



Optical Services Module Memory Upgrade Installation Note

Product numbers:
MEM-OSM-64M=
MEM-OSM-128M=
MEM-OSM-256M=
MEM-OSM-512M=

This publication provides procedures for upgrading the memory on a Optical Services Module (OSM).

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Safety Overview

Safety warnings appear throughout this publication in procedures that, if performed incorrectly, may harm you. A warning symbol precedes each warning statement.



Warning

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. To see translations of the warnings that appear in this publication, refer to the "Translated Safety Warnings" section in this document.



Warning

Before you install, operate, or service the system, read the *Site Preparation and Safety Guide*. This guide contains important safety information you should know before working with the system.



Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

Required Tools

These tools are required to upgrade the memory on the OSM:

- 3/16-inch flat-blade screwdriver for the captive installation screws on the OSM
- Antistatic mat or antistatic foam
- Your own ESD-prevention equipment or the disposable grounding wrist strap included with all upgrade kits, field-replaceable units (FRUs), and spares



Caution

Always use an ESD wrist strap when handling modules or coming into contact with internal components.

Upgrading the OSM Memory

This section provides the procedures for removing and replacing the memory on the OSM.

The synchronous dynamic random-access memory (SDRAM) on the OSM is contained in one small outline dual inline memory module (SODIMM) (see Figure 1).

The OSM has a default memory configuration of 64 MB with Error Checking and Correction (ECC) (single-bit error detection and correction; 2-bit error detection) and is upgradable to 128 MB, 256 MB, or 512 MB.



Note

You should use only 100-MHz SDRAM SODIMMs. A Cisco part number appears on the SODIMMs.

**Caution**

To prevent ESD damage, handle the SODIMM by the card edges only (see Figure 3 on page 5). Place the removed SODIMM on an antistatic mat or store it in an antistatic container.

Removing the SODIMM

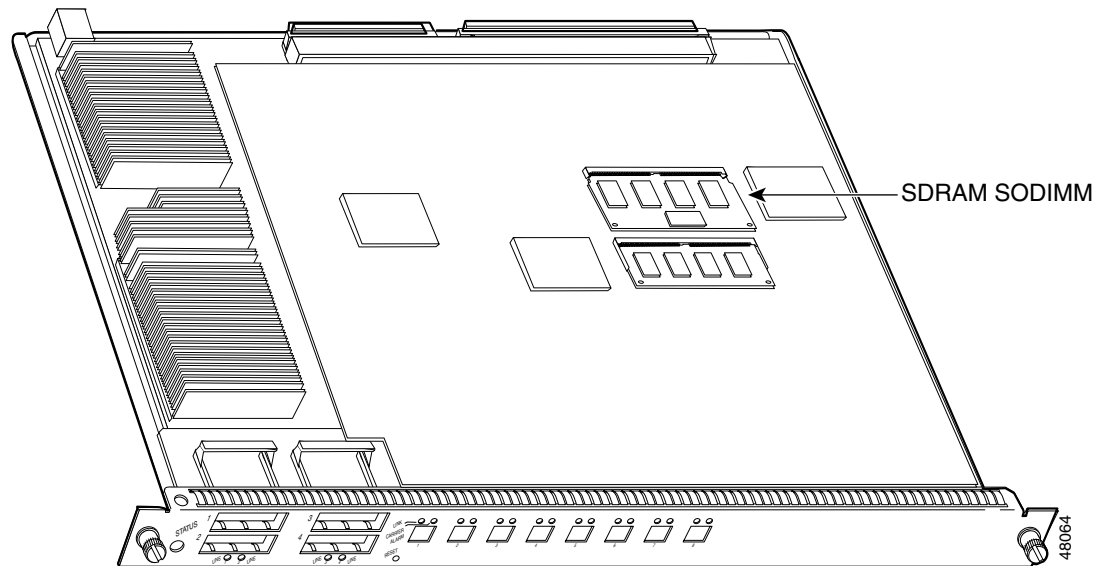
**Warning**

During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself.

To remove the existing SODIMM, follow these steps:

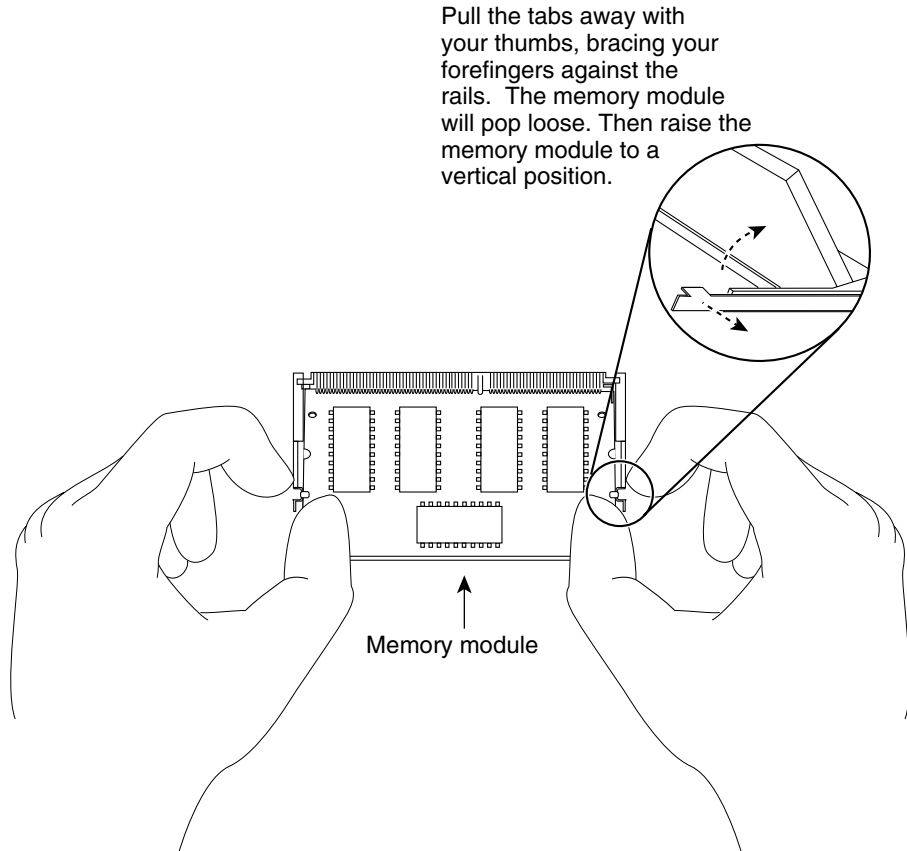
- Step 1** Make sure you take the necessary precautions to prevent ESD damage.
- Step 2** Remove the OSM from the system (refer to the *Optical Services Module Installation and Configuration Note* for removal instructions).
- Step 3** Place the OSM on an antistatic mat or pad.
- Step 4** Locate the SODIMM (see Figure 1).

Figure 1 Location of SDRAM SODIMM on an OSM



- Step 5** Release the spring clips from the SODIMM that you want to remove, and release the SODIMM from the socket (see Figure 2).

Figure 2 Releasing the SODIMM Spring Clips



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- Step 6** When both ends of the SODIMM are released from the socket, grasp the ends of the SODIMM with your thumb and forefinger and pull the SODIMM completely out of the socket. Handle the edges of the SODIMM only; avoid touching the memory modules, pins, or traces (the metal *fingers* along the connector edge of the SODIMM), along the connector edge.
- Step 7** Place the SODIMM in an antistatic container to protect it from ESD damage.

This completes the SODIMM removal procedure. Proceed to the next section to install the new SODIMM.

Installing the New SODIMM

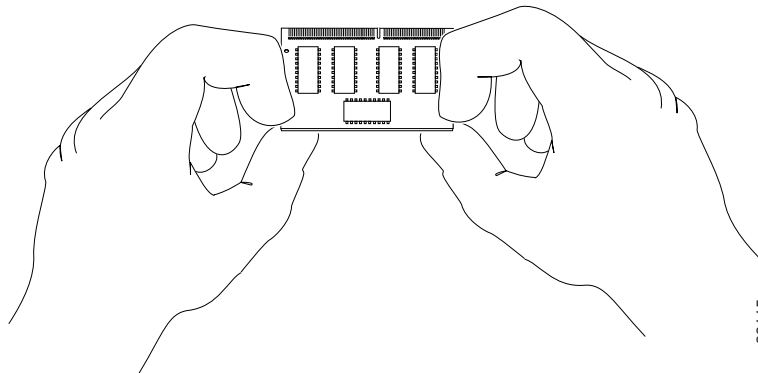

Caution

SODIMMs are sensitive components that are susceptible to ESD damage. Handle SODIMMs by the edges only; avoid touching the memory modules, pins, or traces (the metal *fingers* along the connector edge of the SODIMM). (See Figure 3.)


Caution

To prevent ESD damage, handle SODIMMs as shown in Figure 3.

Figure 3 Handling a SODIMM



Follow these steps to install the new SODIMM:

-
- Step 1** Remove a new SODIMM from the antistatic container.
 - Step 2** Hold the SODIMM component side up, with the connector edge (the metal fingers) away from you.
 - Step 3** Hold the sides of the SODIMM between your thumb and middle finger, with your forefinger against the far edge, opposite the connector edge (see Figure 3).
 - Step 4** Tilt the SODIMM to approximately the same angle as the socket, and insert the connector edge into the socket.


Caution

When inserting SODIMMs, use firm but not excessive pressure. If you damage a socket, you will have to return the OSM to the factory for repair.

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- Step 5** Press the SODIMM down until it is secured by the spring clips.
 - Step 6** When the SODIMM is installed, check the two alignment holes and ensure that the spring retainer is visible. If it is not, the SODIMM is not seated properly. If any SODIMM appears misaligned, carefully remove it and reseal it in the socket. Push the SODIMM firmly back into the socket until the retainer springs snap into place.
 - Step 7** Reinstall the OSM in the system (refer to the *Optical Services Module Installation and Configuration Note* for installation instructions).
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Translated Safety Warnings

Warning Definition



Warning

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. To see translations of the warnings that appear in this publication, refer to the "Translated Safety Warnings" section in this document.

Waarschuwing

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 standaard maatregelen om ongelukken te voorkomen. Voor vertalingen van de waarschuwingen die in deze publicatie verschijnen, kunt u het gedeelte "Translated Safety Warnings" (Vertalingen van veiligheidsvoorschriften) raadplegen in dit document.

Varoitus

Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista. Tässä julkaisussa esiintyvien varoitusten käännökset löydät tämän asiakirjan "Translated Safety Warnings" (käännetyt turvallisuutta koskevat varoitukset).

Attention

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant causer des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions d'avertissements figurant dans cette publication, consultez la section « Translated Safety Warnings » (Traduction des avis de sécurité) de ce document.

Warnung

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewußt. Übersetzungen der in dieser Veröffentlichung enthaltenen Warnhinweise finden Sie im Abschnitt "Translated Safety Warnings" (Übersetzung der Warnhinweise) in diesem Dokument.

Avvertenza

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti. La traduzione delle avvertenze riportate in questa pubblicazione si trova nella documento "Translated Safety Warnings" (Traduzione delle avvertenze di sicurezza) nel presente documento.

Advarsel	Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du være oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker. Hvis du vil se oversettelser av de advarslene som finnes i denne publikasjonen, kan du se i avsnittet "Translated Safety Warnings" [Oversatte sikkerhetsadvarsler] i dette dokumentet.
Aviso	Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos físicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes. Para ver as traduções dos avisos que constam desta publicação, consulte a secção "Translated Safety Warnings" - "Traduções dos Avisos de Segurança" neste documento.
¡Advertencia!	Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes. Para ver una traducción de las advertencias que aparecen en esta publicación, consultar la sección titulada "Translated Safety Warnings" que aparece en este documento.
Varning!	Denna varningssymbol 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 vanligt förfarande för att förebygga skador. Om du vill se översättningar av de varningar som visas i denna publikation, se avsnittet "Translated Safety Warnings" [Översatta säkerhetsvarningar] i detta dokument.

Safety Information Referral Warning



Warning

Before you install, operate, or service the system, read the *Site Preparation and Safety Guide*. This guide contains important safety information you should know before working with the system.

Waarschuwing

Lees de handleiding *Vorbereiding en veiligheid van de locatie Handleiding* voordat u het systeem installeert of gebruikt of voordat u onderhoud aan het systeem uitvoert. Deze handleiding bevat belangrijke beveiligingsvoorschriften waarvan u op de hoogte moet zijn voordat u met het systeem gaat werken.

Varoitus

Ennen kuin asennat järjestelmän tai käytät tai huollat sitä, lue *Asennuspaikan valmistelu-jaturvaopas* -opasta. Tässä oppaassa on tärkeitä turvallisuustietoja, jotka tulisi tietää ennen järjestelmän käyttämistä.

Attention

Avant d'installer le système, de l'utiliser ou d'assurer son entretien, veuillez lire le *Guide de sécurité et de préparation du site*. Celui-ci présente des informations importantes relatives à la sécurité, dont vous devriez prendre connaissance.

Warnung	Warnhinweis Bevor Sie das System installieren, in Betrieb setzen oder warten, lesen Sie die <i>Anleitung zur Standortvorbereitung und Sicherheitshinweise</i> . Dieses Handbuch enthält wichtige Informationen zur Sicherheit, mit denen Sie sich vor dem Verwenden des Systems vertraut machen sollten.
Avvertenza	Prima di installare, mettere in funzione o effettuare interventi di manutenzione sul sistema, leggere le informazioni contenute nella documentazione sulla <i>Guida alla sicurezza</i> . Tale guida contiene importanti informazioni che è necessario acquisire prima di iniziare qualsiasi intervento sul sistema.
Advarsel	Før du installerer, tar i bruk eller utfører vedlikehold på systemet, må du lese <i>Veiledning for stedsklargjøring og sikkerhet</i> . Denne håndboken inneholder viktig informasjon om sikkerhet som du bør være kjent med før du begynner å arbeide med systemet.
Aviso	Antes de instalar, funcionar com, ou prestar assistência ao sistema, leia o <i>Guia de Preparação e Segurança do Local</i> . Este guia contém informações de segurança importantes que deve conhecer antes de trabalhar com o sistema.
¡Advertencia!	Antes de instalar, manejar o arreglar el sistema, le aconsejamos que consulte la <i>Guía de prevención y preparación de una instalación</i> . Esta guía contiene importante información para su seguridad que debe saber antes de comenzar a trabajar con el sistema.
Varning!	Innan du installerar, använder eller utför service på systemet ska du läsa <i>Förberedelser och säkerhet Handbok</i> . Denna handbok innehåller viktig säkerhetsinformation som du bör känna till innan du arbetar med systemet.

Installation Warning



Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

Waarschuwing

Deze apparatuur mag alleen worden geïnstalleerd, vervangen of hersteld door bevoegd geschoold personeel.

Varoitus

Tämän laitteen saa asentaa, vaihtaa tai huoltaa ainoastaan koulutettu ja laitteen tunteva henkilökunta.

Attention

Il est vivement recommandé de confier l'installation, le remplacement et la maintenance de ces équipements à des personnels qualifiés et expérimentés.

Warnung

Das Installieren, Ersetzen oder Bedienen dieser Ausrüstung sollte nur geschultem, qualifiziertem Personal gestattet werden.

Avvertenza

Questo apparato può essere installato, sostituito o mantenuto unicamente da un personale competente.

Advarsel	Bare opplært og kvalifisert personell skal foreta installasjoner, utskiftninger eller service på dette utstyret.
Aviso	Apenas pessoal treinado e qualificado deve ser autorizado a instalar, substituir ou fazer a revisão deste equipamento.
¡Advertencia!	Solamente el personal calificado debe instalar, reemplazar o utilizar este equipo.
Varning!	Endast utbildad och kvalificerad personal bör få tillåtelse att installera, byta ut eller reparera denna utrustning.

Wrist Strap Warning



Warning	During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself.
Waarschuwing	Draag tijdens deze procedure aardingspolsbanden om te vermijden dat de kaart beschadigd wordt door elektrostatische ontlading. Raak het achterbord niet rechtstreeks aan met uw hand of met een metalen werktuig, omdat u anders een elektrische schok zou kunnen oplopen.
Varoitus	Käytä tämän toimenpiteen aikana maadoitettuja rannesuojia estääksesi kortin vaurioitumisen sähköstaattisen purkauksen vuoksi. Älä kosketa taustalevyä suoraan kädelläsi tai metallisella työkalulla sähköiskuvaaran takia.
Attention	Lors de cette procédure, toujours porter des bracelets antistatiques pour éviter que des décharges électriques n'endommagent la carte. Pour éviter l'électrocution, ne pas toucher le fond de panier directement avec la main ni avec un outil métallique.
Warnung	Zur Vermeidung einer Beschädigung der Karte durch elektrostatische Entladung während dieses Verfahrens ein Erdungsband am Handgelenk tragen. Bei Berührung der Rückwand mit der Hand oder einem metallenen Werkzeug besteht Elektroschockgefahr.
Avvertenza	Durante questa procedura, indossare bracciali antistatici per evitare danni alla scheda causati da un'eventuale scarica elettrostatica. Non toccare direttamente il pannello delle connessioni, né con le mani né con un qualsiasi utensile metallico, perché esiste il pericolo di folgorazione.
Advarsel	Bruk jordingsarmbånd under prosedyren for å unngå ESD-skader på kortet. Unngå direkte berøring av bakplanet med hånden eller metallverktøy, slik at di ikke får elektrisk støt.
Aviso	Durante este procedimento e para evitar danos ESD causados à placa, use fitas de ligação à terra para os pulsos. Para evitar o risco de choque eléctrico, não toque directamente na parte posterior com a mão ou com qualquer ferramenta metálica.

Advertencia Usartiras conectadas a tierra en las muñecas durante este procedimiento para evitar daños en la tarjeta causados por descargas electrostáticas. No tocar el plano posterior con las manos ni con ninguna herramienta metálica, ya que podría producir un choque eléctrico.

Varning! Använd jordade armbandsremmar under denna procedur för att förhindra elektrostatisk skada på kortet. Rör inte vid baksidan med handen eller metallverktyg då detta kan orsaka elektrisk stöt.

Related Documentation

These documents are available for the Cisco 7600 Optical Services Router and Catalyst 6000 family switches:

- *Site Preparation and Safety Guide*
- *Optical Services Module Installation and Configuration Note*
- *Cisco 7600 Optical Services Router Installation Guide*
- *Cisco 7600 Optical Services Router Module Installation Guide*
- *Cisco 7600 Optical Services Router Quick Software Configuration Guide*
- *Cisco 7600 Optical Services Router Software Configuration Guide*
- *Cisco 7600 Optical Services Router Command Reference*
- *Catalyst 6000 Family Installation Guide*
- *Catalyst 6000 Family Module Installation Guide*
- *Catalyst 6000 Family Quick Software Configuration*
- *Catalyst 6000 Family Software Configuration Guide*
- *Catalyst 6000 Family Command Reference*
- *System Message Guide—Catalyst 6000 Family, Catalyst 5000 Family, Catalyst 4000 Family, Catalyst 2926G Series, Catalyst 2948G, and Catalyst 2980G Switches*

Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- <http://www.cisco.com>
- <http://www-china.cisco.com>
- <http://www-europe.cisco.com>

Documentation CD-ROM

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

Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:
http://www.cisco.com/cgi-bin/order/order_root.pl
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:
<http://www.cisco.com/go/subscription>
- Nonregistered CCO users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

Documentation Feedback

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You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, for your convenience many documents contain a response card behind the front cover. Otherwise, you can mail your comments to the following address:

Cisco Systems, Inc.
Document Resource Connection
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

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Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

<http://www.cisco.com>

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

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

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

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

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

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

Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

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

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

This document is to be used in conjunction with the documents listed in the “Obtaining Documentation” section.

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