го најдете неговиот период во prevedените безбедносни предупредувања што се испорачани со уредот.

ЧУВАЈТЕ ГИ ОБИЕ НАПАТСТВИЈА

Ostrzeżenie WAŻNE INSTRUKCJE DOTYCZĄCE BEZPIECZEŃSTWA

Ten symbol ostrzeżenia oznacza niebezpieczeństwo. Zachodzi sytuacja, która może powodować obrażenia ciała. Przed przystąpieniem do prac przy urządzeniach należy zapoznać się z zagrożeniami związanymi z układami elektrycznymi oraz ze standardowymi środkami zapobiegania wypadkom. Na końcu każdego ostrzeżenia podano numer, na podstawie którego można odszukać tłumaczenie tego ostrzeżenia w dołączonym do urządzenia dokumencie z tłumaczeniami ostrzeżeń.

NINIEJSZE INSTRUKCJE NALEŻY ZACHOWAĆ

Upozornenie DÔLEŽITÉ BEZPEČNOSTNÉ POKYNY

Tento varovný symbol označuje nebezpečenstvo. Nachádzate sa v situácii s nebezpečenstvom úrazu. Pred prácou na akomkoľvek vybavení si uvedomte nebezpečenstvo súvisiace s elektrickými obvodmi a oboznámte sa so štandardnými opatreniami na predchádzanie úrazom. Podľa čísla na konci každého upozornenia vyhľadajte jeho preklad v preložených bezpečnostných upozorneniach, ktoré sú priložené k zariadeniu.

USCHOVAJTE SI TENTO NÁVOD

Obtaining Optical Networking Information

This section contains information that is specific to optical networking products. For information that pertains to all of Cisco, refer to the [Obtaining Documentation and Submitting a Service Request](#) section.

Where to Find Safety and Warning Information

For safety and warning information, refer to the *Cisco Optical Transport Products Safety and Compliance Information* document that accompanied the product. This publication describes the international agency compliance and safety information for the Cisco ONS 15454 system. It also includes translations of the safety warnings that appear in the ONS 15454 system documentation.

Cisco Optical Networking Product Documentation CD-ROM

Optical networking-related documentation, including Cisco ONS 15xxx product documentation, is available in a CD-ROM package that ships with your product. The Optical Networking Product Documentation CD-ROM is updated periodically and may be more current than printed documentation.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.