

Network Analysis Module Memory Upgrade Installation Note

Product number: MEM-C6KNAM-2GB=

This publication describes how to upgrade the dynamic random-access memory (DRAM) dual inline memory module (DIMM) on the Network Analysis Module (NAM-1 and NAM-2), product numbers WS-SVC-NAM-1 and WS-SVC-NAM-2.

Note

The memory upgrade is intended for the NAM-1 module (product number WS-SVC-NAM-1) and the NAM-2 module (product number WS-SVC-NAM-2) only. The memory upgrade is not intended to be used on product numbers WS-SVC-NAM-1-250S or WS-SVC-NAM-2-250S. Both modules are shipped from the factory with upgraded memory.

Contents

This publication consists of these sections:

- Safety Overview, page 2
- Required Tools, page 6
- Upgrading the NAM Software, page 6
- Removing the NAM, page 7
- Replacing the DRAM Memory, page 9
- Installing the NAM, page 12
- Checking NAM Memory, page 18
- Obtaining Documentation and Submitting a Service Request, page 18



Safety Overview

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

Statement 1071—Warning Definition



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. To see translations of the warnings that appear in this publication, refer to the translated safety warnings that accompanied this device.

Note: SAVE THESE INSTRUCTIONS

Note: This documentation is to be used in conjunction with the specific product installation guide that shipped with the product. Please refer to the Installation Guide, Configuration Guide, or other enclosed additional documentation for further details.

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. Voor een vertaling van de waarschuwingen die in deze publicatie verschijnen, dient u de vertaalde veiligheidswaarschuwingen te raadplegen die bij dit apparaat worden geleverd.

Opmerking BEWAAR DEZE INSTRUCTIES.

Opmerking Deze documentatie dient gebruikt te worden in combinatie met de installatiehandleiding voor het specifieke product die bij het product wordt geleverd. Raadpleeg de installatiehandleiding, configuratiehandleiding of andere verdere ingesloten documentatie voor meer informatie.

Varoitus TÄRKEITÄ TURVALLISUUTEEN LIITTYVIÄ OHJEITA

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 asiakirjassa esitettyjen varoitusten käännökset löydät laitteen mukana toimitetuista ohjeista.

Huomautus SÄILYTÄ NÄMÄ OHJEET

Huomautus Tämä asiakirja on tarkoitettu käytettäväksi yhdessä tuotteen mukana tulleen asennusoppaan kanssa. Katso lisätietoja asennusoppaasta, kokoonpano-oppaasta ja muista mukana toimitetuista asiakirjoista.

Attention IMPORTANTES INFORMATIONS DE SÉCURITÉ

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 les consignes de sécurité traduites qui accompagnent cet appareil.

Remarque CONSERVEZ CES INFORMATIONS

Remarque Cette documentation doit être utilisée avec le guide spécifique d'installation du produit qui accompagne ce dernier. Veuillez vous reporter au Guide d'installation, au Guide de configuration, ou à toute autre documentation jointe pour de plus amples renseignements.

Warnung WICHTIGE SICHERHEITSANWEISUNGEN

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 sind im Lieferumfang des Geräts enthalten.

Hinweis BEWAHREN SIE DIESE SICHERHEITSANWEISUNGEN AUF

Hinweis Dieses Handbuch ist zum Gebrauch in Verbindung mit dem Installationshandbuch für Ihr Gerät bestimmt, das dem Gerät beiliegt. Entnehmen Sie bitte alle weiteren Informationen dem Handbuch (Installations- oder Konfigurationshandbuch o. Ä.) für Ihr spezifisches Gerät.

Figyelem! FONTOS BIZTONSÁGI ELŐÍRÁSOK

Ez a figyelmezető 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.

Megjegyzés ŐRIZZE MEG EZEKET AZ UTASÍTÁSOKAT!

Megjegyzés Ezt a dokumentációt a készülékhez mellékelt üzembe helyezési útmutatóval együtt kell használni. További tudnivalók a mellékelt Üzembe helyezési útmutatóban (Installation Guide), Konfigurációs útmutatóban (Configuration Guide) vagy más dokumentumban találhatók.

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. Per le traduzioni delle avvertenze riportate in questo documento, vedere le avvertenze di sicurezza che accompagnano questo dispositivo.

Nota CONSERVARE QUESTE ISTRUZIONI

Nota La presente documentazione va usata congiuntamente alla guida di installazione specifica spedita con il prodotto. Per maggiori informazioni, consultare la Guida all'installazione, la Guida alla configurazione o altra documentazione acclusa.

Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER

Dette varselssymbolet betyr fare. Du befinner deg i en situasjon som kan forårsake personskade. Før du utfører arbeid med utstyret, bør du være oppmerksom på farene som er forbundet med elektriske kretssystemer, og du bør være kjent med vanlig praksis for å unngå ulykker. For å se oversettelser av advarslene i denne publikasjonen, se de oversatte sikkerhetsvarslene som følger med denne enheten.

Merk TA VARE PÅ DISSE INSTRUKSJONENE

Merk Denne dokumentasjonen skal brukes i forbindelse med den spesifikke installasjonsveiledningen som fulgte med produktet. Vennligst se installasjonsveiledningen, konfigureringsveiledningen eller annen vedlagt tilleggsdokumentasjon for detaljer.

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. O utilizador encontra-se numa situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha em atenção os perigos envolvidos no manuseamento de circuitos eléctricos e familiarize-se com as práticas habituais de prevenção de acidentes. Para ver traduções dos avisos incluídos nesta publicação, consulte os avisos de segurança traduzidos que acompanham este dispositivo.

Nota GUARDE ESTAS INSTRUÇÕES

Nota Esta documentação destina-se a ser utilizada em conjunto com o manual de instalação incluído com o produto específico. Consulte o manual de instalação, o manual de configuração ou outra documentação adicional inclusa, para obter mais informações.

¡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. Vea las traducciones de las advertencias que acompañan a este dispositivo.

Nota GUARDE ESTAS INSTRUCCIONES

Nota Esta documentación está pensada para ser utilizada con la guía de instalación del producto que lo acompaña. Si necesita más detalles, consulte la Guía de instalación, la Guía de configuración o cualquier documentación adicional adjunta.

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. Se översättningarna av de varningsmeddelanden som finns i denna publikation, och se de översatta säkerhetsvarningarna som medföljer denna anordning.

OBS! SPARA DESSA ANVISNINGAR

OBS! Denna dokumentation ska användas i samband med den specifika produktinstallationshandbok som medföljde produkten. Se installationshandboken, konfigurationshandboken eller annan bifogad ytterligare dokumentation för närmare detaljer.

Предупреждение ВАЖНЫЕ СВЕДЕНИЯ ПО БЕЗОПАСНОСТИ

Этот символ предупреждает о наличии опасности. При неправильных действиях возможно получение травм. Перед началом работы с любым оборудованием необходимо ознакомиться с ситуациями, в которых возможно поражение электротоком, и со стандартными действиями для предотвращения несчастных случаев. Переведенный текст предупреждений содержится в соответствующем документе, поставляемом вместе с устройством.

Примечание СОХРАНЯЙТЕ ЭТУ ИНСТРУКЦИЮ Примечание Эта инструкция должна использоваться вместе с руководством по установке конкретного изделия, входящим в комплект поставки. Дополнительные сведения см. в руководстве по установке, руководстве по настройке и другой документации, поставляемой с изделием.

警告 有关安全的重要说明

这个警告符号指有危险。您所处的环境可能使身体受伤。操作设备前必须意识到电流的危险性,务必熟悉操作标准,以防发生 事故。如果需要了解本说明中出现的警告符号的译文,请参阅本装置所附之安全警告译文。

- 注意 保存这些说明
- 注意 本文件应与本产品附带的具体安装说明一并阅读。如欲了解详情,请参阅《安装说明》、《配置说明》或所附的其他 文件。

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、一般的な事故防止対策に留意してください。このマニュ アルに記載されている警告の各国語版は、装置に付属の「Translated Safety Warnings」を参照してく ださい。

注 これらの注意事項を保管しておいてください。

注 この資料は、製品に付属のインストレーション ガイドと併用してください。詳細は、インスト レーション ガイド、コンフィギュレーション ガイド、または添付されているその他のマニュアルを 参照してください。

Required Tools

The following tools are required to perform the NAM memory kit installation:

- · Antistatic mat or foam pad to support and protect the removed NAM
- 3/16-inch flat-blade screwdriver for the captive installation screws on the NAM
- Your own ESD-prevention equipment or the disposable grounding wrist strap included with all upgrade kits, field-replaceable units (FRUs), and spares



Always use an ESD wrist strap when handling modules or coming into contact with internal components.



Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place. Statement 1029

Warning

Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing. Statement 1034



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

Upgrading the NAM Software

Before you upgrade the NAM memory, you must first upgrade the NAM software to version 3.6(1b). Procedures for upgrading the NAM software are contained in the *Catalyst 6500 Series Switch and Cisco 7600 Series Router Network Analysis Module Installation and Configuration Note*.



Problems can occur if you do not upgrade the software prior to upgrading the memory.

After completing the software upgrade, you need to check amount of memory installed on the NAM module. Check the amount of memory as follows:

```
root@nam_machine.cisco.com# show version
NAM Application image version: 3.6(1b)
Maintenance image version: 2.1(3)
NAM Daughter Card Micro code version: 1.34.1.28 (NAM)
PID: WS-SVC-NAM-2
Memory size: 1024MB
Disk size: 40GB
Installed patches:
No patches are installed on this system.
root@nam_machine.cisco.com#
```

Removing the NAM

This section describes how to safely remove the NAM from the chassis slot.

Shutting Down the NAM

To avoid corrupting the NAM hard disk, you must correctly shut down the NAM before you remove it from the chassis or disconnect the power from the chassis. This shutdown procedure is normally initiated by commands entered at the supervisor engine CLI prompt or the NAM CLI prompt. If the NAM fails to respond to these commands properly, you must use the SHUTDOWN button on the NAM front panel to initiate the shutdown procedure. To push the recessed button, use a small pointed object (such as a paper clip).



Note

The shutdown procedure may require several minutes. The STATUS LED turns off when the NAM shuts down.

To shutdown the NAM from the chassis slot, follow one of following methods.

If you are using Cisco IOS software:

- From the root account on the NAM, enter the shutdown command.
- In privileged mode from the CLI, enter the **hw-mod module** *mod* **shutdown** command. (When this command is used, you will have to enter the **hw-mod module** *mod* **reset** command in order to restart the NAM.)



Note When the switch is rebooted, the NAM will reboot.

• If the NAM does not respond to any commands from the NAM prompt or the supervisor engine, use a small, pointed object to access the recessed SHUTDOWN button located on the NAM faceplate.

If you are using Catalyst OS software:

- From the root account on the NAM, enter the **shutdown** command.
- In privileged mode from the CLI, enter the **set module disable** *mod* command. (When this command is used, you will have to enter the **set module enable** *mod* command in order to restart the NAM.)
- When you enter the **set module disable** *mod* command, the specified NAM will remain disabled, even if the switch is rebooted, until you enter the **set module enable** *mod* command.
- In privileged mode from the CLI, enter the **set module shutdown** *mod* command. This form of the command will shut down only the specified NAM.



When you enter the **set module shutdown** command, the NAM will reboot if the switch is rebooted.

• In privileged mode from the CLI, enter the set module shutdown all command.



When you enter the **set module shutdown all** command, you will shut down every NAM installed in the switch.



If the NAM does not respond to any commands from the NAM prompt or the supervisor engine, use a small, pointed object to access the recessed SHUTDOWN button located on the NAM faceplate.

Note

The shutdown process may require several minutes to complete.

Removing the NAM from the Chassis

To remove the NAM from the chassis, follow these steps:

- **Step 1** Verify that the NAM has shut down. Do not remove the NAM from the switch until the NAM STATUS LED is off or is orange.
- **Step 2** Attach an ESD wrist strap to yourself and to earth ground.
- **Step 3** Verify that the captive installation screws on all of the modules in the chassis are tight.

This action ensures that the space created by the removed NAM is maintained.

Note If the captive installation screws are loose, the electromagnetic interference (EMI) gaskets on the installed modules will push the modules toward the open slot, reducing the opening size and making it difficult to install the NAM.

- **Step 4** Loosen the two captive installation screws on the NAM.
- **Step 5** Depending on the orientation of the slots in the chassis (horizontal or vertical), perform one of the following sets of steps:

Horizontal slots

- **a.** Place your thumbs on the left and right ejector levers, and simultaneously rotate the levers outward to unseat the NAM from the backplane connector.
- **b.** Grasp the front edge of the NAM and slide the module part of the way out of the slot. Place your other hand under the NAM to support the weight of the module. Do not touch the NAM circuitry.

Vertical slots

- **a.** Place your thumbs on the ejector levers located at the top and bottom of the NAM, and simultaneously rotate the levers outward to unseat the NAM from the backplane connector.
- **b.** Grasp the edges of the NAM, and slide the module straight out of the slot. Do not touch the NAM circuitry. Only touch the NAM front panel or the NAM metal carrier.

Step 6 Place the NAM on an antistatic mat that is connected to earth ground.

Replacing the DRAM Memory

To replace the DRAM DIMMs on the NAM, follow these steps:

- **Step 1** Verify that you have an ESD grounding strap connected to your wrist and to earth ground.
- **Step 2** Locate the DRAM DIMM in their sockets on the NAM module. (See Figure 1.)

Figure 1 NAM DIMM Socket Locations



Step 3 Release the old DRAM DIMM from its socket by opening the two white DIMM socket latches located on the side of the DIM socket. Be careful not to pivot the socket latches too far, you can break them. (See Figure 2.)



The NAM module uses DIMM sockets J3 and J5 for the DRAM DIMMs. Make sure that you install the replacement DIMMs in sockets J3 and J5.

Figure 2 Releasing the DIMM Socket Spring Clips



1Alignment notch2DIMM connector traces	
--	--

Step 4 Holding the old DRAM DIMM by its edges with your thumb and forefinger and gently pull the DIMM completely out of the socket. (See Figure 3.) Immediately place the old DRAM DIMM on a properly grounded antistatic mat or place it in an antistatic bag.



- **Step 5** Carefully remove the new DRAM DIMM from its shipping packaging.
- **Step 6** Holding the new DRAM DIMM between your thumbs and forefingers, with the connector edge (the connector traces) down, carefully slide the DIMM into the DIMM socket the old DIMM was removed from. Make sure that you fully insert the connector edge of the DIMM into the socket connector.



• Two notches (keys) are located on the connector trace edge of the DIMM. These notches ensure that the DIMM is correctly oriented in the socket.

<u>/</u>!\

Caution	When inserting the DIMM, use firm but not excessive pressure. If you damage a socket, you will have to return the NAM module to Cisco for repair.
Step 7	Gently push the DIMM into the socket until the two socket latches engage the notches on the sides of the DIMM. (See Figure 4.)
Step 8	When the DIMM is installed, check to see it is seated properly. If the DIMM appears misaligned, carefully remove it and reseat it in the socket. Push the DIMM firmly back into the socket until both latches engage the DIMM.
Step 9	Repeat the process for the second DIMM.

Figure 4 Installing the DRAM DIMM in the DIMM Socket



Installing the NAM

After you have replaced the two DRAM DIMMs on the NAM, you are ready to install the NAM into the chassis.



Step 4 Depending on the orientation of the slots in the chassis (horizontal or vertical), perform one of the following two sets of steps:

Chassis with horizontal slots

- **a.** Position the NAM in the slot. (See Figure 5.) Make sure that you align the sides of the NAM carrier with the slot guides on each side of the chassis slot.
- **b.** Carefully slide the NAM into the slot until the EMI gasket along the top edge of the NAM makes contact with the module or cover plate in the slot above it and the NAM ejector levers have both closed to approximately 45 degrees with respect to the NAM faceplate. (See Figure 6.)

Figure 5 Positioning the NAM in a Horizontal Slot Chassis



c. Using the thumb and forefinger of each hand, grasp the two ejector levers and gently press down to create a small 0.040 inch (1 mm) gap between the NAM's EMI gasket and the module or cover plate above it. (See Figure 6.)



Do not press down too forcefully on the levers because they will bend and get damaged.

Figure 6 Clearing the EMI Gasket in a Horizontal Slot Chassis



d. While gently pressing down, simultaneously close the left and right ejector levers to fully seat the NAM in the backplane connector. The ejector levers are fully closed when they are flush with the NAM faceplate. (See Figure 6.)



Failure to fully seat the NAM in the backplane connector can result in error messages.

e. Tighten the two captive installation screws on the NAM.



Make sure the ejector levers are fully closed before tightening the captive installation screws.

f. Verify that the NAM STATUS LED is lit.



After you reinstall the NAM into a switch, you must log in to the NAM root account and configure the NAM parameters before you can use the NAM for network analysis. Refer to the *Catalyst 6500 Series Network Analysis Module Installation and Configuration Note* for parameter configuration information.

Chassis with vertical slots

- **a.** Position the NAM in the slot. (See Figure 7.) Make sure that you align the sides of the NAM carrier with the slot guides on the top and bottom of the chassis slot.
- **b.** Carefully slide the NAM into the slot until the EMI gasket along the right edge of the NAM makes contact with the module or cover plate in the slot adjacent to it and the NAM ejector levers have both closed to approximately 45 degrees with respect to the module faceplate. (See Figure 8.)

Figure 7 Positioning the NAM in a Vertical Slot Chassis





c. Using the thumb and forefinger of each hand, grasp the two ejector levers and exert a slight pressure to the left, deflecting the NAM approximately 0.040 inches (1 mm) creating a small gap between the NAM's EMI gasket and the module or cover plate adjacent to it. (See Figure 8.)



Do not exert too much pressure on the ejector levers because they will bend and get damaged.

d. While gently pressing down on the ejector levers, simultaneously close both levers to fully seat the NAM in the backplane connector. The ejector levers are fully closed when they are flush with the NAM faceplate. (See Figure 9.)



Figure 9 Closing the NAM Ejector Levers in a Vertical Slot Chassis

e. Tighten the two captive installation screws on the NAM securing it in the slot.



Make sure that the ejector levers are fully closed before tightening the captive installation screws.

f. Verify that the NAM STATUS LED is lit.



After you reinstall the NAM into a switch, you must log in to the NAM root account and configure the NAM parameters before you can use the NAM for network analysis. Refer to the *Catalyst 6500 Series Network Analysis Module Installation and Configuration Note* for parameter configuration information.

Checking NAM Memory

After you complete the memory upgrade, check to ensure that the NAM memory has been upgraded to 2 GB.

To check the NAM memory, follow these steps:

Step 1 Use Telnet or the **session** command to reach the NAM command-line interface.

```
NAM_machine# sess slot 7 proc 1
The default escape character is Ctrl-^, then x.
You can also type 'exit' at the remote prompt to end the session
Trying 127.0.0.71 ... Open
```

Cisco Network Analysis Module (WS-SVC-NAM-2)

NAM_machine.cisco.com login:

Step 2 Log in to the NAM as user **root**.

Step 3 Enter the show version command.

```
root@nam_machine.cisco.com# show version
NAM Application image version: 3.6(1b)
Maintenance image version: 2.1(3)
NAM Daughter Card Micro code version: 1.34.1.28 (NAM)
PID: WS-SVC-NAM-2
Memory size: 2048MB
Disk size: 40GB
Installed patches:
No patches are installed on this system.
root@nam_machine.cisco.com#
```

The amount of installed memory should show approximately 2048 MB after you complete the memory upgrade.

Note

The amount of installed memory that is displayed can vary slightly.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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