



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
October 2007	Added NTP-D364 Set Up the ONS 15454 in Secure Mode. Updated the Caution in the section "D255 Cross-Connect Card Side Switch Test" in the "DLPs A200 to A299" chapter.
November 2007	Added a Note in the sections, DLP-D69 and DLP-D73 in the DLPs D1 to D99 chapter. Added NTP-A360 Enable EMS Secure Access in the Turn up a Node chapter.

Date	Notes
April 2008	<p>Added a note in Chapter 6, Create Circuits and Low-Order Tunnels, NTP-D283 and NTP-D284.</p> <p>Modified a note in in the Chapter 1, Install the Shelf and FMECs, section Install the Shelf Assembly.</p> <p>Modified a note in Chapter 12, Upgrade Cards and Spans, section NTP-D234 Upgrade the XC-VXL-2.5G Card to the XC-VXL-10G or XC-VXC-10G Card and NTP-D333 Upgrade the XC-VXL-10G Card to the XC-VXC-10G Card.</p> <p>Added a note in Chapter 4, Turn Up a Node, section NTP-D316 Set Up Name, Date, Time, and Contact Information.</p>
July 2008	<p>Added a note in Chapter 19, DLPs D200 to D299, section DLP-D247 Change an STM-N Card.</p>
September 2008	<p>Added MRC-2.5G-12 support for J0 section trace in NTP-A328 Create a J0 Section Trace, Chapter 7, Manage Circuits.</p> <p>Added a note in NTP-D314 Upgrade the TCC2 Card to the TCC2P Card section of Chapter 12, Upgrade Cards and Spans.</p> <p>Added a note in NTP-D333 Upgrade the XC-VXL-10G Card to the XC-VXC-10G Card in Chapter 12, Upgrade Cards and Spans.</p>
November 2008	<ul style="list-style-type: none"> • Updated Server Trail documentation in Chapter 6, Create Circuits and Low-Order Tunnels and Chapter 19, DLPs D200 to D299. • 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-D283 Create an Automatically Routed VCAT Circuit and NTP-D284 Create a Manually Routed VCAT Circuit procedures in Chapter 6, Create Circuits and Low-Order Tunnels.
December 2008	<ul style="list-style-type: none"> • Added a note in the “NTP D94 Upgrade STM-N Cards and Spans Automatically” section of Chapter 12 Upgrade Cards and Spans.
February 2009	<ul style="list-style-type: none"> • Added a new procedure “NTP-D377 Convert an MS-SPRing to SNCP Manually” in Chapter 13, Convert Network Configurations.
March 2009	<p>Removed references to AIP in the following sections:</p> <ul style="list-style-type: none"> • NTP-D230 Replace the Fan-Tray Assembly section in Chapter 15, Maintain the Node • Table 20-28 in Chapter 20 DLPs D300 to D399 • DLP-D432 section in Chapter 21 DLPs D400 to D499 • Table A-3 section in Appendix A CTC Information and Shortcuts
April 2009	<ul style="list-style-type: none"> • Updated the reinitialization tool options in DLP-D244 Use the Reinitialization Tool to Clear the Database and Upload Software (Windows) and DLP-D245 Use the Reinitialization Tool to Clear the Database and Upload Software (UNIX) sections of Chapter 19, DLPs A200 to A299. • Updated a Caution in the "Connect Office Power to the ONS 15454 SDH Shelf" section of Chapter 17, DLPs D1 to D99.

Date	Notes
June 2009	<ul style="list-style-type: none"> • Updated the size of power cables in Chapter 1, Install the Shelf and FMECs and Chapter 17, DLPs D1 to D99. • Updated Step 1 in “NTP-D94 Upgrade STM-N Cards and Spans Automatically” in Chapter 12, Upgrade Cards and Spans.
August 2009	<ul style="list-style-type: none"> • Updated the “Add an SNCP Node” procedure in Chapter 14, “Add and Remove Nodes”.
October 2009	<ul style="list-style-type: none"> • 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 D200 to D299. • 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 D1 to D99.
November 2009	<ul style="list-style-type: none"> • Updated the section “NTP-D350 Create a Server Trail” in the chapter, “Create Circuits and VC Low-order Tunnels”. • Added a note in “Delete a PPM from the MRC-12, MRC-2.5G-12, or STM64-XFP Card” in the chapter “DLPs D100 to D199”.
December 2009	Added a note in “Create Protection Groups” procedure in Chapter 4, Turn Up a Node.
January 2010	<ul style="list-style-type: none"> • Updated the section “NTP-D94 Upgrade STM-N Cards and Spans Automatically” in the chapter Upgrade Cards and Spans. • Updated the “Add an SNCP Node” procedure in Chapter 14, “Add and Remove Nodes”.
August 2010	<ul style="list-style-type: none"> • 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 A200 to A299”. • Removed the reference to G1000 card support in the chapters “Turn Up a Node” and “Install Cards and Fiber-Optic Cable”.
October 2010	<ul style="list-style-type: none"> • Added a note in the chapters, “Install the Shelf and FMECs” and “Maintain the Node”.
November 2010	<ul style="list-style-type: none"> • Added a note to DLP-D211 in the chapter, DLPs D200 to D299.
December 2011	<ul style="list-style-type: none"> • Updated the procedure, “NTP-D94 Upgrade STM-N Cards and Spans Automatically” in the chapter, “Upgrade Cards and Spans”.
May 2012	<ul style="list-style-type: none"> • Added a note to “NTP-D94 Upgrade OC-N Cards and Spans Automatically” procedure in the chapter, “Upgrade Cards and Spans”. • Added a new procedure “NTP-D374 Upgrade STM-N Cards Manually” to the chapter, “Upgrade Cards and Spans”. • Updated the “Set Up SNMP” procedure in the chapter “Turn Up a Node”.

Date	Notes
August 2012	The full length book-PDF was generated.
November 2012	<ul style="list-style-type: none"> • Added a note to “NTP-D194 Create Overhead Circuits” procedure in the chapter “Create Circuits and Low-Order Tunnels”. • Added a note to “DLP-363 Provision Regenerator-Section DCC Terminations” and “DLP-D364 Provision Multiplex-Section DCC Terminations” procedures in the chapter “DLPs D300 to D399”. • Updated the “NTP-D107 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 SDH nodes and ONS 15454 SDH 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 in the following sections.

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 SDH Procedure Guide* with the following referenced publications:

- *Cisco ONS 15454 SDH Reference Manual, Release 8.5*
Provides detailed card specifications, hardware and software feature descriptions, network topology information, and network element defaults.
- *Cisco ONS 15454 SDH Troubleshooting Guide, Release 8.5*
Provides general troubleshooting procedures, alarm descriptions and troubleshooting procedures, transient conditions, and error messages.
- *Cisco ONS 15454 DWDM Procedure Guide, Release 8.5*
Explains how to install, turn-up, test, and maintain an ONS 15454 DWDM network.
- *Cisco ONS 15454 DWDM Reference Manual, Release 8.5*
Provides detailed card, node, and network-level information for ONS 15454 nodes in DWDM configurations.
- *Cisco ONS 15454 DWDM Troubleshooting Guide, Release 8.5*
Provides alarms and troubleshooting procedures for ONS 15454 DWDM nodes and networks.
- *Cisco ONS 15454 SDH and Cisco ONS 15600 SDH TL1 Command Guide, Release 8.5*
Provides a full Transaction Language One (TL1) command and autonomous message set including parameters, access identifiers (AIDs), conditions, and modifiers for the Cisco ONS 15454 SDH and Cisco ONS 15600 SDH.
- *Cisco ONS 15454 SDH and Cisco ONS 15600 SDH TL1 Reference Guide, Release 8.5*
Provides general information, procedures, and errors for TL1 in the Cisco ONS 15454 SDH and Cisco ONS 15600 SDH.

- *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.
- *Release Notes for the Cisco ONS 15454 SDH 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.
<i>italic</i>	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.
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 käsittelyyn 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. Mielott 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 legemeskade. 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	<p>ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ</p> <p>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 συνηθισμένες 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.</p> <p>ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ</p>
אזהרה	<p style="text-align: right;">הוראות בטיחות חשובות</p> <p>סימן אזהרה זה מסמל סכנה. אתה נמצא במצב העלול לגרום לפציעה. לפני שתעבוד עם ציוד כלשהו, עליך להיות מודע לסכנות הכרוכות במגעלים חשמליים ולהכיר את הנהלים המקובלים למניעת תאונות. השתמש במספר ההוראה המסופק בסופה של כל אזהרה כדי לאתר את התרגום באזהרות הבטיחות המתורגמות שמצורפות להתקן.</p> <p style="text-align: right;">שמור הוראות אלה</p>
Opomena	<p>ВАЖНИ БЕЗБЕДНОСНИ НАПАТСТВИЈА</p> <p>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.</p> <p>ЧУВАЈТЕ ГИ ОБИЕ НАПАТСТВИЈА</p>
Ostrzeżenie	<p>WAŻNE INSTRUKCJE DOTYCZĄCE BEZPIECZEŃSTWA</p> <p>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.</p> <p>NINIEJSZE INSTRUKCJE NALEŻY ZACHOWAĆ</p>
Upozornenie	<p>DÔLEŽITÉ BEZPEČNOSTNÉ POKYNY</p> <p>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.</p> <p>USCHOVAJTE SI TENTO NÁVOD</p>

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>

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