

ISG 2000 Field Upgrade Guide

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Part No.
093-1444-000,
Revision C

With increased memory and one or more security modules, an ISG 2000 security system running ScreenOS 5.0.0-IDP1 can support Intrusion Detection and Prevention (IDP). To enable IDP, the device must also have both an Advanced license key and an IDP license key installed. To configure IDP, you must use NetScreen-Security Manager 2004 FP3-IDP or later.



NOTE: Installing the IDP license key disables Deep Inspection (DI).

With this upgrade kit, you can expand memory capacity and install up to three security modules (purchased separately) in an ISG 2000 device. If you have not already purchased one or more security modules, contact your value added reseller (VAR) or contact Juniper Networks Customer Care directly.

The kit includes these instructions and the following items:

- 1-GB SIMM DRAM modules (2)
- Phillips-head screwdriver (1)
- Antistatic mat (1)
- Antistatic wrist strap (1)



NOTE: You also need the OS loader upgrade and ScreenOS 5.0.0-IDP1 image (or later), both of which are available for download from www.juniper.net/support.

The procedure for upgrading the ISG 2000 to support IDP involves the following steps:

1. Registering the ISG 2000
2. Upgrading the OS Loader
3. Upgrading to ScreenOS 5.0.0-IDP1
4. Installing License Keys
5. Opening the Chassis
6. Replacing Memory Modules
7. Adding Security Modules
8. Closing the Chassis



NOTE: If your ISG 2000 is already running ScreenOS 5.0.0-IDP1 or later and you simply want to add more security modules, refer just to steps 4, 6, and 7.

1 Registering the ISG 2000

To be able to access customer support and download new ScreenOS releases, create a customer account and register your ISG 2000. If you have already done this, proceed to the next section.

1. Sign up for a customer account by following the online instructions that begin at <http://www.juniper.net/entitlement/>
2. Log in to the Juniper Networks Customer Support Center (CSC) at <http://www.juniper.net/support/>.
3. Click **Register New Product** in the Contract and Product Management section.
4. Follow the online instructions to register your ISG 2000 device.

2 Upgrading the OS Loader

Because the ISG 2000 needs additional memory to support IDP, you must upgrade the OS loader if it is not v1.1.5 or later so that it can recognize the added memory. You can see the OS loader version scroll by during the bootup process or by entering the **get envar** command.

1. Download the OS loader from the Juniper Networks support site to the root directory of your TFTP server.
 - a. Visit www.juniper.net/support and log in.
 - b. In the Download Software section, click **ScreenOS Software**.
 - c. Download the latest OS loader and save it to the root directory of your TFTP server.
2. If necessary, start the TFTP server.
3. Make an Ethernet connection from the device hosting the TFTP server to the MGT port on the ISG 2000 and a serial connection from your workstation to the console port on the ISG 2000.
4. Reboot the ISG 2000 by entering the **reset** command. When prompted to confirm the command—**System reset, are you sure? y/[n]**—press the **Y** key.
5. When you see the following prompt, press the **X** key, and then the **A** key:

```
NetScreen NS-ISG 2000 BootROM V0.9.0 (Checksum: 8796E2F3)
Copyright (c) 1997-2004 NetScreen Technologies, Inc.
Total physical memory: 2048MB
Test - Pass
Initialization..... Done
Hit key 'X' and 'A' sequentially to update OS Loader.
```

6. Enter the filename for the OS loader software you want to load (for example, *load2000v115.d.S*), the IP address of the ISG 2000, and the IP address of your TFTP server:

```
Serial Number [0079112003000031]: READ ONLY
BOM Version [C06]: READ ONLY
Self MAC Address [0010-db58-c900]: READ ONLY
OS Loader File Name [boot2000v090.ld.S]: load2000v115.d.S
Self IP Address [10.150.65.152]:
TFTP IP Address [10.150.65.151]:
```

7. Press the **Enter** key, and the file loads.

```
Save loader config (112 bytes)... Done
Loading file "load2000v115.d.S"...
rtatatatatata ...
Loaded successfully! (size = 383,222 bytes)
Ignore image authentication!
Program OS Loader to on-board flash memory...
+++++Done!
Start loading...
.....
Done.
```

You have completed the upgrade of the OS loader.

3 Upgrading to ScreenOS 5.0.0-IDP1

The ISG 2000 is now ready to support ScreenOS 5.0.0-IDP1 or later. You can copy this ScreenOS image to the root directory of your TFTP server, and then save it to the ISG 2000.

1. Download the latest version of ScreenOS 5.0.0-IDP from the Juniper Networks support site to the root directory of your TFTP server.
 - a. Visit www.juniper.net/support and log in.
 - b. In the Download Software section, click **ScreenOS Software**.
 - c. Download the latest version of ScreenOS 5.0.0-IDP and save it to the root directory of your TFTP server.
2. If necessary, start the TFTP server.
3. Make a console, Telnet, or SSH connection to the ISG 2000, and then log in.
4. Enter the following CLI command:

```
save software from tftp ip_addr filename to flash
```

in which *ip_addr* is the address of the TFTP server and *filename* is the name of the firmware file.

5. Reboot the ISG 2000 by entering the **reset** command.

Next, you need to open the top panel of the chassis, upgrade the memory modules, add one or more security modules, and then close the top panel. These steps are explained in the following sections.

4 Installing License Keys

If you have not already done so, purchase and activate an Advanced license key and an IDP license key.

1. Contact the value-added reseller (VAR) who sold you the ISG 2000 or contact Juniper Networks Customer Care directly:
(+1) 888-314-5822 (US and Canada)
(+1) 408-745-9500 (International)
2. Provide the serial number of your device and state that you want the Advanced and IDP license keys. Juniper Networks generates the license keys and sends them to you through e-mail.
3. Load the license keys on the ISG 2000 device. You can load a license key by copying the alphanumeric license key sent in the e-mail, entering the following CLI command, and pasting the content you copied in place of the variable string shown below:

exec license-key string

For example, if you receive the following advanced license key via e-mail, copy everything from “2E1...” to “...g = =”

```
advanced_key=2E1gQaBVzOxBkQTowf0VZ3pw8j/nY/xqCZFkHkiUWs7sLZvXkX
2DxF/Colh76JSnNveIDorA6mY0nUby6lnbDXw8JMkxz2ECGA4IT6nSonsag/etk
atpFiz/aPp8AHbIBCh+fmHeEACuxb+YgtmY803H16ZNmGNXLS07kb0KoMOCN
ql79XLM5q7UU6c4p6vP9fDPST7oZE8dWA50MIh0I/2Cz5UbCAvebYYNa3uzD
qnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BJTijVONpw3aQsZ8+k5ACwQ6TwhsiA7
CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjdb4lg==
```

and paste it after **exec license-key**:

```
exec license-key 2E1gQaBVzOxBkQTowf0VZ3pw8j/nY/xqCZFkHkiUWs7
sLZvXkX2DxF/Colh76JSnNveIDorA6mY0nUby6lnbDXw8JMkxz2ECGA4IT6n
Sonsag/etkatpFiz/aPp8AHbIBCh+fmHeEACuxb+YgtmY803H16ZNmGNXLS
07kb0KoMOCNql79XLM5q7UU6c4p6vP9fDPST7oZE8dWA50MIh0I/2Cz5U
bCAvebYYNa3uzDqnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BJTijVONpw3aQs
Z8+k5ACwQ6TwhsiA7CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjdb
4lg==
```

4. Reboot the ISG 2000 by entering the **reset** command. When prompted to confirm the command—**System reset, are you sure? y/[n]**—press the **Y** key.
5. After the ISG 2000 reboots, you can confirm that the key or keys are now loaded by entering the **get license-key** command:

get license-key

advanced_key:

```
2E1gQaBVzOxBkQTowf0VZ3pw8j/nY/xqCZFkHkiUWs7sLZv
XkX2DxF/Colh76JSnNveIDorA6mY0nUby6lnbDXw8JMkxz2ECGA4IT6nSons
ag/etkatpFiz/aPp8AHbIBCh+fmHeEACuxb+YgtmY803H16ZNmGNXLS07kb
0KoMOCNql79XLM5q7UU6c4p6vP9fDPST7oZE8dWA50MIh0I/2Cz5UbCAv
ebYYNa3uzDqnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BJTijVONpw3aQsZ8+k
5ACwQ6TwhsiA7CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjdb4lg==
```

idp_sm_key:

```
2jPLivNPTB7SI0AXNQPPqxkeJmi0c47KQ9JhZTC77AJnqTvJDtGxhl3A4pdR
gYq6pnZeS2X69Q0jQ73jROSGo73LvXq/xVJvXKzx3Z3jzfb2NiEPZlje/oGhAN
```

zVxyDJnloQTVzFwCmmQ4xmtCHP/dXPhLgcXhrfbRPEeIHHDjNuLOYmg6TczU
 FOjFGdCXiDNJeONwTwIL4hnP8C0nrdEcjoCNdCVVXWJgqPW/XJSvBFDBzK+
 pH3PvrwgiiA2vYQBjJwTbHkBG9e+d4q2bZGijmBpUjUlvvJEVdleOycFr7IVuFup
 6F2MfcoJCOoyk3C2/2Di8IK/yQuPIFbBrOSXw==

Model: Advanced

...

5 Opening the Chassis

1. Turn off the power for the ISG 2000 and disconnect the power cable. Spread out the antistatic mat and ground it. Set the ISG 2000 on the mat. Then connect the grounding wire from the antistatic wrist strap to the terminal on the antistatic mat, and put the strap on your wrist.



2. Use the Phillips-head screwdriver to remove three screws from the top panel of the chassis. The screws are located near the rear of the panel. (Keep the screws nearby for use when closing the chassis later.)

Remove screws from top panel.

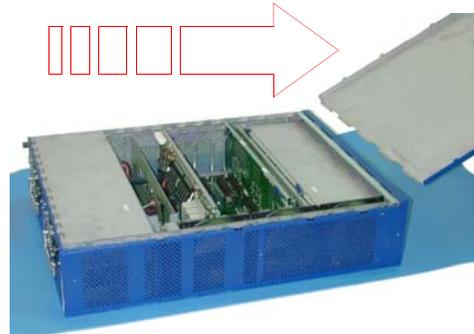


3. Grip the rear edge of the top panel, lift it up, and then remove it.

3a. Lift top panel.



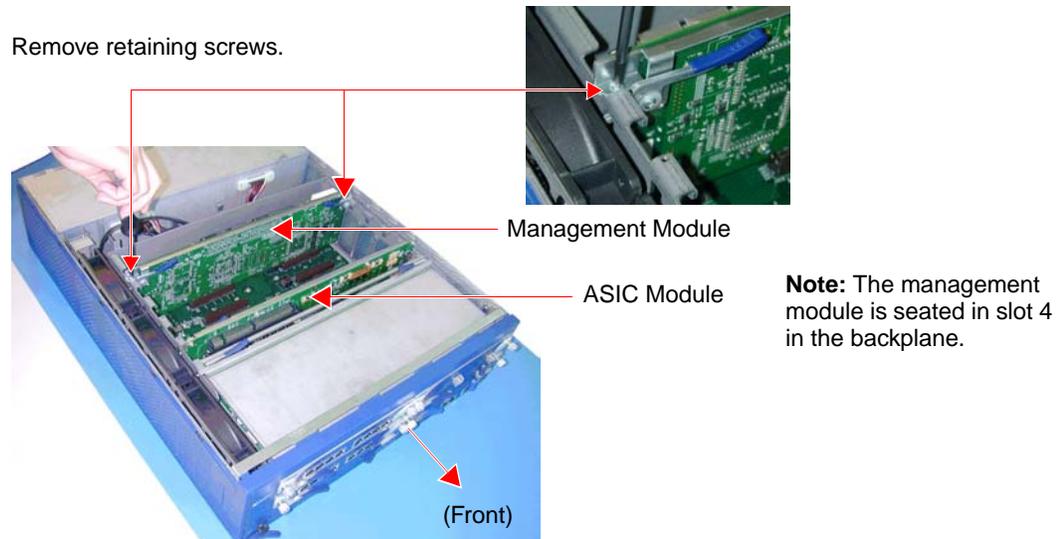
3b. Then remove it.



6 Replacing Memory Modules

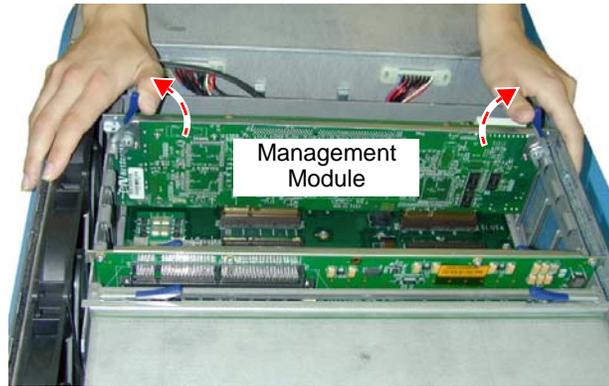
Before adding one or more security modules, you must first replace the two 512-MB SIMM DRAM memory modules with two 1-GB modules.

1. Use the Phillips-head screwdriver to remove the two retaining screws from the left and right top edges of the management module.

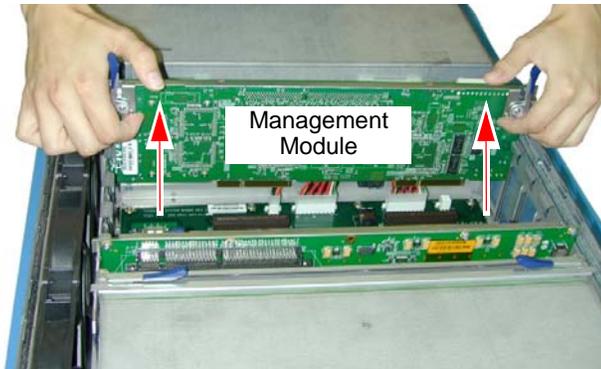


2. Swivel the release levers at each end of the management module and then slide the module up and out of the chassis.

Swivel release levers up.

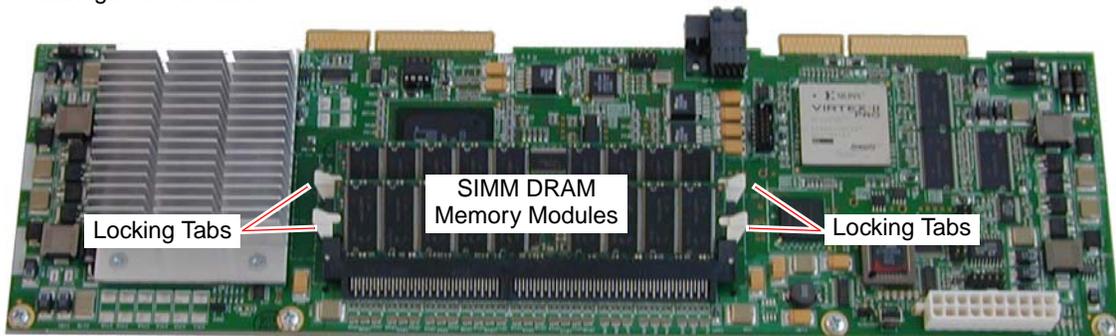


Slide management module up and out of chassis.

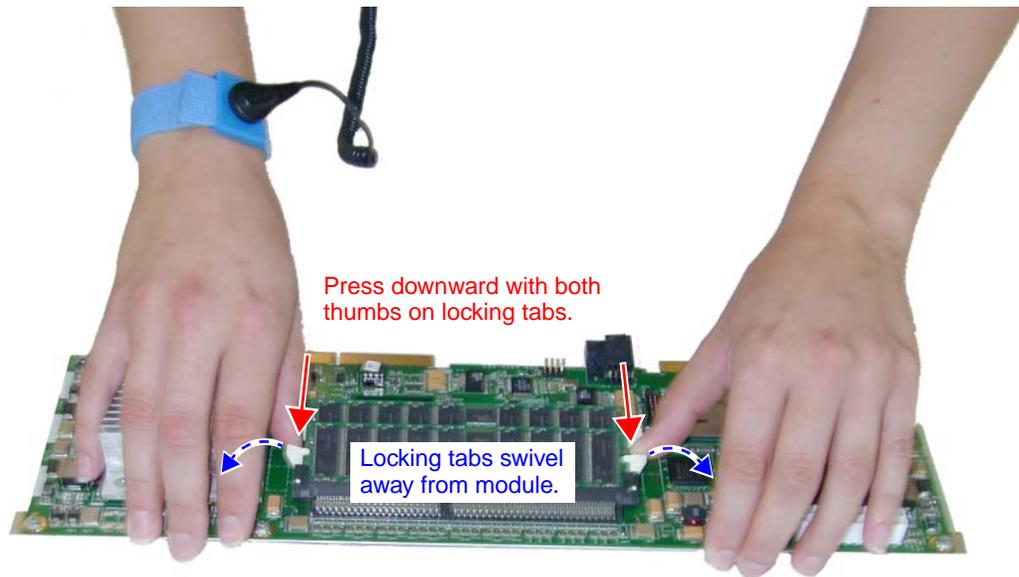


3. Set the management module on the antistatic mat. The two 512-MB SIMM DRAM memory modules are nested in partially overlapping layers.

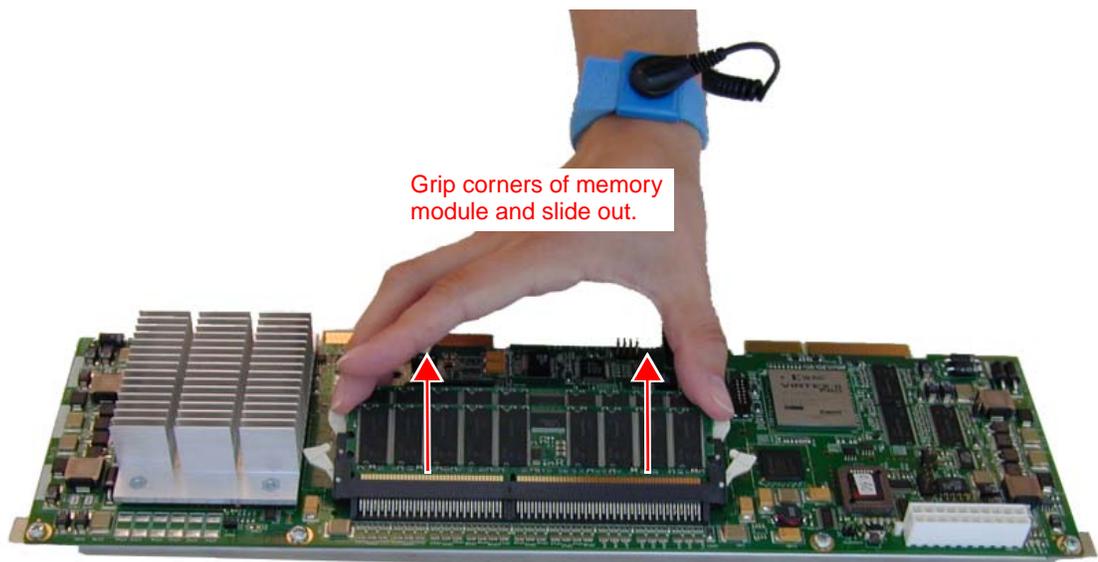
Management Module



4. Release the uppermost 512-MB SIMM DRAM memory module by pressing your left and right thumbs downward on the locking tabs on each side of the module so that the tabs swivel away from it.

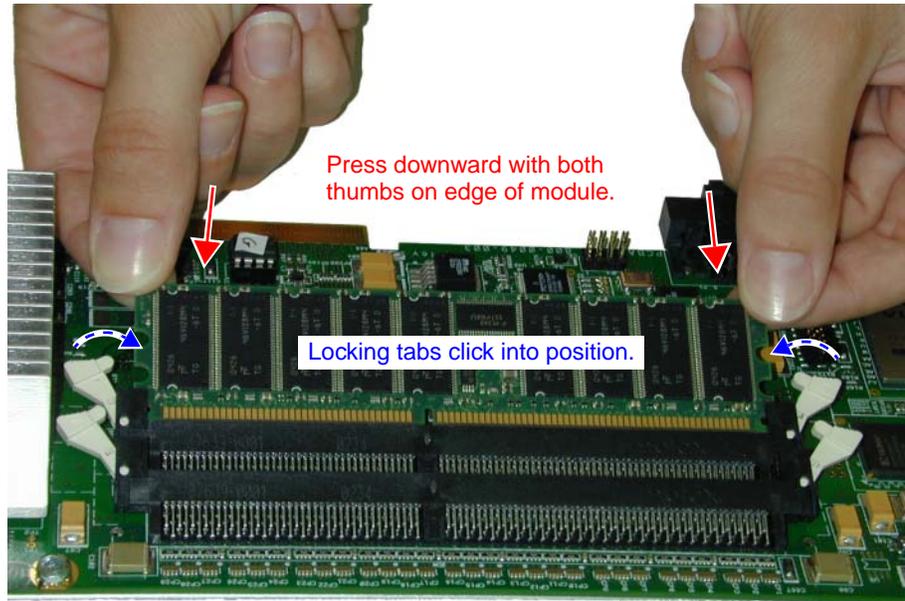


5. Grip the long edge of the uppermost memory module and slide it out. Set it aside.



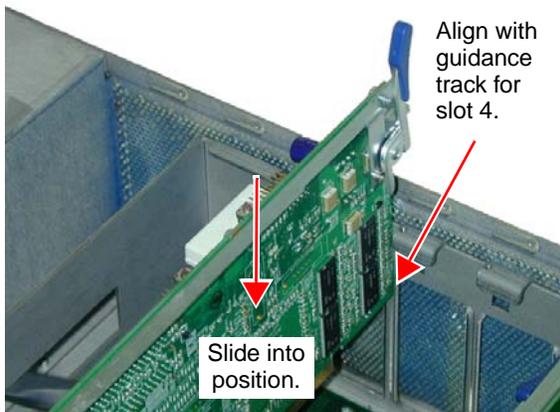
6. Repeat steps 4 and 5 to remove the lowermost 512-MB SIMM DRAM memory module.

7. Insert a 1-GB SIMM DRAM memory module in the lowermost slot. Exerting even pressure with both thumbs upon the upper edge of the module, press the it downward until the locking tabs click into position.

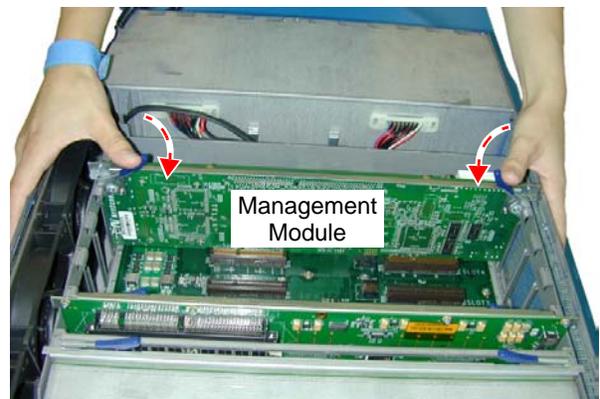


8. Repeat step 7 to insert the uppermost 1-GB SIMM DRAM memory module.
9. Align the management module with the guidance tracks on the inner walls of the chassis next to "Slot 4" on the backplane, and then press it into position. Swivel the release levers downward until the module is fully seated.

9a. Align management module with guides and slide into chassis.

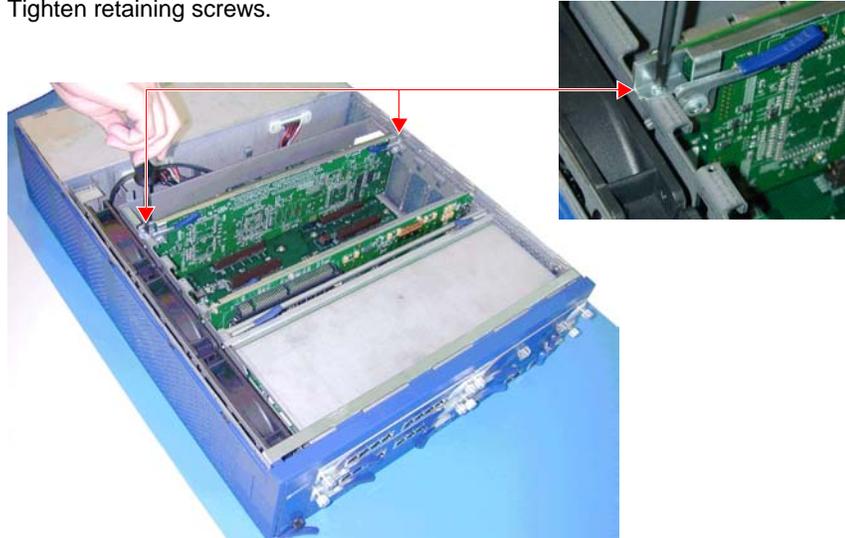


9b. Press release levers down until management module is fully seated.



10. Use the Phillips-head screwdriver to tighten the two retaining screws to the left and right top edges of the management module, securing it to the chassis.

Tighten retaining screws.



7 Adding Security Modules

You can add one, two, or three security modules to the ISG 2000. For optimum performance, Juniper Networks recommends putting the security modules in the numbered slots—indicated on the backplane—as explained below:

If you are adding	then put
one security module,	it in slot 3, leaving slots 2 and 1 empty.
two security modules,	the first one in slot 3 and the second one in slot 2, leaving slot 1 empty.
three security modules,	the first in slot 3, the second in slot 2, and the third in slot 1.

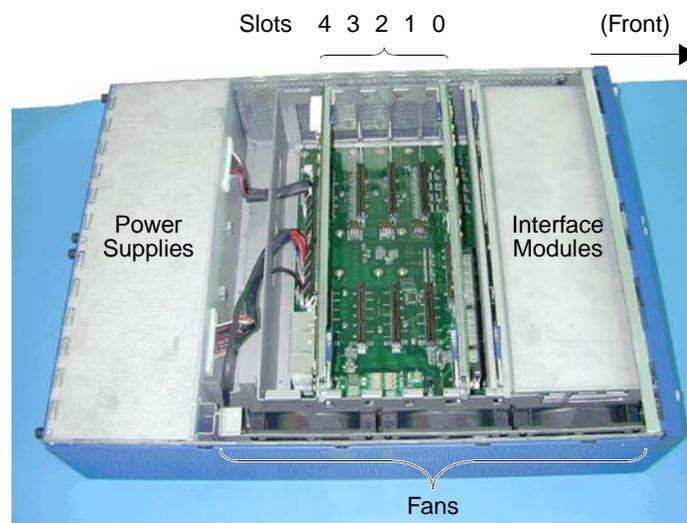
Slot 4: Management Module

Slot 3: Security Module

Slot 2: Security Module

Slot 1: Security Module

Slot 0: GigaScreen ASIC Module



1. Align the security module with the guidance tracks on the inner walls of the chassis next to “Slot 3” on the backplane, and then slide it into position. Press the release levers downward until the module is fully seated.
2. Use the Phillips-head screwdriver to tighten the two retaining screws to the left and right top edges of the security module, securing it to the chassis.

Tighten retaining screws.

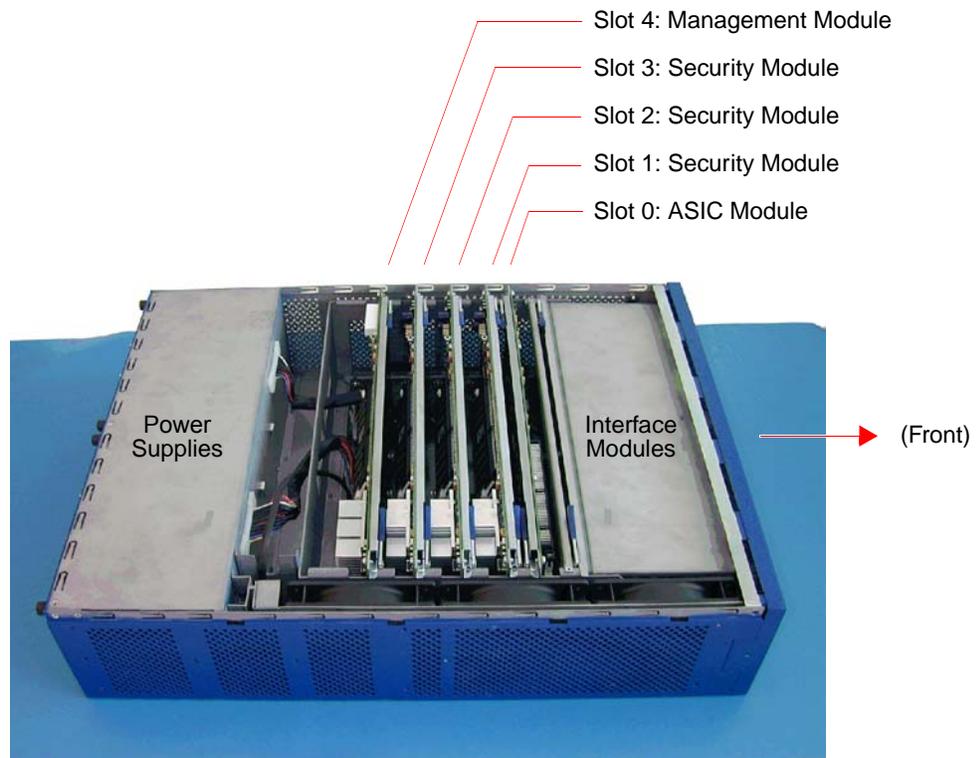


Management Module
in slot 4

Security Module in
slot 3

3. If you are adding more than one security module, repeat steps 1 and 2, putting the second security module in slot 2 and the third in slot 1.

ISG 2000 with three Security Modules Installed

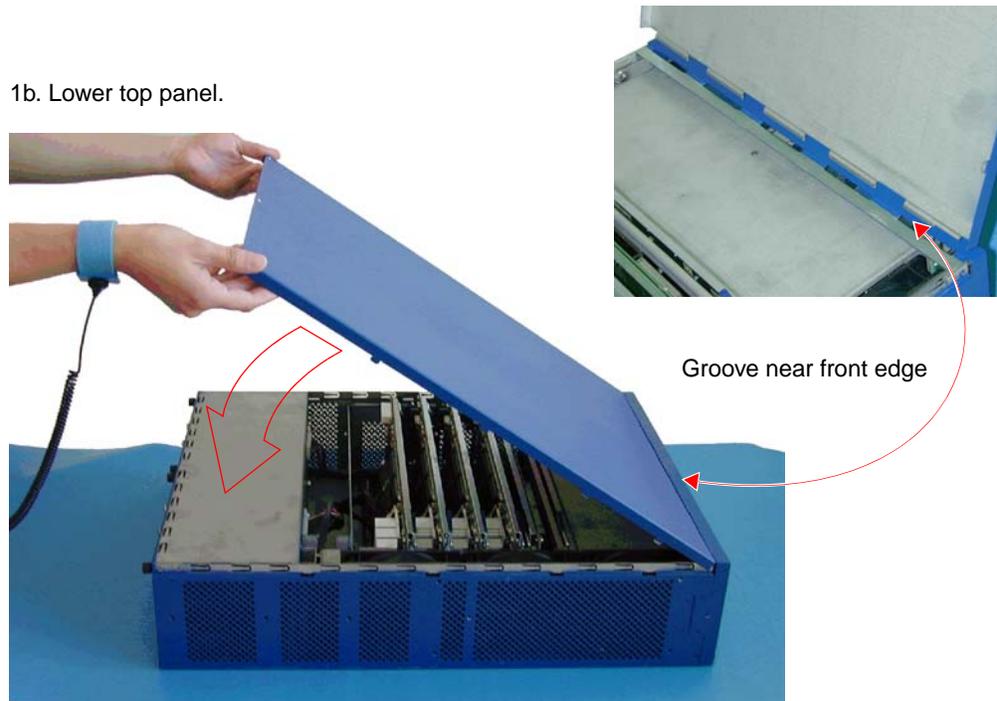


8 Closing the Chassis

After you have replaced the memory modules and added one or more security modules, you can replace the top panel on the chassis.

1. Set the front edge of the top panel into the groove that runs along the top front edge of the chassis. Then lower the top panel onto the chassis.

1a. Set front edge of top panel into groove near front of chassis.



2. Use the Phillips-head screwdriver to tighten the three screws you removed earlier, securing the top panel to the chassis.

Tighten screws to secure top panel to chassis.



At this point the ISG 2000 is able to support Intrusion Detection and Prevention (IDP).



NOTE: To configure IDP, you must use NetScreen-Security Manager 2004 FP3-IDP or later.

Juniper Networks Documentation

To obtain technical documentation for any Juniper Networks NetScreen product, visit www.juniper.net/techpubs/.

If you find any errors or omissions in the preceding content, please contact us at the following e-mail address: techpubs-comments@juniper.net.