Doc. No. 78-4309-01

Replacing the Power Supply in Cisco AS5200 Universal Access Servers

Product Numbers: AS5200-PWR-AC= , AS5200-PWR-DC=

This document describes how to replace the internal power supply and includes the following sections:

Safety Recommendations

Follow these guidelines to ensure general safety:

- Keep the chassis area clear and dust-free during and after installation.
- Put the removed chassis cover in a safe place.
- Keep tools away from walk areas where you or others could fall over them.
- Do not wear loose clothing that could get caught in the chassis. Fasten your tie or scarf and roll up your sleeves.
- Wear safety glasses when working under any conditions that might be hazardous to your eyes.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.

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Safety Warnings

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

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 *Regulatory Compliance and Safety Information* document that accompanied this device.

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 document *Regulatory Compliance and Safety Information* (Informatie over naleving van veiligheids- en andere voorschriften) raadplegen dat bij dit toestel is ingesloten.

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 laitteen mukana olevasta *Regulatory Compliance and Safety Information* -kirjasesta (määräysten noudattaminen ja tietoa turvallisuudesta).

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 le document *Regulatory Compliance and Safety Information* (Conformité aux règlements et consignes de sécurité) qui accompagne cet appareil.

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 Dokument *Regulatory Compliance and Safety Information* (Informationen zu behördlichen Vorschriften und Sicherheit), das zusammen mit diesem Gerät geliefert wurde.

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 nel documento *Regulatory Compliance and Safety Information* (Conformità alle norme e informazioni sulla sicurezza) che accompagna questo dispositivo.

Advarsel Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du vare 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 dokumentet *Regulatory Compliance and Safety Information* (Overholdelse av forskrifter og sikkerhetsinformasjon) som ble levert med denne enheten.

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 o documento *Regulatory Compliance and Safety Information* (Informação de Segurança e Disposições Reguladoras) que acompanha este dispositivo.

¡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 el documento titulado *Regulatory Compliance and Safety Information* (Información sobre seguridad y conformidad con las disposiciones reglamentarias) que se acompaña con este dispositivo.

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. Se förklaringar av de varningar som förkommer i denna publikation i dokumentet *Regulatory Compliance and Safety Information* (Efterrättelse av föreskrifter och säkerhetsinformation), vilket medföljer denna anordning.

Safety with Electricity

Follow these guidelines when working on equipment powered by electricity:

- Locate the emergency power-OFF switch in the room in which you are working. Then, if an electrical accident occurs, you can quickly shut the power OFF.

Warning Read the installation instructions before you connect the system to its power source.

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

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

Warning To ensure your safety and the safety of others, be sure the power is OFF and the power cord is unplugged before working on the router.

- Disconnect all power before doing the following:
  - Installing or removing a chassis
  - Working near power supplies

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.

- Do not work alone if potentially hazardous conditions exist.
- Never assume that power is disconnected from a circuit. Always check.

- Look carefully for possible hazards in your work area, such as moist floors, ungrounded power extension cables, and missing safety grounds.
- If an electrical accident occurs, proceed as follows:
  - Use caution; do not become a victim yourself.
  - Turn OFF power to the system.
  - If possible, send another person to get medical aid. Otherwise, determine the condition of the victim and then call for help.
  - Determine if the person needs rescue breathing or external cardiac compressions; then take appropriate action.

Preventing Electrostatic Discharge Damage

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. It occurs when electronic printed circuit cards are improperly handled and can result in complete or intermittent failures. Always follow ESD prevention procedures when removing and replacing cards. Ensure that the chassis is electrically connected to earth ground. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the clip to an unpainted surface of the chassis frame to safely channel unwanted ESD voltages to ground. To properly guard against ESD damage and shocks, the wrist strap and cord must operate effectively. If no wrist strap is available, ground yourself by touching the metal part of the chassis.

Caution For safety, periodically check the resistance value of the antistatic strap, which should be between 1 and 10 megohms (Mohm).

Required Tools and Equipment

This kit includes the following items:

- An AC or DC power supply
- Power ratings labels

To install the power supply, you will also need the following tools and equipment (which are not included):

- Cisco AS5200 access server
- Medium-size Phillips screwdriver
- ESD-preventive wrist strap
- Tie-wraps (optional)
- Antistatic bag (optional)

Removing the Chassis Cover

Warning Do not touch the power supply when the power cord is connected. For systems with a power switch, line voltages are present within the power supply even when the power switch is off and the power cord is connected. For systems without a power switch, line voltages are present within the power supply when the power cord is connected.

Take these steps:

Step 1 Power OFF the access server.

Before working on a chassis or working near power supplies, unplug the power cord on AC units; disconnect the power at the circuit breaker on DC units.

Warning Before opening the chassis, disconnect the telephone-network cables to avoid contact with telephone-network voltages.

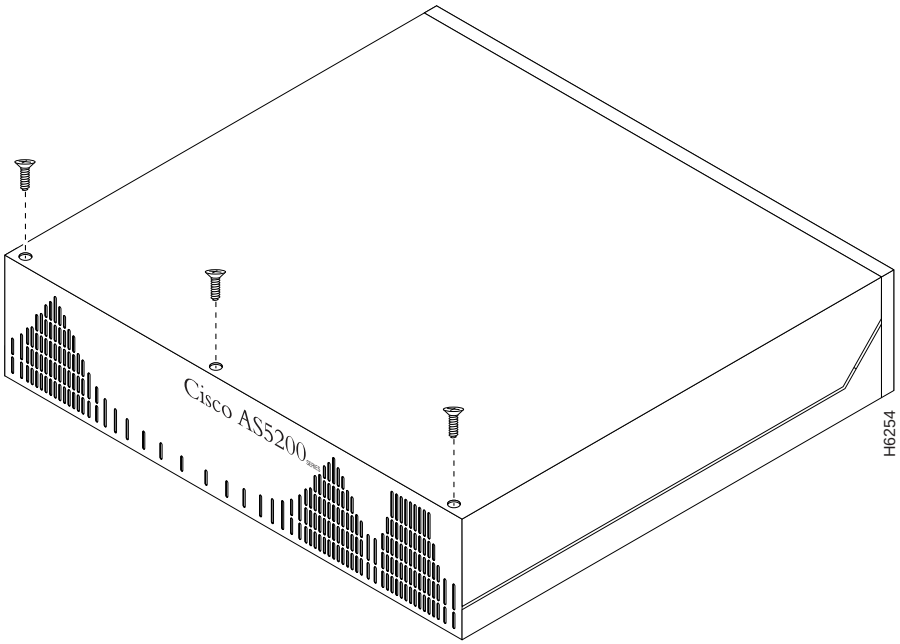
Warning Do not work on the system or connect or disconnect cables during periods of lightning activity.

Step 2 Remove all cables from the rear panel of the access server.

Step 3 Place the access server so that the front panel is facing you.

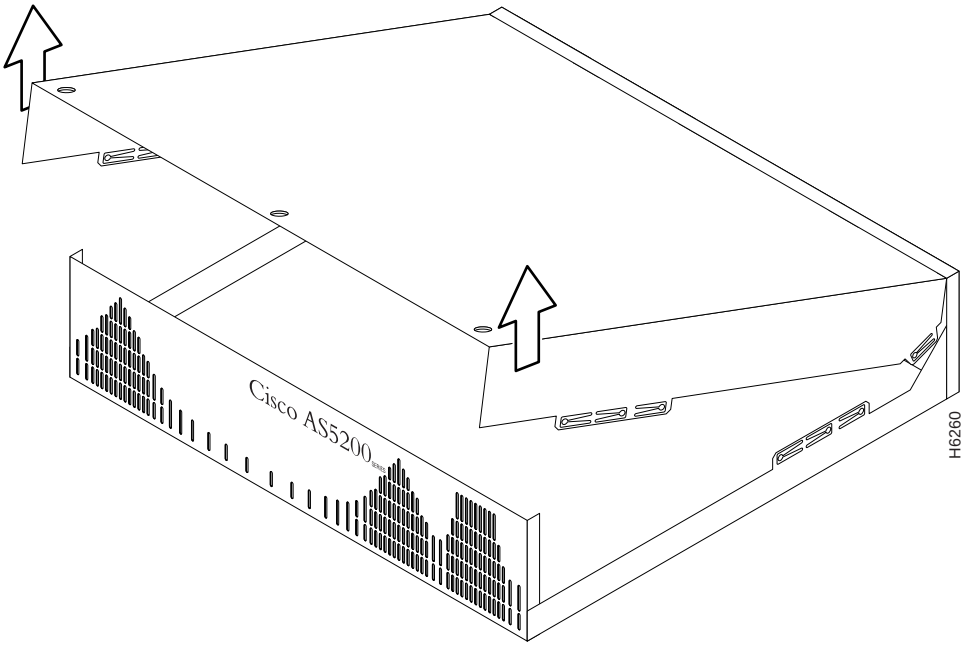
Step 4 Remove the three screws located on the top cover of the chassis.

Figure 1 Removing the Top Cover



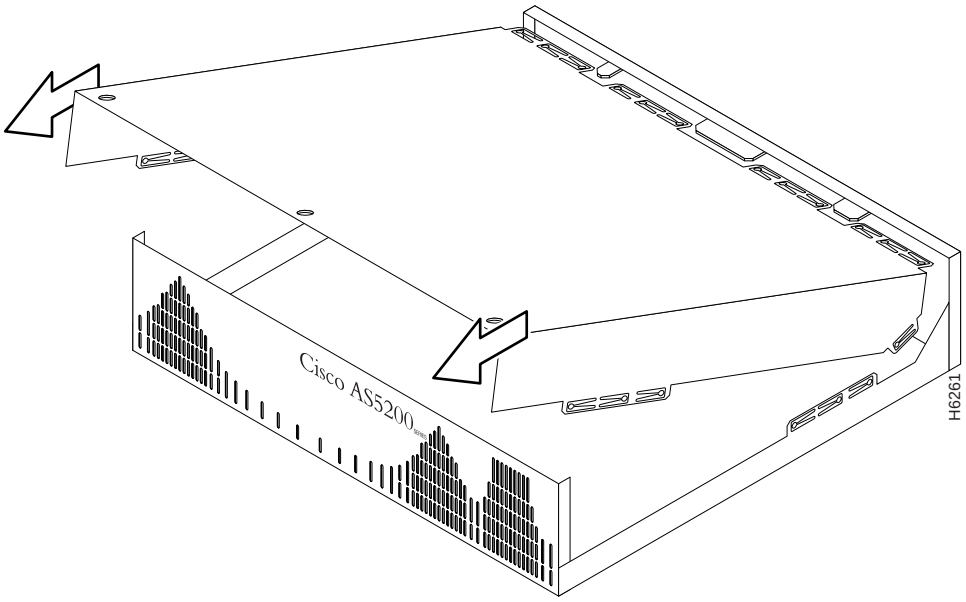
Step 5 Lift up the front edge of the top cover a few inches. You might need to use a screwdriver to pry the top cover apart from the chassis bottom.

Figure 2 Lifting the Top Cover



Step 6 Pull the top cover toward you until the metal tabs on the top cover separate from the chassis bottom.

Figure 3 Separating the Top Cover from the Chassis Bottom



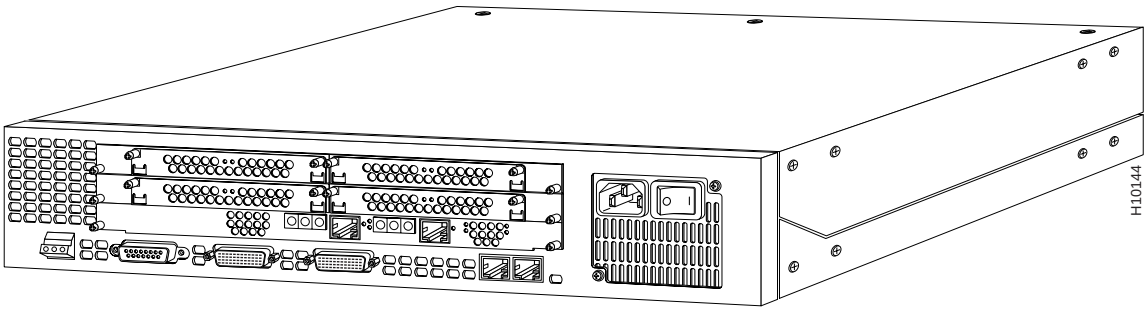
Step 7 Lift the top cover until it separates from the chassis bottom and set it aside.

Removing the Power Supply

Take these steps:

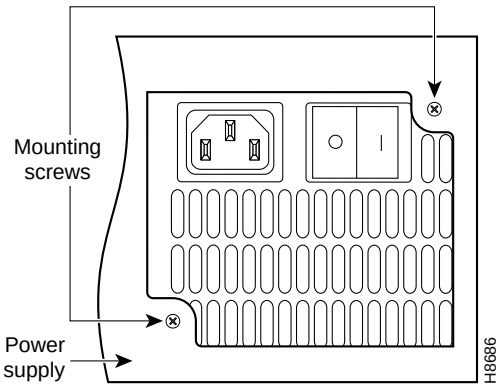
Step 1 Place the access server so that the rear panel is facing you.

Figure 4 Cisco AS5200 Access Server Rear Panel



Step 2 Remove the two mounting screws that secure the power supply to the chassis and set them aside.

Figure 5 Removing the Mounting Screws

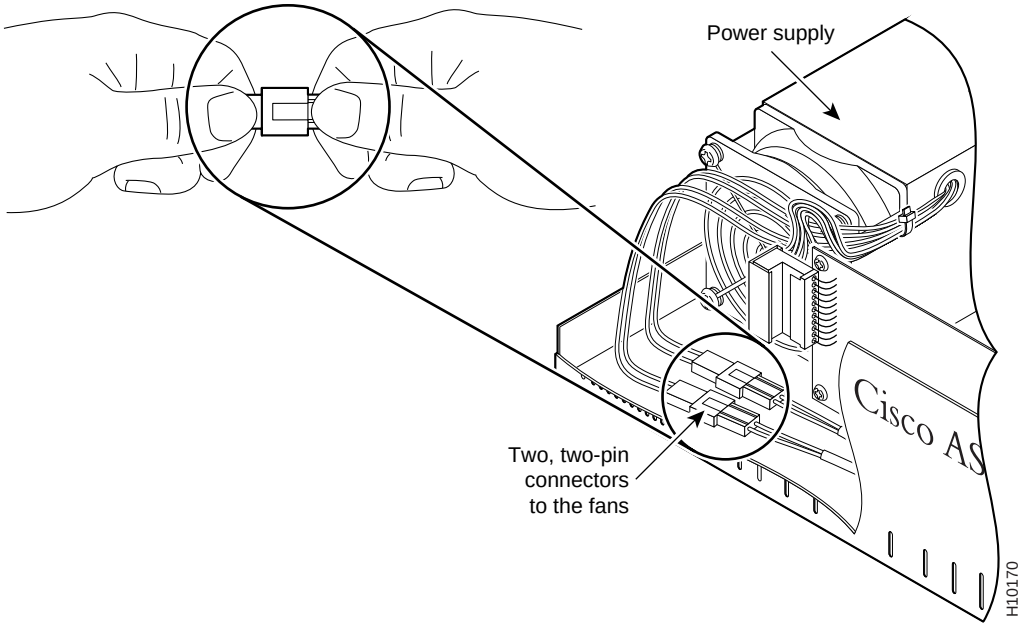


Note Although the illustrations in this document show the AC power supply, the procedures are the same for the DC power supply.

Step 3 Now turn the access server so that the front panel is facing you.

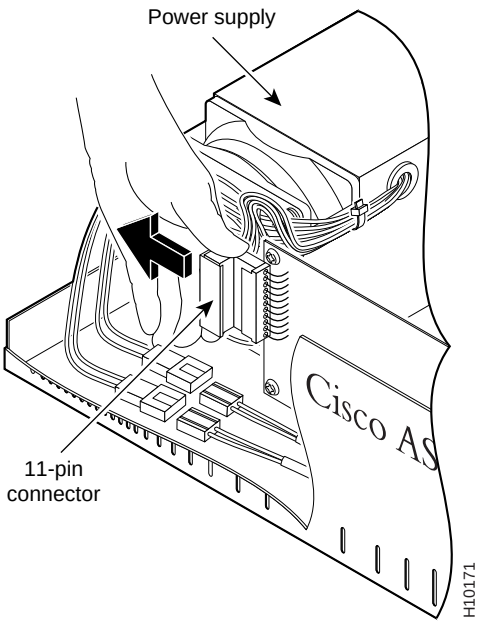
Step 4 Locate the two small two-pin connectors that power the fans. Grasp the two halves of each connector firmly and pull them apart. If the tie-wraps get in your way, cut them. But be careful not to cut the wires. If the wires are cut, the fans will not operate.

Figure 6 Disconnecting the Two-Pin Connectors



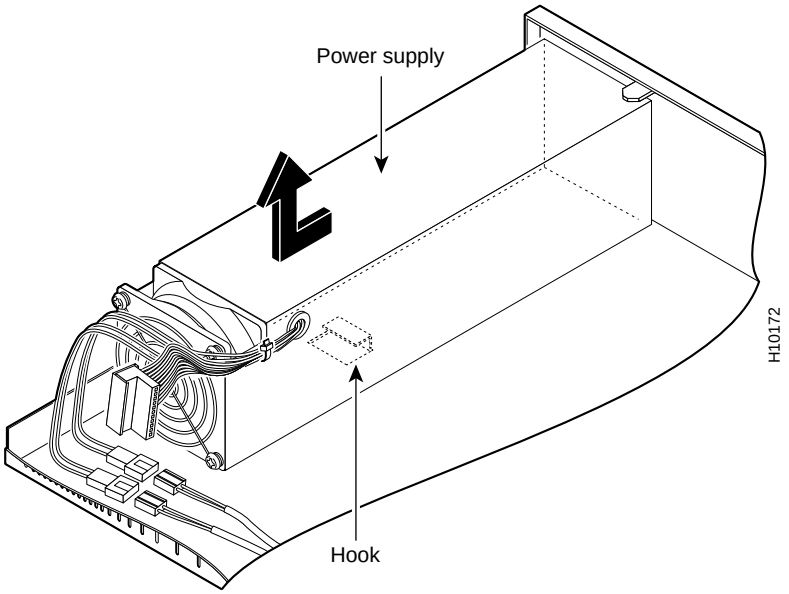
Step 5 Locate the large rectangular 11-pin connector that connects the power supply to the backplane. While pulling firmly, wiggle the connector until it disconnects from the backplane. It may take some force to disconnect the connector.

Figure 7 Disconnecting the Power Connector



Step 6 Slide the power supply slightly toward the front of the chassis. This disengages the built-in hook that helps secure the power supply to the chassis.

Figure 8 Removing the Power Supply



Step 7 Lift the power supply out of the chassis. If you want to preserve the power supply, put it in an antistatic bag.

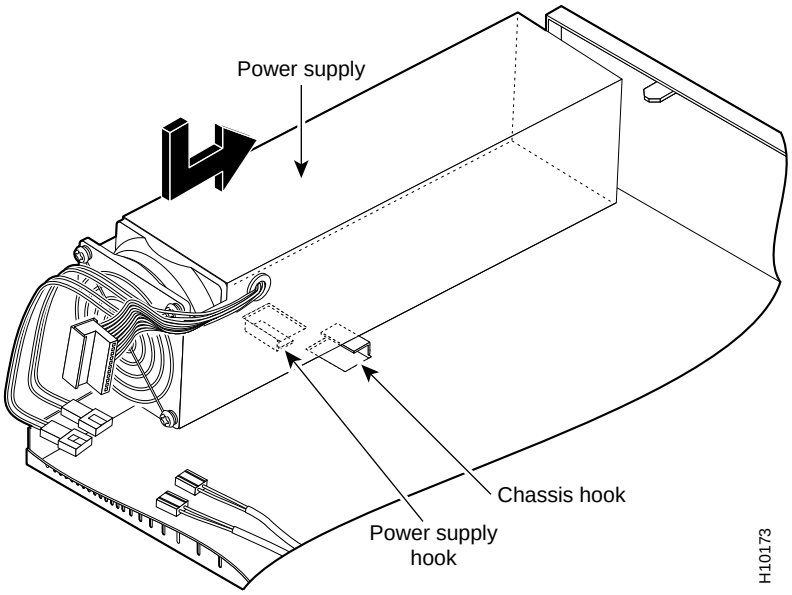
Installing the Power Supply

Take these steps:

Step 1 Place the access server so that the rear panel is facing you.

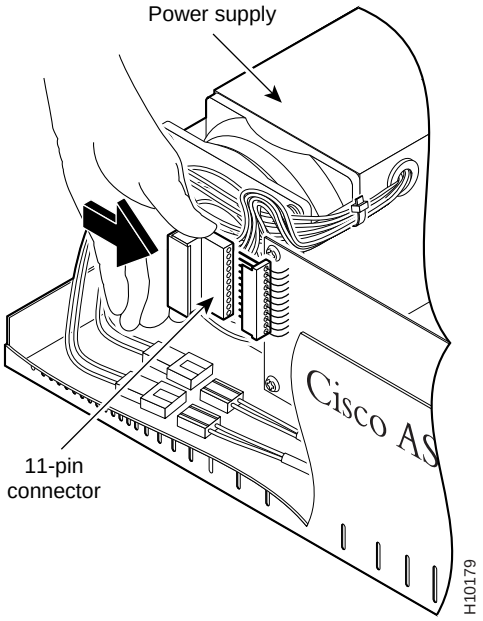
Step 2 Align the new power supply with the chassis cutout and the built-in hook. Then slide the power supply toward you, making sure that the built-in hook engages.

Figure 9 Installing the Power Supply



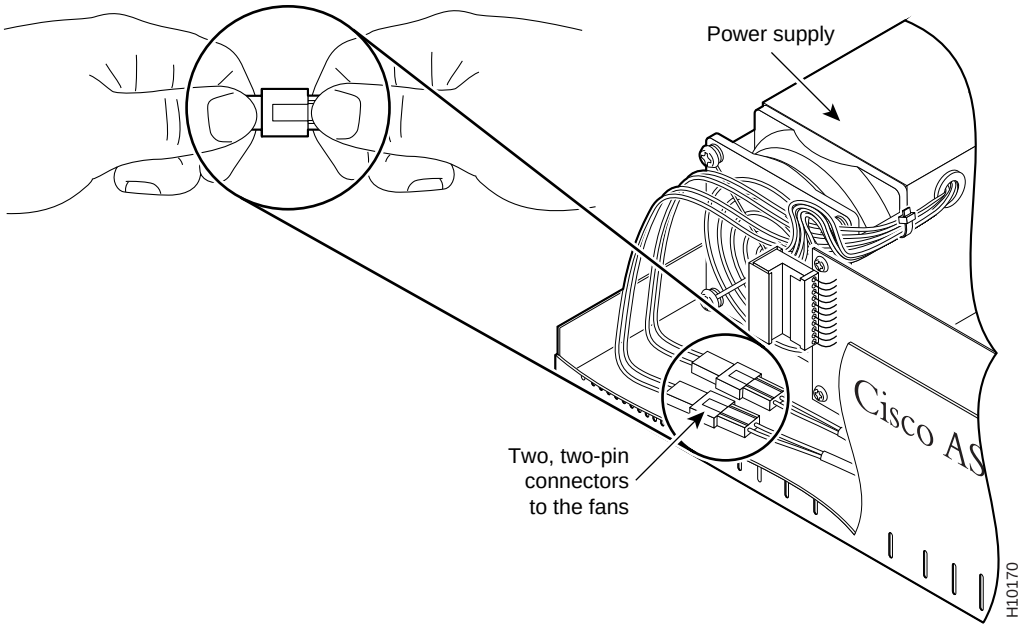
Step 3 Connect the 11-pin connector to the backplane. Note the orientation of the connector relative to the backplane.

Figure 10 Connecting the 11-Pin Connector to the Backplane



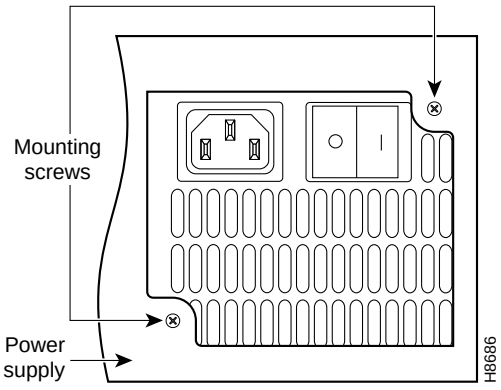
Step 4 Connect the two small two-pin connectors used to power the fans.

Figure 11 Connecting the Two-Pin Connectors



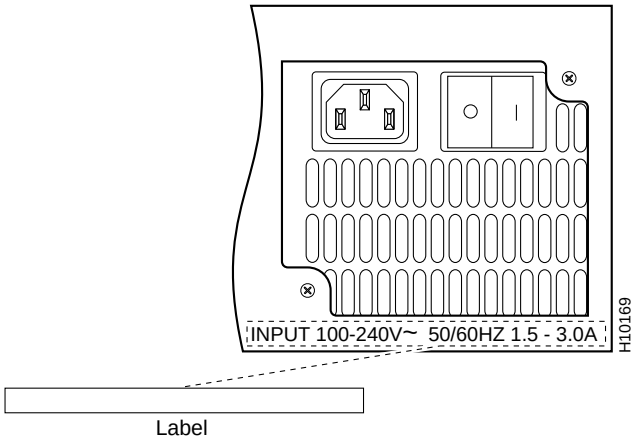
Step 5 Reinstall the mounting screws into the screw holes on the rear panel.

Figure 12 Reinstalling the Mounting Screws



Step 6 If you installed a different type of power supply (AC or DC) than was originally installed in the access server, place one of the power ratings labels that came in the plastic bag with the documentation directly over the power ratings information on the rear panel. For example, if the original chassis came with an AC power supply and you replaced it with a DC power supply, place the DC power ratings label over the ratings stamped on the rear panel of the chassis. This will ensure that the correct power ratings information appears on the rear panel.

Figure 13 Attaching the Power Ratings Label



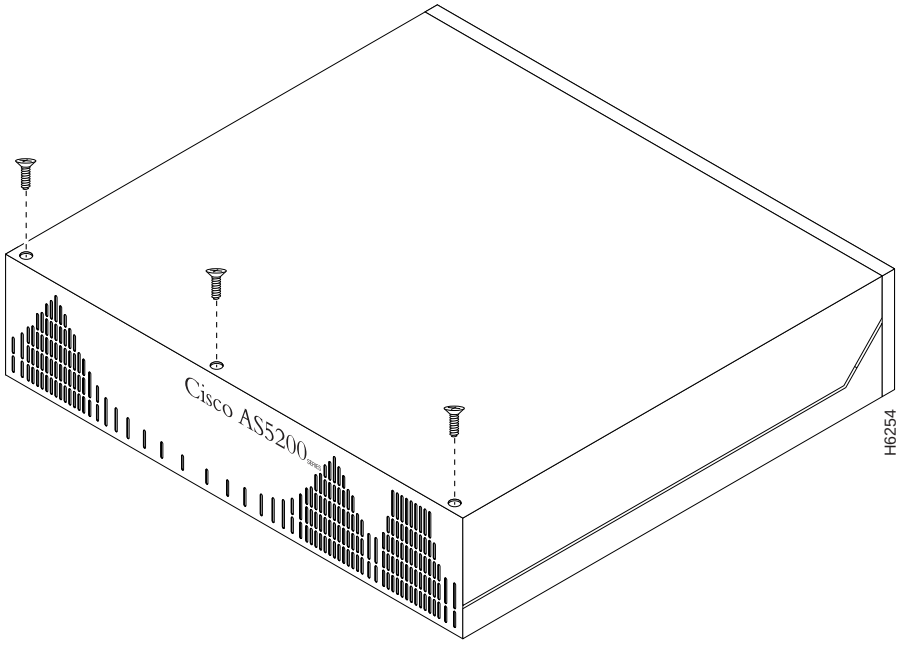
Closing the Chassis Cover

Refer to Figure 14 and take these steps:

Step 1 Place the chassis bottom so that the front panel is facing you.

Step 2 Hold the top cover over the chassis bottom, and align the chassis and top cover tabs at the top rear of the chassis.

Figure 14 Replacing the Chassis Cover



Step 3 Push the top cover toward the chassis back panel, and ensure the following:

- The top cover tabs fit under the chassis back panel so that they are not exposed.
- The chassis tabs on the top of the chassis back panel fit under the top cover so that they are not exposed.

Step 4 Lower the front of the top cover to close the chassis, and ensure the following:

- The top cover side tabs fit under the chassis side panels so that they are not exposed.
- The chassis tabs fit under the top cover side panels so that they are not exposed.

Step 5 Reinstall the three screws that secure the chassis cover to the chassis bottom.

Step 6 Reinstall the chassis in a rack or on a tabletop.

Step 7 Reconnect all cables.

Step 8 Remove your ESD-preventive wrist strap.

The concludes the procedure for replacing the power supply.

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- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

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Use this document with the *Cisco AS5200 Universal Access Server Hardware Installation Guide* and *Regulatory Compliance and Safety Information* publications.

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