



Installation and Configuration Note for the Catalyst 4500 Series AC Power Shelf

Product Numbers:

WS-P4502-1PSU—Catalyst 4500 AC power shelf with 2500 W power supply

PWR-4502—Redundant 2500 W power supply for AC power shelf

CAB-4502-DC-2M—2-m DC cable set

CAB-4502-DC-60-CM—60-cm DC cable set

WS-X4500-PS01—Service Access Cover

This publication describes how to install the Catalyst 4500 series AC power shelf. The AC power shelf provides additional power for switching modules that need to provide power to in-line devices such as IP telephones.

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Safety Overview

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



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 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 للإصابات. 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****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

Installing the AC Power Shelf

This section describes how to install the AC power shelf (see [Figure 1](#)) in a rack and connect it to your power supplies. You can install one or two 2500 W power supplies (see [Figure 2](#)) in the AC power shelf, depending on how much power is required.



Warning

Read the installation instructions before connecting the system to the power source. Statement 1004



Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment. Statement 1030



Warning

This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security. Statement 1017



Warning

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024


Warning

The plug-socket combination must be accessible at all times, because it serves as the main disconnecting device. Statement 1019


Warning

Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals. Statement 43


Warning

Ultimate disposal of this product should be handled according to all national laws and regulations. Statement 1040

Figure 1 AC Power Shelf

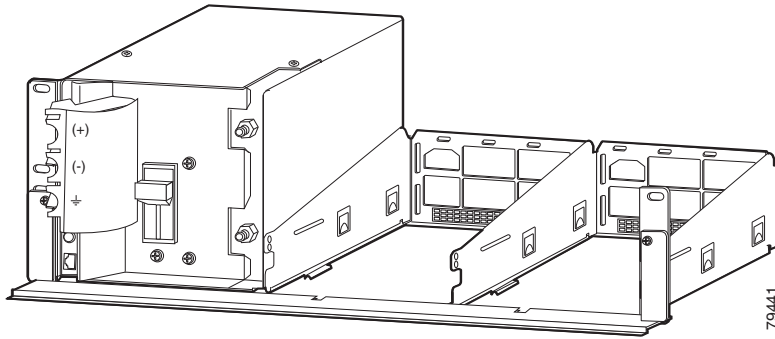
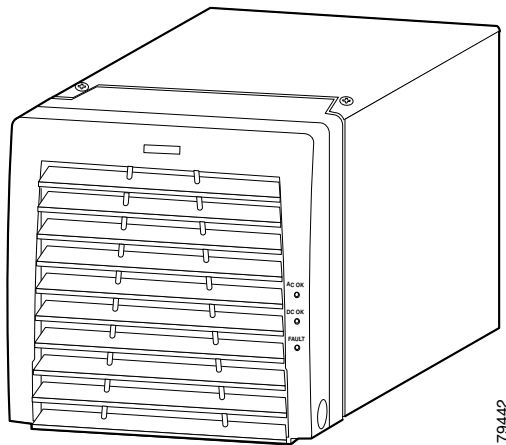


Figure 2 2500 W AC Power Supply



Required Tools

You will need the following tools to perform the procedures in this section:

- Number 1 and number 2 Phillips screwdrivers to tighten the captive installation screws on most systems
- 3/16-inch flat-blade screwdriver to open the power supply release mechanism and for the captive installation screws on the supervisor engine and switching modules on some systems
- Antistatic mat or antistatic foam in case you need to remove switching modules to troubleshoot the installation
- Rack-mount kit
- Tape measure
- Level
- Your own electrostatic discharge (ESD) grounding strap or the disposable ESD strap included with the system
- 11 mm or 7/16 inch wrench or socket for the output terminal nuts
- Torque wrench and 11 mm or 7/16 inch socket (if you will be installing a strapping kit)

Rack-Mounting and Connecting the AC Power Shelf



Warning

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006



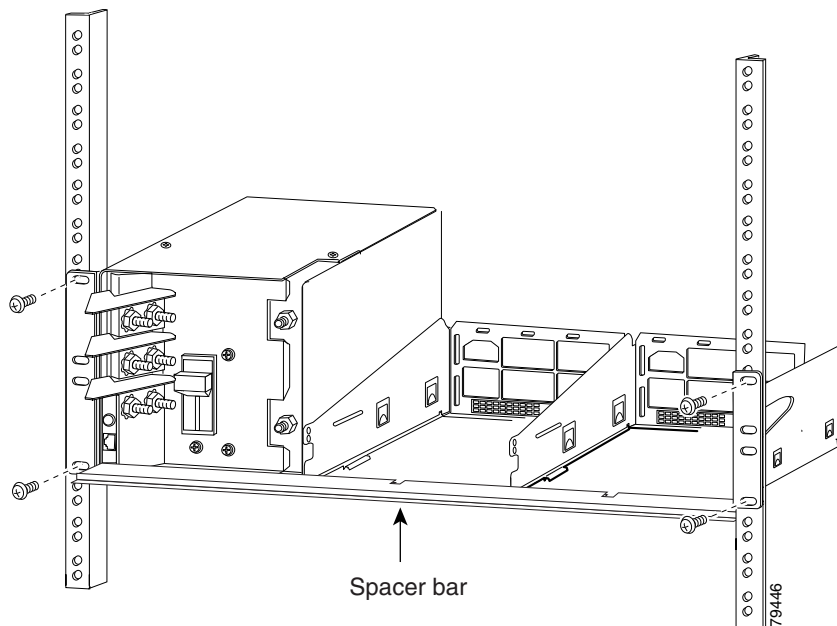
Note

Install your AC power shelf close enough to your Catalyst 4500 series switch so that you can connect the power cable to the switch. It is recommended that you install the AC power shelf directly above your Catalyst 4500 series switch or in a directly adjacent rack.

To mount the AC power shelf on an equipment rack and connect it to your switch, follow these steps:

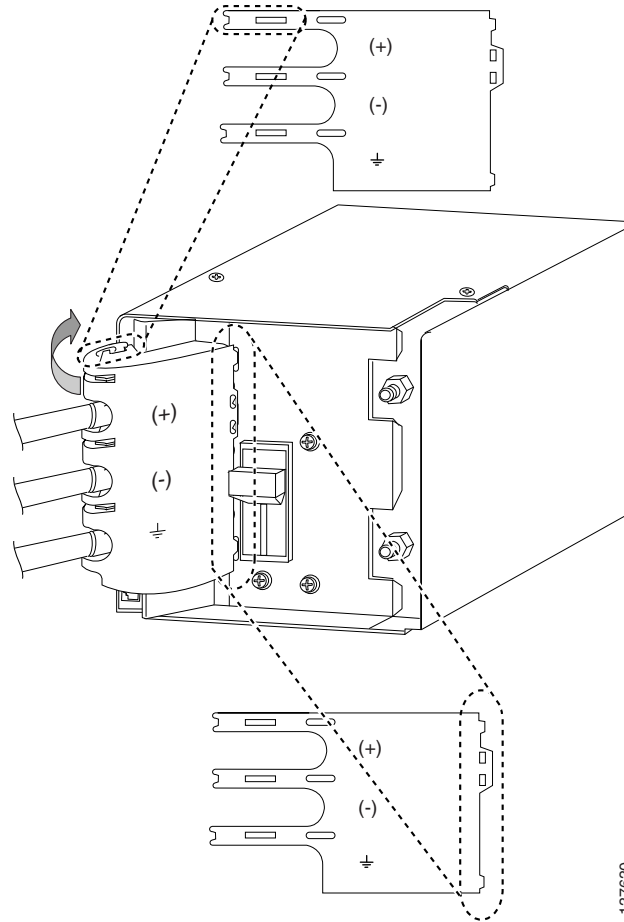
- Step 1** Align the mounting holes of the L brackets with the mounting holes of the equipment rack.
- Step 2** Secure the AC power shelf using four (two per side) 12-24 x 3/4-inch screws through the elongated holes in the L bracket and into the threaded holes in the mounting post. (See [Figure 3](#).)

Figure 3 **Mounting the AC Power Shelf on the Rack**



- Step 3** Using a tape measure and a level, ensure that the AC power shelf is mounted straight and level.
- Step 4** Remove the spacer bar.
- Step 5** If installing a second shelf in parallel, refer to the [“Installing a Second Shelf”](#) section on page 15.
- Step 6** Make sure that the power switch on the output panel is off.
- Step 7** Using the CAB-4502-DC-2M or CAB-4502-DC-60CM cable set, connect the ground and power terminals on the shelf to the DC input terminals on the switch.
- Step 8** Install the service access cover (WS-X4500-PS01) over the DC terminals on the power shelf as described in the following sub steps:
- a. Insert the tabs on the service access cover into the slots to the left of the terminals.
 - b. Bend the service access cover around the terminal block, allowing the corners to poke through the slots on the cover.

Figure 4 Installing the Service Access Cover



- c. Insert the tabs on the front of the service access cover into the slots to the right of the terminals.



Caution

Turn off the Catalyst 4500 series switch and unplug the power cord or cords providing AC input power before removing or replacing the service access cover.



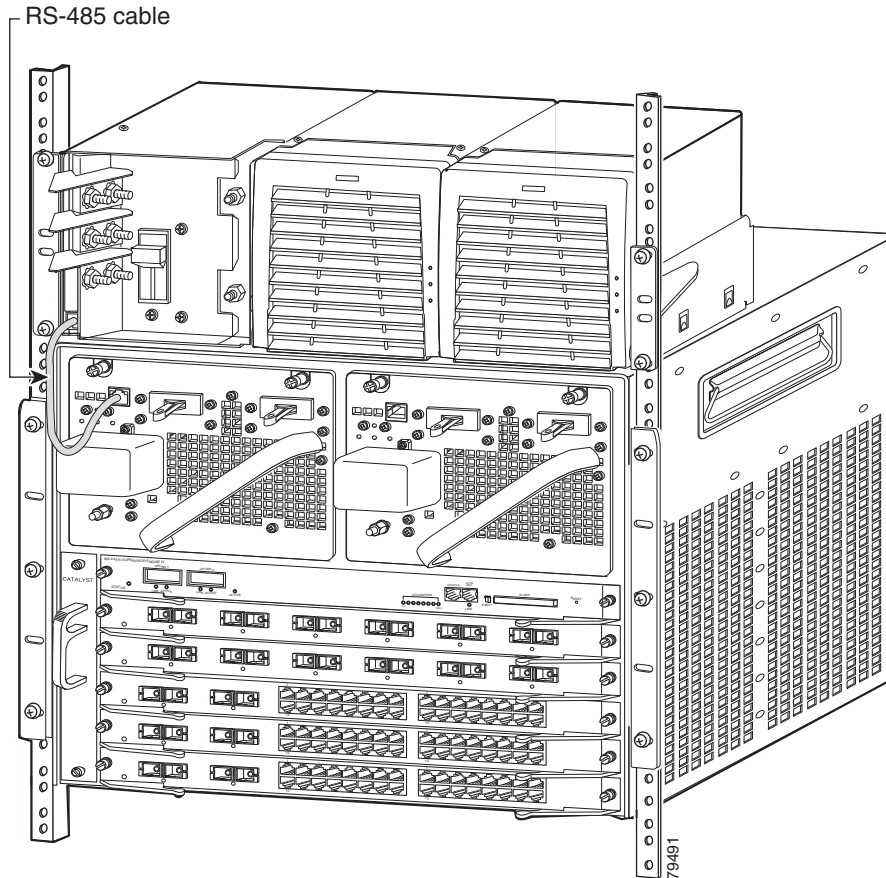
Warning

This product must be connected to a power-over-ethernet (PoE) IEEE 802.3af compliant power source or an IEC60950 compliant limited power source. Statement 353

Step 9

Connect the RS-485 cable (straight-through CAT5 cable commonly used in Ethernet connections) from an RJ-45 connector on the AC power shelf output panel to the RJ-45 connector on the DC-input power supply in your Catalyst 4500 series switch. (See [Figure 5](#).)

Figure 5 Connecting the RJ-485 Cable



- Step 10** Install the power supplies. Refer to the “[Installing a Power Supply](#)” section on page 12.
- Step 11** Power on the power switch on the AC power shelf output panel.

Installing a Power Supply

You can install one or two power supplies into the AC power shelf. There are two slots to the right of the output panel as shown in [Figure 1](#).

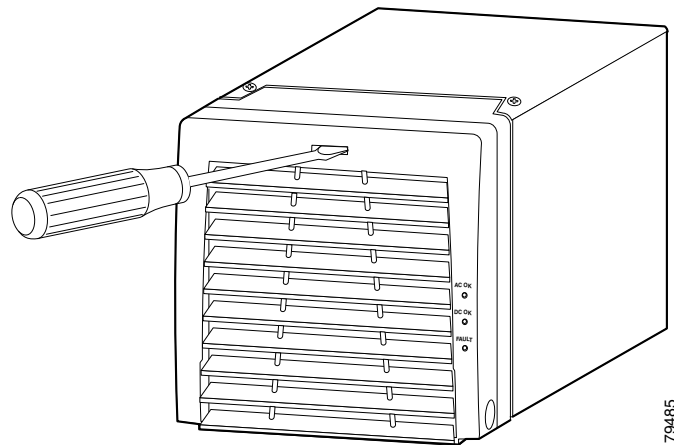


Note Do not install the power supplies until the shelf is mounted in the rack.

To install a power supply in an AC power shelf, follow these steps:

- Step 1** Use a flat-blade screwdriver to unlatch the power supply frame as shown in [Figure 6](#).

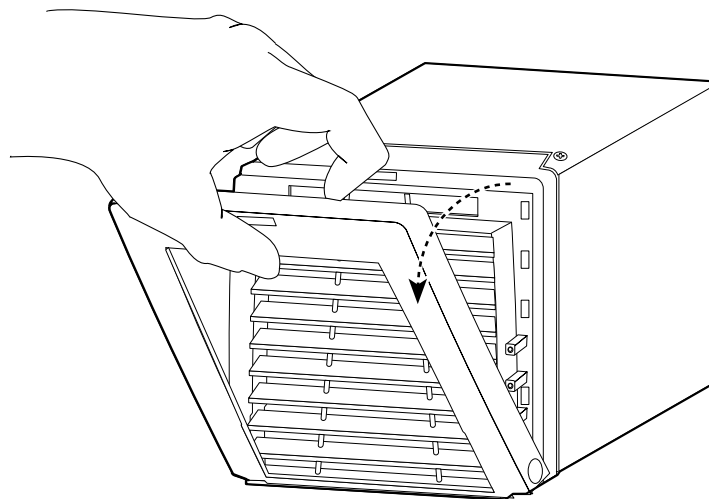
Figure 6 Using a Screwdriver to Unlatch the Front Panel of the Power Supply



79485

Step 2 Pull the power supply frame downward as shown in [Figure 7](#).

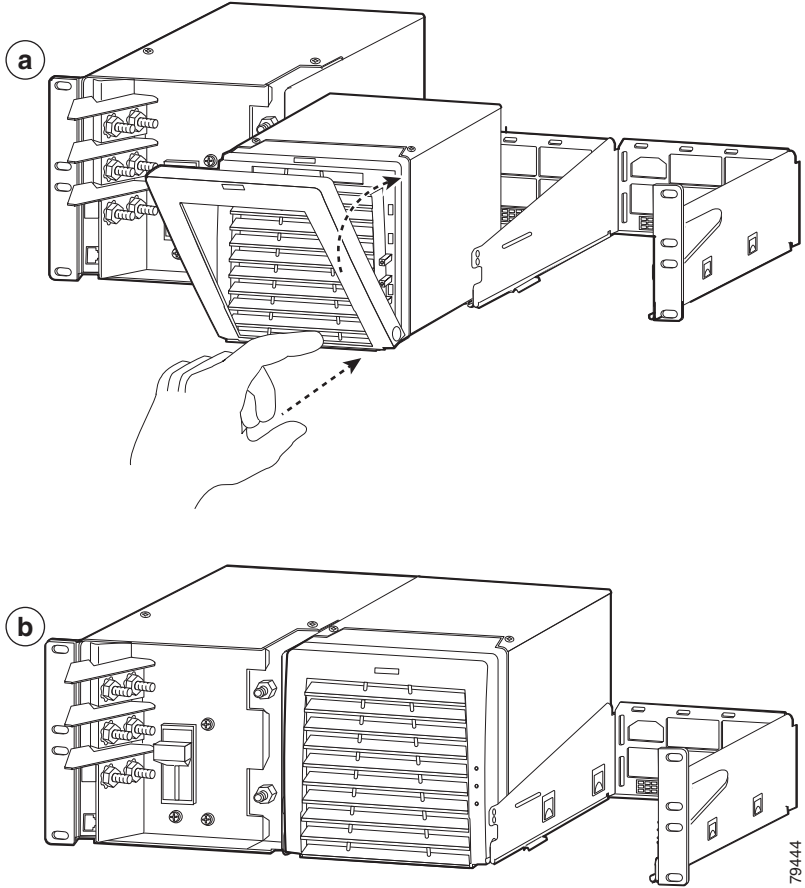
Figure 7 Pulling the Power Supply Frame Downward



79443

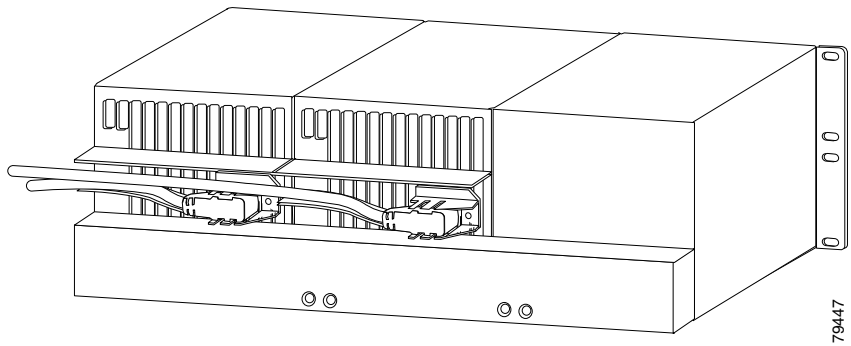
- Step 3** Align the power supply in a AC power shelf slot and gently slide it into the slot as described in the following substeps:
- a. Make sure the hinges on the bottom of the power supply frame connect with the arc-shaped slots on the frame of the voice power module.
 - b. Slide the power supply into the slot, making sure that the frame closes completely and the latch clicks into the closed position as shown in [Figure 8](#).

Figure 8 *Sliding the Power Supply into the AC Power Shelf Slot*



Step 4 Plug one power cord (250 V, 20 A [U.S.A.]) into each installed power supply as shown in [Figure 9](#). The power connector is on the back of the power supply.

Figure 9 *Plugging in the Power Cords*



Installing a Second Shelf

Two voice power shelves can be connected in parallel to provide power to a Catalyst 4500 series switch. This will require a strapping kit, which can be ordered separately. To connect the shelves, follow these steps:

- Step 1** Install the first shelf as described in Steps 1-4 of the [“Rack-Mounting and Connecting the AC Power Shelf”](#) section on page 9.
- Step 2** If the power supplies are already installed in the first shelf, disconnect the AC power cord from each power supply or remove the power supplies from the shelf. Turning the power supply off does not disable power from the power terminals.

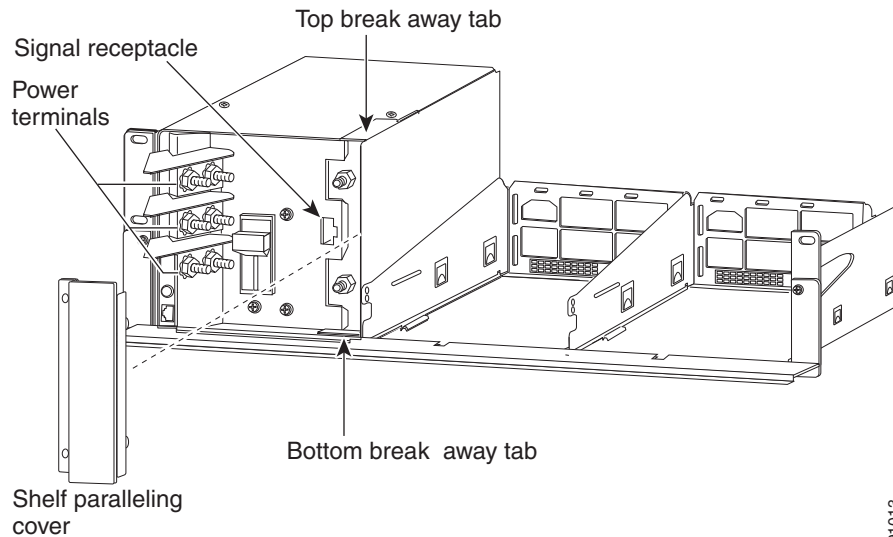


Warning

This unit might have more than one power supply connection. All connections must be removed to de-energize the unit. Statement 1028

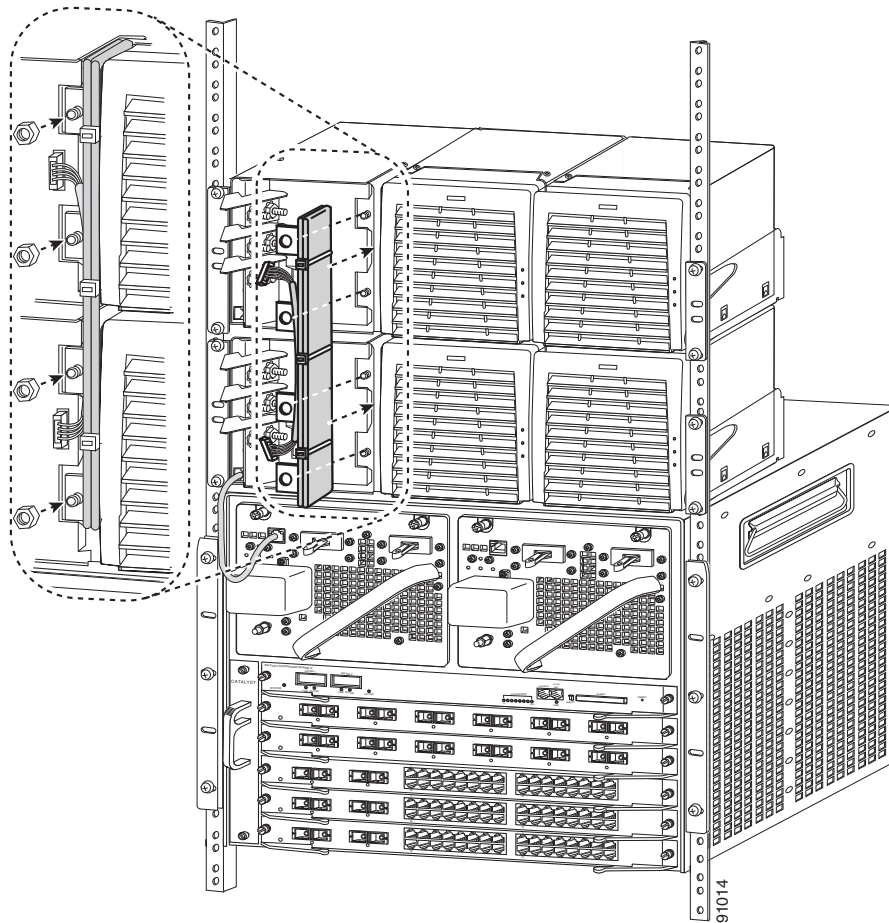
- Step 3** Using a pair of pliers, remove the breakaway tab on the top of the output panel of the AC power shelf you just installed, and remove the breakaway tab on the bottom of the output panel of the secondary AC power shelf.

Figure 10 Locating the Breakaway Tabs



- Step 4** Install the second shelf in the rack. Do not leave a gap between the shelves, install the second shelf directly on top of the first.
- Step 5** Remove the shelf paralleling cover from both shelves using a Phillips screwdriver.
- Step 6** Remove the nuts on the power terminals using an 11-millimeter or 7/16-inch wrench.
- Step 7** Attach the strapping kit tabs to the power terminals.

Figure 11 Attaching the Strapping Kit



Step 8 Replace and tighten down the nuts removed in Step 5. Do not tighten more than 65 inch pounds (7 Newton meters).

Step 9 Connect the wires attached to the strapping assembly to the signalling ports on both shelves.



Warning

This product must be connected to a power-over-ethernet (PoE) IEEE 802.3af compliant power source or an IEC60950 compliant limited power source. Statement 353

Step 10 Replace the shelf paralleling covers on both shelves.

Step 11 Attach the current and ground connectors as described in Step 6 to Step 8 of the [“Installing the AC Power Shelf”](#) section on page 7

Specifications

Table 1 AC Power Shelf Specifications

Item	Specification
AC-input type	Autoranging input with power factor corrector
AC-input voltage	200 to 240 VAC ($\pm 10\%$ for full range)
AC-input current per power supply	15 A maximum at 200 VAC
AC-input frequency	50/60 Hz (nominal) ($\pm 3\%$ for full range)
Output capacity per power supply	2600 W maximum
Output holdup time	20 ms minimum
Power shelf weight	41.9 lb (19 kg)
Power shelf dimensions	height 5.13 in. (130 mm) width 17.4 in. (423 mm) length 12 in. (304 mm)
Power supply weight	9.4 lbs (4.3 kg)
Power supply dimensions	height 5.13 in. (130 mm) width 5.75 in. (146.1 mm) length 10.77 in. (273.6 mm)

Related Documentation

For more detailed installation and configuration information, refer to the following documentation:

- [Catalyst 4000 Series Installation Guide](#)
- [Catalyst 4500 Series Installation Guide](#)
- [Catalyst 4000 Series Module Installation Guide](#)
- [Regulatory Compliance and Safety Information for the Catalyst 4500 Series Switches](#)
- [Software Configuration Guide—Catalyst 4000 Family, Catalyst 2948G, and Catalyst 2980G Switches](#)
- [Command Reference—Catalyst 4000 Family, Catalyst 2948G, and Catalyst 2980G Switches](#)
- [System Message Guide—Catalyst 6000 Family, Catalyst 5000 Family, Catalyst 4000 Family, Catalyst 2926G Series, Catalyst 2948G, and Catalyst 2980G Switches](#)

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