# Preface

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:

- Revision History
- Document Objectives
- Audience
- Document Organization
- Related Documentation
- Document Conventions
- Obtaining Optical Networking Information
- Obtaining Documentation and Submitting a Service Request

# Revision History

| Date | Notes |
|------|-------|
| October 2007 | Added NTP-A358 Set Up the ONS 15454 in Secure Mode. |
| | Updated the Caution in the "D255 Cross-Connect Card Side Switch Test" section of the "DLPs A200 to A299" chapter. |
| | Added a note in the section "Before you Begin" in the "Upgrading Cards and Spans" chapter. |
| | Added a note in the section "NTP-A324 Create Protection Groups" in the "Turn up a Node" chapter. |

| Date | Notes |
|------|-------|
| November 2007 | Added a note in sections, DLP-A69 and DLP-A73 in the "DLPs A1 to A99" chapter. |
| | Added NTP-A360 Enable EMS Secure Access, in the Turn up a Node chapter. |
| | Added a note in the section, "D255 Cross-Connect Card Side Switch Test" in the "DLPs A200 to A299" chapter. |
| February 2008 | Updated the entries for CE-MR-10 and ML-MR-10 cards in the Card and Slot Compatibility for the XCVT Card table under the NTP- A15 Install the Common Control Cards section in the Install Cards and Fiber-Optic Cable chapter. The entries now state non-support for XCVT cards. |
| | Added a note in NTP-A264 and NTP-A264 in Chapter 6, Create Circuits and VT Tunnels. |
| July 2008 | Added a note in the NTP-A25 Set Up Name, Date, Time, and Contact Information section of Chapter 4, Turn Up a Node. |
| | Updated ground cable size information in DLP-A16 Connect the Office Ground to the ONS 15454 section of Chapter 17, DLPs A1 to A99. |
| | Added a note in the DLP-A247 Change an OC-N Card section of Chapter 19, DLPs A200 to A299. |
| | Deleted the note in the User-Supplied Materials section of Chapter 1,  Install the Shelf and Backplane Cable. |
| September 2008 | Added a note in DLP-A385 Delete a Member from a VCAT Circuit, in Chapter 20, DLPs A300 to A399. |
| | Added MRC-2.5G-4 support for J0 section trace in NTP-A328 Create a J0 Section Trace, Chapter 7, Manage Circuits. |
| | Added a note in NTP-A333 Upgrade the XCVT/XC10G Card to the XC-VXC-10G Card in Chapter 12, Upgrade Cards and Spans. |
| | Added a note in NTP-A296 Upgrade the TCC2 Card to the TCC2P Card section of Chapter 12, Upgrade Cards and Spans. |
| December 2008 | Updated Server Trail documentation in Chapter 6, Create Circuits and VT Tunnels and Chapter 21, DLPs A400 to A499. |
| | Added new DLPs A596 and A597. |
| | Added a note, on display of port name in circuit table, in the procedures to provision Ethernet and POS ports for CE-Series and ML Series cards. |
| | Added Notes under NTP-A264 Create an Automatically Routed VCAT Circuit and NTP-A265 Create a Manually Routed VCAT Circuit procedures in Chapter 6, Create Circuits and VT Tunnels. |
| | Added a note in the "NTP - A94 Upgrade OC-N Cards and Spans Automatically" section of Chapter 12 Upgrade Cards and Spans. |

| Date | Notes |
|------|-------|
| April 2009 | Added a new procedure "NTP-A374 Convert a BLSR to Path Protection Manually" in Chapter 13, Convert Network Configurations. |
| | Updated Caution in DLP-A553 Upgrade DS3XM-6 Cards in a 1:1 Configuration to High-Density DS3XM-12 Electrical Cards section in Chapter 22, DLPs A500 TO A599. |
| | Updated the reinitialization tool options in DLP-A244 Use the Reinitialization Tool to Clear the Database and Upload Software (Windows) and DLP-A245 Use the Reinitialization Tool to Clear the Database and Upload Software (UNIX) sections of Chapter 19, DLPs A200 to A299. |
| May 2009 | Updated the table, Card and Slot Compatibility for the XCVT Card in the chapter, Install Cards and Fiber-Optic Cable. |
| June 2009 | • Updated the figure AEP Wire-Wrap Connections to Backplane Pins in Chapter 1, Shelf and Backplane Hardware. |
| | • Updated Step 1 in "NTP-A94 Upgrade OC-N Cards and Spans Automatically" in Chapter 12, Upgrade Cards and Spans. |
| | • Added a note, Step 3, and Step 10 to "NTP-A333 Upgrade the XCVT/XC10G Card to the XC-VXC-10G Card" in Chapter 12, Upgrade Cards and Spans. |
| | • Added "DLP-A600 Perform BLSR Lockout" in Chapter 23, DLPs A600 to A699. |
| | • Added "DLP-A601 Remove BLSR Lockout" in Chapter 23, DLPs A600 to A699. |
| August 2009 | • Updated the "Add a Path Protection Node" procedure in Chapter 14, "Add and Remove Nodes". |
| | • Updated the shelf assembly part number in Chapter 1, "Install the Shelf and Backplane Cable". |
| October 2009 | • Updated the "Clean Fiber Connectors" procedure in Chapter 15, "Maintain the Node". |
| | • Added the "Clean Multi Fiber-Optic Cable Connectors" procedure in Chapter 19, DLPs A200 to A299. |
| | • Added a note in the sections "Create a 1:1 Protection Group," "Create a 1:N Protection Group," and "Create a 1+1 Protection Group" in the Chapter 17, DLPs A1 to A99. |
| November 2009 | • Updated the section "NTP-A326 Create a Server Trail" in the chapter, "Create Circuits and VT Tunnels". |
| | • Added a note in "Delete a PPM from the MRC-12, MRC-2.5G-4, or OC192-XFP Card" procedure in the chapter, "DLPs A500 to A599". |
| | • Updated the figure for fan tray assembly in chapters, "Install the Shelf and Backplane Cable" and "Maintain the Node". |
| December 2009 | • Updated the fan tray caution in the section "NTP-A7 Install the Fan-Tray Assembly" in the chapter "Install the Shelf and Backplane Cable". |
| | • Updated the note in "Create Protection Groups" procedure in the chapter "Turn Up a Node". |

| Date | Notes |
|---|---|
| January 2010 | • Updated the sections "DLP-A600 Perform BLSR Lockout" and "DLP-A601 Remove BLSR Lockout" in the chapter "DLPs A600 to A699".<br>• Updated the section "NTP-A94 Upgrade OC-N Cards and Spans Automatically" in the chapter "Upgrade Cards and Spans".<br>• Updated the "Add a Path Protection Node" procedure in the chapter "Add and Remove Nodes". |
| February 2010 | • Added a note to NTP-A356 in the chapter "Maintain the Node". |
| August 2010 | • Updated the procedures "Roll the Source or Destination of One Optical Circuit", " Roll One Cross-Connect from an Optical Circuit to a Second Optical Circuit", " Roll Two Cross-Connects on One Optical Circuit Using Automatic Routing", "Roll Two Cross-Connects on One Optical Circuit Using Manual Routing", "Roll Two Cross-Connects from One Optical Circuit to a Second Optical Circuit" in the chapter "DLPs A400 to A499".<br>• Removed the reference to G1000 card support in the chapters "DLPs A500 to A599" and "Maintain the Node".<br>• Added a note to DS3XM-12 in the chapter, "Maintain the Node". |
| October 2010 | • Added a note in the chapters, "Maintain the Node", "Install the Shelf and Backplane Cable" and "DLPs A1 to A99". |
| November 2010 | • Added Step 11 and a note to Step 9 in the procedure, "DLP-A17 Connect Office Power to the ONS 15454 Shelf".<br>• Updated Step 1 in the procedure "DLP-A18 Turn On and Verify Office Power".<br>• Added a note to DLP-A509 in the chapter, DLPs A500 to A599.<br>• Updated Step 11 in the procedure "DLP-A448 Convert DS3XM-6 or DS3XM-12 Cards From 1:1 to 1:N Protection". |
| March 2011 | • Added a note in the chapter, "Upgrade Cards and Spans". |
| September 2011 | • Updated the "Test DS1/E1-56 and DS3XM-12 Electrical Card Ports" in the chapter, "Maintain the Node". |
| December 2011 | • Updated the procedure, "NTP-A94 Upgrade OC-N Cards and Spans Automatically" in the chapter, "Upgrade Cards and Spans". |
| May 2012 | • Added a note to "NTP-A94 Upgrade OC-N Cards and Spans Automatically" procedure in the chapter, "Upgrade Cards and Spans".<br>• Added a new procedure "NTP-A370 Upgrade OC-N Cards Manually" to the chapter, "Upgrade Cards and Spans".<br>• Updated the "Set Up SNMP" procedure in the chapter "Turn Up a Node". |
| August 2012 | • The full length book-PDF was generated. |
| November 2012 | • Added a note to "NTP-A194 Create Overhead Circuits" procedure in the chapter "Create Circuits and VT Tunnels".<br>• Added a note to "DLP-A377 Provision Section DCC Terminations" and "DLP-A378 Provision Line DCC Terminations" procedures in the chapter "DLPs A300 to A399".<br>• Updated the "NTP-A107 Inspect and Replace the Air Filter" procedure in the chapter "Maintain the Node". |

# Document Objectives

This guide provides procedures for installation, turn up, provisioning, and acceptance of ONS 15454 nodes and ONS 15454 networks.

# 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.

# Document Organization

The organization of the guide reflects Cisco's recommended work flow for new installations. This organization also provides easy access to procedures and tasks used to modify existing installations. Verification procedures are provided, where necessary, to allow contract vendors to complete the physical installation and then turn over the site to craft personnel for verification, provisioning, turn up, and acceptance.

The front matter of the book appears in the following sequence:

1. Title Page
2. Table of Contents
3. List of Figures
4. List of Tables
5. List of Procedures
6. List of Tasks

The information in the book follows a task-oriented hierarchy using the elements described below.

## Chapter (Director Level)

The guide is divided into logical work groups (chapters) that serve as director entry into the procedures. For example, if you are arriving on site after a contractor has installed the shelf hardware, proceed to Chapter 2, "Install Cards and Fiber-Optic Cable" and begin verifying installation and installing cards. You may proceed sequentially (recommended), or locate the work you want to perform from the list of procedures on the first page of every chapter (or turn to the front matter or index).

Each NTP is a list of steps designed to accomplish a specific procedure. Follow the steps until the procedure is complete. If you need more detailed instructions, refer to the Detailed Level Procedure (DLP) specified in the procedure steps.

**Note** Throughout this guide, NTPs are referred to as "procedures" and DLPs are termed "tasks." Every reference to a procedure includes its NTP number, and every reference to a task includes its DLP number.

## Detailed Level Procedure (DLP)

The DLP (task) supplies additional task details to support the NTP. The DLP lists numbered steps that lead you through completion of a task. Some steps require that equipment indications be checked for verification. When the proper response is not obtained, the DLP provides a trouble clearing reference.

# Related Documentation

Use the *Cisco ONS 15454 Procedure Guide* with the following referenced publications:

- *Cisco ONS 15454 Reference Manual*
  Provides detailed card specifications, hardware and software feature descriptions, network topology information, and network element defaults.

- *Cisco ONS 15454 Troubleshooting Guide*
  Provides alarm descriptions, alarm and general troubleshooting procedures, error messages, and transient conditions.

- *Cisco ONS SONET TL1 Command Guide*
  Provides a full TL1 command and autonomous message set including parameters, AIDs, conditions and modifiers for the Cisco ONS 15454, ONS 15600, ONS 15310-CL, and ONS 15310-MA systems.

- *Cisco ONS SONET TL1 Reference Guide*
  Provides general information, procedures, and errors for TL1 in the Cisco ONS 15454, ONS 15600, ONS 15310-CL, and ONS 15310-MA systems.

- *Cisco ONS 15454 and Cisco ONS 15454 SDH Ethernet Card Software Feature and Configuration G uide*
  Provides software features for all Ethernet cards and configuration information for Cisco IOS on ML-Series cards.

- *Release Notes for the Cisco ONS 15454 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/ps2006/prod_eol_notices_list.html.

# Document Conventions

This publication uses the following conventions:

| Convention | Application |
|------------|-------------|
| **boldface** | Commands and keywords in body text. |
| *italic* | Command input that is supplied by the user. |
| [   ] | 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. |

| Convention | Application |
|---|---|
| Ctrl | The control key. For example, where Ctrl + D is written, hold down the Control key while pressing the D key. |
| screen font | Examples of information displayed on the screen. |
| **boldface screen font** | Examples of information that the user must enter. |
| < > | 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

FONTOS BIZTONSÁGI ELOÍRÁSOK

Ez a figyelmezeto jel veszélyre utal. Sérülésveszélyt rejto helyzetben van. Mielott bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplo figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján keresheto 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 사고
를 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 legemesbeskadigelse.
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 للحيلولة 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 συνήθεις 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 כד לאתר את התרגום באזהרות הבטיחות המתורגמות שמצורפות להתקן.

**שמור הוראות אלה**

Opomena

ВАЖНИ БЕЗБЕДНОСНИ НАПАТСТВИЈА
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 преведените безбедносни предупредувања што се испорачани со уредот.
ЧУВАЈТЕ ГИ ОВИЕ 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.