



Installing SEP or SEP-E Modules in the VPN 3000 Series Concentrator

Follow these instructions to:

- Install a SEP (Scalable Encryption Processing) or SEP-E (Enhanced SEP) module in the VPN 3000 Series Concentrator
- Convert or upgrade a VPN 3000 Series Concentrator from SEP encryption to SEP-E



Note

Current SEP and SEP-E modules do not fit earlier Altiga VPN Concentrator Models C10, C20, and C50. The modules may fit earlier Models C15, C30, and C60, depending on chassis design. If the expansion modules fasten with screws, they will fit; if they fasten with latches, they will not fit.

Limitations and Restrictions

Your VPN Concentrator uses *either* SEP *or* SEP-E modules, not both. Do not install both types of modules on the same device. If you install a SEP-E module on a VPN Concentrator that already contains a SEP module, the VPN Concentrator disables the SEP module and uses only the SEP-E.

To recognize and use the SEP-E, your VPN Concentrator must be running software version 4.0.

These instructions do not apply to the VPN Concentrator Model 3005. Model 3005 does not accept SEP modules.



Warning

Always shut down the VPN Concentrator before removing or installing a SEP or SEP-E module.



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Before You Begin

Read through all the instructions to become familiar with the steps.



Caution

The VPN Concentrator and the SEP and SEP-E modules contain electronic components that are sensitive to electrostatic discharge (ESD). While they are protected by the chassis and module housing, improper handling could damage components. Leave the module in its protective ESD-shielded envelope until instructed to remove it, and handle it only as instructed.

If you have any reservations about installing the module, ask for assistance from a qualified technician.

You should save the current VPN Concentrator configuration file and copy it to a remote system before you proceed. See the Administration | File Management | TFTP Transfer screen in the VPN Concentrator Manager.

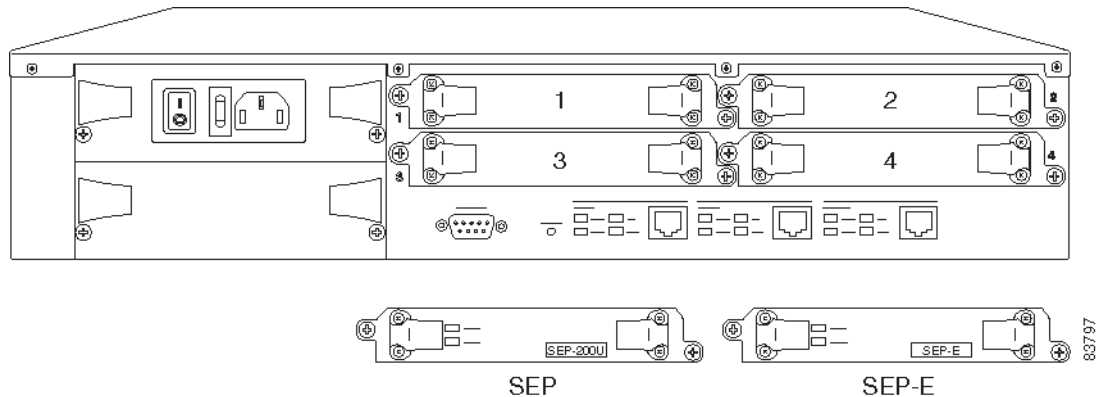
Tools You Need

No. 2 Phillips screwdriver.

Identifying the Correct Slot

VPN Concentrator expansion slots and their sequence are shown in [Figure 1](#), looking at rear of chassis. *Always insert SEP or SEP-E modules in the the slots sequentially.*

Figure 1 VPN Concentrator Expansion Slots



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Distinguishing SEP and SEP-E Modules

SEP and SEP-E modules look very similar. They are differentiated by a small label on the lower right of the cover plate. (See [Figure 1.](#)) The SEP module is labeled “SEP 200U.” The SEP-E module is labeled “SEP-E.”

(SEP-E Only) Upgrade VPN Concentrator Software

If you are installing a SEP-E module, update the VPN Concentrator software to Version 4.0 or greater. (If you are installing a SEP module, skip this step.)

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- Step 1** Save the current VPN Concentrator configuration file and copy it to a remote system. See the Administration | File Management | TFTP Transfer screen in the VPN Concentrator Manager.
 - Step 2** Update the VPN Concentrator software to Release 4.0 or greater. See the Administration | Software Update | Concentrator screen in the VPN Concentrator Manager.
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Installing the Module

Follow the instructions below to install the new SEP or SEP-E module.



Warning

Removing or installing a SEP-E on a system that is not powered off can destroy the module. Always shut down the VPN Concentrator before removing or installing a SEP or SEP-E module.

Shutting Down and Powering Off

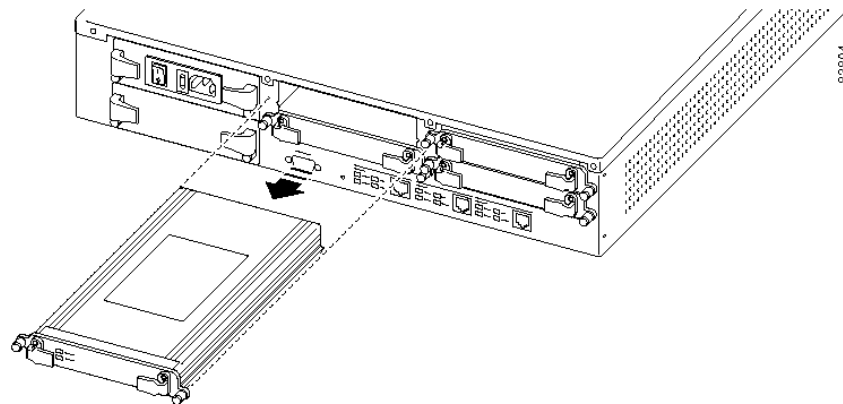
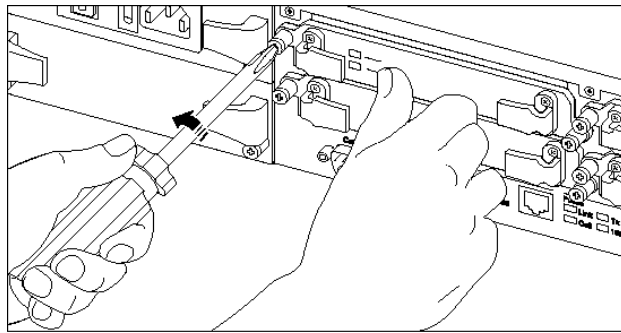
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- Step 1** Using the VPN Concentrator Manager, shut down the VPN Concentrator (see the Administration | System Reboot screen).
 - Step 2** Turn power off: press **0** on the VPN Concentrator power switch (on the power module, on the rear of the chassis).
 - Step 3** Leave the VPN Concentrator plugged in to an outlet with a reliable Earth ground.
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(SEP-E Only) Removing the SEP Modules

The VPN Concentrator does not support SEP and SEP-E modules simultaneously. If your VPN Concentrator currently has SEP modules installed, remove them before installing the SEP-E module. (If you are installing a SEP module, skip this step.)

- Step 1** Remove all SEP modules from the expansion module slots. Two captive screws hold each in place. (See [Figure 2](#).)

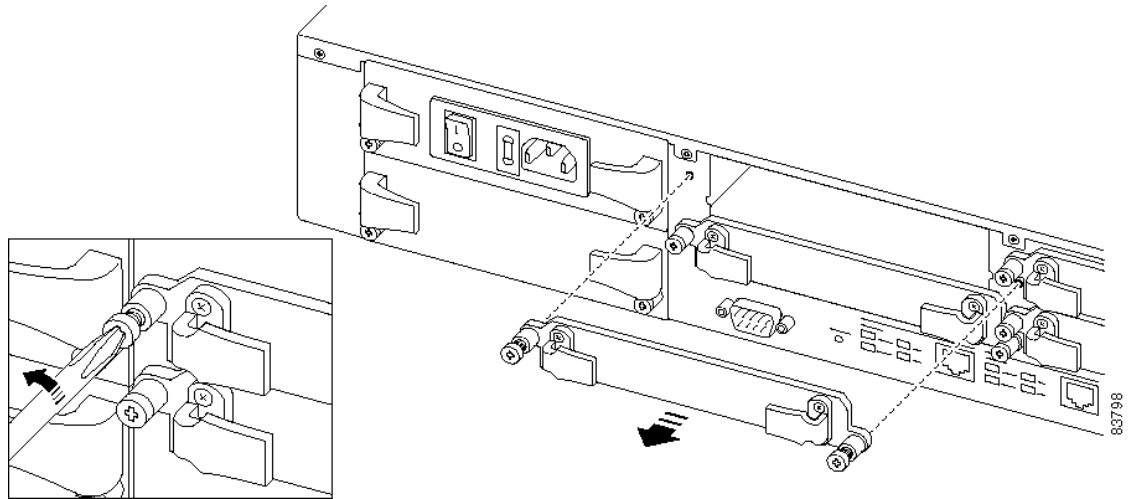
Figure 2 Removing the Old SEP



Installing the New Module

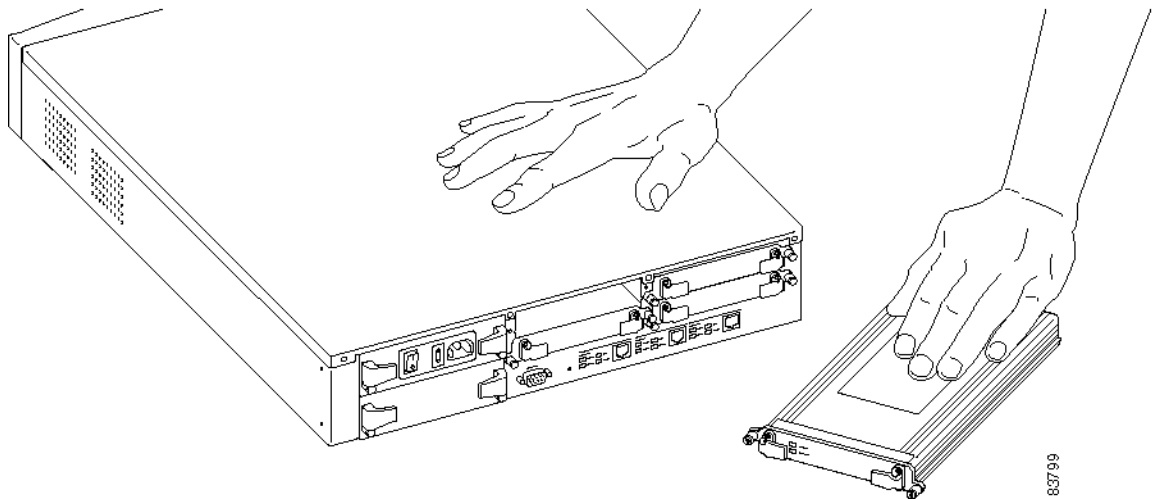
- Step 1** If the expansion module slot has a cover plate, remove it. Two captive screws hold it in place. (See [Figure 3](#).)

Figure 3 Removing the Cover Plate from the Expansion Module Slot



- Step 2** Remove the new module from its ESD envelope.
- Step 3** With the VPN Concentrator plugged in to a grounded outlet but still turned off, simultaneously touch the VPN Concentrator case with one hand and the module case with the other hand for at least 5 seconds to dissipate any static charge. (See [Figure 4](#).)

Figure 4 Dissipating the Static Charge

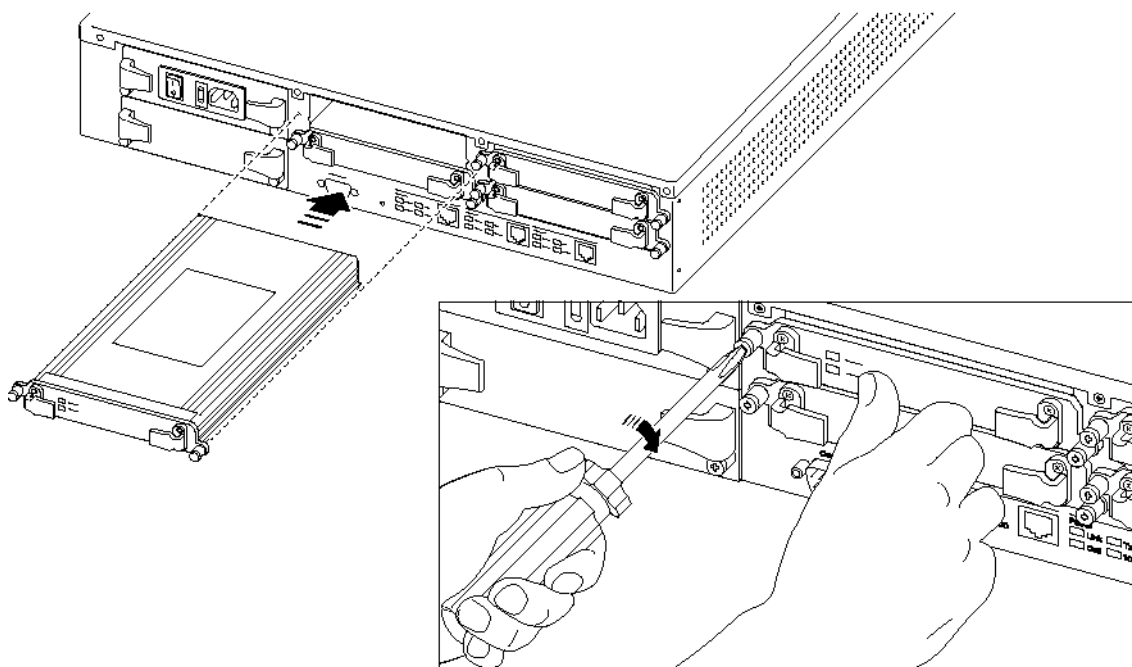


- Step 4** Orient and insert the module in the correct slot. (See “[Identifying the Correct Slot.](#)”) Push module all the way in, so that its cover plate is flush with the rear chassis. (See [Figure 5.](#))



Caution The module slides in easily. Do not force it

Figure 5 Inserting the Module



- Step 5** Tighten the two captive screws to seat module firmly in its slot. (See [Figure 5.](#))

Checking the Module

Follow these steps to confirm that you have installed the module correctly:

- Step 1** Turn power on: press I on the power switch. The VPN Concentrator automatically detects the new module during reboot. Watch the console display.
- Step 2** Check LEDs on front and rear.
- a. Front: Expansion Module Insertion Status and Run Status should be ON (green) for the installed number of modules.
 - b. Rear: On all installed modules, Power should be ON (green). If you installed a SEP-E module, Active should be ON (green). If you installed a SEP module, Status should be ON (green).
- Step 3** Using the VPN Concentrator Manager, check the Monitor | System Status screen. Be sure the module is included in the back-panel image. Click the module to examine its status.

Configuring the Module

The module itself has no configurable parameters.

Troubleshooting

Problem	Possible cause	Solution
Module not detected. Power LED is OFF.	<ul style="list-style-type: none"> Module is not seated properly. Module is installed in older VPN Concentrator model. Module is defective. 	<ul style="list-style-type: none"> Shut down the VPN Concentrator and turn power off. Loosen the module and reseal it. Tighten screws securely. Be sure the VPN Concentrator is Model 3015, 3030, 3060, or 3080 only. Contact Cisco support.
Power LED is ON, and Status (or Activity) LED is OFF or blinking.	<ul style="list-style-type: none"> Module failed diagnostics. Module is defective. 	<ul style="list-style-type: none"> Contact Cisco support.

For More Information

For more information on SEP redundancy, see the “Monitoring | System Status | SEP” section of *VPN 3000 Series Concentrator Reference Volume II: Administration and Monitoring*.