

ISG 1000 IDP Field Upgrade Guide

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Part No.
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Revision B

An Integrated Security Gateway 1000 (ISG 1000) security system can be upgraded to support Intrusion Detection and Prevention (IDP). For IDP support, you need to install the following items:

- OS loader v1.0.1 or later
- ScreenOS 5.0.0-IDPr3 or later software image
- An Advanced license key and an IDP license key
- 1-GB SIMM DRAM memory module(s)
- One or two security modules

To configure IDP, you must use NetScreen-Security Manager 2005.2 or later.

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

Upgrade Kit Contents

The upgrade kit includes these instructions and the following items:

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

If you have not already purchased the security module(s), you can purchase them from your value added reseller (VAR), or you can contact Juniper Networks Customer Care directly for more information.

Upgrade Procedure

The upgrade procedure involves the following steps:

1. Registering Your ISG 1000 Security System
2. Upgrading the OS Loader
3. Upgrading the Software Image to ScreenOS 5.0.0-IDPr3
4. Installing License Keys

5. Opening the Chassis
6. Replacing Memory Modules
7. Adding Security Modules
8. Closing the Chassis

Registering Your ISG 1000 Security System

Registering your ISG 1000 security system allows you access to the Customer Support Center (CSC) and ScreenOS releases. If you already have a customer account, go to the next section.

1. Go to <http://www.juniper.net/entitlement/> to sign up for a customer account.
2. Log into the Juniper Networks 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 1000 security system.

Upgrading the OS Loader

If the OS loader running on your ISG 1000 security system is not v1.0.1 or later, you need to upgrade the OS loader 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. If the OS loader is v1.0.1 or later, go to the next section.

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, restart the TFTP server.
3. Make the following connections:
 - An Ethernet connection from the device hosting the TFTP server to the MGT port on the ISG 1000 security system
 - A serial connection from your workstation to the console port on the ISG 1000 security system
4. Reboot the ISG 1000 security system by entering the **reset** command.
5. When prompted to confirm the command—**System reset, are you sure? y/[n]**—enter **y**.
6. When you see the following prompt, enter **x** and then **a**:


```
NetScreen NS-ISG 1000 BootROM V1.1.0 (Checksum: 8796E2F3)
Copyright (c) 1997-2005 Juniper Networks, Inc.
Total physical memory: 2048MB
Test - Pass
Initialization..... Done
Hit key 'X' and 'A' sequentially to update OS Loader.
```

7. Enter the filename for the OS loader software you want to load (for example, *load1000v101.d*), the IP address of the ISG 1000 security system, 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]: load1000v101.d
Self IP Address [10.150.65.152]:
TFTP IP Address [10.150.65.151]:
```

8. Press **Enter**. The file loads.

```
Save loader config (112 bytes)... Done
Loading file "load1000v101.d"...
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. You can now upgrade the software image running on the ISG 1000 system to ScreenOS 5.0.0-IDPr3 or later.

Upgrading the Software Image to ScreenOS 5.0.0-IDPr3

IDP security modules run on ScreenOS 5.0.0-IDPr3 or later. If the ISG 1000 system is already running ScreenOS 5.0.0-IDPr3 or later, go to the next section.

The following steps explain how to upgrade the operating system.

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, restart the TFTP server.
3. Log into the ISG 1000 system through a console, a Telnet, or an SSH connection.
4. Enter the following CLI command:


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

 where *ip_addr* is the address of the TFTP server and *filename* is the name of the firmware file.
5. Reboot the ISG 1000 security system by entering the **reset** command.

After the ISG 1000 security system reboots, you are ready to install the license keys.

Installing License Keys

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

1. Gather your authorization code and device serial number. The authorization code is in the package entitled “End User License Agreement & Certificate.”
 - Authorization Code—a passkey required to generate and activate the license key that you or your company has purchased for your Juniper Networks ISG device.

NOTE: The authorization code is required in order for you to generate your license key -- it is not the actual license key.

- Device Serial Number—When generating your license key, Juniper Networks uses the device serial number, a unique 16-character code, to identify your Juniper Networks ISG device. You can find the device serial number at the bottom or back of the device. You can also find it in the device information section in the GUI or by executing the “get system” command on the CLI.
2. Sign in to the Juniper Networks License Management System (LMS) at http://www.juniper.net/generate_license, select the Firewall/IPSec VPN and Intrusion Prevention link, then follow the instructions in the system user interface.
 3. The Juniper License Management System provides the license key in one of two ways:
 - You download the license key to your computer.
 - You receive an e-mail that contains the license key.
 4. Load the license keys on the ISG 1000 security system. You can load each 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/Colh76Jkxz2ECGA4IT6nSonsag/etkatpFiz/aPpMIhOI/2Cz5UbCAvebYYN
a3uzDqnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BjTijVONpw3aQsZ8+k5ACwQ6T
whsiA7CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjdb4lg==
```

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

```
exec license-key 2E1gQaBVzOxBkQTowf0VZ3pw8j/nY/xqCZFkHkIUWs7
sLZvXkX2DxF/Colh76Jkxz2ECGA4IT6nSonsag/etkatpFiz/aPpMIhOI/2Cz5
UbCAvebYYNa3uzDqnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BjTijVONpw3aQ
sZ8+k5ACwQ6TwhsiA7CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjd
b4lg==
```

5. Reboot the ISG 1000 system by entering the **reset** command. When prompted to confirm the command—**System reset, are you sure? y/[n]**—enter **y**.
6. After the ISG 1000 system 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/Colh76Jkxz2ECGA4IT6nSonsag/etkatpFiz/aPpMIhOI/2Cz5UbCAveb
YYNa3uzDqnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BjTijVONpw3aQsZ8+k5ACw
Q6TwhsiA7CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjdb4lg==
```

idp_sm_key:

```
2jPLlvNPTB7SIOAXNQPPqxkeJmi0c47KQ9JhZTC77AJnqTvJDtGxhI3A4pdRgYq
6pnZeS2X69Q0jQ73jROSGo73LvXq/xVJvXKzx3Z30Ymg6TczUFOjFGdCXiDNJeO
NwTwILBzK+pH3PvrwgiiA2vYQBjJwTbHkBG9e+d4q2bZGijmBpUjUlvvJEVdleOycF
r7IVuFup6F2MfcoJCOoyk3C2/2Di8IK/yQuPIfBrOSXw==
```

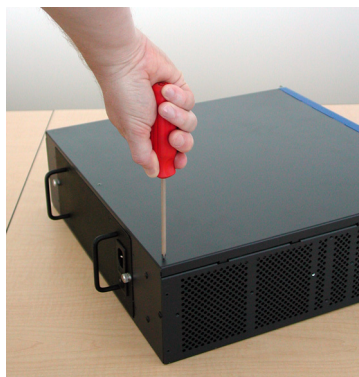
Model: Advanced

...

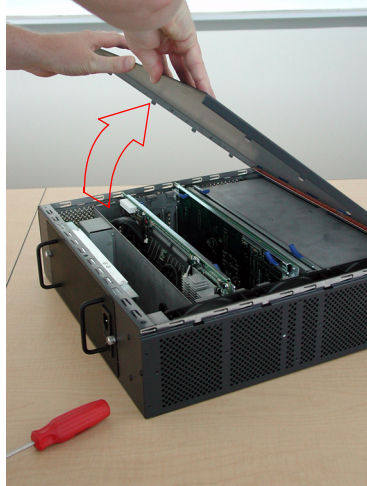
The keys are now loaded. Next, you need to open the ISG 1000 system chassis.

Opening the Chassis

1. Prepare to open the chassis.
 - a. Turn off the power for the ISG 1000 system and remove the power cable.
 - b. Spread out the antistatic mat, ground it, and then set the ISG 1000 system on it.
 - c. Connect the grounding wire from the antistatic wrist strap to the terminal on the antistatic mat.
 - d. Put the strap on your wrist.
2. Using the phillips head screwdriver, remove the three screws from the top panel at the rear of the chassis. (Keep the screws to close the chassis later.)



3. Lift the top panel up and remove it from the chassis. Place the top panel in a safe place.



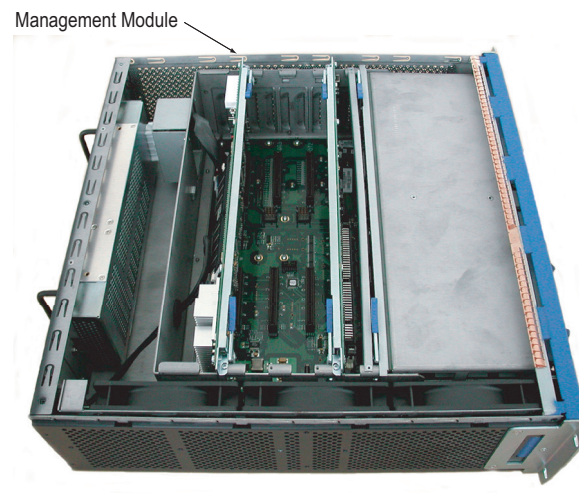
The chassis is now ready for the memory module upgrade.

Replacing Memory Modules

Before adding security modules, you must first replace the two 512-MB SIMM DRAM memory modules with two 1-GB memory modules. For this procedure, you need a phillips head screwdriver and the 1-GB SIMM DRAMM memory modules.

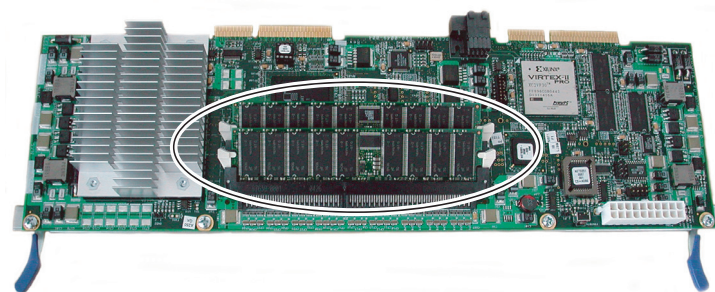
The memory modules reside on the management module, which resides in slot 4 of the chassis. See Figure 1.

Figure 1: Management Module Location



The two 512-MB SIMM DRAM memory modules are nested in partially overlapping layers. See Figure 2. Memory modules are circled.

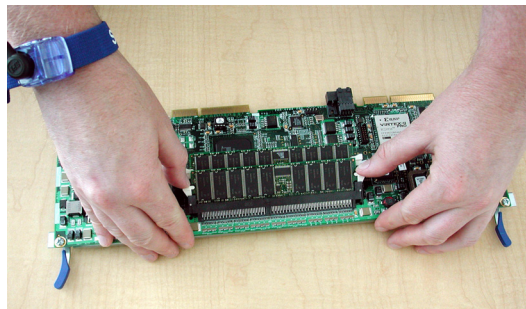
Figure 2: Memory Modules on Management Module



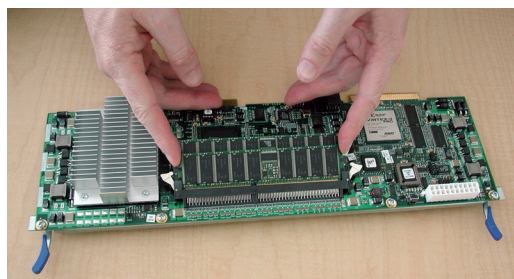
1. Use the phillips head screwdriver to remove the two retaining screws from the left and right top edges of the management module.



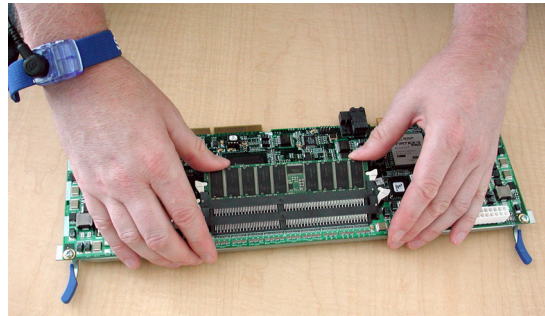
2. Remove the management module.
 - a. Pull up the release levers at each end of the management module.
 - b. Slide the module up and out of the chassis.
 - c. Set the management module on the antistatic mat.
3. Release the upper 512-MB SIMM DRAM memory module by using your thumbs to push out the locking tabs on each side of the module.



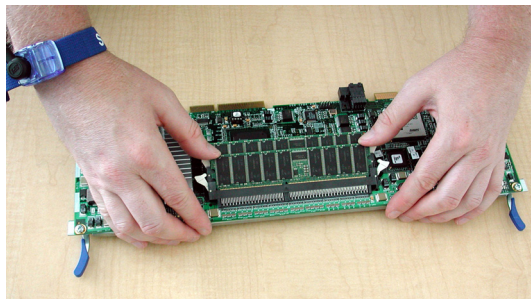
4. Carefully remove the upper memory module and set it on the antistatic mat.



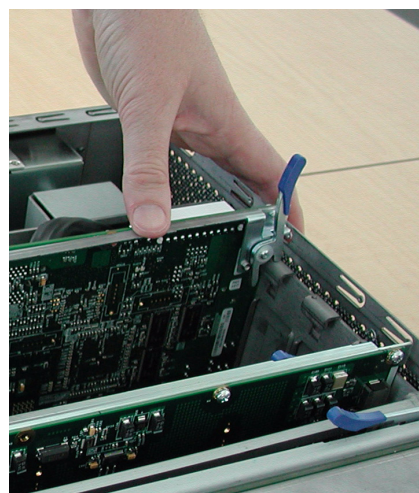
5. Repeat steps 3 and 4 to remove the lower 512-MB SIMM DRAM memory module.
6. Insert a 1-GB SIMM DRAM memory module in the lower slot. Exert even pressure with both thumbs on the upper edge of the module and press the edges down until the locking tabs click into position.



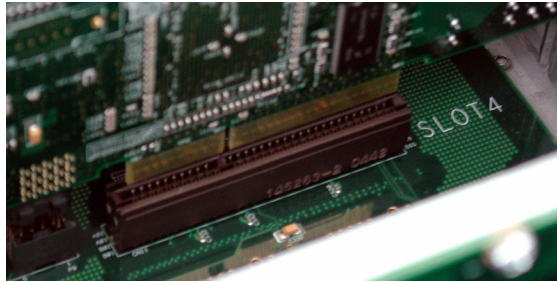
7. Insert a 1-GB SIMM DRAM memory module in the upper slot. Exert even pressure with both thumbs on the upper edge of the module and press the edges down until the locking tabs click into position.



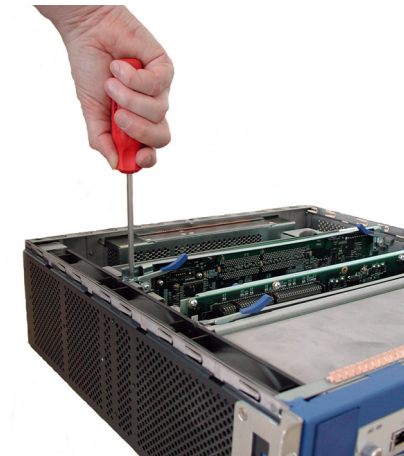
8. Position the release levers up, align the management module with the slot guides on the inner walls of the chassis next to "Slot 4" on the backplane, and then push the management module down until it is fully seated. The release levers return to the down position.



9. Make sure that the module is seated completely.



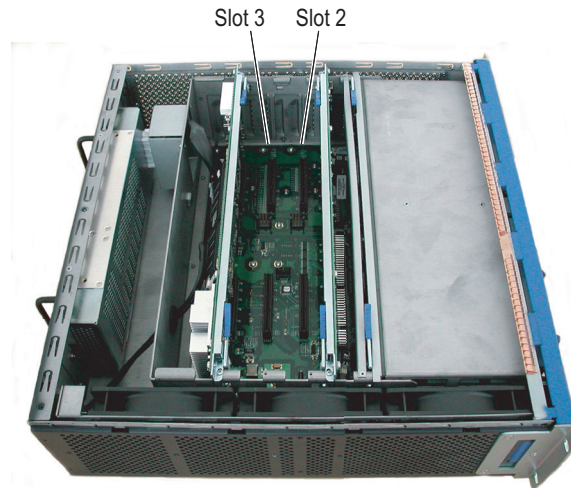
10. Use the phillips head screwdriver to tighten the two retaining screws to the left and right top edges of the management module, securing the module to the chassis.



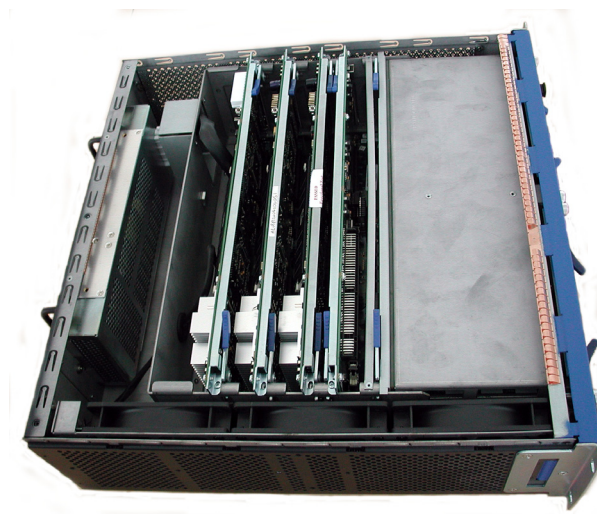
Adding Security Modules

You can add one or two security modules to an ISG 1000 security system. If you are adding one security module, place it in the empty slot closer to the management module (slot 3). If you are adding two security modules, then place one module in each empty slot (slot 2 and slot 3). See Figure 3.

Figure 3: Slot Numbering



1. Position the release levers up, 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 the module into position. Press the release levers down until the module is fully seated.
2. Use the phillips head screwdriver to tighten the two retaining screws on the left and right top edges of the security module, to secure it to the chassis.
3. Repeat steps 1 and 2 to insert the second security module in slot 2.



Closing the Chassis

After you have upgraded the memory modules and installed the security module(s), you need to 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.
2. Use the phillips head screwdriver to tighten the three screws you removed earlier, to secure the top panel to the chassis.

The ISG 1000 system is now able to support IDP. To configure IDP, you must use NetScreen-Security Manager 2005.2 or later.

Rack Mounting and Configuration

Refer to the *ISG 1000 User's Guide, Revision B* for rack mounting and configuration instructions.

Juniper Networks Documentation

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

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